



# Preview – Information



Thank you for your interest in this Mega Bundle. This product contains multiple Workbooks and Google Lesson Slides. Within this preview, you will see:

- ✓ A selection of Ready-To-Use Google Lesson Slides for each unit.
- ✓ A selection of worksheets included in each workbook.

When you make a purchase, you will receive a folder that contains each of the .pdf workbook files and links to where you can make copies of the Google Lessons units to your Google Drive.

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# Google Slides Lessons Preview





# Alberta Science Curriculum Earth Systems (Seasons) – Grade 1

## 3-Part Lesson Format

### Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

**THE SUN**

**LEARNING GOAL**

We are learning to **understand** the Sun and seasons so we can **explain** why the Sun is important to Earth and our weather.

### MATCHING ACTIVITY: THE SUN AND SEASONS

Drag each description to the correct term

| Term       | Description |
|------------|-------------|
| Sun        |             |
| Summer     |             |
| Revolution |             |
| Winter     |             |

- Earth moving around the Sun
- Has cold and snowy weather
- A big, hot star that gives light and heat
- Has warm and sunny weather

### Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

### Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

**Consolidation – Reflection**

Complete these sentences to show what you learned about the Sun and the seasons. Use what you know about how the Earth moves and how weather changes in Alberta.

- 1) I learned that the Sun is a \_\_\_\_\_.
- 2) The Sun gives us \_\_\_\_\_ and heat.
- 3) When Alberta is closer to the Sun, it is \_\_\_\_\_.
- 4) Knowing about the Sun and seasons helps me understand \_\_\_\_\_.



# Alberta Science Curriculum

## Earth Systems (Seasons) – Grade 1

### SUMMER SMART ACTIVITY: STAY COOL!

Read each sentence. Drag the correct letter (A, B, or C) to the empty box.



|                                                           |           |                    |            |   |
|-----------------------------------------------------------|-----------|--------------------|------------|---|
| 1) I wear these on my feet to stay cool in summer.        | A) Boots  | B) Mittens         | C) Sandals | A |
| 2) Some animals dig this to stay cool underground.        | A) Burrow | B) Nest            | C) Pond    | B |
| 3) I use this in my house to cool the air.                | A) Heater | B) Air conditioner | C) Oven    | C |
| 4) Animals that sleep in the day and wake up at night are | A) Frozen | B) Nocturnal       | C) Sleepy  |   |

### Summer Weather

For each item, decide what type of summer storm it belongs to. Place each word in the correct box.

| Thunderstorm | Hailstorm | Tornado |
|--------------|-----------|---------|
|              |           |         |
|              |           |         |



Ice falling from the sky

Small balls of ice

Dark clouds

Spinning wind

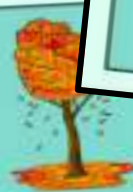
Lightning

Roof lifted by the wind

### SPRING

Read each sentence. Put an X beside the actions that do NOT help people or animals prepare for fall.

|                                                     |                                                            |
|-----------------------------------------------------|------------------------------------------------------------|
| Squirrels hide nuts and seeds in the ground.        | People wear jackets when the weather gets cold.            |
| Someone wears shorts on a cold fall day.            | Birds fly south to warmer places.                          |
| People rake leaves that fall from trees.            | Animals store food to eat later.                           |
| Animals throw away the food they stored for winter. | The Sun gives more heat and light in the fall than summer. |







# Alberta Science Curriculum Earth Systems (Seasons) – Grade 1

## HOW ANIMALS SURVIVE WINTER

Look at each situation. Drag a if it helps animals survive winter, or a if it does not help animals survive winter.

|                                                           |                          |
|-----------------------------------------------------------|--------------------------|
| A squirrel gathering nuts                                 | <input type="checkbox"/> |
| A bear outside in the snow                                | <input type="checkbox"/> |
| A child wearing a swimming suit                           | <input type="checkbox"/> |
| A family indoors with a furnace                           | <input type="checkbox"/> |
| Birds cold in a tree in a snowstorm (Not migrating south) | <input type="checkbox"/> |
| A furry rabbit in the winter                              | <input type="checkbox"/> |

## PLANT DORMANCY

Read each sentence. Decide what happens.

|                                                           |  |
|-----------------------------------------------------------|--|
| 1) A flower begins to grow in warm spring weather.        |  |
| 2) A tree loses its leaves when winter starts.            |  |
| 3) A plant stops growing during the cold winter months.   |  |
| 4) A plant grows bigger when it gets sunlight and warmth. |  |
| 5) Roots stay alive under the soil during winter.         |  |
| 6) A tree grows new leaves when the weather gets warmer.  |  |

**Dormant Plant:**

**Growing Plant:**

## ICE STORMS

What happens on the right?

|   |                                         |
|---|-----------------------------------------|
| 1 | Snow falling for many hours             |
| 2 | Ice forms on roads and sidewalks        |
| 3 | Strong wind blows snow around           |
| 4 | Freezing rain falls during an ice storm |

### What Do We Experience?

|   |                                          |
|---|------------------------------------------|
| A | Roads and sidewalks become very slippery |
| B | It becomes hard to see far away          |
| C | Cars and people must move very carefully |
| D | Snow covers the ground and buildings     |



# Workbook Preview



## Grade 1 – Science Unit

**Organizing Idea Matter:** Earth Systems: Understandings of the living world, Earth, and space are deepened by investigating natural systems and their interactions.

**Guiding Question:** In what ways can environments change?

|                                            | <b>Learning Outcome</b> – Students analyze environments and investigate interactions and changes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Pages</b>                                           |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| ES.1                                       | <p>The four seasons in Alberta are summer, autumn or fall, winter, spring</p> <p>Some places have fewer than four seasons, such as</p> <ul style="list-style-type: none"> <li>two seasons: rainy and dry</li> <li>three seasons: cool or cold, rainy, and dry</li> </ul> <p>Many seasonal changes appear in environments, such as</p> <ul style="list-style-type: none"> <li>snow covering the ground snow</li> <li>melting the surface of lakes and other bodies of water freezing</li> <li>rivers flowing fast or slow</li> </ul> <p>Seasonal changes appear in plants and animals, such as</p> <ul style="list-style-type: none"> <li>camouflage in animals</li> </ul> | 6-16, 21-26, 29-31, 33, 44-45, 47, 49-54, 57-60, 66-71 |
| ES.2                                       | <p>Many animals hibernate in winter, such as:<br/>black bears and grizzly bears, groundhogs, some types of squirrels</p> <p>Environments can undergo sudden changes, such as storms, floods, fires, winds</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0, 27-28, 4-40, 46, 61                                 |
| ES.3                                       | Information can be gathered from environments using the senses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 72-81                                                  |
| ES.4                                       | Seasonal changes may affect a variety of choices and activities, such as clothing choices, recreational activities, Indigenous ceremonies, hunting and gathering                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 15-16, 24-26, 30-31, 44-45, 62-65                      |
| ES.5                                       | <p>The responsibility to care for environments is shared by all people and is fulfilled by showing respect for and protecting all aspects of nature.</p> <p>For First Nations, Métis, and Inuit, a sense of responsibility toward nature can be connected to place and traditional teachings for future generations, such as taking only what is needed.</p>                                                                                                                                                                                                                                                                                                              | 82-98                                                  |
| <b>Computer Science – Learning Outcome</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                        |
| CS.1                                       | Students follow instructions and relate them to outcomes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 41-42, 55-56                                           |

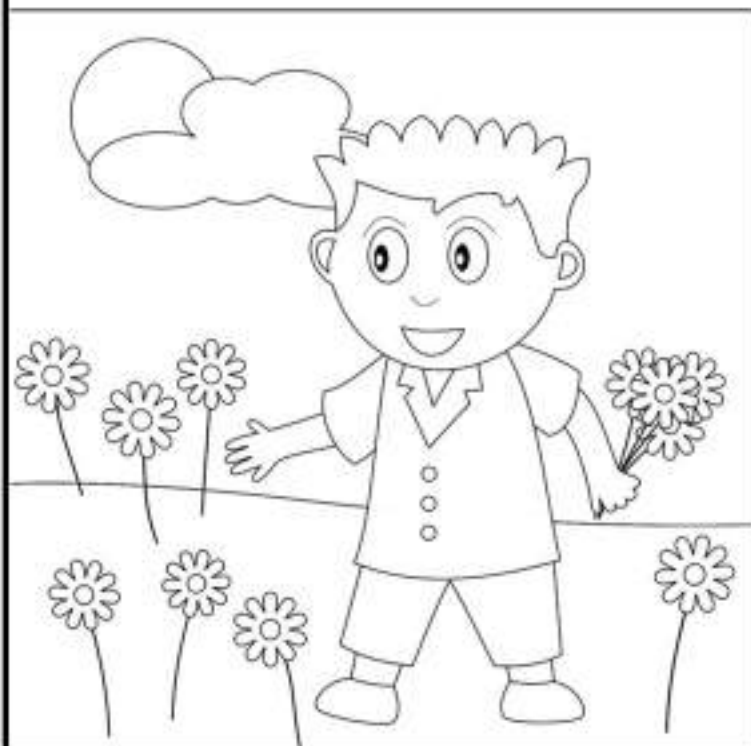
Preview of 70 pages from  
this product that contains  
152 pages total.



NAME: \_\_\_\_\_

# SEASONS

**PREVIEW**





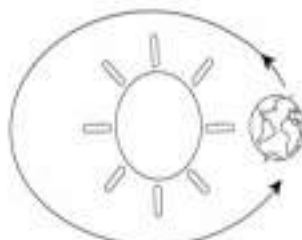
# The Sun - Seasons

In Alberta, we have four seasons: summer, autumn (fall), winter, and spring. These seasons have different weather. In the winter, it is cold and snowy. In the summer it is hot and sometimes rainy. In the fall and spring, it isn't hot or cold.

We have different seasons because of the Sun. The Earth moves around the Sun. In one year from now, the Earth will be at the same place around the Sun. This means the weather will be close to the weather on this date.

In the winter, Alberta is furthest from the Sun. In the summer, Alberta is closest to the Sun.

Revolution  
go around



Takes:  
365 days or 1 year

Seasons



Spring Summer Fall Winter

## Questions

Answer the questions below.

|                                                |          |           |
|------------------------------------------------|----------|-----------|
| 1) In the winter, Alberta is _____ to the Sun. | Furthest | Closest   |
| 2) In the summer, Alberta is _____ to the Sun. | Furthest | Closest   |
| 3) The Earth moves around the _____.           | Sun      | Moon      |
| 4) Summer is the _____ season.                 | Cool     | Hottest   |
| 5) Fall and spring have _____ temperatures.    | The Same | Different |

## Draw

Draw where the Earth might be as it circles the Sun



Summer



Fall



Winter



Spring

## Experiment – Orbiting Earth Around the Sun

**Research Question** What happens when the Earth orbits around the Sun?

How much time goes by when the Earth travels around the Sun?

**Materials** What do we need for our experiment?

- 1) Cake baker's pan
- 2) Playdough to make a ball
- 3) A small ball to represent the Earth



**Method** How do we complete the experiment?

- 1) Make a circle with the playdough to represent the Sun.
- 2) Place the Sun in the middle of the pan
- 3) Add the ball to the pan to represent the Earth
- 4) Tilt the pan to show the Earth orbiting around the Sun. Each time the Earth orbits the Sun is 1 year. Try to orbit the Earth at the same speed around the Sun.
- 5) A **revolution** is one full orbit around the Sun. One revolution is one year of time
- 6) Let students take turns to orbit the Earth around the Sun. Have them count out the years as the Earth orbits the Sun. The students could orbit the Earth the number of years they have been alive.

**Observations**

Answer the questions below

1) How many times does the Earth orbit the Sun in a year?

2) How many times has the Earth orbited the Sun in your life?

3) Does the Earth orbit around the Sun or does the Sun orbit around the Earth?

Earth orbits the Sun  
Sun orbits the Earth**Draw**

Draw a picture of the Earth and Sun with arrows



# The Sun

**Directions**

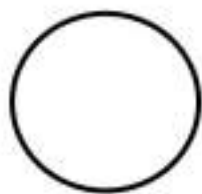
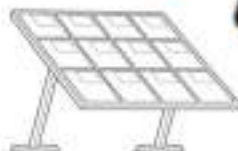
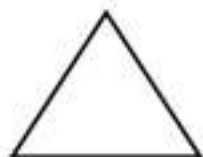
Draw a picture of the sun below



**PREVIEW**

**Directions**

Circle the words and pictures that are related to the sun.

**Hot****Cold****Big****Small**

# Exit Cards

**Cut Out** Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Mark

Circle Yes or No for each question.

1) Is the sun a star?

Yes

No

2) Is the sun a solid rock?

Yes

No

3) Is the sun very big?

Yes

No

4) Is the sun a yellow dwarf star?

Yes

No

5) Are all stars smaller than the sun?

Yes

No

Name: \_\_\_\_\_

Mark

Circle Yes or No for each question.

1) Is the sun a star?

Yes

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No

4) Is the sun a yellow dwarf star?

Yes

No

5) Are all stars smaller than the sun?

Yes

No

# Drawing Suns – Tracing and Colouring

**Draw** Trace and colour the suns. Use orange and yellow together



**PREVIEW**





## Without the Sun

**Activity**

Circle what would happen if we didn't have the sun

|                                           |            |          |
|-------------------------------------------|------------|----------|
| 1) We would be                            | Hot        | Frozen   |
| 2) It would be                            | Light      | Dark     |
| 3) Plants would                           | Grow       | Die      |
| 4) We would have                          | Seasons    | Problems |
| 5) We would have                          | Fun        | Food     |
| 6) We would be up to                      | Darkness   | Light    |
| 7) It would never be                      | Summer     | Winter   |
| 8) We could get no _____ energy           | Solar      | Wind     |
| 9) The oceans, lakes, and rivers would be | Warm       | Cold     |
| 10) You wouldn't need                     | Sunglasses | Gloves   |

**Draw**

Draw a picture of what life would be like without the sun

# Summer Season



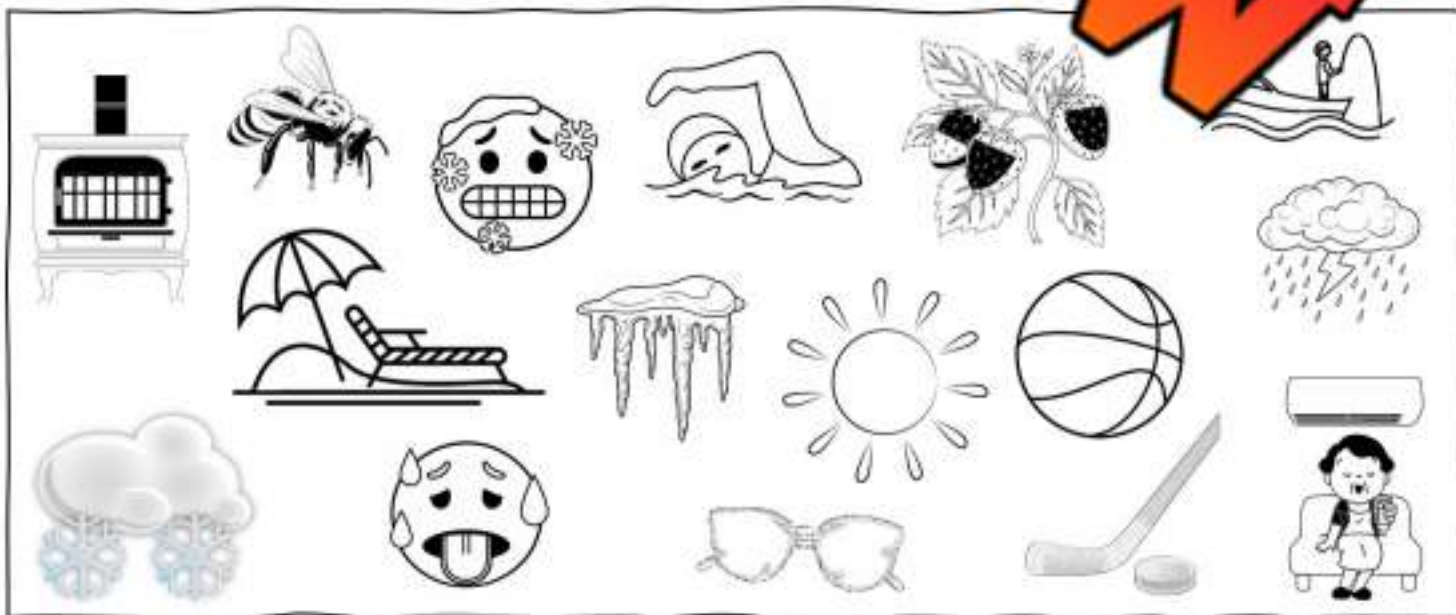
## Questions

Circle the correct answers below

|                                         |                 |                  |
|-----------------------------------------|-----------------|------------------|
| 1) During the summer, the sun is        | Far from earth  | Close to earth   |
| 2) The summer season is                 | Warm            | Cold             |
| 3) It does _____ in the summer          | Rain            | Snow             |
| 4) The _____ is warm, even at           | Night           | Lunchtime        |
| 5) Many plants _____ in the summer      | Cheese          | Fruits           |
| 6) In the summer, many people use _____ | Air conditioner | Furnace (heater) |
| 7) Which insects live _____ in summer   | Mosquitos       | Turtles          |
| 8) The days in the summer are _____     | Longest         | Shortest         |
| 9) In the summer, we get _____ light    | More            | Less             |
| 10) We play _____ in the summer         | Ice Hockey      | Soccer           |

## Summer

Circle the pictures that relate to summer



# Summer Season - Matching

**Matching**

Match the pictures to the names



● Sunglasses

● Flower

● Sandals



● Air conditioner



● Sunshine



● shirt



● Fishing



● Rain



● Beach



● Fishing



## Summer – Adapting To The Heat

Humans have made living in the summer more comfortable. We try to stay cool by wearing sandals, shorts, t-shirts and light coloured clothing. We also use air conditioners to make cool air.



Some animals stay cool by being nocturnal. **Nocturnal** animals sleep during the day and wake up in the cooler night. Animals will also burrow underground to stay cool in the summer. The temperature underground is cooler.

**Draw**

Draw how humans and other animals do to enjoy summer

T-shirt

Sandals

Air Conditioner

Nocturnal Animals

Burrow Underground

## Summer Storms

### Summer Storms in Alberta

In the summer, Alberta has different storms that bring rain, wind, and sometimes thunder and lightning.

**Thunderstorms:** When it is hot outside, sometimes big, dark clouds come, and we have thunderstorms. We can see lightning in the sky and hear loud thunder. It can rain a lot during a thunderstorm!

**Hailstorms:** When it's really stormy, small balls of ice called hail can fall from the sky. It's like winter in the summer! This happens because the very cold air way up high in clouds turns rain into ice balls before they fall down.

**Tornadoes:** Rarely, every storm can spin around and around, making a tornado. Tornadoes can pick up things from the ground. If there's a tornado, we need to go to a safe place like a basement.

### Questions

Circle the best answer.



|                                         |         |           |
|-----------------------------------------|---------|-----------|
| 1) Thunderstorms happen in the _____.   | Spring  | Winter    |
| 2) Thunder is _____.                    | Quiet   | Loud      |
| 3) We can see _____.                    | Thunder | Lightning |
| 4) Hailstorms are small balls of _____. | Ice     | Rock      |
| 5) Tornadoes happen _____.              | A lot   | A little  |

### Making Connections

Write and draw about a summer storm you have seen

|                         |  |
|-------------------------|--|
| <hr/> <hr/> <hr/> <hr/> |  |
|-------------------------|--|

# Exit Cards

**Cut Out**

Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Match the terms to what they mean.

Mark

**Thunderstorms**☐ Small balls of ice fall from the sky**Hailstorms**☐ Bright flash in the sky**Tornadoes**☐ Big clouds with rain and thunder**Lightning**☐ Strong wind that spins around

Name: \_\_\_\_\_

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## Summer Season - Wildfires

### Wildfires

Wildfires are very big fires that happen outside in the forest. They can make a lot of smoke and can be very hot. Sometimes wildfires can spread into communities, making people and other animals leave their homes.

### When Do They Happen?

Wildfires usually happen in the hot and dry seasons, like summer. When there's not a lot of rain, everything is dry, it's easier for a fire to start and spread.

### Why Do They Happen?

Wildfires can happen for different reasons. Sometimes, a little spark from a campfire or lightning can start a big fire if it's very dry. People have to be very careful not to start fires. Other times, the sun can be so hot that it dries out the leaves and grass, and they can catch on fire.



### Think

Is this behavior safe?

|                                                                |      |        |
|----------------------------------------------------------------|------|--------|
| 1) Starting a fire during a burn ban                           | Safe | Unsafe |
| 2) Having a bon fire in the forest after 2 weeks of no rain    | Safe | Unsafe |
| 3) Using your barbeque                                         | Safe | Unsafe |
| 4) Checking if your city has a burn ban before starting a fire | Safe | Unsafe |
| 5) Only starting fires in contained fire pits                  | Safe | Unsafe |

### Draw

Draw the different ways forest fires begin

Lightning

Sunlight

Humans Starting Fires

# Summer Activities



## Word Search

Find the words from the word bank

|            |        |         |          |       |
|------------|--------|---------|----------|-------|
| Sunglasses | Flower | Sandals | Sunshine | Shirt |
| Swimming   | Rain   | Beach   | Fishing  | Sun   |

W X I M X F C F R P Q F I H F V  
 L N S N H L T A P T P L R S  
 C L H D C O E C I S Q D C A  
 W F G I A W N Z K N C J Z N  
 C F S R I Z V J D T U D  
 Z J R G C F N Z T D E T A  
 F I S H I N G S S Q X C K L  
 U J D X D F N S U N G S S E S  
 S W I M M I N G Y K I Y M  
 T T J L L I S Q F S N B P L X

## Word Scramble

Unscramble the words from the word bank

|            |  |          |  |
|------------|--|----------|--|
| SIRHT      |  | FOLWRE   |  |
| SNSASUEGLS |  | SMIWMNG  |  |
| BECAH      |  | SNHUISNE |  |
| SDAALNS    |  | SNU      |  |
| RIAN       |  | FHSNIIG  |  |



# Fall Season

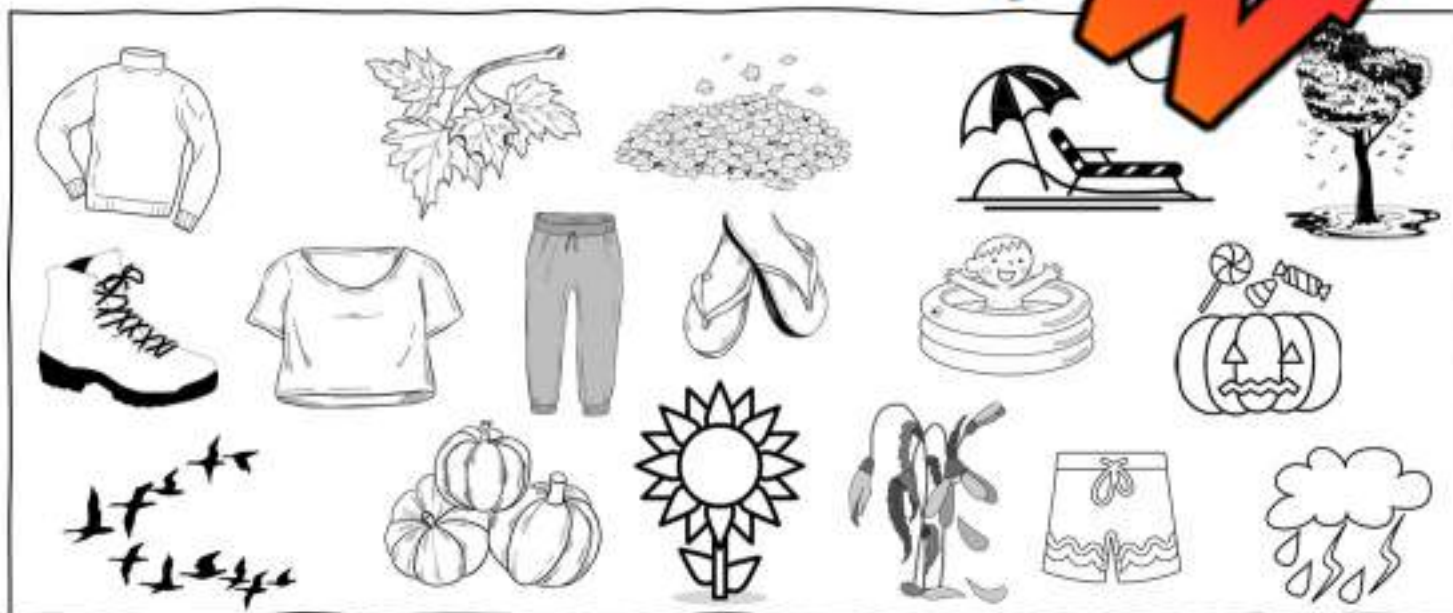
## Questions

Circle the correct answers below

|                                                   |            |           |
|---------------------------------------------------|------------|-----------|
| 1) The sun is _____ from the Earth than in Summer | Closer     | Further   |
| 2) It is _____ in fall than in summer             | Warmer     | Colder    |
| 3) The _____ fall from trees in the fall season   | Leaves     | Branches  |
| 4) The _____ in the fall                          | Type       | Colour    |
| 5) Which plant do you see a lot of in fall?       | Sunflowers | Pumpkins  |
| 6) The days are _____ in _____ in summer          | Longer     | Shorter   |
| 7) We get _____ light than in summer              | Less       | More      |
| 8) The fall season begins in _____ month          | June       | September |
| 9) The leaves on the trees turn _____             | Orange     | Green     |
| 10) The above ground parts of most plants _____   |            | Grow      |

## Fall

Circle the pictures that relate to the season





# Fall Season - Matching

**Matching**

Match the pictures to the names



● Leaves Falling

● Thunderstorm

● Jacket

● Birds Migrating

● Dying Flowers

● Piles of Leaves

● Pumpkins

● Halloween

● Sweater

● Pants

# Exit Cards

**Cut Out** Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Mark

Put a checkmark under✓ the pictures that relate to the Fall season

|                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
|                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |

Name: \_\_\_\_\_

Mark

Put a checkmark under✓ the pictures that relate to the Fall season

|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |

Name: \_\_\_\_\_

Mark

Put a checkmark under✓ the pictures that relate to the Fall season

|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |

## Adapting to the Fall Season

As the sun begins to give us less heat and light, humans adapt. We wear jackets, sweaters, and pants. We rake the leaves that have fallen from trees.



Animals also adapt to the changing season. Some animals will begin to migrate. **Migrate** means animals go somewhere with warmer weather. They like better. Canadian Geese will begin to migrate towards the end of the season. Squirrels will also gather food in the fall. Squirrels, chipmunks, and groundhogs gather nuts and seeds.

**Draw**

Draw pictures of the ways humans and other animals do to survive the fall

Sweater

Pants

We rake leaves that  
have fallen from treesAnimals gather nuts  
and seedsMigrate -  
geese fly south



# Fall Activities



## Word Search

Find the words from the word bank

|         |        |        |          |           |
|---------|--------|--------|----------|-----------|
| Orange  | Leaves | Jacket | Pumpkins | Halloween |
| Sweater | Pants  | Autumn | Cool     | Thunder   |

X N O S H Q K L L S F G G Y H B  
 N F Y H T W E P I C S B R T J  
 T W Y A H I A M X A F C P Q A  
 F I H L V S B U U M H N C  
 T P P L F O L H D T C S K  
 Q D C L S W O G R Z U K E  
 C J O T Z W E R G J Z V M T  
 J O N D T E R O R N U Z J N  
 C A R G C E F S W A N Z T  
 P D E T D N B R S P U P T N S

## Word Scramble

Unscramble the words from the word bank

|           |  |          |  |
|-----------|--|----------|--|
| JECKAT    |  | ONRAGE   |  |
| CLOO      |  | LVAEES   |  |
| TUDNEHR   |  | STWEEAR  |  |
| HELEOLWAN |  | PUNKIPMS |  |
| AUTMUN    |  | PTNAS    |  |

# The Winter Season

## Questions

Circle the correct answers below

|                                                |              |             |
|------------------------------------------------|--------------|-------------|
| 1) In the winter, we are furthest from the     | Sun          | Moon        |
| 2) The days are the _____ in the winter        | Longest      | Shortest    |
| 3) It gets _____ in the winter                 | Early        | Late        |
| 4) Winter is the _____ winter season is        | Cold         | Hot         |
| 5) In the winter, plants _____                 | Stop growing | Grow bigger |
| 6) In the winter, we wear _____ clothing       | Warm         | Thin        |
| 7) In the winter, I wear _____                 | Sandals      | Boots       |
| 8) What falls from the sky in the winter?      | Snow         | Rain        |
| 9) I enjoy playing _____ outside in the winter | Soccer       | Hockey      |
| 10) Which animal hibernates in the winter?     | Bears        |             |

## Winter

Circle the pictures that relate to the season



# Winter Matching Activity

**Matching**

Match the pictures to the names



● Snowman

● Snow

● Cold

● Hockey

● Coat

● Hibernates

● Sledding

● Skates

● Scarf





## Animals That Hibernate

**Questions**

Cut and paste the animals putting them in the right category

**Hibernate****Do Not Hibernate**

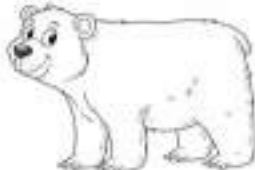
**PREVIEW**



## Animals That Hibernate

**Questions**

Which animals below hibernate? Circle yes or no?

|                                                                                                        |                                                                                                         |                                                                                                          |                                                                                                           |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 1)<br><br>Yes    No    | 2)<br><br>Yes    No    | 3)<br><br>Yes    No    | 4)<br><br>Yes    No    |
| 5)<br><br>Yes    No  | 7)<br><br>Yes    No  | 8)<br><br>Yes    No  |                                                                                                           |
| 9)<br><br>Yes    No | 10)<br><br>Yes    No | 11)<br><br>Yes    No | <br>Yes    No        |
| 13)<br><br>Yes    No | 14)<br><br>Yes    No | 15)<br><br>Yes    No | 16)<br><br>Yes    No |

# Animals That Migrate

**Questions**

Cut and paste the animals putting them in the right category

**Migrate****Do Not Migrate**

**PREVIEW**





## Adaptation - Dormancy

### What is Dormancy?

Plants will become dormant in the winter or during dry seasons. Dormancy means that plants stop growing. Plants will become dormant so they can save energy.

In Canada, plants stop growing in the winter because it is too cold and the days are short. Plants need warmth and sunlight to grow so they go dormant in winter.

### Examples of Dormant Plants

- ✓ Deciduous trees stop growing in the winter. They lose their leaves
- ✓ Plants may look dead above ground, but their roots are alive

### Matching

Write the description beside each stage



|  |                |                                                                    |
|--|----------------|--------------------------------------------------------------------|
|  | Dormant        | a) The bulb feels the warmer weather and will grow a shoot.        |
|  | Waking Up      | b) The bulb feels the cold for winter. It is time to stop growing. |
|  | Bloom          | c) The bulb grows a flower. The flower will open.                  |
|  | Falling Asleep | d) The bulb feels the cold and the shorter days.                   |

### Draw

Draw pictures of the following



Colour the Tree

Draw a Dormant Plant

## Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Mark

Is the statement true (T) or false (F)?

|                                            |   |
|--------------------------------------------|---|
| 1) Plants grow a lot in winter             | T |
|                                            | F |
| 2) Dormancy means a plant stops growing.   | T |
|                                            | F |
| 3) Roots are dead when a plant is dormant. | T |
|                                            | F |
| 4) Some trees lose their leaves in winter. | T |
|                                            | F |

Name: \_\_\_\_\_

Mark

Is the statement true (T) or false (F)?

|                                            |   |
|--------------------------------------------|---|
| 1) Plants grow a lot in winter             | T |
|                                            | F |
| 2) Dormancy means a plant stops growing.   | T |
|                                            | F |
| 3) Roots are dead when a plant is dormant. | T |
|                                            | F |
| 4) Some trees lose their leaves in winter. | T |
|                                            | F |

Name: \_\_\_\_\_

Mark

Is the statement true (T) or false (F)?

|                                            |   |
|--------------------------------------------|---|
| 1) Plants grow a lot in winter             | T |
|                                            | F |
| 2) Dormancy means a plant stops growing.   | T |
|                                            | F |
| 3) Roots are dead when a plant is dormant. | T |
|                                            | F |
| 4) Some trees lose their leaves in winter. | T |
|                                            | F |

Name: \_\_\_\_\_

Mark

Is the statement true (T) or false (F)?

|                                            |   |
|--------------------------------------------|---|
| 1) Plants grow a lot in winter             | T |
|                                            | F |
| 2) Dormancy means a plant stops growing.   | T |
|                                            | F |
| 3) Roots are dead when a plant is dormant. | T |
|                                            | F |
| 4) Some trees lose their leaves in winter. | T |
|                                            | F |



## Winter Storms

### Winter Storms in Alberta

Alberta has two big kinds of winter storms: blizzards and ice storms.

- **Blizzards** are like super snow days. They happen when it's very cold, the wind is strong, and it snows a lot. It can be hard to see anything because of all the snow blowing around.
- **Ice Storms** happen when it's freezing outside and rain falls. The rain turns into ice. Ice coats the ground, trees, cars, and houses. This can make the ground very slippery and makes getting around hard as people and cars slip.

Colour

Colour the card below





## Coding – Making a Snowflake

**Directions**

Follow the instructions below to make a snowflake

### HOW TO MAKE PAPER SNOWFLAKE



# Winter Activities

## Word Search

Find the words from the word bank



|        |         |          |        |           |
|--------|---------|----------|--------|-----------|
| Snow   | Cold    | Hockey   | Coat   | Hibernate |
| Skiing | Snowman | Sledding | Skates | Scarf     |

E U P V S N O W M A N Y G C B R  
 F H U J X S B P W F K L P  
 O T Q Y T Y C C A T S A S X  
 H I B N E A S K K Q R K T  
 P M E A R D D L N V A E  
 S K I I N U B L N F O T E  
 N E P E I B H N O Z C T E C  
 X X A Y K T O T H V O Y K S I  
 Z A V P T N S L E D N H X Z  
 Y T S R S G D N J H H T O H

## Word Scramble

Unscramble the words from the word bank

|          |  |           |  |
|----------|--|-----------|--|
| SWON     |  | HEOCKY    |  |
| CLOD     |  | STKAES    |  |
| SELNDIDG |  | HNIEATBRE |  |
| SKINIG   |  | SACRF     |  |
| CAOT     |  | SAWOMNN   |  |



# Spring Season

## Questions

Circle the correct answers below

|                                                       |             |               |
|-------------------------------------------------------|-------------|---------------|
| 1) As the Earth gets closer to the sun, it gets       | Warmer      | Colder        |
| 2) During spring, the temperature is ____ than winter | Warmer      | Colder        |
| 3) The day ____ in spring than winter                 | Longer      | Shorter       |
| 4) It gets ____ than in the winter                    | Earlier     | Later         |
| 5) During spring, ____ begin to grow                  | Animals     | Plants        |
| 6) During spring, animals in Canada                   | Fly back to | Fly away from |
| 7) During spring, there is ____                       | Ice         | Mud           |
| 8) During spring, there is a lot of ____              | Rain        | Snow          |
| 9) Hibernating animals will ____ in spring            | Wake Up     | Go to Sleep   |
| 10) During spring, we wear mostly ____                | Sweaters    |               |

## Spring

Circle the pictures that relate to the Spring season





# Spring Matching Activity

**Matching**

Match the pictures to the names



● Sweater

● Rain Boots

● Mud

● Baby Animals

● Rain

● Slip

● Umbrella

● Bear Waking Up

● Rainbow

## Adapting to the Spring Season

The spring season is wet and cool. Humans adapt to the weather by wearing rain boots and rain jackets. We also use umbrellas and stay inside when it is raining. Animals enjoy the spring! They wake up from their hibernation, and they migrate back to Canada. They enjoy spring as plant foods grow and the weather warms up.

Animals also like to stay dry. When the rain causes flooding, they go to higher ground to get out of the water. They get out of the water by living under and inside of trees. Some animals also burrow underground.

**Draw**

Draw pictures of things humans and other animals do in the spring

Raincoat

Rainboots

Umbrella

Living in Trees

Waking Up - Hibernation

Migrate Back Home

# Spring Activities

## Word Search

Find the words from the word bank



|         |       |          |        |         |
|---------|-------|----------|--------|---------|
| Sweater | Rain  | Boots    | Mud    | Rainbow |
| Bees    | Tulip | Umbrella | Waking | Babies  |

A B W X F A N E C F M Q T B W P  
 N P Q F C N Z E L F E A X  
 O J U M B R E L L A T G K F  
 M B L X F W R B S N U H I E  
 Z F U N B N T E L I N B  
 B L S K I T I O J I L G A  
 G C E F C M A F P R F B  
 V W E Z I E I A O R S F H I  
 D E B P W A X A W H X P E  
 W S O S R A I N B O W

## Word Scramble

Unscramble the words from the word bank

|         |  |          |  |
|---------|--|----------|--|
| SEETWAR |  | BT00S    |  |
| WINAKG  |  | BSEE     |  |
| MDU     |  | UREMLBLA |  |
| RINA    |  | RANBIOW  |  |
| TLIPU   |  | BBAEIS   |  |



# Comparing Seasons

Seasons

Circle the season(s) that relate to the picture



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |



|        |
|--------|
| Summer |
| Fall   |
| Winter |
| Spring |

# Exit Cards

**Cut Out**

Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_ Mark

Label the seasons below.

|                                                                                    |                                                                                    |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|   |   |
|  |  |
|                                                                                    |                                                                                    |

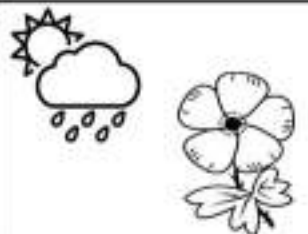
Name: \_\_\_\_\_ Mark

Label the seasons below.

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|   |   |
|  |  |
|                                                                                     |                                                                                      |

Name: \_\_\_\_\_ Mark

Label the seasons below.

|                                                                                     |                                                                                     |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |
|  |  |
|                                                                                     |                                                                                     |

Name: \_\_\_\_\_ Mark

Label the seasons below.

|                                                                                      |                                                                                       |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |
|  |  |
|                                                                                      |                                                                                       |

## Seasons - Questions

**Questions**

Answer the questions below

1) What season is the coldest?

---

2) Which season is the warmest?

---

4) Which season comes before summer?

---

5) Which season comes after winter?

---

7) Which season comes after spring?

---

9) What is your favourite season?

---



Seasons of  
the Year



3) What are the 4 seasons?

---

---

---

---

6) Which season comes after fall?

---

8) What is your least favourite season?

---





**Coding – Dress Up****Directions**

Follow the code to dress the person for the winter

run program

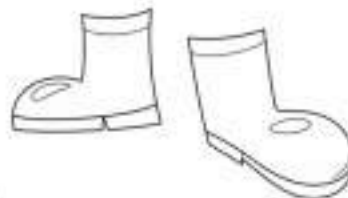
cut out the person

cut out the hat

cut out the jacket

cut out the boots

paste the clothes on the person



## Coding – Dress Up

**Directions**

Follow the code to dress the person for the fall or spring

run pro

cut out the skirt

cut out the shirt

cut out the shoes

paste the clothes on the person



## Changing Seasons – Falling Leaves

**Part 1**

Label each of the trees by their seasons

Fall

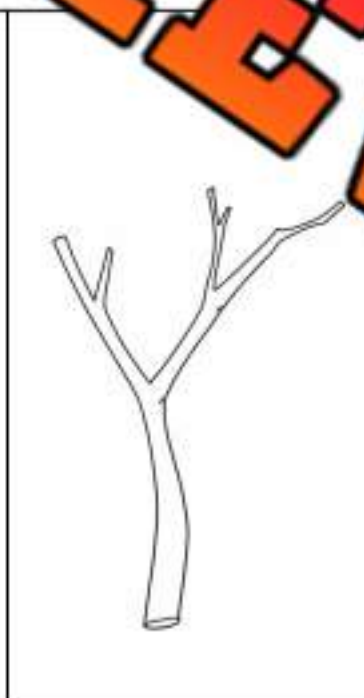
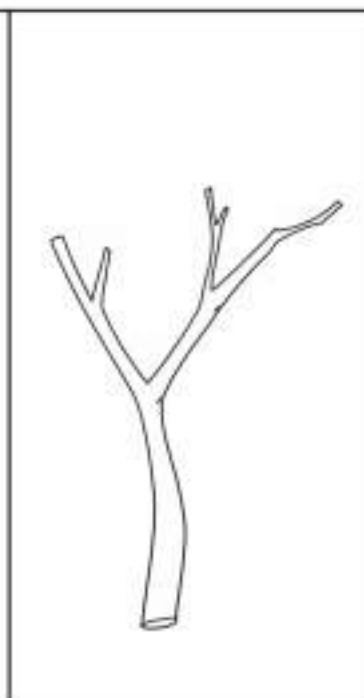
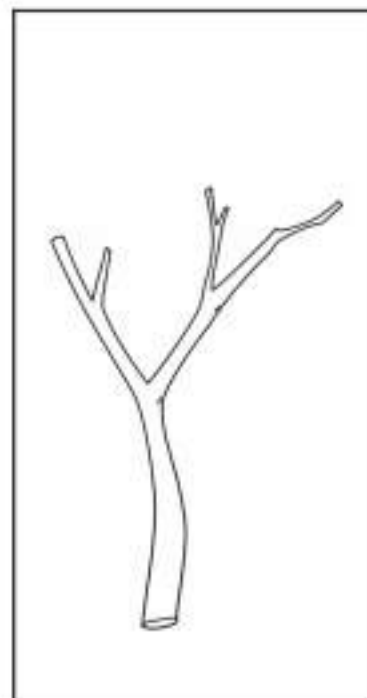
Summer

Winter

Spring

**Part 2**

Draw and colour leaves on the tree branches on the season



Fall

Summer

Winter

Spring



## How Humans Deal With Seasonal Changes

### Questions

Circle the correct answers below



|                                          |                    |               |
|------------------------------------------|--------------------|---------------|
| 1) We play ice hockey in the summer      | Inside arenas      | Outside       |
| 2) We can plant food during the winter   | Inside greenhouses | Outside       |
| 3) We can _____ during the winter in     | Outdoor pools      | Indoor pools  |
| 4) We can _____ at night using           | The sun            | Lights        |
| 5) We _____ at night using               | Lights             | The sun       |
| 6) We keep our _____ in the summer using | The outdoors       | Refrigerators |
| 7) We plant flowers _____ the winter     | Outside            | Inside        |
| 8) We play soccer in the winter          | In a Sports Dome   | Outside       |
| 9) We bike in the winter                 | Exercise bikes     | Outside       |
| 10) We play basketball in the winter     | Outside            | In Gyms       |

### Write and Draw

Answer the questions below



1) What do you and your family do to stay warm in the winter?

|       |
|-------|
| _____ |
| _____ |
| _____ |

2) What do you and your family do to stay cool in the summer?

|       |
|-------|
| _____ |
| _____ |
| _____ |

## Activity – Dog Booties

### Task

What are we building?

Just like humans, dogs get cold in the snow. They can get frostbite in their paws. Their paws can dry out as well, leaving them cracked. Today, you will make dog booties for dogs to wear to protect their paws from the snow.



### Materials

What do we need for this activity?

- 1) Baby socks – 4 per dog
- 2) Balloons – One per bootie

### Method

How do we complete the activity?

- 1) Put the sock on the two fingers next to your thumb
- 2) Wrap the balloon around the sock
- 3) Decorate the balloon by drawing on it with markers or adding stickers to it
- 4) Answer the questions on the back of the page

**Results**

Answer the questions below

1) If you only used the sock, would the dog's paws get wet?

Yes

No

2) Is the sock waterproof?

Yes

No

3) Will the rubber balloon keep the dog's paws dry?

Yes

No

4) Is the rubber balloon waterproof?

Yes

No

5) Will the rubber material make them slippery?

Yes

No

6) Why do dogs need booties in the winter?

---

---

---

---



## Seasonal Around the World

### Canada - Four Seasons

Alberta is in Canada. Canada is at the top of the Earth. This means as the Earth moves around the Sun, the top part of the Earth feels the Sun's heat and light differently than the middle and bottom parts of the Earth.

### Africa - 2 Seasons: Rainy and Dry

Many parts of Africa have just two seasons: rainy and dry. These parts of Africa are near the middle of the Earth.



During the rainy season, the Sun is right above Africa. The Sun heats up the ocean water and makes it rise into the air, making rain clouds. During the dry season, the Sun is not right above Africa. This means less water rises, so there is less rain.

### Questions

Answer the questions below.

1) Many parts in Africa have how many seasons?

1

2

2) During the rainy season, the Sun is \_\_\_\_\_ Africa.

Right Above

Far Away From

3) When the Sun is right about Africa, the ocean water moves where?

Nowhere

Into the air

On to the ground

### Colour

Colour the dry and rainy season pictures below



## Dry and Rainy Seasons

### Dry and Rainy Seasons – Interesting Facts

- During the rainy season, plants grow well because they get lots of water.
- Farmers plant crops like corn and rice during the rainy season.
- Animals have babies during the rainy season because there is lots of food.
- Some trees in Africa lose their leaves during the dry season to save water.
- Elephants use their big ears to fan themselves and keep cool in the dry season.
- Some animals like zebras and wildebeest, travel or migrate to find water during the dry season. This is a big journey!
- Lions like to hunt in the dry season because they can see their prey better when the grass is short.
- Many birds fly away to places where there is more food and water during the dry season. They come back when the rainy season starts.

**Draw**

Draw pictures of interesting facts from the reading



Growing Plants

Trees Losing Leaves

Elephant Ears As Fans

Zebras Finding Water

Lions Hunting in Short Grass

Birds Flying to Water



## Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Circle whether the fact happens in the Rainy Season (R) or Dry Season (D).

|                                    |   |   |
|------------------------------------|---|---|
| 1) Plants grow well.               | R | D |
| 2) Trees lose their leaves.        | R | D |
| 3) Elephants use ears to cool off. | R | D |
| 4) Zebras travel to find water     | R | D |
| 5) Birds fly away to find food.    | R | D |
| 6) Farmers grow corn and rice.     | R | D |

Name: \_\_\_\_\_

Circle whether the fact happens in the Rainy Season (R) or Dry Season (D).

|                                    |   |   |
|------------------------------------|---|---|
| 1) Plants grow well.               | R | D |
| 2) Trees lose their leaves.        | R | D |
| 3) Elephants use ears to cool off. | R | D |
| 4) Zebras travel to find water     | R | D |
| 5) Birds fly away to find food.    | R | D |
| 6) Farmers grow corn and rice.     | R | D |

Name: \_\_\_\_\_

Circle whether the fact happens in the Rainy Season (R) or Dry Season (D).

|                                    |   |   |
|------------------------------------|---|---|
| 1) Plants grow well.               | R | D |
| 2) Trees lose their leaves.        | R | D |
| 3) Elephants use ears to cool off. | R | D |
| 4) Zebras travel to find water     | R | D |
| 5) Birds fly away to find food.    | R | D |
| 6) Farmers grow corn and rice.     | R | D |

Name: \_\_\_\_\_

Circle whether the fact happens in the Rainy Season (R) or Dry Season (D).

|                                    |   |   |
|------------------------------------|---|---|
| 1) Plants grow well.               | R | D |
| 2) Trees lose their leaves.        | R | D |
| 3) Elephants use ears to cool off. | R | D |
| 4) Zebras travel to find water     | R | D |
| 5) Birds fly away to find food.    | R | D |
| 6) Farmers grow corn and rice.     | R | D |



## Experiment – Rainy and Dry Seasons

### Objective

What are we learning about?

This activity helps students understand the impact of different seasons on plant life and can easily be linked to how animals would be affected too.

### Materials

What do we need?

- ✓ Seeds (grass, beans, etc.)
- ✓ Small rocks
- ✓ Small pots or jars
- ✓ Seeds (grass, beans, etc.)
- ✓ Small plastic animals
- ✓ Water



### Method

How do we complete the experiment?

- 1) Divide the students into groups. Each group gets a jar.
- 2) Have students fill the bottom of their jars with rocks. This will help with drainage.
- 3) Then, add a layer of soil on top of the rocks and plant the seeds.
- 4) Half of the groups will represent the rainy season. They should water their jar every day to simulate a lot of rain.
- 5) The other half will represent the dry season. They should only water their jar twice a week to simulate less rain.
- 6) To make it more fun, students can add small plastic animals in their jars.
- 7) Over a few weeks, observe the jars. Discuss the differences between the two groups of jars. Which season did the seeds grow better in? How do the different amounts of water affect the plants' growth?

**Hypothesis**

What do you think will happen?

Which jar do you think the seeds will grow best in?

Dry Season Jar

Rainy Season Jar

**Results**

What happened?

1) Did the seeds grow? Explain.

2) If you were an animal, would you rather live in?

Dry Season Jar

Rainy Season Jar

3) Which season will there be more food for an animal?

Dry Season Jar

Rainy Season Jar

4) Draw your jars below.

Dry Season Jar

Rainy Season Jar



### 3 Seasons: Cold, Rainy, Dry

#### Countries with 3 Seasons

In Thailand and India, they have three seasons: cold, dry, and rainy.

**Thailand:** During the cold season, animals like elephants find sunny spots to stay warm. In the dry season, people drink lots of water and wear hats for shade. Animals find shady places or swim in rivers to cool off. In the rainy season, people use umbrellas and boots, while animals like frogs enjoy the wet weather.

**India:** In the cold season, people wear warm clothes and animals grow thicker fur. In the dry season, animals rest during the hottest part of the day and are active at night. In the rainy season, people use raincoats and animals find shelter under trees or in their burrows.



#### Questions

Circle the correct answer.

|                                                         |        |          |
|---------------------------------------------------------|--------|----------|
| 1) Which country has 3 seasons?                         | Canada | Thailand |
| 2) During the cold season, elephants find _____ spots.  | Shady  | Sunny    |
| 3) In the dry season, people drink lots of _____.       | Water  | Tea      |
| 4) In the dry season, it is _____.                      | Hot    | Cold     |
| 5) Thailand has how many seasons?                       | 3      | 4        |
| 6) During the dry season, animals rest during the ____. | Night  | Day      |
| 7) Which season do people use umbrellas?                | Dry    | Rainy    |
| 8) Which season do people wear coats?                   | Cold   | Rainy    |
| 9) Some animals find shade in their ____.               | Burrow | Clothes  |
| 10) Which animal enjoys the rainy season?               | Humans | Frogs    |



## Our 5 Senses

Fill in the Blanks

Fill in the blanks below

### Word Bank

Taste

See

Touch

Hear

Smell

**PREVIEW**

1. I can \_\_\_\_\_ with my hands

2. I can \_\_\_\_\_ with my eyes

3. I can \_\_\_\_\_ with my nose

4. I can \_\_\_\_\_ with my ears

5. I can \_\_\_\_\_ with my mouth



## Five Senses – Describing Objects

**Brainstorm**

Use the word bank or your own words to describe the hot chocolate

| Smell        | Taste | Touch  | See    | Hear    |
|--------------|-------|--------|--------|---------|
| Stinky       | Good  | Hard   | Tall   | Loud    |
| Burnt        | Sweet | Soft   | Short  | Quiet   |
| Sweet        | Sour  | Bumpy  | Wide   | Silent  |
| Refrigerator |       | Hot    | Thin   | Deep    |
| Good         |       | Smooth | Colour | Whisper |

**Writing**

Describe the hot chocolate using the words you chose

---

---

---

---

---

## Five Senses – Describing Environments

**Explain**

Describe the environment below using your senses. Colour the picture.



|       |  |  |  |  |
|-------|--|--|--|--|
| See   |  |  |  |  |
| Taste |  |  |  |  |
| Smell |  |  |  |  |
| Hear  |  |  |  |  |
| Feel  |  |  |  |  |



## Five Senses – Describing Environments

**Explain**

Describe the environment below using your senses. Colour the picture.



|       |  |  |  |  |
|-------|--|--|--|--|
| See   |  |  |  |  |
| Taste |  |  |  |  |
| Smell |  |  |  |  |
| Hear  |  |  |  |  |
| Feel  |  |  |  |  |

## Five Senses – Describing Environments

**Explain**

Describe the environment below using your 5 senses. Colour the picture.



|       |  |  |  |  |
|-------|--|--|--|--|
| Taste |  |  |  |  |
| See   |  |  |  |  |
| Smell |  |  |  |  |
| Hear  |  |  |  |  |
| Feel  |  |  |  |  |

**Writing**

Describe the environment using the words you chose

|                   |
|-------------------|
| <hr/> <hr/> <hr/> |
|-------------------|

## The Environment and our Community

People interact with natural features in these ways:



- We use water to drink and bathe in



- We cut down trees to build houses and communities

- We burn oil to make energy



- We dig into the ground to find rocks



- Some people litter by throwing things on the ground

### Multiple Choice

Circle the best answer.

|                                                           |        |         |
|-----------------------------------------------------------|--------|---------|
| 1) We should try not to _____ water                       | Drink  | Waste   |
| 2) Cutting down trees is good or bad for the environment? | Good   | Bad     |
| 3) Which burns oil to get energy?                         | A car  | Car     |
| 4) Which is a rock found in the ground?                   | Marble | Glass   |
| 5) Animals get sick or healthy from eating litter         | Sick   | Healthy |

### Write and Draw

How do you interact with natural features?

|                         |  |
|-------------------------|--|
| <hr/><br><hr/><br><hr/> |  |
|-------------------------|--|



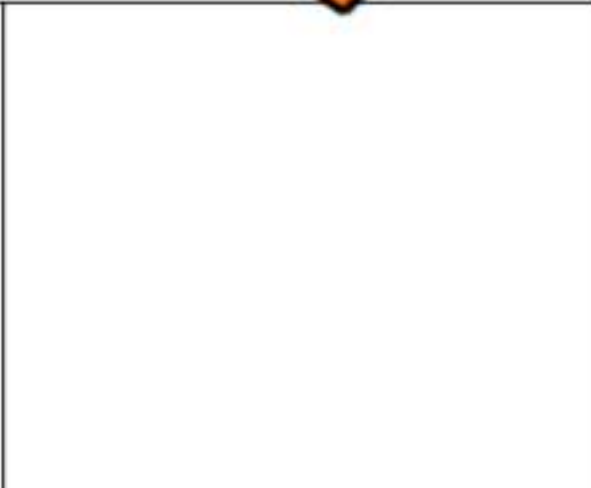
## The Environment and our Community

When we take care of natural features, we help our environment. Check out the ways we can help below.

|                                       |                                                                                                                                                                                                                                                                      |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Planting Trees</b>                 | <ul style="list-style-type: none"> <li>✓ Trees are homes to animals like birds and squirrels</li> <li>✓ Trees help clean the air</li> </ul>                                       |
| <b>Picking Up Trash</b>               | <ul style="list-style-type: none"> <li>✓ Animals can eat garbage and get sick</li> <li>✓ Trash can make our water dirty</li> </ul>                                                |
| <b>Using Less Plastic</b>             | <ul style="list-style-type: none"> <li>✓ Plastic ends up in landfills for many years</li> <li>✓ Plastic can be eaten by animals and they get sick</li> </ul>                      |
| <b>Putting Waste In The Right Bin</b> | <ul style="list-style-type: none"> <li>✓ We can compost food waste, so it becomes soil</li> <li>✓ We can recycle some things so they can be used again</li> </ul>                |
| <b>Planting A Garden</b>              | <ul style="list-style-type: none"> <li>✓ Plants make our air cleaner</li> <li>✓ Animals like ladybugs, bees, butterflies and toads will enjoy living in your garden</li> </ul>  |

**Write and Draw**

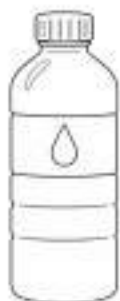
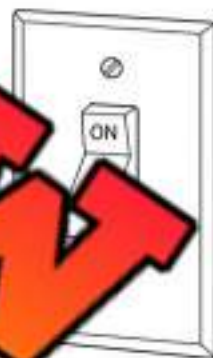
What will you do to take care of the environment?

|                               |                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------|
| <hr/> <hr/> <hr/> <hr/> <hr/> |  |
|-------------------------------|--------------------------------------------------------------------------------------|

# Respecting the Natural Environment

**Respect**

Circle the things that are good for the natural environment





## Clean Water From Our Environment

Water is a basic need for plants and animals. We need clean water from our environment to drink, bathe in, and wash with. There is a lot of water on Earth, but only 2.5% is water we can use.

We need to keep our water clean. We can do this by:

- Never pour oil down the drain
- Use less soapy water at your house
- Don't let food or grease go down the drain
- Only flush water and toilet paper down the toilet
- Use natural fertilizers in your yard. No pesticides that will get into our water



### Fill in the Blanks

What is the missing word?

#### Word Bank

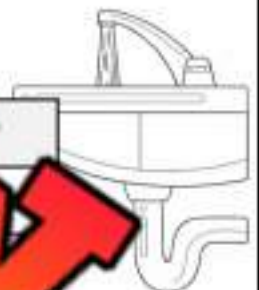
Paper

Water

Drain

Wash

Clean



- 1) We should not pour oil down the \_\_\_\_\_.
- 2) We should only flush water and toilet \_\_\_\_\_ down the drain.
- 3) We need water to drink, bath in, and \_\_\_\_\_ with.
- 4) We can only use 2.5% of the \_\_\_\_\_ on Earth.
- 5) We need to keep our water \_\_\_\_\_.



## Clean Water From Our Environment

**Directions**

What examples of water pollution do you see in the picture?



1)

2)

3)

4)

5)

# Indigenous Groups and the Environment

## How the Indigenous Take Care of the Environment

Indigenous groups in Canada take good care of the environment. They:

- 1) **Respect Nature:** They believe everything in nature is special. They don't take more than they need and always say thank you to the earth. For example, some groups spread tobacco on farm fields after they take food (harvest) to say thank you.
- 2) **Clean:** They keep rivers and lakes clean. They know that fish and animals need clean water to live so they don't pollute water.
- 3) **Reuse and Recycle:** They don't waste things. They use everything they can and recycle things they've done. When they hunt animals like the buffalo, they use every part, like bones for tools.
- 4) **Teach Others:** The elders in these communities teach their kids and grandkids how to take care of the environment.

Yes/No

Is the answer yes or no?



|                                                                |     |    |
|----------------------------------------------------------------|-----|----|
| 1) Do they waste food?                                         | Yes | No |
| 2) Do they cut down trees for fun?                             | Yes | No |
| 3) Do they hunt animals?                                       | Yes | No |
| 4) When they hunt, do they waste parts of the animals?         | Yes | No |
| 5) Do they pollute water with chemicals and oil?               | Yes | No |
| 6) Do the elders teach kids how to take more than they need?   | Yes | No |
| 7) Do they only take from the environment?                     | Yes | No |
| 8) Do they give tobacco to the environment after they harvest? | Yes | No |
| 9) Do they think that nature is not that important?            | Yes | No |
| 10) Do they believe nature is special?                         | Yes | No |



## Cree First Nation – Seasonal Round

The Cree people were hunter-gatherers. This meant they moved around looking for food. As the seasons went on, some foods were found more than others. Check out the seasonal round that shows what in general they ate during each season.

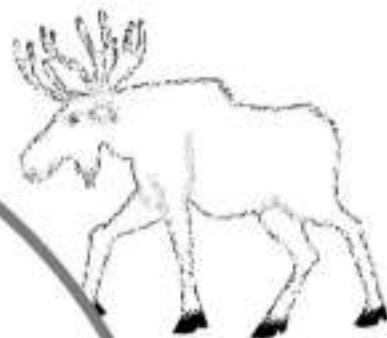
### Summer

✓ Berries

✓ Fish

Animals: Beaver and Muskrat

Plants: Mint



### Spring

✓ Fish

✓ Birds

✓ Maple Syrup

✓ Green plants that started to grow



### Fall

✓ Moose and Fish

✓ Mushrooms and Berries

✓ Pumpkins and Vegetables

✓ Turnips and



### Winter

✓ Fish

✓ Deer

✓ Rabbit

✓ Pine Needle Tea



**Questions**

Answer the questions below



1) Which season did they look for pine needles for tea?

2) What did they eat all year?

3) Which seasons could they eat fruits?

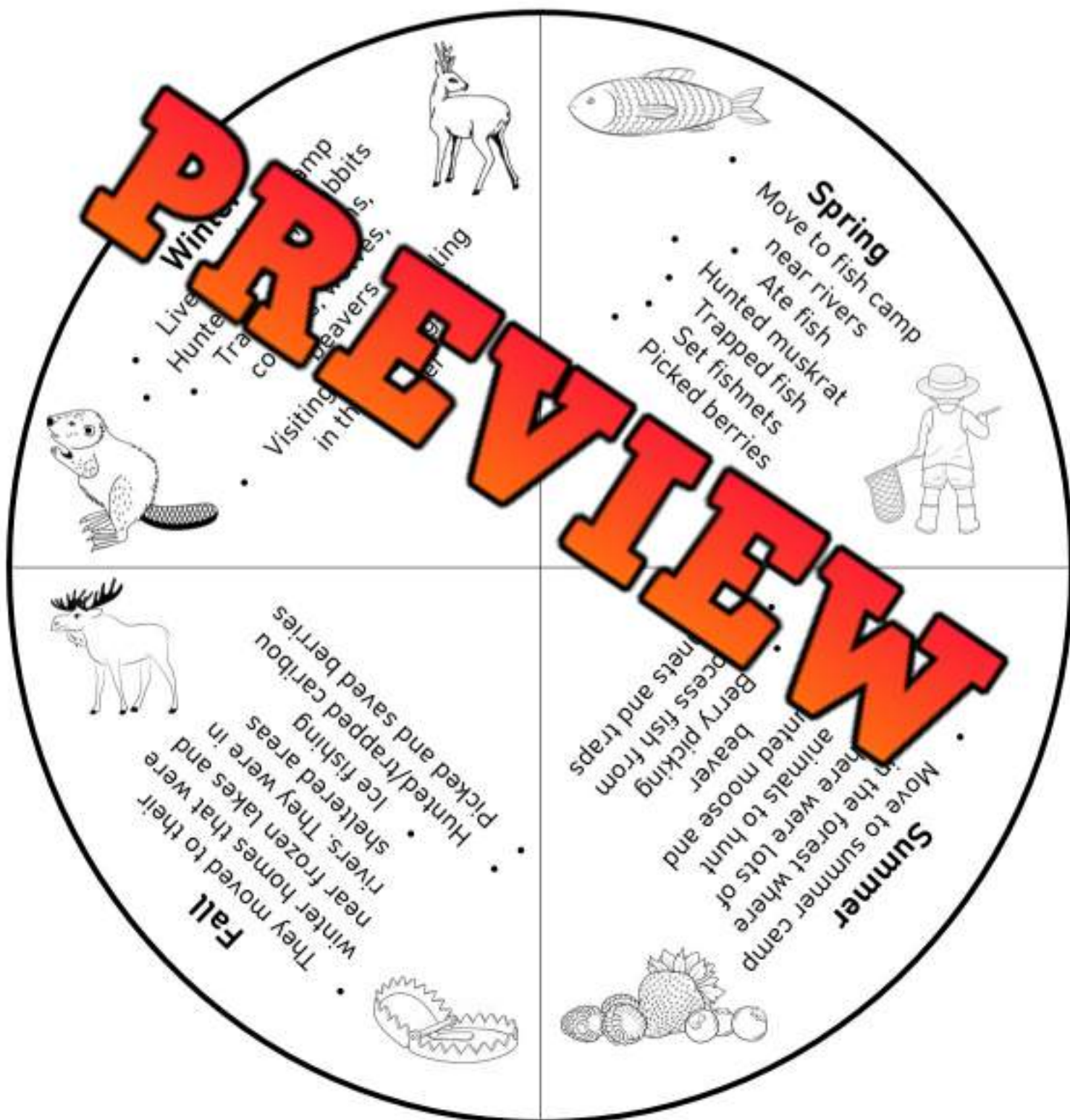
4) Why didn't they eat fruit in the winter?

5) Draw a food the Cree ate during each season.

|               |             |               |               |
|---------------|-------------|---------------|---------------|
|               |             |               |               |
| <b>Summer</b> | <b>Fall</b> | <b>Winter</b> | <b>Spring</b> |

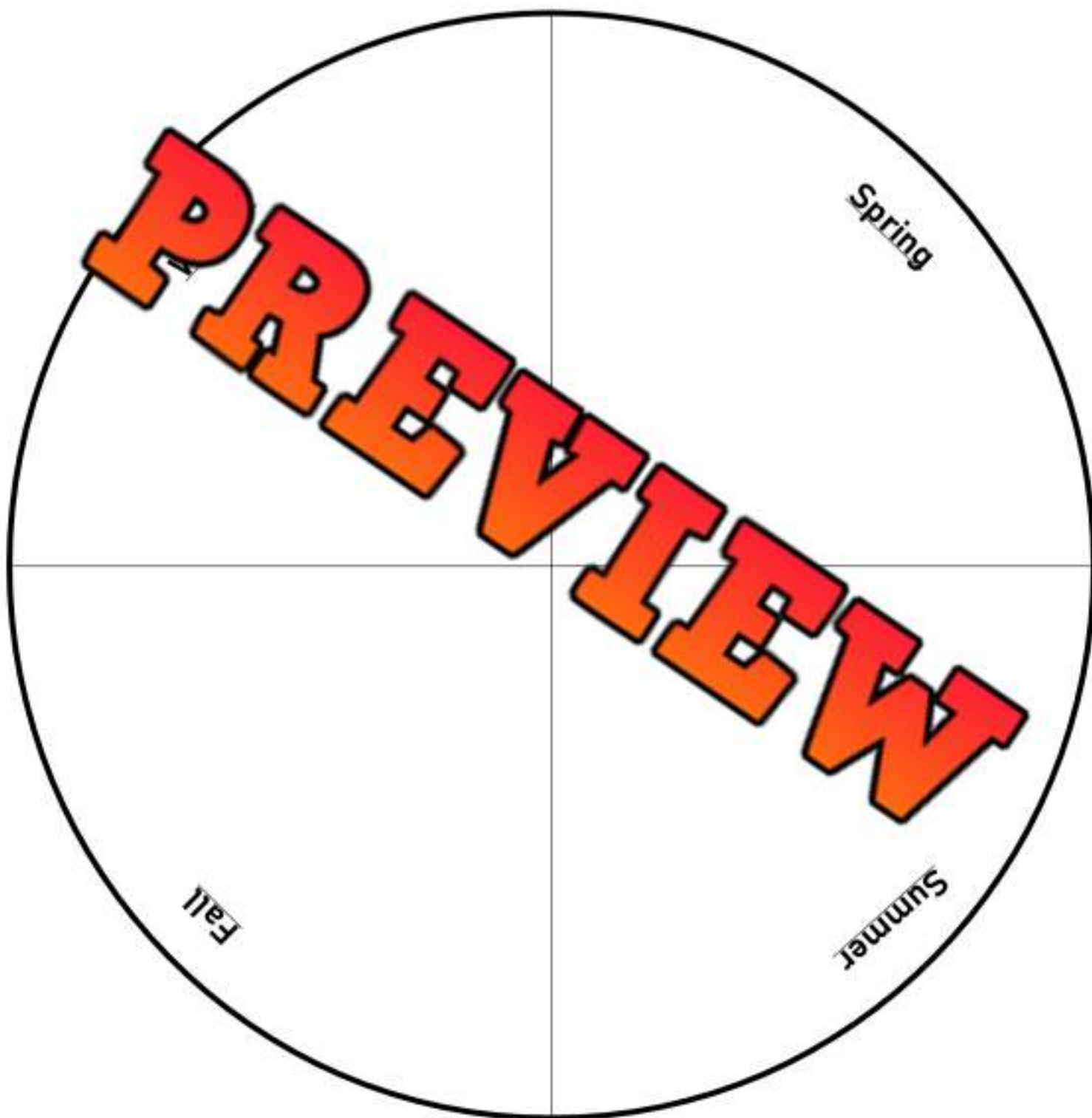
## Dene First Nation – Seasonal Round

The Dene First Nation hunted and gathered different foods as the year went on. They also moved to different areas where the most food could be found.



**Instructions**

While your teacher reads, draw pictures in the different seasons to show what the Dene First Nation did



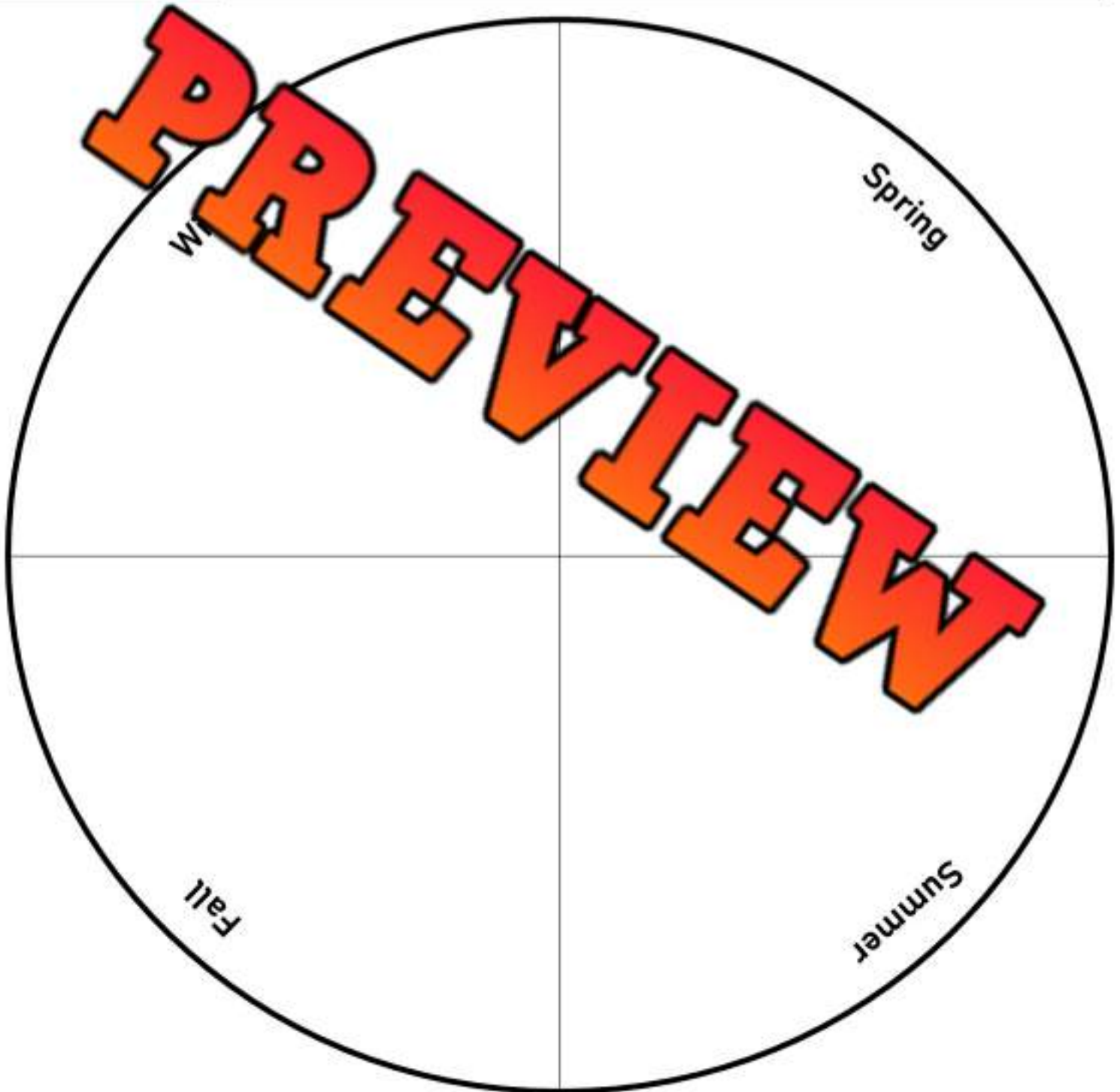


## Your Own Seasonal Round

You will likely have different things happening in your life from season to season. Do you celebrate certain holidays in a season? Do you play different sports or do different activities in different seasons?

**Instructions**

Draw or write the things you do from season to season



## Unit Test – Daily and Seasonal Changes

### Part 1

Answer the questions below

1) What season is the coldest?

---

2) Which month is the warmest?

---

3) Which season comes in summer?

---

4) What are the 4 seasons?

---

---

---

---

### Part 2

Circle the correct answer below

1) Which storm happens in the summer?

Hail      Lizard

2) How are many wildfires started?

Lightning      Candles

3) Is burning gas good or bad for the environment?

Good      Bad

4) Is cutting down trees good or bad for the environment?

Good      Bad

5) Which season do more plants grow in?

Dry      Rainy

6) Do all countries have the same number of seasons?

Yes      No

7) The Earth moves around the \_\_\_\_\_.

Sun      Moon

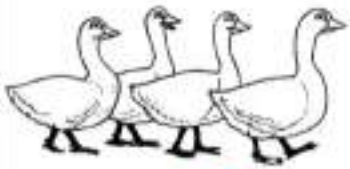
8) What is the reason we have seasons?

The Moon      The Sun

## Part 3

Does the animal below hibernate? Circle yes or no?

1)



Yes

2)



Yes

No

3)



Yes

No

4)



Yes

No

5)



Yes

No

7)



Yes

No

8)



Yes

No

## Part 4

Circle the animals that migrate





## Part 5

Circle the season(s) that relate to the picture

|                                                                                     |        |                                                                                     |        |                                                                                       |        |
|-------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|
|    | Summer |    | Summer |    | Summer |
|                                                                                     | Fall   |                                                                                     | Fall   |                                                                                       | Fall   |
|                                                                                     | Winter |                                                                                     | Winter |                                                                                       | Winter |
|                                                                                     | Spring |                                                                                     | Spring |                                                                                       | Spring |
|   | Summer |   | Summer |   | Summer |
|                                                                                     | Fall   |                                                                                     | Fall   |                                                                                       | Fall   |
|                                                                                     | Winter |                                                                                     | Winter |                                                                                       | Winter |
|                                                                                     | Spring |                                                                                     | Spring |                                                                                       | Spring |
|  | Summer |  | Summer |  | Summer |
|                                                                                     | Fall   |                                                                                     | Fall   |                                                                                       | Fall   |
|                                                                                     | Winter |                                                                                     | Winter |                                                                                       | Winter |
|                                                                                     | Spring |                                                                                     | Spring |                                                                                       | Spring |
|  | Summer |  | Summer |  | Summer |
|                                                                                     | Fall   |                                                                                     | Fall   |                                                                                       | Fall   |
|                                                                                     | Winter |                                                                                     | Winter |                                                                                       | Winter |
|                                                                                     | Spring |                                                                                     | Spring |                                                                                       | Spring |



# Google Slides Lessons Preview





# Alberta Science Curriculum Living Systems Unit – Grade 1

## 3-Part Lesson Format

### Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

**LIVING THINGS VERSUS NON-LIVING THINGS**



**LEARNING GOAL**  
We are learning to tell the difference between living and non-living things so we can understand how they are part of our environment.

**WORD SEARCH – LIVING AND NON-LIVING THINGS**  
Find the 10 words in the puzzle. Circle each word. Use the list to help you.

|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W | K | T | B | F | Z | P | Z | D | P | I | C | V |
| A | U | F | I | L | H | V | P | R | F | Z | Z | U |
| T | P | X | R | P | U | H | E | Q | O | A | V | X |
| E | F | T | D | E | Q | W | Z | I | M | T | H | H |
| R | U | S | H | D | O | S | W | D | M | K | F | J |
| M | B | X | N | L | O | B | E | E | C | W | R | G |
| W | C | E | F | D | R | G | M | O | J | I | O | M |
| D | V | U | T | R | E | E | R | C | D | R | W | E |
| N | M | Y | P | C | H | A | I | R | F | B | S | E |

|       |        |
|-------|--------|
| Dog   | Cup    |
| Tree  | Bee    |
| Rock  | Flower |
| Bird  | Chair  |
| Water | Frog   |

### Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

### Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

**Consolidation – Reflection**

Complete these sentences to show what you learned about living and non-living things. Use what you know about how we can tell if something is living.

- 1) I learned that living things need \_\_\_\_\_.
- 2) A plant is living because it can \_\_\_\_\_.
- 3) An animal is living because it can \_\_\_\_\_.
- 4) A rock is non-living because it does not \_\_\_\_\_.
- 5) Water is non-living because it does not \_\_\_\_\_.





# Alberta Science Curriculum

## Living Systems Unit – Grade 1

### HUMANS OR ANIMALS?

Look at each card. Drag the correct heading under it to show if it describes a Human or an Animal.

| Human | Animal |
|-------|--------|
|       |        |
|       |        |
|       |        |

### BEST ANSWER: ANIMAL LOCOMOTION

Read each sentence. Drag the correct letter (A, B, or C) to the empty box.

|                                          |                       |                       |                 |
|------------------------------------------|-----------------------|-----------------------|-----------------|
| 1. What does "edible" mean?              | A) Safe to touch      | B) Safe to eat        | C) Safe to hold |
| 2. Which living thing is inedible?       | A) Carrot             | B) Buffalo            | C) Bat          |
| 3. What does "totemic" mean?             | A) Easy to grow       | B) Special to a group | C) Good to eat  |
| 4. Why do people classify living things? | A) To understand them | B) To mix them        | C) To hide them |

A B C

| Item  | Description |
|-------|-------------|
| Food  |             |
| Water |             |
| Air   |             |
| Tools |             |

Helps...

- Gives us energy to grow
- Help us get food, water, and shelter
- Helps us stay healthy and not thirsty



# Alberta Science Curriculum

## Living Systems Unit – Grade 1

 **ANIMAL LOCOMOTION** 

Read what is on the left. Draw a line to match it with what we know on the right.

| Items         |   | What Do We Know?                   |
|---------------|---|------------------------------------|
| A penguin     | 1 | A It walks on four legs.           |
| A snake       | 2 | B It walks on two legs.            |
| A horse       | 3 | C It moves by sliding on its body. |
| A caterpillar | 4 | D It crawls using many tiny legs.  |

**SORTING**  
(PLACE A ✓ IN THE CORRECT COLUMN.)

| Item            | Plant Needs |
|-----------------|-------------|
| 1 Candy         |             |
| 2 Toy           |             |
| 3 Sunlight      |             |
| 4 Space to Grow |             |
| 5 Warmth        |             |
| 6 Shoes         |             |

Use this to complete the activity: 

**HOW ANIMALS EAT**  
(DRAW A LINE TO THE CORRECT COLUMN.)

| Item                       | Cracks | Tears | Chews | Swallows Whole |
|----------------------------|--------|-------|-------|----------------|
| 1 A lion eating meat       |        |       |       |                |
| 2 A squirrel opening a nut |        |       |       |                |
| 3 A snake eating a mouse   |        |       |       |                |
| 4 A cow eating grass       |        |       |       |                |
| 5 A bird breaking a seed   |        |       |       |                |
| 6 A frog catching a fly    |        |       |       |                |

Use this to complete the activity: 





# Workbook Preview





# Grade 1 – Science Unit

Organizing Idea Matter: Living Systems: Understandings of the living world, Earth, and space are deepened by investigating natural systems and their interactions

Guiding Question: Students investigate and examine needs of plants and animals.

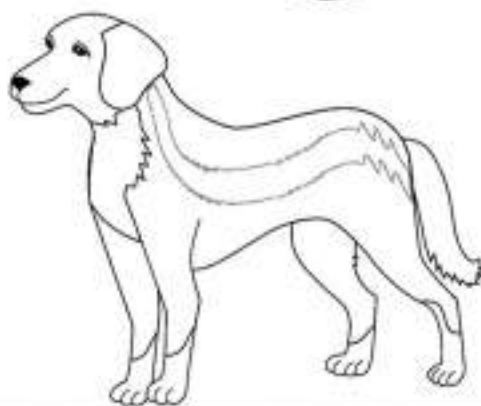
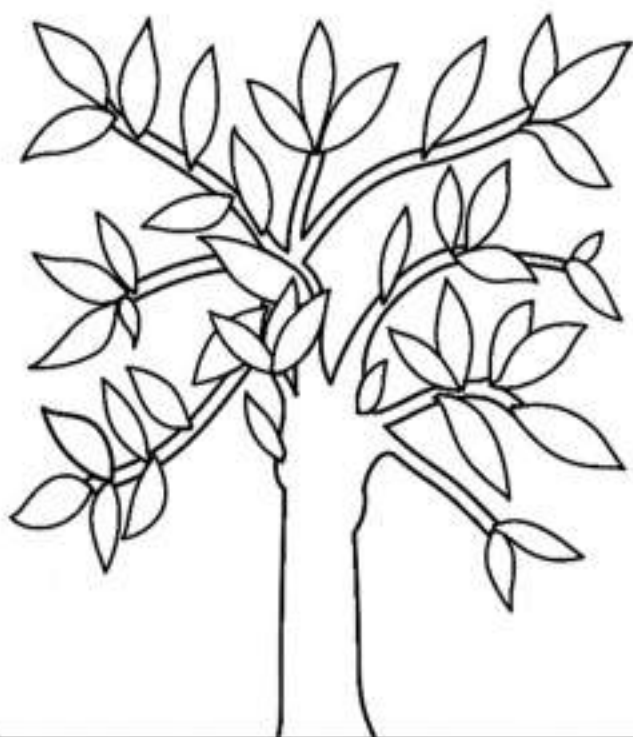
|      | Learning Outcome - Students investigate direction, pathway, and speed of moving objects and animals.                                                                                                                                                                                                                                                                                   | Pages                     |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|      | <ul style="list-style-type: none"> <li>Plants are living things that can grow and make their own food.</li> <li>Plants usually cannot move from place to place.</li> </ul>                                                                                                                                                                                                             | 63                        |
| LS.2 | <ul style="list-style-type: none"> <li>A variety of plants and animals exist and are dispersed over Earth.</li> <li>Diverse plants and animals can be found in many environments in Alberta, such as forests prairies lakes and rivers mountains</li> <li>Basic needs of plants and animals include food water air shelter</li> </ul>                                                  | 33 – 34, 51 – 55, 64 – 67 |
| LS.3 | <ul style="list-style-type: none"> <li>Ways humans can help meet the needs of plants or animals include watering plants, taking care of domestic animals, respecting environments</li> <li>Ways that plants and animals, or their parts, help meet the needs of humans include providing air for breathing, food, clothing, shelter, medicine connection (social/emotional)</li> </ul> | 35 – 47, 68 – 87          |
|      | <b>Computer Science - Learning Outcome</b>                                                                                                                                                                                                                                                                                                                                             |                           |
| CS.1 | Students follow instructions and relate them to outcomes.                                                                                                                                                                                                                                                                                                                              | 48 – 50, 88 – 89          |

Preview of 70 pages from this product that contains 146 pages total.

NAME: \_\_\_\_\_

# LIVING THINGS

**PREVIEW**





# Environment - Living and Non-Living Things

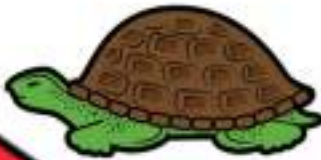
The environment is the area where someone or something lives. Things that are not living can also exist in the environment as well.

|                                                                                   |                                                                                    |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
| Living Things in the Environment                                                  | Non-Living Things in the Environment                                               |

Living Things are things that grow (plants, animals, humans, bacteria)

Non-Living Things are things that do not grow (rocks, wind, air, sunlight, water)

Directions: Circle whether the thing is living or non-living

|                                                                                     |                                                                                     |                                                                                       |            |        |            |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------|--------|------------|
|  |  |  |            |        |            |
| Living                                                                              | Non-Living                                                                          | Living                                                                                | Non-Living | Living | Non-Living |
|  |  |  |            |        |            |
| Living                                                                              | Non-Living                                                                          | Living                                                                                | Non-Living | Living | Non-Living |
|  |  |  |            |        |            |
| Living                                                                              | Non-Living                                                                          | Living                                                                                | Non-Living | Living | Non-Living |



**Environment - Living and Non-Living Things****Directions** Cut and paste the structures putting them in the right category**Living Things****Non-Living Things****PREVIEW**

# Things In My Environment

**Directions**

Circle the living things you can find in your environment

## Living Things In Your Environment

**Directions**

Circle the non-living things you can find in your environment

## Non-Living Things In Your Environment





# Plant or Animal

Plants and animals are both alive, but only animals move. Plants stay in one spot.

| Plants         | Animals |
|----------------|---------|
| <b>PREVIEW</b> |         |
|                |         |

## Questions

Cut the plants and animals out and paste them above



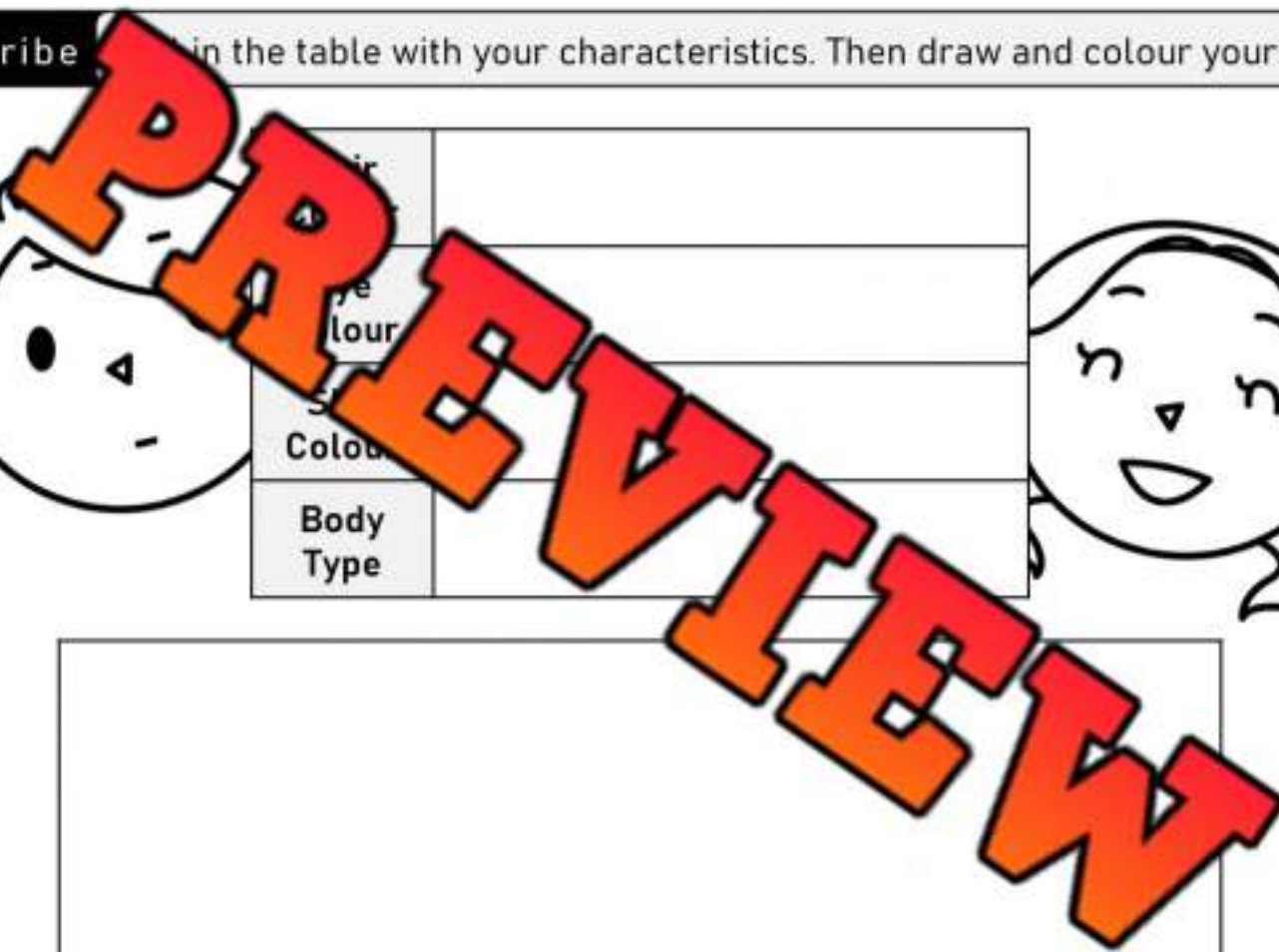


# Describing Humans

Humans are animals. If you look at other humans, you'll notice we don't all look the same. Our eye colour, hair colour, skin colour, and body types are different. These characteristics make us unique.

Describe \_\_\_\_\_ in the table with your characteristics. Then draw and colour yourself

| Hair | Eye Colour | Skin Colour | Body Type |
|------|------------|-------------|-----------|
|      |            |             |           |
|      |            |             |           |
|      |            |             |           |
|      |            |             |           |



# Describing Animals

We can describe things in our environment using 4 characteristics – size, colour, shape, and common parts. A cat has been described below.



| Size                                                                      | Colour                                                                    | Shape                                                                                                        | Common Parts                                                                                   |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Small</li> <li>• Thin</li> </ul> | <ul style="list-style-type: none"> <li>• Gray</li> <li>• White</li> </ul> | <ul style="list-style-type: none"> <li>• Pointy ears</li> <li>• Round torso</li> <li>• Round face</li> </ul> | <ul style="list-style-type: none"> <li>• 4 legs</li> <li>• Tail</li> <li>• Whiskers</li> </ul> |

Describe the animals below by describing the animals



Dalmatian - Dog

|              |  |
|--------------|--|
| Size         |  |
| Colour       |  |
| Shape        |  |
| Common Parts |  |



Chipmunk

|              |  |
|--------------|--|
| Size         |  |
| Colour       |  |
| Shape        |  |
| Common Parts |  |

# Describing Animals

Describe

Fill in the tables below by describing the animals

|                                                                                                      |              |  |
|------------------------------------------------------------------------------------------------------|--------------|--|
| <br>Bird - Blue Jay | Size         |  |
|                                                                                                      | Colour       |  |
|                                                                                                      | Shape        |  |
|                                                                                                      | Common Parts |  |

|                                                                                                             |              |  |
|-------------------------------------------------------------------------------------------------------------|--------------|--|
| <br>Snake - Garter Snake | Size         |  |
|                                                                                                             | Colour       |  |
|                                                                                                             | Shape        |  |
|                                                                                                             | Common Parts |  |

|                                                                                               |              |  |
|-----------------------------------------------------------------------------------------------|--------------|--|
| <br>Spider | Size         |  |
|                                                                                               | Colour       |  |
|                                                                                               | Shape        |  |
|                                                                                               | Common Parts |  |



# Describing Animals

## Questions

Answer the questions below

1) Circle the animals that have tails



2) Circle the animals that have 4 legs



3) Circle the animals that have wings



4) Circle the animals smaller than you



5) Circle the animals that have scales



# Nocturnal and Diurnal Animals

## Diurnal Animals

Diurnal animals love the sun! These animals wake up when the sun rises. They play, eat, and work during the day. When the night comes, they sleep.

### Diurnal Animals

- Humans
- Dogs
- Bees
- Butterflies



## Nocturnal Animals

Nocturnal animals love the dark. They wake up when the sun sets and the moon shines. They play, eat, and work during the night. When the day comes, they sleep.

### Nocturnal Animals

- Bats
- Owls
- Raccoons



## Why Are Some Animals Nocturnal?

Nocturnal animals like the dark. It keeps them safe from other animals that might want to hurt them. The cool night air also helps some animals, like the desert mouse, stay cool.

## Why Are Some Animals Diurnal?

Diurnal animals love the sunlight. It helps them see clearly. Some diurnal animals, like butterflies, need the sun's heat to fly.



# Nocturnal and Diurnal Animals

**Nocturnal animals** sleep during the day and move around at night. They do this to stay out of the heat during the day. It is cooler at night when the sun has gone down.

Which Type?

Is the animal nocturnal or diurnal?

**PREVIEW**



Nocturnal

Diurnal



Nocturnal

Diurnal



Nocturnal

Diurnal



Nocturnal

Diurnal



Nocturnal

Diurnal



Nocturnal

Diurnal



Nocturnal

Diurnal



Nocturnal

Diurnal



Nocturnal

Diurnal



Coyote

Nocturnal

Diurnal



Nocturnal

Diurnal



Fox

Nocturnal

Diurnal



# Research - Favourite Animal

**Directions**

Answer the questions below



1) What is your favourite animal?

2) Draw a picture of your favourite animal.

**PREVIEW**

3) How much does the animal weigh?

4) How tall is the animal?

5) What colour(s) is the animal?

6) Where does the animal live?

7) What does the animal eat?

# Research - Favourite Animal

**Colour**

Colour the features your animal has

**Writing**

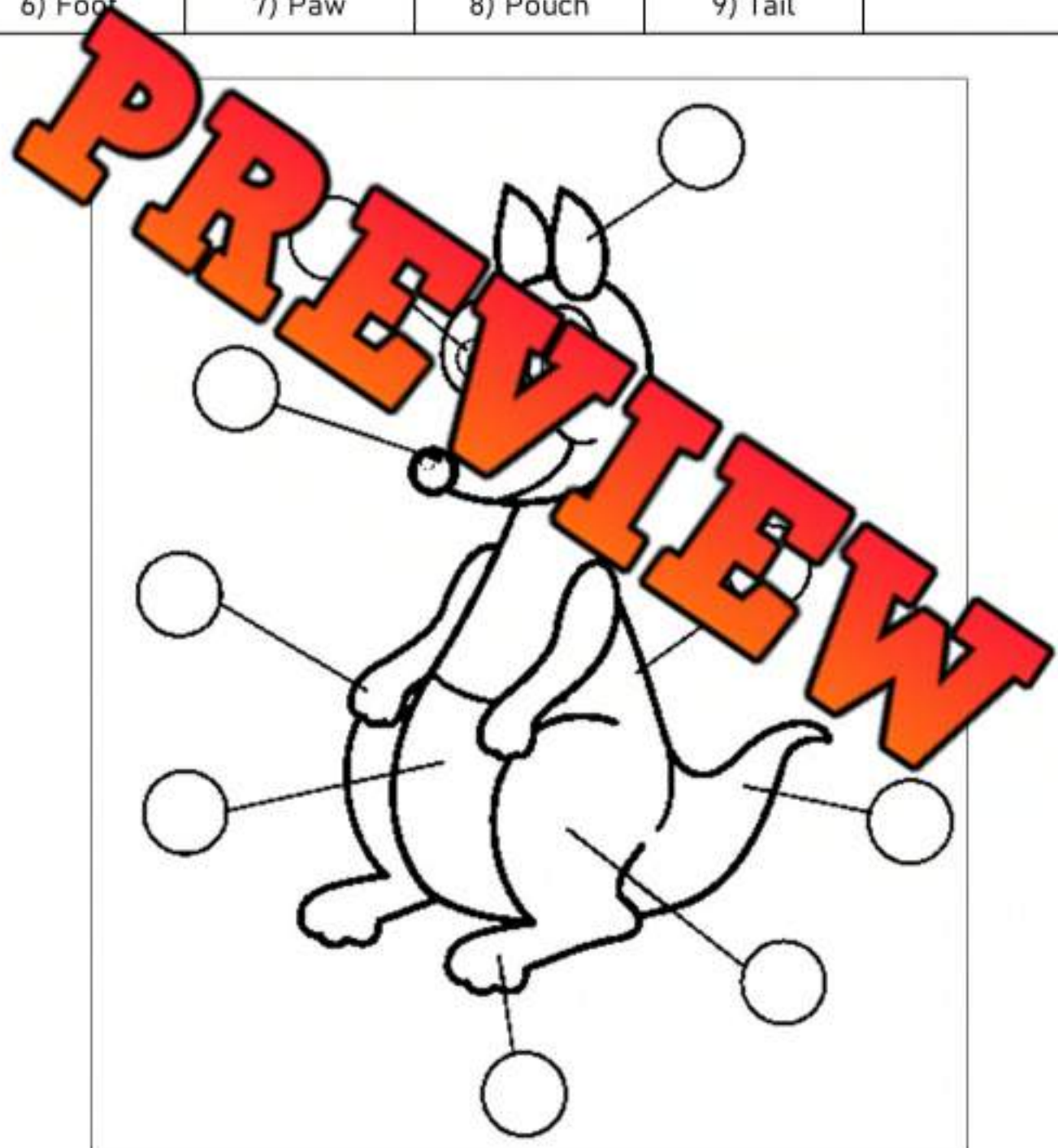
Use your research to write a paragraph about your animal

|                               |
|-------------------------------|
| <hr/> <hr/> <hr/> <hr/> <hr/> |
|-------------------------------|

# Animal Body Parts

**Questions** Label the kangaroo's body parts. Then colour the kangaroo

|         |        |          |         |         |
|---------|--------|----------|---------|---------|
| 1) Ear  | 2) Eye | 3) Back  | 4) Leg  | 5) Nose |
| 6) Foot | 7) Paw | 8) Pouch | 9) Tail |         |





# Animal Body Parts

**Questions**

Label the whale's body parts. Then colour the whale.

|                 |               |          |                 |
|-----------------|---------------|----------|-----------------|
| 1) Blowhole     | 2) Dorsal Fin | 3) Ear   | 4) Eye          |
| 5) Pectoral Fin | 6) Fluke      | 7) Mouth | 8) Belly Pleats |



## Indigenous Methods for Classifying Living Things

Indigenous people have been classifying living and non-living things for a long time. One way they classified living things is whether they are edible or inedible.

**Edible Living Things** – Plants and animals we can eat safely

**Inedible Living Things** – Plants and animals that are unsafe to eat

Direction: Circle whether the living thing is edible or inedible

PREVIEW



Edible

Inedible



Edible

Inedible



Edible

Inedible



Edible

Inedible



Edible

Inedible



Edible

Inedible



Edible

Inedible



Edible

Inedible



Edible

Inedible

# Names of Common Plants

**Matching**

Draw a line matching the picture of the plant to its name

Sunflower ●

Maple ●

Mushroom ●

Daisy ●

Evergreen Tree ●

Tulip ●

Dandelion ●



**PREVIEW**



# Scavenger Hunt - Finding Common Plants

## Directions

Look around your school yard for the common plants below.  
Put a check if you find the plant.

☐☐☐

Dandelion

Grass



Daisy

☐

Clover

☐

Buttercup

☐

Tulip

☐

Orchid

☐

Thistle

☐

Maple Tree

☐

Yarrow

☐

Ivy

# Sorting Common Plants

**Directions**

Circle the examples of the common plant types below

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shrubs   |                                                                                                     |
| Trees    |                                                                                                |
| Creepers |                                                                                          |
| Climbers |                                                                                          |
| Herbs    |       |



# Creeper or Climber

**Directions**

Circle the examples of the common plant types below



|         |         |
|---------|---------|
| Creeper | Climber |
| Melon   |         |



|           |         |
|-----------|---------|
| Creeper   | Climber |
| Grapevine |         |



|                |         |
|----------------|---------|
| Creeper        | Climber |
| Zucchini Plant |         |



|                    |         |
|--------------------|---------|
| Creeper            | Climber |
| Passionflower Vine |         |



|         |         |
|---------|---------|
| Creeper | Climber |
| Pumpkin |         |



|          |         |
|----------|---------|
| Creeper  | Climber |
| Cucumber |         |



|            |         |
|------------|---------|
| Creeper    | Climber |
| Watermelon |         |



|              |         |
|--------------|---------|
| Creeper      | Climber |
| Bitter Gourd |         |



|            |         |
|------------|---------|
| Creeper    | Climber |
| Strawberry |         |



# Our Basic Needs

Animals need food, water, air, and a shelter to live in to survive. We get these 4 basic needs from our environment.



**Directions** How do you meet your basic needs below? Write and draw

**Food** – What foods do you like to eat?

**Water** – When do you drink drinking water?

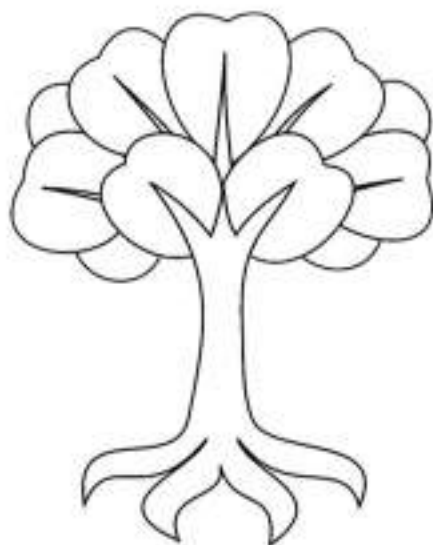
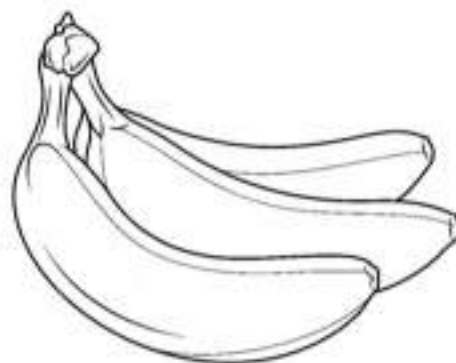
**Air** – How do you get fresh air? Are there trees on

**Shelter** – Describe your shelter (house, apartment, condo)

# Our Basic Needs

**Directions**

Colour and circle the basic things you need to survive



# Caring For a Pet



## Questions

Answer the questions below about caring for a pet

1) What 4 things do all animals need?

1)

2)

3)

4)

2) What should you do to take care of your pet?

|       |
|-------|
| _____ |
| _____ |
| _____ |

3) How will you make sure your pet has water to drink?

|       |
|-------|
| _____ |
| _____ |
| _____ |

4) Where will your pet live so they can keep warm and safe?

|       |
|-------|
| _____ |
| _____ |
| _____ |



## Meeting Our Needs - Using Tools

### Meeting Our Needs

Humans meet their needs by using tools. We need to eat, breathe, drink, and have shelter to survive. Here is how we use tools to meet these needs.



**Food** – Tools are used for food in many ways. We use knives to cut our food. We use shovels to plant crops that we eat. We hunt animals using tools.

**Water** – We use tools to dig into the ground so we can get groundwater to drink. We also use tools to make filters that make our water clean.



**Shelter** – We use tools like hammers, drills, and saws.

**Making Connections** Which tools do you use for the three needs below?

|         |  |
|---------|--|
| Food    |  |
| Water   |  |
| Shelter |  |

**Draw**

Draw a tool that is used to meet each of the needs below

| Food | Water | Shelter |
|------|-------|---------|
|      |       |         |

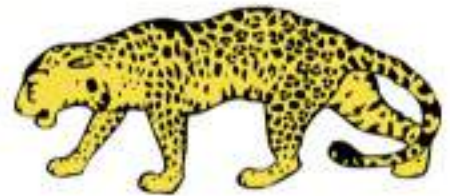
# How Do I Move?

**Matching**

Draw a line from the movement to the animals



Fly



Jump



Swim



Galop



Crawl



Walk/Run





# Animals - Life Processes

## Life Processes

All animals need to eat, sleep, breathe, grow, and drink to survive.

How animals do each of these life processes is different.



### Dogs

Your dog sleeps more than you. Adult dogs sleep an average of 14 hours a day. Dogs breathe more than humans. They breathe about 23 times per minute which is more than the average person. Dogs are like humans as they grow fast when they are young and stop growing as adults. Both humans and dogs need water.

## Activities

1) Count how many breaths you take in one minute.

2) How many hours of sleep do you get a night?

## Yes/No

Is the answer yes or no?

|                                                                 |     |    |
|-----------------------------------------------------------------|-----|----|
| 1) Dogs sleep longer than most humans                           | Yes | No |
| 2) All living things breathe, eat, sleep, grow, and drink water | Yes | No |
| 3) Some animals can live without eating                         | Yes | No |
| 4) Dogs and humans grow more when they are babies               | Yes | No |
| 5) Human adults grow a lot                                      | Yes | No |



## Experiment - Designing a Zoo Enclosure

### Research Question

What do lions need to survive?

A zoo just got one lion. You've been hired to build an enclosure for the lion.



### Materials

What do we need for our activity?

- 1) Cardstock
- 2) A box - or other small box
- 3) Pipe cleaners
- 4) Toothpicks or wooden skewers
- 5) Straws
- 6) Construction paper



### Method

How do we complete the experiment?

- 1) Research what a lion zoo enclosure looks like
- 2) Write down things on the backside of the page that you want to include in your enclosure
- 3) Write down what a lion needs to survive
- 4) Draw a plan of your zoo enclosure
- 5) Complete the checklist to make sure the lion has everything it needs
- 6) Begin making the model of your zoo enclosure
- 7) Complete the extension activity - math connection

# Experiment - Designing a Zoo Enclosure

**Planning**

Answer the questions below



1) What things do lions and other animals need to survive?

|  |
|--|
|  |
|  |
|  |
|  |
|  |
|  |

2) What will you put in the enclosure so that the lion can survive?

Draw the things

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

3) What could you put in the enclosure so that the lion has fun?

Draw the things

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**STEAM - Designing a Zoo Enclosure****Draw**

Draw a plan of your enclosure from a bird's eye view

**PREVIEW**



# STEM - Designing a Zoo Enclosure

Materials are not free! How many materials did you use? Find out how much your enclosure cost to make.

Math

Answer the questions below



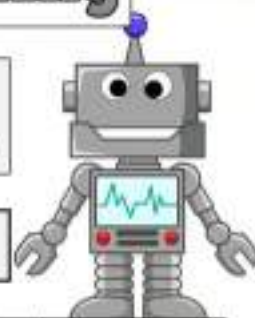
| Material        | Cost              |
|-----------------|-------------------|
| Pipe Cleaners   | \$1 each          |
| Cardboard Boxes | \$5 each          |
| Clay            | \$1 for one piece |
| Toothpicks      | \$1 each          |
| Wooden Dowels   | \$2 each          |
| Straws          | \$1 each          |
| Pieces of Paper | 2 each            |

How many of each material did you use? Write the number below.

| Material          | Number Used | Cost |
|-------------------|-------------|------|
| Pipe Cleaners     |             |      |
| Cardboard Boxes   |             |      |
| Clay              |             |      |
| Toothpicks        |             |      |
| Wooden Dowels     |             |      |
| Straws            |             |      |
| Pieces of Paper   |             |      |
| <b>Total Cost</b> |             |      |

# STEM - Working at the Zoo - Coding

Rob is a robot that works at the zoo. The staff needs your help to program him to get his work done. Write commands for Rob to do.

**Zoo**

Use this map to write code on the next page





**STEM - Working at the Zoo - Coding****Commands** – use arrows and numbers to fill in the codeMove  \_\_\_\_\_, 4 times, then move  \_\_\_\_\_, 2 times**Zoo**

Tell Rob where to go. He always starts in his robot station

1) Rob needs to check on the bears and then feed the eagles



Move \_\_\_\_\_ times, then move \_\_\_\_\_, \_\_\_\_\_ times,

Move \_\_\_\_\_, \_\_\_\_\_ times, then move \_\_\_\_\_, \_\_\_\_\_ times.

2) Rob needs to feed the snakes and then go to the bathroom.



Move \_\_\_\_\_, \_\_\_\_\_ times, then move \_\_\_\_\_, \_\_\_\_\_ times,

Move \_\_\_\_\_, \_\_\_\_\_ times, then move \_\_\_\_\_, \_\_\_\_\_ times.

3) Rob needs to make more popcorn, then check on the monkeys, and then feed the lion.



Move \_\_\_\_\_, \_\_\_\_\_ times,

Move \_\_\_\_\_, \_\_\_\_\_ times, then move \_\_\_\_\_, \_\_\_\_\_ times,

Move \_\_\_\_\_, \_\_\_\_\_ times, then move \_\_\_\_\_, \_\_\_\_\_ times.



# Basic Needs of Plants

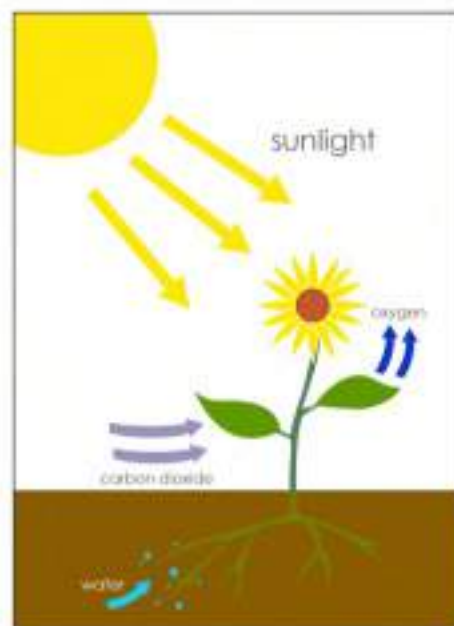
## What Do Plants Need To Survive?

Plants need certain things to live and grow:

**light, water, air, space, and warmth.**

### Light

Without light, plants will starve. Plants need light so they can make their own food.



### Water

Plants need water to live. Water is all around the plant. Water moves from the roots of the plant, up the stem, and to the leaves.

### Air

Plants need air to make food. They use the carbon dioxide in the air to make yummy sugars and starches for the plant to use.

### Space

All plants need space to grow. The leaves on branches will not grow without room. The roots also need space to grow.

### Warmth

Some plants like the cold, while others can survive in the desert. All plants need some heat in order to live. If the plant gets too cold, it will shut down.



# Basic Needs of Plants

## Question

Answer the question below

What are the 5 basic survival needs for a plant?

1)

2)



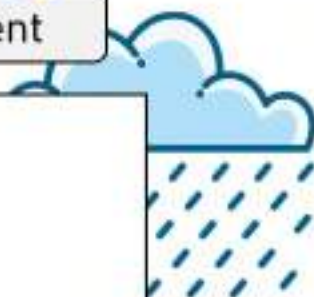
## True or False

Circle whether the statement is true or false

|                                                         |      |       |
|---------------------------------------------------------|------|-------|
| 1) Light is needed for plants to create their own food  | True | False |
| 2) Plants can grow in any temperature                   | True | False |
| 3) Cedar trees can survive in cold temperatures         | True | False |
| 4) Plants need space for their leaves and roots to grow | True | False |
| 5) All plants need some heat                            | True | False |

## Draw

Draw a picture of a plant in a healthy environment



# Experiment - Basic Needs of Plants

## Research Question

What do plants need to survive?

Will plants survive in any environment? Will seeds grow better in the dark or in the light? Will they grow better with water or without?



## Materials

What do we need for our experiment?

- 1) 6 Small cups to plant seeds
- 2) Soil
- 3) Water
- 4) Fridge
- 5) Shredded paper
- 6) Seeds - lettuce, broccoli, and cauliflower germinate the fastest



## Method

How do we complete the experiment?

- 1) Fill 5 cups with soil
- 2) In the 6<sup>th</sup> cup, do not add soil. Instead add shredded paper
- 3) Add your seeds to the soil, about 2 cm deep (the width of the seed)
- 4) In one of the cups with soil, add a lot of seeds (about 10)
- 5) Place one cup in a closet, where it won't get sun
- 6) Place another cup in the fridge, where it is cold
- 7) Place three cups in a window where it will get the most sun. One of these cups should be the one with a lot of seeds and one should be the shredded paper.
- 8) Water each of the cups two times a day. Do not water one of the two cups that are in the window (you should water the one cup with a lot of seeds)
- 9) Monitor the results by checking the cups each day

## Hypothesis

In which cup will the seed(s) grow the fastest?

| Cup 1<br>In the Closet | Cup 2<br>In the Fridge | Cup 3<br>A lot of Seeds | Cup 4<br>Window with Water | Cup 5<br>Window no Water | Cup 6<br>Shredded Paper |
|------------------------|------------------------|-------------------------|----------------------------|--------------------------|-------------------------|
|                        |                        |                         |                            |                          |                         |



# Experiment - Basic Needs of Plants

**Observations**Have any of the seeds sprouted? Put a ☒ or an ☐

| Day | Cup 1 | Cup 2 | Cup 3 | Cup 4 | Cup 5 | Cup 6 |
|-----|-------|-------|-------|-------|-------|-------|
| 1   |       |       |       |       |       |       |
| 2   |       |       |       |       |       |       |
| 3   |       |       |       |       |       |       |
| 4   |       |       |       |       |       |       |
| 5   |       |       |       |       |       |       |
| 6   |       |       |       |       |       |       |
| 7   |       |       |       |       |       |       |
| 8   |       |       |       |       |       |       |
| 9   |       |       |       |       |       |       |
| 10  |       |       |       |       |       |       |
| 15  |       |       |       |       |       |       |
| 20  |       |       |       |       |       |       |

**Results**

What do plants need to grow?

---

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---

# Investigating Plants



**Directions** Find a plant and investigate it by filling in the table below

| Draw the Plant | Attributes   | Circle the Options that Apply |
|----------------|--------------|-------------------------------|
|                | Size         | Small Medium Large Thick Thin |
|                | Colour       | Green Blue Yellow Red Brown   |
|                | Shape        | Circles Pointed Squares       |
|                | Common Parts | Leaves Stem Seeds Bulb        |

**Writing** Describe the plant by using the words you circled above

|                               |
|-------------------------------|
| <hr/> <hr/> <hr/> <hr/> <hr/> |
|-------------------------------|

# Parts of a Plant

**Diagram**

Label the parts of the plant below and then colour the picture

Plants have 5 main parts that allow them to meet their basic needs. Each part needs to be working for the plant to grow and survive.

**Word Bank**

Stem

Roots

Flower

Leaf

Seeds





## Lab - Water Travels Through a Plant

### Research Question

What are we learning more about?

How does water travel through a plant? If we put coloured water in a glass with a leaf that has a stem, will the water travel up the stem and into the leaf?

### Hypothesis

What do you think will happen?

### Materials

What do we need for our experiment?

- Leaf with a stem
- Scissors
- Clear cups
- Water
- Red food colouring



### Procedure

What do you need to do?

1. Fill your cup 1/3 of the way full of water
2. Put your leaf into the cup. Use a leaf with a lightly coloured stem
3. Add red food colouring to the water
4. Observe the changes in the leaf and record them

**Lab - Water Travels Through a Plant****Diagram**

Draw a diagram of your leaf in the water. Label the stem and leaf

**Observations**

What do you see?

| Day | What do you see? |
|-----|------------------|
| 1   |                  |
| 2   |                  |
| 3   |                  |
| 4   |                  |
| 5   |                  |

# Describing Plants

Plants can also be described using the same characteristics we describe animals. The tulip is described below.



| Size                                                                                       | Colour                                                                                | Shape                                                                                            | Common Parts                                                                                                            |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Short</li> <li>• Thin</li> <li>• Large</li> </ul> | <ul style="list-style-type: none"> <li>• Green stem</li> <li>• Pink flower</li> </ul> | <ul style="list-style-type: none"> <li>• Bell shaped flower</li> <li>• Pointed leaves</li> </ul> | <ul style="list-style-type: none"> <li>• Stem</li> <li>• Petals</li> <li>• Bulb (no seeds)</li> <li>• Leaves</li> </ul> |

Describe the sunflower using the words that describe the sunflower



Sunflower

|              |          |        |        |           |        |
|--------------|----------|--------|--------|-----------|--------|
| Size         | Small    | Medium | Large  | Thick     | Thin   |
| Colour       | Green    | Blue   | Yellow | Red       | Brown  |
| Shape        | Triangle | Circle | Square | Rectangle | Square |
| Common Parts | Leaves   | Petals | Stem   | Bulb      | Roots  |

Writing Describe the sunflower by using the words you circled above

---



---



---



---



# Describing Plants

**Describe**

Circle the words that describe the maple tree

|                                                                                                 |               |                                         |
|-------------------------------------------------------------------------------------------------|---------------|-----------------------------------------|
| <br>Maple Tree | <b>Size</b>   | Small   Medium   Large   Thick   Thin   |
|                                                                                                 | <b>Colour</b> | Orange   Blue   Yellow   Red   Brown    |
|                                                                                                 | <b>Shape</b>  | Triangles   Circles   Pointed   Squares |
|                                                                                                 |               | Leaves   Petals   Stalk   Seeds   Bulb  |

**Writing**

Describe the maple tree using the words you circled above

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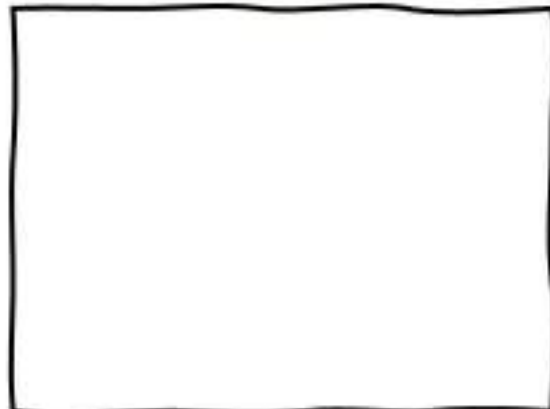
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**Colour and Draw**

Colour the maple leaves and draw a maple leaf



# Sorting Plants

## Questions

Answer the questions below

1) Circle the plants that are tall



2) Circle the plants that have round flowers



3) Circle the plants that have leaves



4) Circle the plants that are short



5) Circle the leaves with more than 4 points.





# Living Things - Activities



## Word Search

Find the words from the word bank

|        |        |           |             |       |
|--------|--------|-----------|-------------|-------|
| Living | Plants | Animals   | Grow        | Dog   |
| Cat    | Pet    | Sunflower | Environment | Needs |



## Word Scramble

Unscramble the words from the word bank



|           |  |             |  |
|-----------|--|-------------|--|
| PTNALS    |  | GORW        |  |
| SONWFEULR |  | CTA         |  |
| PTE       |  | LVNIIG      |  |
| DGO       |  | EMEVNIORNNT |  |
| NDEES     |  | AALIMNS     |  |



# Plants and Animals in Forests

Forests are like big, green homes filled with lots of plants and animals. Most animals on Earth live in forests because they have everything these animals need. Forests have trees to live in or under, plants to eat, and plants to hide and rest in.

## Animals Living in Forests:

- Deer
- Bears
- Squirrels

## Plants Living in Forests:

- Pine Trees
- Wild Roses
- Blueberries
- Ferns
- Spruce Trees
- Mosses
- Clover
- Birch Trees

## Directions

Do plants and animals live in forests?



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No

# Plants and Animals in Prairies

Prairies are wide, open spaces where the ground is mostly flat. They have a lot of grass and not many trees. The prairies are great homes for plants because they have good soil to grow in.

Without tall trees to hide in, many animals living in the prairies become nocturnal, so they can move around at night. Other prairie animals burrow down into the ground to hide.

## Animals Living on the Prairies:

- Coyotes
- Hawks
- Fox
- Deer
- Rabbits
- Snakes



## Plants Living on the Prairies:

- Prairie Grass
- Sunflowers
- Daisies
- Clover
- Cacti
- Sagebrush
- Wild Lilies
- Violets



## Directions

Draw a picture of the prairies with plants and animals. Label the plants and animals.



## Plants and Animals in Lakes/Rivers

Lakes and rivers are special places where lots of animals and plants love to live. The water gives them what they need to live, like food and a place to make a home.

Here are some animals that love living there:

- Beavers: They use the wood from trees to make homes called dams.
- Ducks: They swim on top of the water and find food there.
- Frogs: They live near the water because they lay their eggs there.
- Otter: They love swimming and find lots of food in the water.
- Mosquitoes and Dragonflies: They lay their eggs in the water.

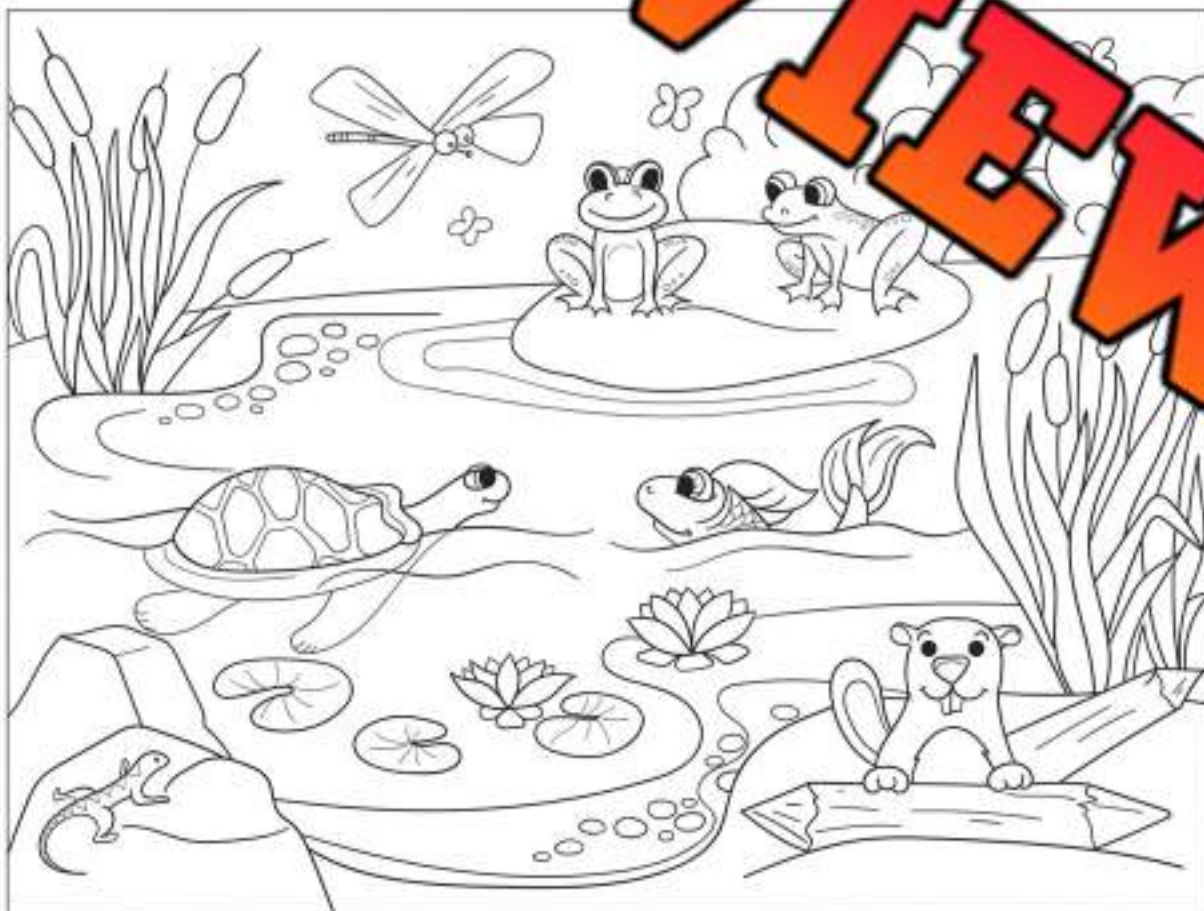
Here are some plants that love growing there:

- Water Lilies: They grow on the water.
- Cattails: They grow at the water's edge.
- Algae: This is a plant that floats in the water.
- Willow Trees: They grow near the water.



### Directions

Colour the lake below with the animals/plants you see.



|            |
|------------|
| Lion       |
| Frog       |
| Dragonfly  |
| Butterfly  |
| Beaver     |
| Fish       |
| Cattail    |
| Water Lily |
| Eagle      |
| Butterfly  |
| Algae      |
| Turtle     |
| Maple Tree |



# Plants and Animals on Mountains

**Mountains** are big and tall, and they are home to many plants and animals. These animals and plants like mountains because they have lots of places to hide and find food. Plus, the high up air is cooler, which some animals and plants really like!

Here are some **animals** that live in the mountains:

- **Mountain Goats:** They can climb steep rocks to stay safe.
- **Grizzly Bears:** They find lots of berries and fish to eat.
- **Big Horn Sheep:** They like the tall grasses on the mountain.
- **Lynx:** They hunt smaller animals on the mountain.
- **Snow leopards:** They blend in with the snow.

Here are some **plants** that grow there:

- **Spruce Trees:** They can handle the cold.
- **Moss:** It grows on rocks and trees.
- **Bearberries:** They provide food for many animals.
- **Ferns:** They grow on the sides of the mountain.
- **Berries:** Berries like blueberries provide food.



## Directions

Do the plants and animals live on mountains?



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



snowshoe hare

Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No

# Food From Our Environment

A healthy environment gives animals food to meet their needs. Fruits and vegetables can grow in a healthy environment. These plants give animals energy.

**Directions**

Circle the plants you like to eat

**Directions**

Circle the animal products you like

|                |             |                 |               |
|----------------|-------------|-----------------|---------------|
| <b>Chicken</b> | Eggs        | Chicken Nuggets | Chicken Wings |
| <b>Cows</b>    | Milk        | Steak           | Hamburger     |
| <b>Pigs</b>    | Bacon       | Sausage         | Pork Chops    |
| <b>Fish</b>    | Fish Sticks | Salmon          | Tuna          |



# Animals Finding Food

**Questions**

Answer the questions below

1) Circle the things a squirrel eats



2) Circle the things a frog eats



3) Circle the things a fox eats



4) Circle the things an eagle eats



5) Circle the things a bear eats

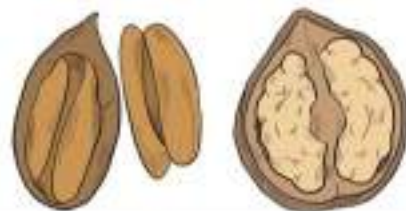




# Animals Eating Nuts

Nuts are an important food for many animals. Nuts give animals a lot of energy. Squirrels, chipmunks, mice, foxes, raccoons, deer, and even black bears need nuts to survive.

Nuts are seeds of plants. If we didn't have these nuts, many of these animals would starve!



Fill in the Blanks

What is the missing word?



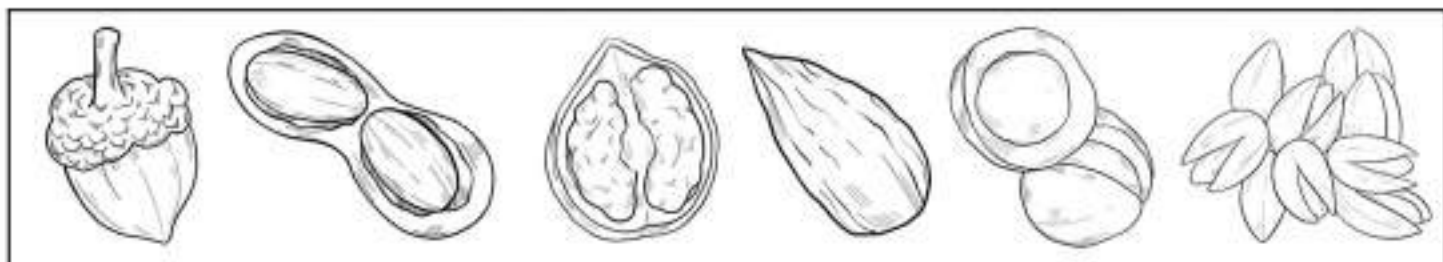
| Word Bank |       |      |
|-----------|-------|------|
| Starve    | Seeds | Nuts |



- 1) Nuts are \_\_\_\_\_.
- 2) Squirrels, chipmunks, and \_\_\_\_\_ need nuts to survive.
- 3) Without nuts, many animals would \_\_\_\_\_.
- 4) A healthy environment has a lot of \_\_\_\_\_ animals.
- 5) Even black \_\_\_\_\_ need nuts to survive!

Colour

Colour the nuts below



# How Animals Eat

## Ways Animals Eat

Animals have different ways of eating their food. Check them out below:

| Way to Eat       | What it Means                       | Example Animals            |
|------------------|-------------------------------------|----------------------------|
| Cracking         | Breaking things into smaller pieces | Birds, squirrels           |
| Ripping          | Ripping food apart                  | Lions, wolves              |
| Strangling       | Wrapping food until it stops moving | Snakes                     |
| Chewing          | Breaking food with teeth            | Humans, cows, deer, horses |
| Swallowing whole | Swallowing food whole               | Frogs, whales, snakes      |

## How Animals Eat

- Birds use their beaks to crack open seeds.
- Lions use their strong and sharp teeth to tear their food up.
- Snakes like to wrap around their food and squeeze it until it stops moving, which is called strangling. Then they swallow the food whole.
- Humans and cows chew their food, using their teeth to break it into small pieces before swallowing.
- Some animals, like frogs and whales, can swallow their food whole!





# How Animals Eat

**Directions**

Circle how the animal eats



Cracking      Chewing



Strangling      Tearing



Cracking      Tearing



Cracking      Tearing



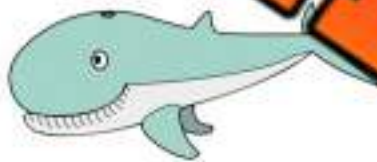
Tearing      Chewing



Chewing      Tearing



Swallowing Whole      Chewing



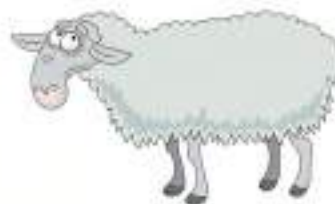
Swallowing Whole      Chewing



Swallowing Whole      Chewing



Cracking      Tearing



Tearing      Chewing



Cracking      Tearing



## Story - Plants and Animals - Allergies

### Living With Allergies

Once upon a time, there was a brave little boy named Billy. Billy loved playing outside, exploring the woods behind his house, and taking care of his pet bunny, Fluffy.



One afternoon, Billy went to play in the woods. He was running through the trees when he found a patch of flowers. They were the brightest blue he had ever seen. He reached down to pick one, but when he touched it, his hand got itchy. "Hmm, that's strange," he thought, but he shrugged and kept playing.



Not long after, Billy went back home to play with Fluffy. He loved how soft Fluffy's fur was. But when he petted Fluffy, his eyes started to itch and water, and he started sneeze. "Achoo! Achoo! Achoo!" Billy was confused. "Why am I sneezing so much? We were just playing."

Billy told his mom about the itchy hands and sneezing. His mom took him to see Dr. Friendly, the family doctor. Dr. Friendly told him, "Your superhero body is a little confused. It thinks the flower you touched and the fur are 'bad guys.' That's why you're sneezing and itching. This is called an allergy."

Billy was a little sad. He didn't want to stop playing with the flowers or Fluffy. But Dr. Friendly gave him good news. He said, "Don't worry, Billy. We can help your body understand that the flowers and Fluffy aren't 'bad guys.' I'll give you some special medicine that will calm your superhero body down."

So Billy took the medicine Dr. Friendly gave him, and it worked! His hand didn't itch when he touched the flowers, and he could pet Fluffy without sneezing. Billy learned that it's okay to have allergies, and with a little help, you can still do the things you love. And Billy, Fluffy, and the blue flowers lived happily ever after.

**Story - Plants and Animals - Allergies****Write**

Answer the questions below

1) Do you know of anyone allergic to something. Write about it.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2) What things have you seen that people are allergic to? Draw or write.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Yes/No**

Is the answer yes or no?

1) Kids with allergies will sneeze or get itchy

Yes

No

2) Our bodies make us itchy because it thinks flowers are bad

Yes

No

3) Medicine does not help people with allergies

Yes

No

4) Many kids are allergic to animal fur

Yes

No

5) Billy was only allergic to flowers

Yes

No



# Plants and Animals - Allergies

**Directions** Is the picture something people are commonly allergic to?



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



## Harmful Living Things - Plants and Animals

### Plants That Can Hurt Us

Some plants can make us itch or feel sick. Here are some:

- Poison Ivy: This plant has three leaves and can make your skin itchy and red.
- Poison Oak: This plant can also make you itch. Its leaves look like leaves.
- Stinging Nettle: This plant has tiny sharp bits that can sting you and make you itch.
- Bad Berries: Some berries can make you sick if you eat them. Always ask a grown-up first.



Remember, don't touch or eat plants unless you know it's safe!

### Animals That Can Hurt

Some animals can hurt us if they're scared or if we're too close. Here are some:

- Bees and Wasps: Their stings can hurt! Some people get really sick from their stings.
- Spiders: Some spiders can bite and make you feel bad. Don't touch spiders.
- Snakes: Some snakes can bite and make you very sick. Leave snakes alone.
- Wild Dogs or Cats: These animals might bite or scratch if they're scared. Let grown-ups handle them.

Remember, look at wild animals but don't touch them. Tell a grown-up if you see a hurt or lost animal.



**Harmful Living Things - Plants and Animals****Draw**

Draw plants and animals that could harm you

Plant

Plant

Plant

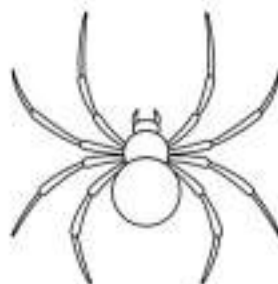
Animal

Animal

Animal

**Colour**

Colour the plants and animals that could harm you





# Healthy Environment - Clean Air

Air pollution happens when we release dirty gases or poisons into the air.

Common air pollutants are:

- Smoke from factories, airplanes, and cars
- Fumes from spray cans
- Methane from landfills



Directions: Look at the picture and decide if the picture shows clean air or air pollution



Clean Air

Air Pollution



Clean Air

Air Pollution

Clean Air

Air Pollution



Clean Air

Air Pollution



Clean Air

Air Pollution



Clean Air

Air Pollution



Clean Air

Air Pollution



Clean Air

Air Pollution



Clean Air

Air Pollution



# Clean Air From Trees and Plants

Plants keep our air clean by doing the following:

- 1) Sucking up carbon dioxide. Carbon dioxide is bad for our environment.
- 2) Making oxygen for us to breathe. Our lungs need oxygen. 1 large tree gives enough oxygen for two people.



1 tree =



=



2 trees =  
4 people

## Questions

Draw the number of trees and the number of people who could use the oxygen.

3 Trees

How many people? (Draw 2 people per tree)

5 Trees

How many people? (Draw 2 people per tree)

7 Trees

How many people? (Draw 2 people per tree)

# Shelters for Animals

All animals need shelter to survive. The shelters used by each animal are different.

- Humans – build shelters out of wood and steel
- Chipmunks – often live in holes in logs
- Owls – live in holes in trees
- Spiders – live in spiderwebs that they make
- Bears – live in dens (caves) or holes in the ground
- Ground Squirrels – live in tunnels underground



## Matching

Draw a line from the animal to their shelter





# Healthy Environment - Shelters

When we cut down trees, we destroy shelters for many animals. 80% of land animals live in forests. We need to save our forests so that our environment can stay healthy for all animals. We can save trees and forests by:

- Planting trees
- Using paper – don't waste it!
- When in a forest, stay on the path
- Borrow, share or donate books. Books have a long life, so don't throw them out
- Farming is the best way forests are cut down. Grow your own garden with fruits and vegetables

**Draw**

Draw pictures of the shelters described below.

Wood log with bugs and spiders living in it

Paper and books

Pond with the ground

Garden with fruits and vegetables



# Helping Other Living Things

**Survey** Do you help living things? Complete the survey below



|                                                    |                                     |                          |
|----------------------------------------------------|-------------------------------------|--------------------------|
| 1) Stay on the path of a forest                    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2) Feed birds in the winter (bird feeder)          | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3) Have _____ your property where animals can live | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4) Leave animals alone in the wild                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5) Don't waste _____                               | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6) Don't throw out toxic _____ or batteries        | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7) Don't throw garbage on the _____                | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8) Don't use plastic water bottles                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9) Don't put paint, oils, or grease down the drain | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10) Wash your hands so you don't spread germs      | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Write** Do you help other living things? What could you do to help them?



|                               |
|-------------------------------|
| <hr/> <hr/> <hr/> <hr/> <hr/> |
|-------------------------------|

# Misinformation - Living Things

## Misinformation

Many of the things we see about plants and animals are not true. Plants and animals (other than humans) do not speak English. Plants cannot grow through the clouds.



True/F.

Is the example from movies true or false?

|                                                              |      |       |
|--------------------------------------------------------------|------|-------|
| 1) Animals can talk to other                                 | True | False |
| 2) Animals can speak English                                 | True | False |
| 3) Humans can understand what animals are saying             | True | False |
| 4) A bean stock can grow through a cloudy sky                | True | False |
| 5) Animals have thoughts and feelings                        | True | False |
| 6) Lions like to live with tigers, hippos, birds and honey   | True | False |
| 7) Cats and dogs can live as pets together                   | True | False |
| 8) Lions protect other animals in their kingdom              | True | False |
| 9) Pandas can do kung fu                                     | True | False |
| 10) Animals can have real jobs like doctor or police officer | True | False |
| 11) Animals work together to meet their needs                | True | False |
| 12) Dogs can walk on 2 feet all day                          | True | False |
| 13) When all the humans leave, pets begin talking English    | True | False |
| 14) If you kiss a frog, it will turn into a prince           | True | False |
| 15) Bears are friendly towards humans                        | True | False |

# Coding - Animal Maze

**Directions**

Follow the code to get the dog to the doghouse

run program

|      |      |       |       |       |       |
|------|------|-------|-------|-------|-------|
| 1) → | 5) → | 9) ←  | 13) ← | 17) → | 21) → |
| 2) ↓ | 6) ↑ | 10) ↑ | 14) ↓ | 18) ↑ | 22) ↓ |
| 3) → | 7) → | 11) ← | 15) ← | 19) → | 23) → |
| 4) ↓ | 8) ↓ | 12) ↑ | 16) ↑ | 20) ↓ | 24)   |





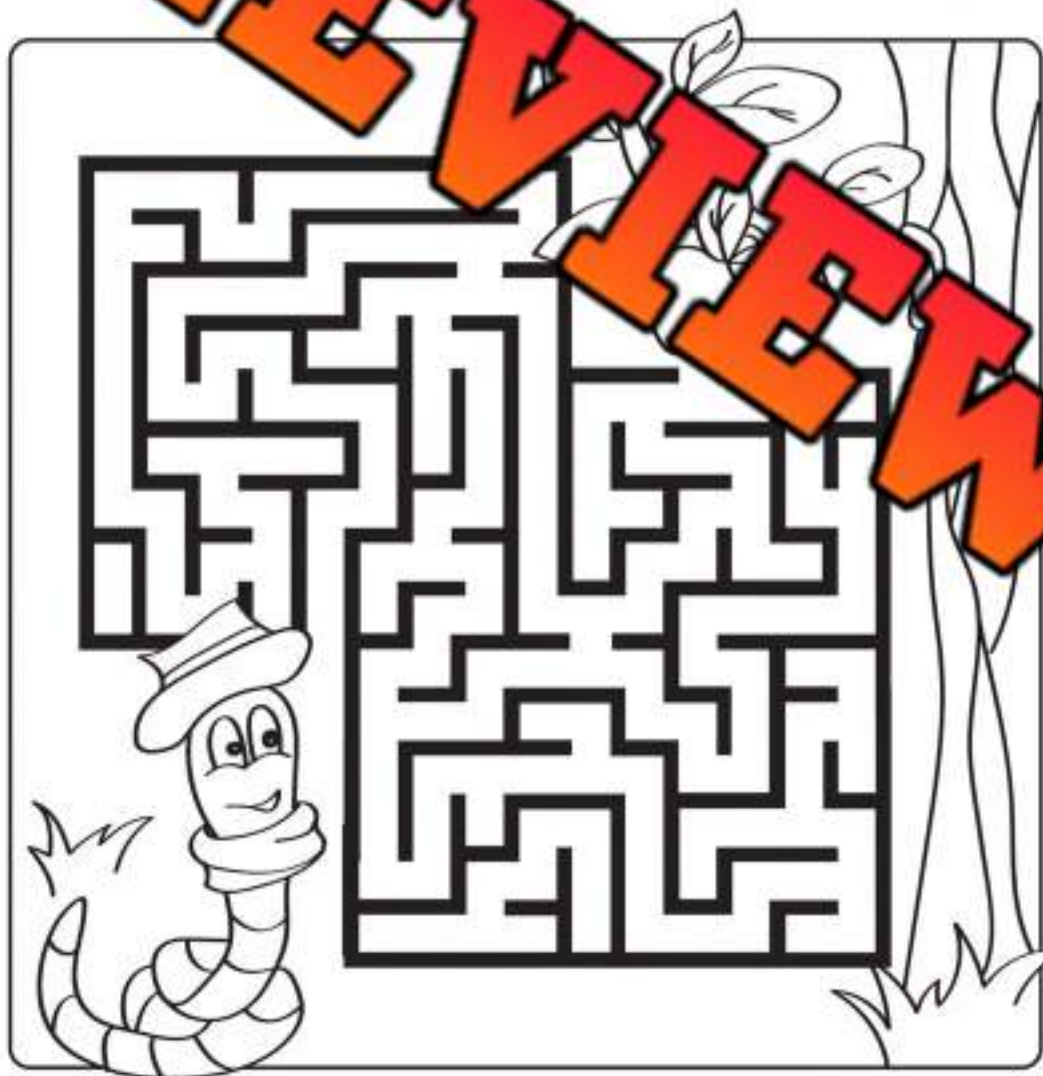
# Coding - Animal Maze

**Directions**

Draw your own arrows to get the worm to the apple

run program

|    |    |     |     |     |     |     |
|----|----|-----|-----|-----|-----|-----|
| 1) | 5) | 9)  | 13) | 17) | 21) | 25) |
| 2) |    | 10) | 14) | 18) | 22) |     |
| 3) | 7) | 11) | 15) | 19) | 23) |     |
| 4) |    | 12) | 16) | 20) | 24) |     |



# Unit Test - Living Things

## Part 1

Circle whether the thing is living or non-living



Living



Living

Non-Living



Living

Non-Living



Living

Non-Living



Living

Non-Living



Living

Non-Living

## Part 2

Answer the questions

1) Circle the animals that have tails



2) Circle the animals that have 4 legs





### Part 3

Label the parts of the plants below. Use the numbers if you can't fit the word

#### Word Bank

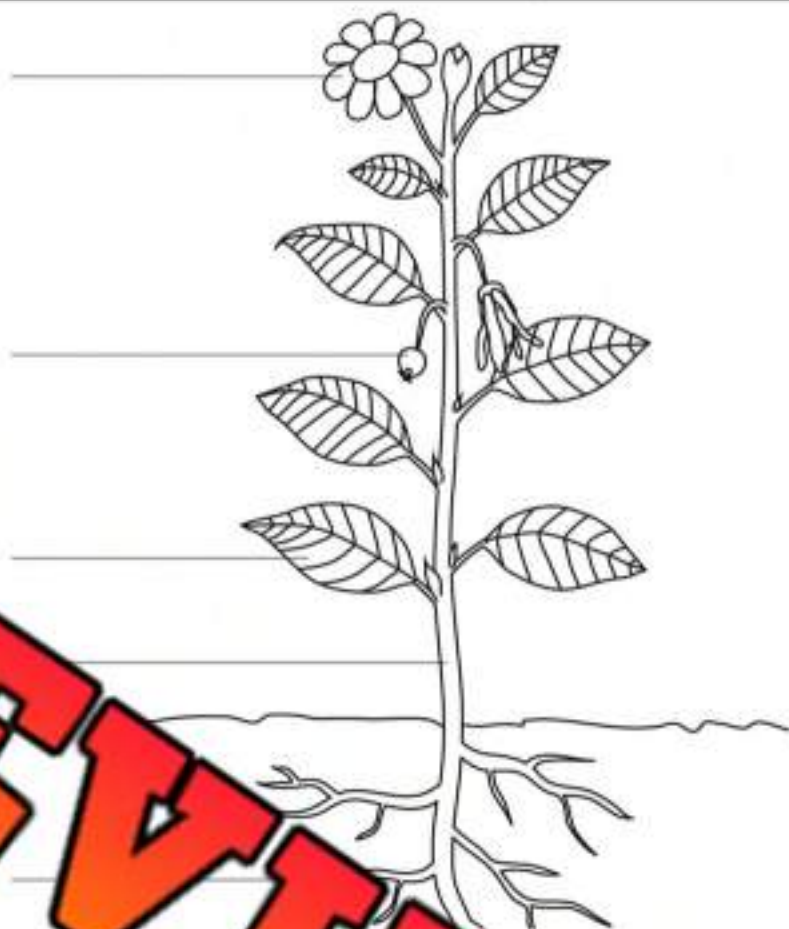
1) Stem

2) Roots

3) Flower

4) Leaf

5) Seeds



### Part 4

Where do the animals live?



Forest

Mountain



Prairie

Lake



River

Forest



River

Forest



Prairie

Mountain



Lake

Forest



Mountain

Prairie



Forest

Lake



## Part 5

Circle the basic things you need to survive



## Part 6

Answer the question

What are the 5 basic survival needs for a plant?

|    |  |
|----|--|
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |
| 5) |  |



# Google Slides Lessons Preview





# Alberta Science Curriculum Energy (Movement) Unit – Grade 1

## 3-Part Lesson Format

### Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

### WHAT IS MOVEMENT?

#### LEARNING GOAL

We are learning to tell how things move so we can talk about moving up, down, forward, backward, sideways, and toward or away from places.

### MOVEMENT DETECTIVE ACTIVITY: FIND THE DIRECTION

Read each sentence. Drag the correct letter (A, B, or C) to the empty box.

|                                          |             |             |             |   |
|------------------------------------------|-------------|-------------|-------------|---|
| 1) I jump high off the ground.           | A) Down     | B) Sideways | C) Up       | A |
| 2) I walk to the door in front of me.    | A) Forward  | B) Backward | C) Down     | B |
| 3) I slide to the right without turning. | A) Sideways | B) Forward  | C) Down     | C |
| 4) I walk closer to the park.            | A) Away     | B) Toward   | C) Backward |   |

### Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

### Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

### Consolidation - Reflection

Complete these sentences about movement. Use what you know about moving up, down, forward, backward, sideways, and toward or away.

- 1) I learned that movement means \_\_\_\_\_
- 2) One way my body can move is \_\_\_\_\_
- 3) When I slide to the left or right, I move \_\_\_\_\_
- 4) When I jump, I move \_\_\_\_\_





# Alberta Science Curriculum Energy (Movement) Unit – Grade 1

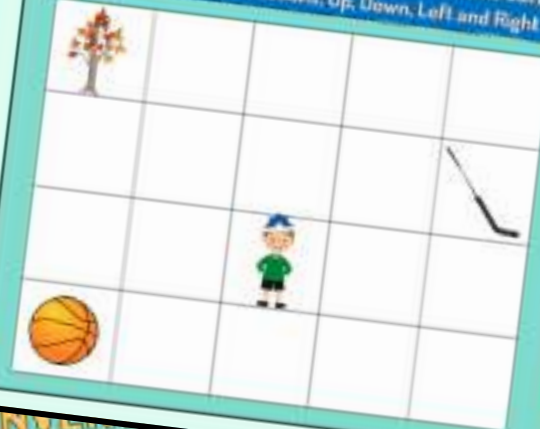
## SORTING ACTIVITY – NATURAL OR HUMAN-MADE MOVEMENT? (PLACE A ✓ IN THE CORRECT COLUMN.)

| Action                           | Natural Movement | Human-Made Movement |
|----------------------------------|------------------|---------------------|
| 1 A child riding a bike          |                  |                     |
| 2 A car driving on the road      |                  |                     |
| 3 Leaves falling from a tree     |                  |                     |
| 4 A ball kicked across the field |                  |                     |
| 5 A river flowing downhill       |                  |                     |
| 6 Trees swaying in the wind      |                  |                     |

Use this to complete the activity:

## HOW WE FOLLOW DIRECTIONS

Help the boy below how to get to the items using the four different directions: Up, Down, Left and Right.



**A B C**

1) Which direction should the boy go to get to the ball?

A) 2 squares down, then 1 square to the left

B) 1 square down, then 2 squares to the left

C) 1 square down, then 2 squares to the right

2) Which direction should the boy go to get to the Maple Tree?

A) 2 squares up, then 1 square to the left

B) 2 squares up, then 2 squares to the right

C) 2 squares up, then 2 squares to the left

3) Which direction should the boy go to get to the Hockey Stick?

A) 1 square up, then 2 squares to the right

B) 1 square up, then 2 squares to the left

C) 1 square right, then 2 squares to the up

## INVENTING THE WHEEL

Read each sentence, decide if it is true or false.

- 1) The Sumerians made the first wheel.
- 2) A car drives on four wheels.
- 3) A bike moves because its wheels turn.
- 4) The first wheel was created a long time ago.
- 5) A truck carries goods on wheels.
- 6) The Sumerians designed a round shape that could roll.

Using the Wheel

Inventing the wheel



# Alberta Science Curriculum

## Energy (Movement) Unit – Grade 1

### SORT THE OBJECTS: RUBBER OR NOT RUBBER

Drag each object to the correct box to show if it is made of rubber or not rubber.

| Rubber | Not rubber |
|--------|------------|
|        |            |



### SMOOTH OR ROUGH?

Read each sentence. Decide if the surface is smooth or rough.

- 1) A puck moves fast on ice.
- 2) Shoes grip the carpet and do not slide far.
- 3) A car drives slowly on a rocky road.
- 4) A book slides easily on a desk.
- 5) A toy car moves quickly on a glass table.

| Smooth Surface | Rough Surface |
|----------------|---------------|
|                |               |

### FAST OR SLOW?

Put a ✓ in the correct column.

| Action                          | Fast | Slow |
|---------------------------------|------|------|
| 1 A turtle walking on the grass |      |      |
| 2 A car driving on the road     |      |      |
| 3 A lion running to catch food  |      |      |
| 4 A snail moving on a leaf      |      |      |
| 5 A plane flying in the sky     |      |      |
| 6 A slug crawling on the ground |      |      |

Use this to complete the activity: 



# Workbook Preview





# Grade 1 – Science Unit

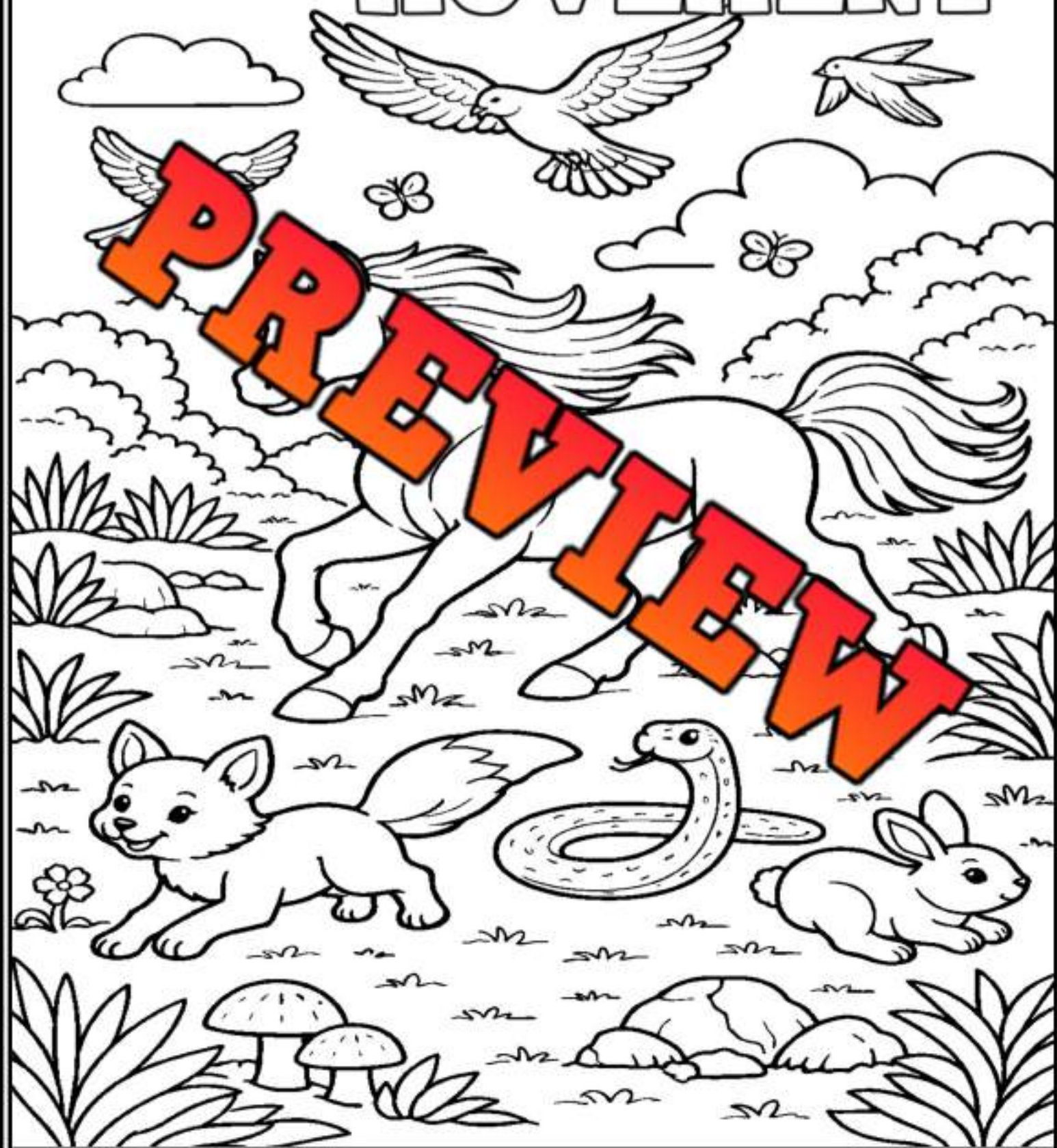
Organizing Idea Matter: Energy: Understandings of the physical world are deepened by investigating matter and energy

Guiding Question: How can movement of objects and animals be understood?

|                                            | <b>Learning Outcome</b> - Students investigate direction, pathway, and speed of moving objects and animals.                                                                                                                                                                                                 | <b>Pages</b>           |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| EM.1                                       | <ul style="list-style-type: none"><li>Directions of movement can be described as: up, down, forward, backward, sideways, toward, away from</li></ul>                                                                                                                                                        | 17, 34, 48, 54, 58, 75 |
|                                            | <p>such as: rolling, bouncing, sliding</p> <ul style="list-style-type: none"><li>Speed can be described as: fast, slow, changing, not changing</li></ul>                                                                                                                                                    |                        |
| EM.2                                       | <p>The movement of objects can be influenced by:</p> <ul style="list-style-type: none"><li>the shape of the object</li><li>the materials the object is made from</li><li>the surface texture of</li><li>the object interactions with other objects</li></ul> <p>Wheels can make objects easier to move.</p> | 49-51, 55, 59-62       |
| <b>Computer Science - Learning Outcome</b> |                                                                                                                                                                                                                                                                                                             |                        |
| CS.1                                       | Students follow instructions and relate them to outcomes.                                                                                                                                                                                                                                                   | 18-21, 35-36           |

Preview of 60 pages from  
this product that contains  
120 pages total.

# ENERGY MOVEMENT



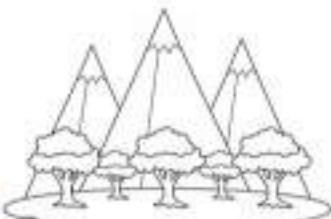


**Relative Location – Under, Over, In Front, Behind****Questions**

Circle the correct answer

1) The trees are \_\_\_\_\_ of the mountains.

- a) Under
- b) Over
- c) In Front
- d) Behind



2) The bird flew \_\_\_\_\_ the pond.

- a) Under
- b) Over
- c) In Front
- d) Behind



3) The chair is \_\_\_\_\_ the table.

- a) Under
- b) Over
- c) In Front
- d) Behind



4) The person is \_\_\_\_\_ the cash register.

- a) Under
- b) Over
- c) In Front
- d) Behind



5) The plane flew \_\_\_\_\_ the road.

- a) Under
- b) Over
- c) In Front
- d) Behind



6) The soccer field is \_\_\_\_\_ of the school.

- a) Under
- b) Over
- c) In Front
- d) Behind



7) The sun shines \_\_\_\_\_ the waterfall.

- a) Under
- b) Over
- c) In Front
- d) Behind



8) The rain falls \_\_\_\_\_ the clouds.

- a) Under
- b) Over
- c) In Front
- d) Behind



9) The mountains are \_\_\_\_\_ the tent.

- a) Under
- b) Over
- c) In Front
- d) Behind

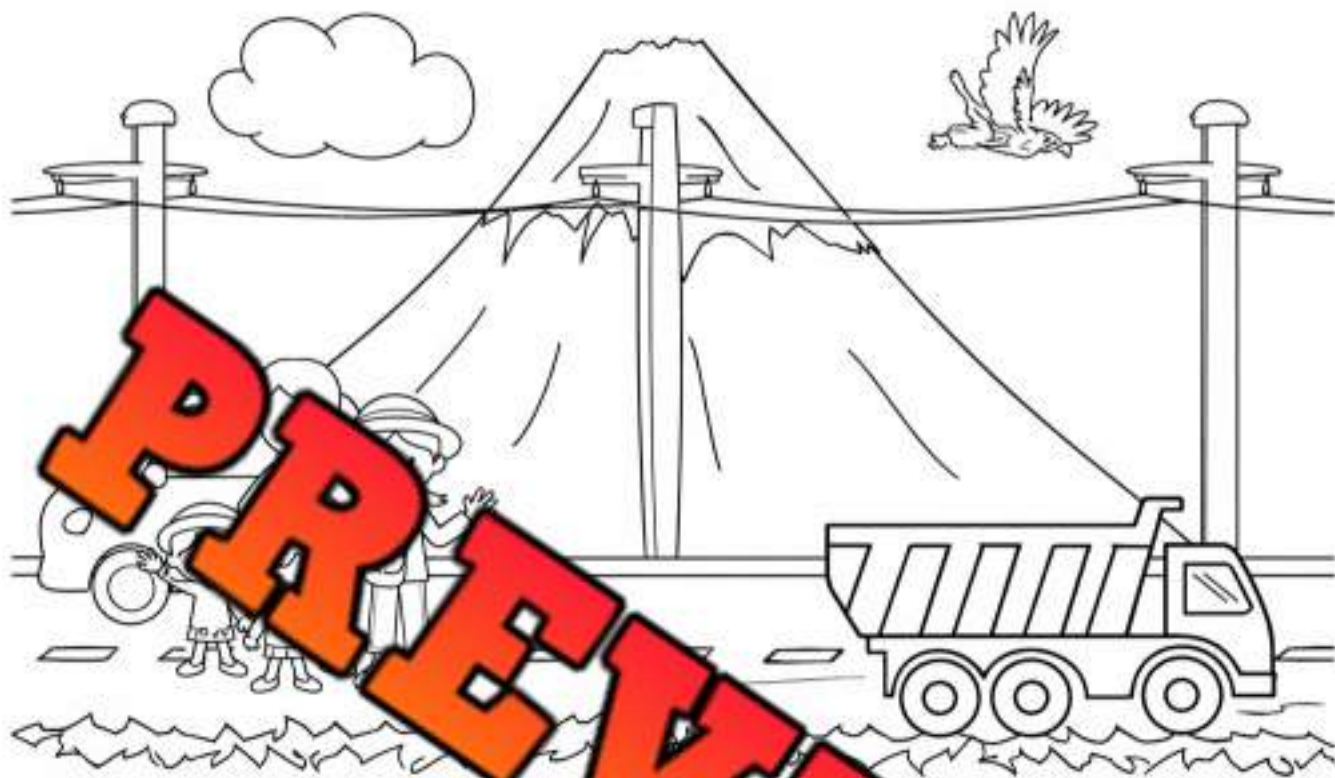


10) The boy jumps \_\_\_\_\_ the trampoline.

- a) Under
- b) Over
- c) In Front
- d) Behind



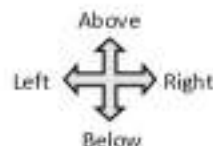


**Relative Location – Under, Over, In Front, Behind****Questions**

Answer the questions by looking at the scene above

| Questions                                   | Under, Over, In Front, Behind |
|---------------------------------------------|-------------------------------|
| 1) The truck is ____ the hawk (bird)        |                               |
| 2) The car is ____ of the power lines       |                               |
| 3) The power lines are ____ of the mountain |                               |
| 4) The hawk flies ____ the road             |                               |
| 5) The cloud is ____ the family             |                               |
| 6) The mountain is ____ the family          |                               |
| 7) The grass is ____ of the road            |                               |

# Relative Location – Above, Below, Left, Right



## Questions

Answer the questions by looking at the scene above

| Questions                           | Above, Below, Left, or Right | To the left |
|-------------------------------------|------------------------------|-------------|
| 1) The clock is _____ the light     |                              |             |
| 2) The carpet is _____ the table    |                              |             |
| 3) The light is _____ the carpet    |                              |             |
| 4) The TV is _____ of the light     |                              |             |
| 5) The bookshelf is _____ of the TV |                              |             |
| 6) The TV is _____ the TV stand     |                              |             |
| 7) The clock is _____ of the plant  |                              |             |

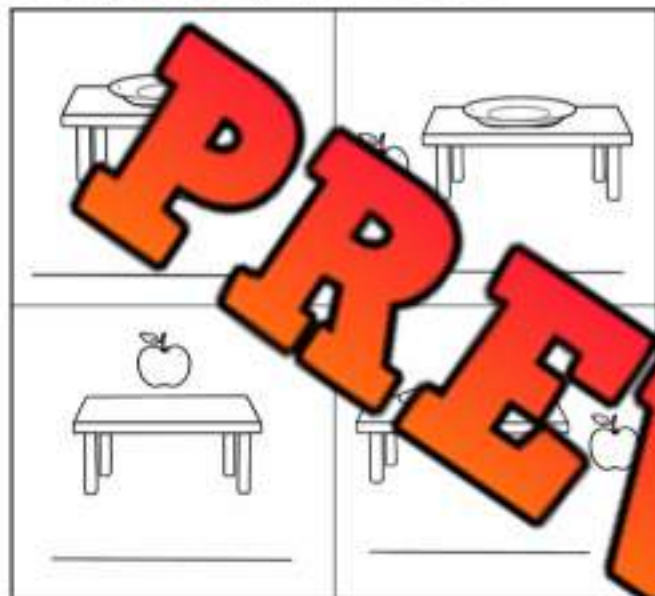
# Exit Cards

**Cut Out**

Cut out the exit cards below and have students complete them at the end of class

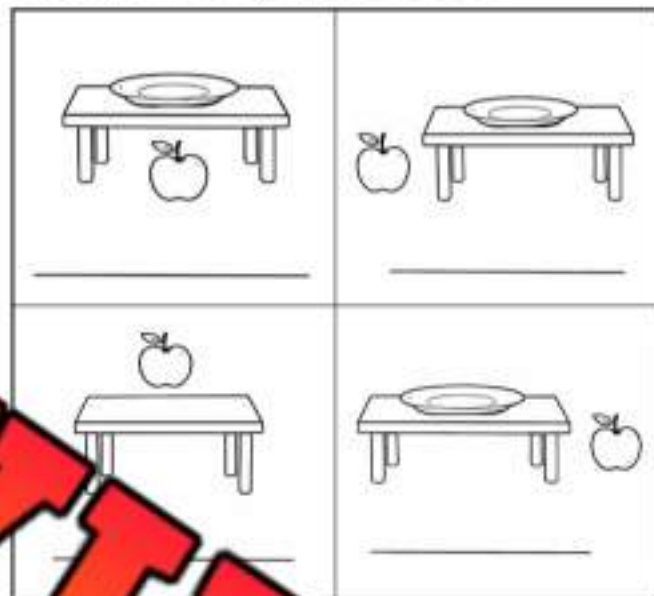
Name: \_\_\_\_\_

Mark

Where is the apple? Is it above,  
below, to the right, to the left?

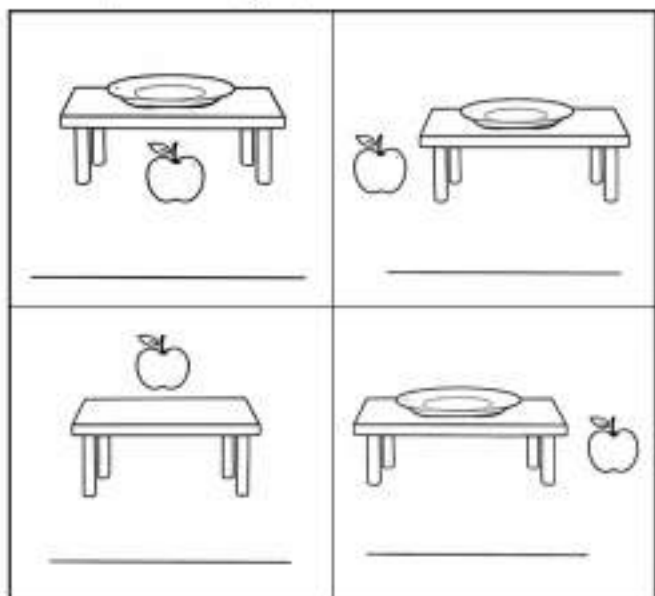
Name: \_\_\_\_\_

Mark

Where is the apple? Is it above,  
below, to the right, to the left?

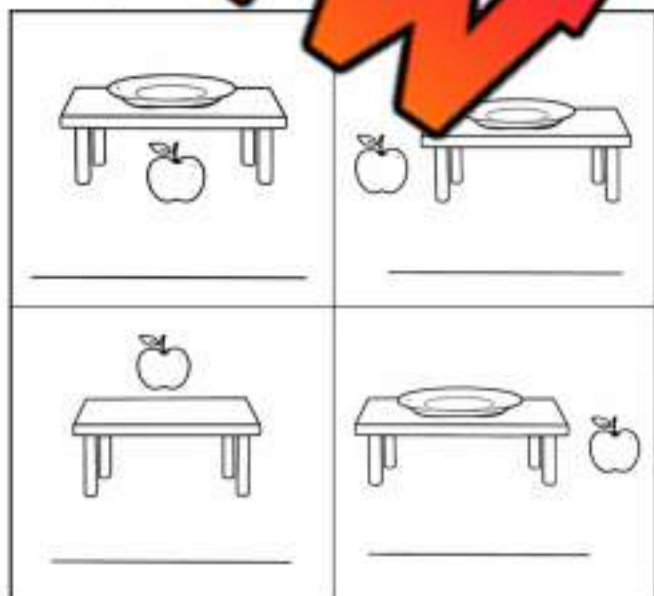
Name: \_\_\_\_\_

Mark

Where is the apple? Is it above,  
below, to the right, to the left?

Name: \_\_\_\_\_

Mark

Where is the apple? Is it above,  
below, to the right, to the left?



## Relative Location - Drawing

**Questions**

Draw these things in the correct location

|                                        |                          |
|----------------------------------------|--------------------------|
| 1) A house in the middle               | <input type="checkbox"/> |
| 2) A car to the left of the house      | <input type="checkbox"/> |
| 3) A tree to the right of the house    | <input type="checkbox"/> |
| 4) A mountain behind the house         | <input type="checkbox"/> |
| 5) A cloud above the car               | <input type="checkbox"/> |
| 6) A cloud above the tree              | <input type="checkbox"/> |
| 7) The sun to the left of the mountain | <input type="checkbox"/> |
| 8) A road below the house              | <input type="checkbox"/> |



**PREVIEW**

**Relative Location****Directions**

Where is the boy? Write the number from the picture beside the preposition

**WHERE IS THE BOY?**

MATCH THE PREPOSITION OF PLACE TO THE CORRECT PICTURES.

☐ TO THE RIGHT☐ BETWEEN☐ ON☐ TO THE LEFT☐ IN FRONT OF☐ THROUGH☐ IN☐ BEHIND☐ NEAR

## Relative Location

**Directions**

Fill in the blanks below



| Questions                           | on | next to | behind | under |
|-------------------------------------|----|---------|--------|-------|
| 1) The owl is _____ the bed.        |    |         |        |       |
| 2) The ball is _____ the table.     |    |         |        |       |
| 3) The gift is _____ the dog.       |    |         |        |       |
| 4) The dog is _____ the table.      |    |         |        |       |
| 5) The ball is _____ the bag.       |    |         |        |       |
| 6) The cat is hiding _____ the bed. |    |         |        |       |
| 7) The bag is _____ the table       |    |         |        |       |



## Non-Standard Units – Describing Position

In this activity, you will count how many steps different objects are away from you. You will need to always face the same direction when you start.

For example: If a friend sits in front of you, you will count how many steps they are in front of you. If they sit in front of you and to the right, you will have two measurements to record. It may be 5 steps forward and 3 steps to the right.

Explain \_\_\_\_\_ Answer the questions below

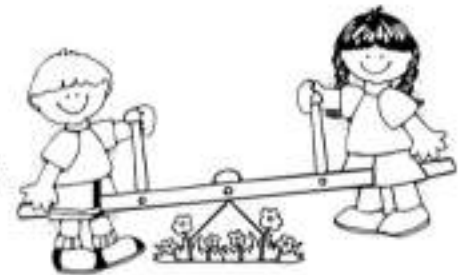
| Questions                                                                                                                  | Answer |
|----------------------------------------------------------------------------------------------------------------------------|--------|
| 1) How many steps is the door away from you? Will you move forward, backward, left, or right? Give directions to the door. |        |
| 2) How many steps is a friend away from you? Write the friend's name and the directions to get there.                      |        |
| 3) How many steps away is the closest window to you? Describe the directions to get there.                                 |        |
| 4) How many steps away is the teacher's desk from you? Describe the directions to get there.                               |        |
| 5) How many steps away is the classroom's clock? Describe the directions to get there.                                     |        |

# Movement

## What is Movement?

In our world, things move in different directions.

Here are some ways we can describe these movements:



### 1) Up and Down

When we stand up, we move up. When we sit down, we move down.

### 2) Forward and Backward

We can walk forward to our friend. We can also take steps back, walking backwards.

### 3) Sideways

When we slide to the left or right, we are moving sideways.

### 4) Toward and Away From

When we walk to the park, we move toward the park. When we leave the park, we move away from it.

## Directions

Draw pictures of you moving in the ways below.

Moving Up and Down

Moving Forward and Backward

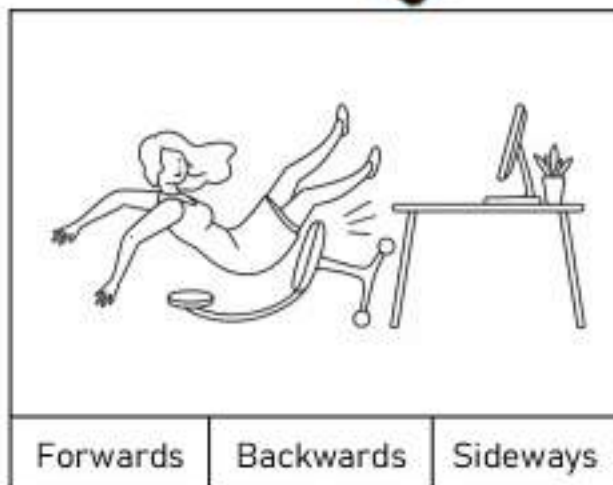
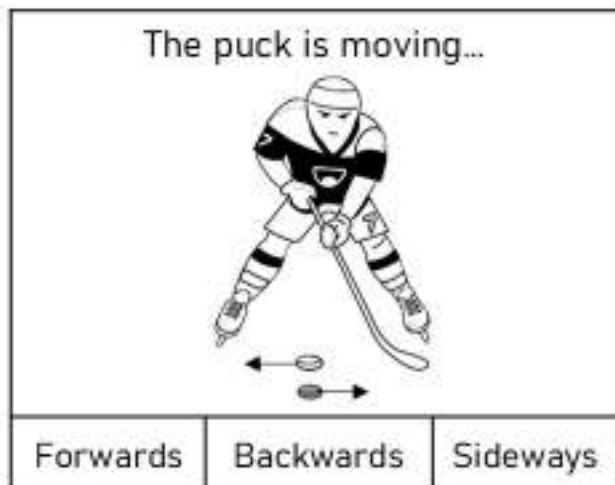
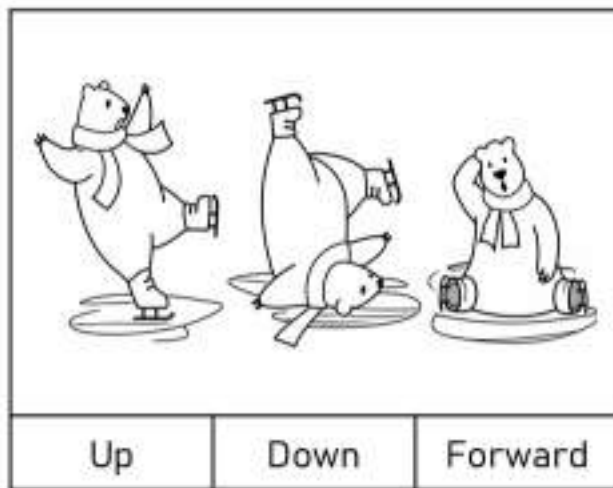
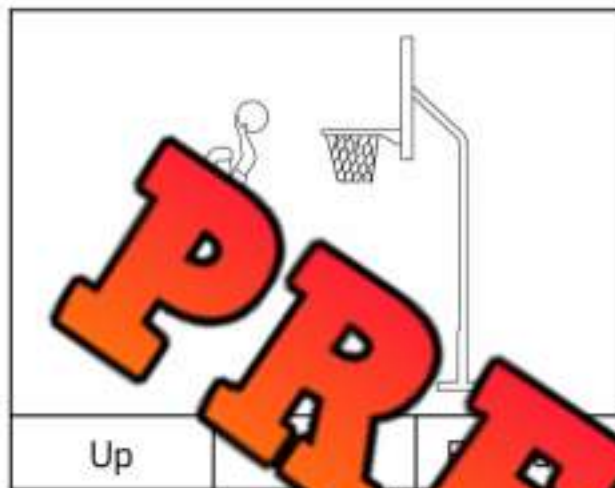
Moving Sideways

Moving Towards or Away From

# Movement

## Questions

Circle how the person/animal/object is moving in the pictures below





## Activity – Guess the Movement

**Objective**

What are we learning about?

To understand different directions of movement (up, down, forward, backward, sideways, toward, and away from).

**Materials**

What do we need?

- ✓ A large open space with enough room to move freely
- ✓ A set of cards with different movement directions (up, down, forward, backward, sideways, toward, away from)

**Method**

How do we complete the experiment?

- 1) Begin by explaining the different directions of movement to the students. Give real-world examples to help them understand better.
- 2) Shuffle the set of cards and place them facedown in a pile.
- 3) Have a student pick a card and perform the movement direction written on the card. For example, if a student picks the 'forward' card, they could walk a few steps forward.
- 4) Allow other students to guess the movement direction. Once guessed correctly, explain again what the movement means.
- 5) Repeat the process until all movement directions have been performed and understood.



**Activity – Guess the Movement****Directions**

Cut out the cards below

UP DOWN

FORWARD BACKWARD

SIDEWAYS TOWARD

AWAY FROM

**PREVIEW**

# Natural and Human-Made Movement

## Natural Motion

Natural motion happens by itself, no people needed! Look at these:

- Trees swing when wind blows.
- Rivers flow from high places to low places.
- Birds fly up, down, and side to side.
- Leaves fall from trees in autumn.



## Human-Made Motion

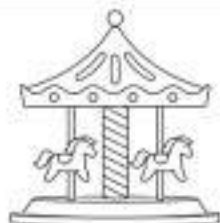
Human-made motion happens because people make it:

- Bicycles move when you pedal.
- Cars need a driver to go slow or fast or right.
- When you throw or kick a ball, it moves.
- Swings move back and forth when you push or pull.



## Directions

Is the movement natural or human-made?





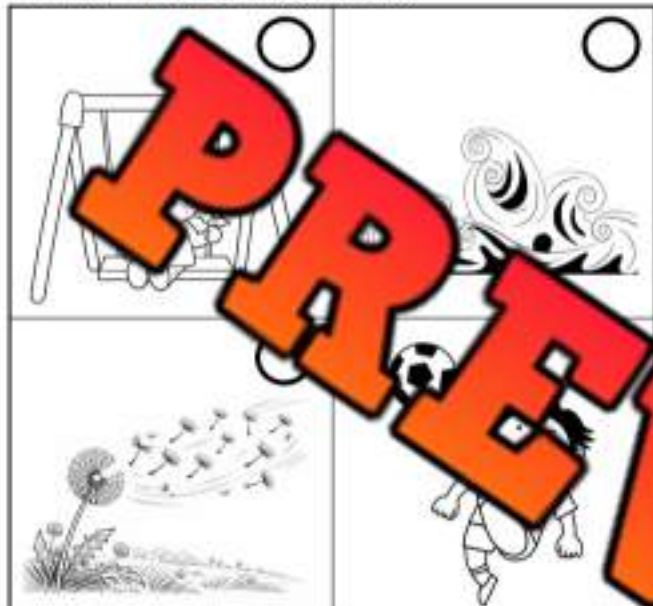
# Exit Cards

**Cut Out**

Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Mark

Check the pictures that show  
human-made movement.

Name: \_\_\_\_\_

Mark

Check the pictures that show  
human-made movement.

Name: \_\_\_\_\_

Mark

Check the pictures that show  
human-made movement.

Name: \_\_\_\_\_

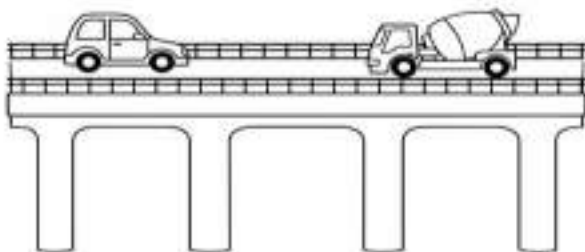
Mark

Check the pictures that show  
human-made movement.

## Moving Objects - Pathways

### Movement Pathway

A movement pathway is the path an object or animal follows when it moves.



- In a straight line

An elevator moves straight up and down. A car drives straight if the road is straight. A window moves in a straight line.

- In a curve

Cars drive in a curve when they turn. Trains move in a curve. A train track is not straight. Instead, it has many curved parts.

- Back and forth

Things that vibrate move back and forth. A guitar string vibrates back and forth, and up and down. A ride on a swing will move back and forth.

- In a circle

A merry-go-round moves in a circle. A record player also spins in a circle. Some rollercoasters spin you in a circle as well.

- Zig-Zag

A snowboarder and skier will go down the hill in a zigzag pattern to slow them down. Every turn they do slows their movement down the hill.

- Up and down

An elevator moves up and down and so does a yoyo. A ride on a seesaw will also move you up and down.









## Different Ways Objects Move

**Directions**

Use the word bank to label each type of movement

Circular

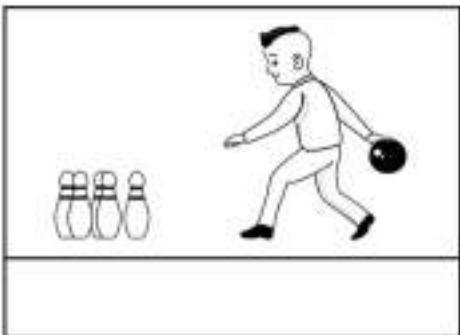
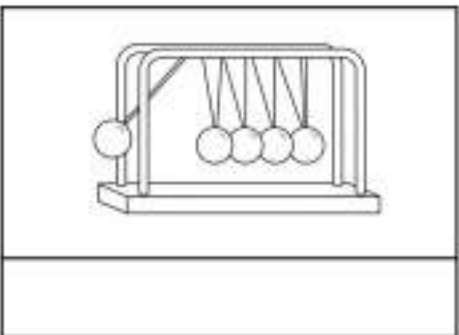
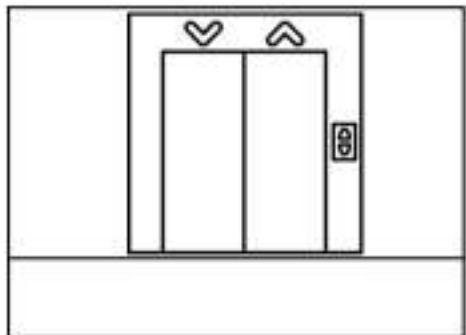
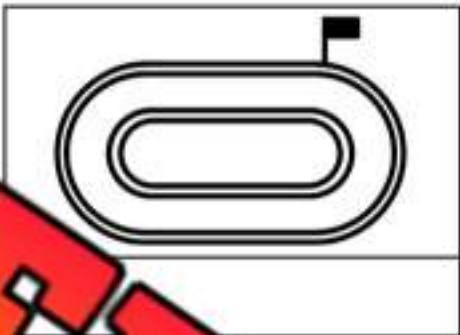
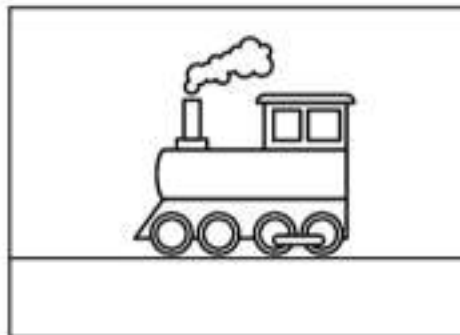
Up and Down

Back and Forth

Curved

Straight

Zig-Zag



## Story – Sammy the Squirrel

### The Adventure of Sammy the Squirrel

Once upon a time, in a large and lush green park, there lived a little squirrel named Sammy. Sammy was always full of energy and loved to explore.

One sunny morning, Sammy decided to look for new places to find his favorite nuts. He ran in a straight line across the park, his little paws moving swiftly on the soft grass.

Sammy then found a long curvy pathway that was lined with pretty flowers. He thought it might be a good place to look for nuts. So, he decided to follow the pathway, moving in a curve. He turned right and left, following the winding pathway.

Just as Sammy was about to reach the end of the curvy path, he spotted a tall tree with a spiral-shaped vine. It looked like a great place to look for nuts. Sammy thought it would be fun to climb up the vine. So, he moved up the vine, turning right and left, until he reached the top. From up there, Sammy had a beautiful view of the entire park.

But oh! Sammy noticed an old log on the ground nearby that he hadn't seen before. It was on its side and looked just like the perfect place to find some yummy nuts. So, he quickly slid down the vine and dashed towards the log.

Once he reached the log, he started to move side to side, peeking into each end of the log to search for nuts. To his delight, Sammy found a stash of the most delicious nuts he had ever seen.

That evening, Sammy went home with a full belly and a big smile. His adventure had taken him in a straight line, along a curved path, up in a spiral, and from side to side. He couldn't wait to share the story of his exciting day with his friends!

And so, Sammy learned that the world around him was full of interesting pathways, each one leading to a new adventure. From then on, every day was a new journey for Sammy, full of exciting ways to move and explore.



Name: \_\_\_\_\_

34

Curriculum Connection  
EM.1

Draw

While listening to the story, draw the path Sammy takes

**PREVIEW**



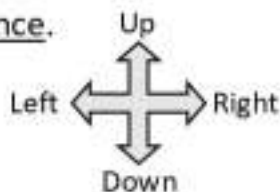
## Following Directions – Up, Down, Left, Right

When we move something or someone from one location to another, we describe the movement using direction and distance.

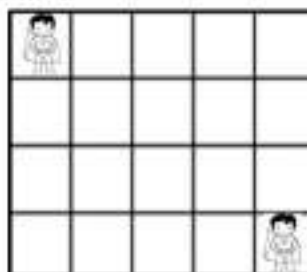
**Directions** – Left, Right, Up, Down

**Distance** – Steps, Metres

Example of movement – the child went down 3 steps, and right 4 steps.

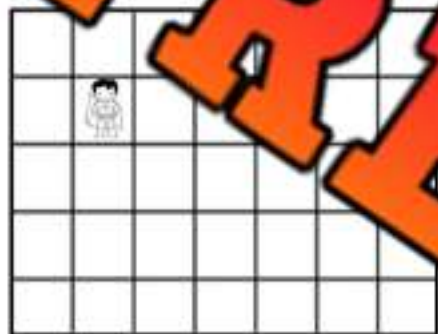


start

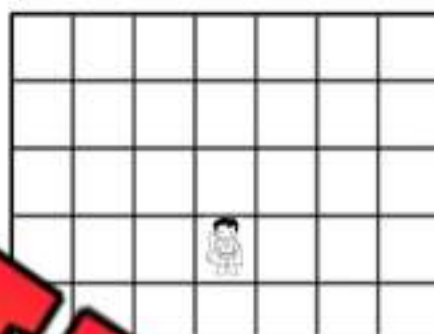


Question: Put an X where you think the child will end up

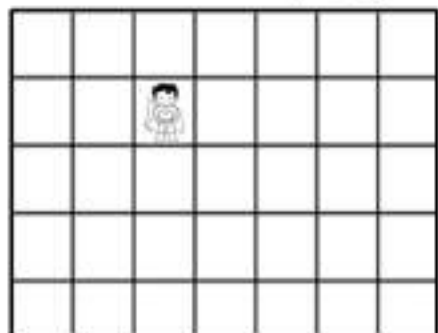
1) Directions – down 2 steps, right 3 steps



2) Directions – up 2 steps, right 2 steps



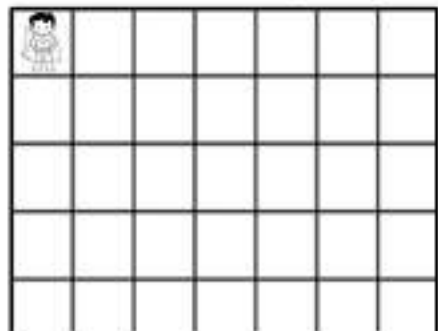
3) Directions – down 3 steps, right 3 steps



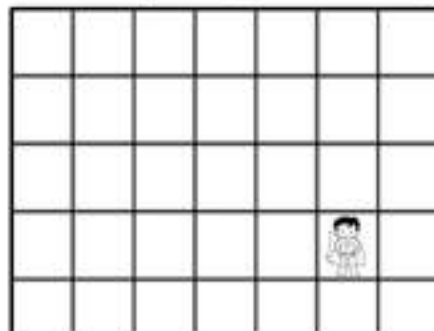
4) Directions – up 1 step, right 2 steps



5) Directions – down 4 steps, right 5 steps



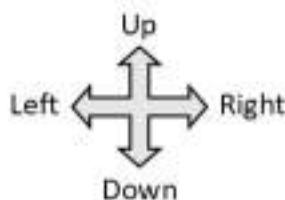
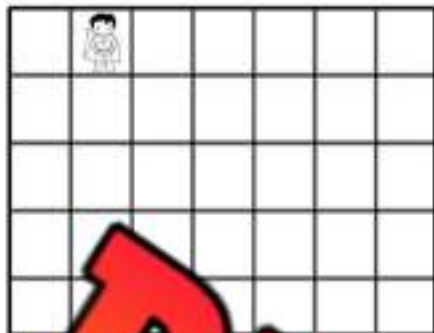
6) Directions – up 2 steps, left 4 steps



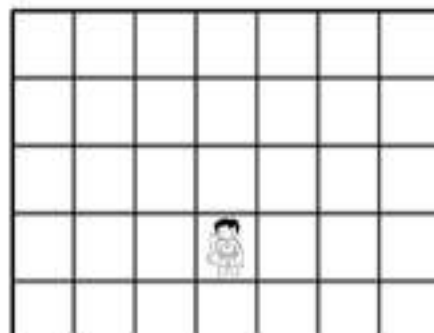
## Questions

Put an X where you think the child will end up

1) Down 2 steps right 3 steps, down 2 steps



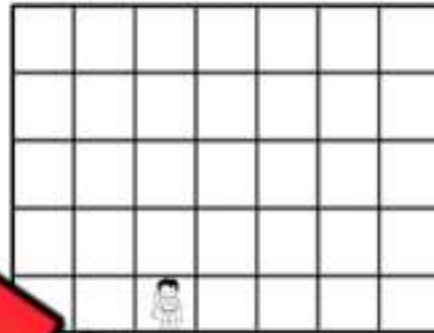
2) Left 2 steps, up 3 steps, right 4 steps



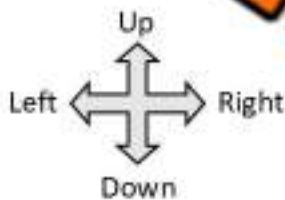
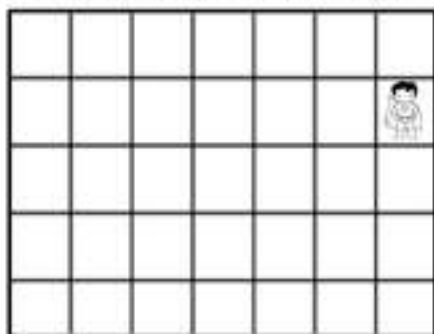
3) Down 3 steps, up 2 steps



4) Up 2 steps, right 3 steps, down 1 step



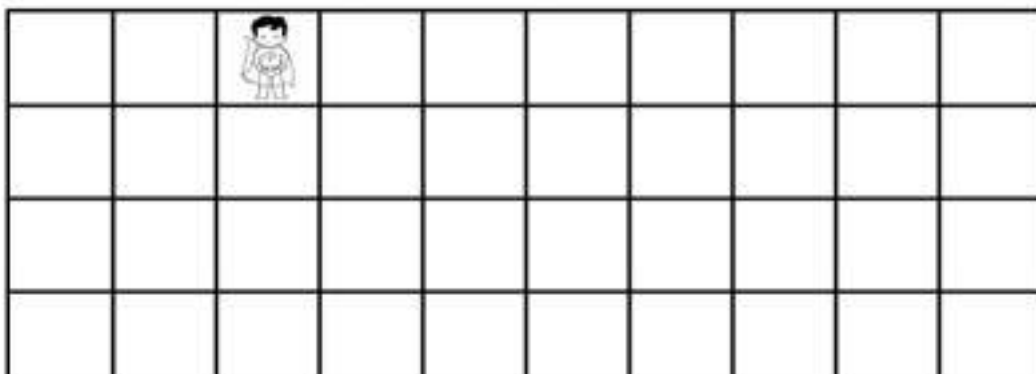
5) Left 5 steps, down 3 steps, right 4 steps



6) Right 3 steps, down 5 steps, down 2 steps



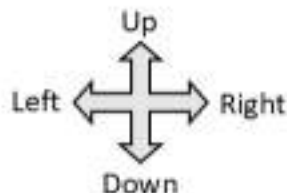
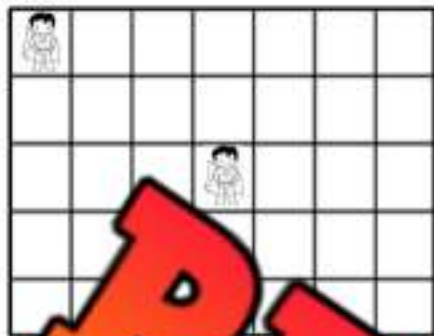
7) Right 5 steps, down 3 steps, left 7 steps, up 3 steps, right 2 steps



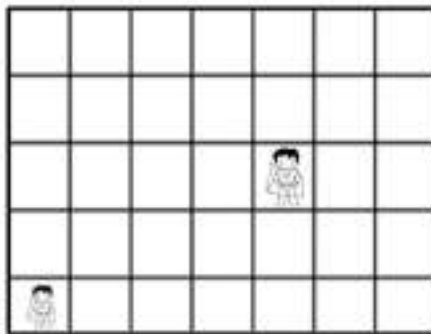
**Describing Directions – Up, Down, Left, Right****Questions**

Describe how the child moved from the start to the end

1) start



2)



start

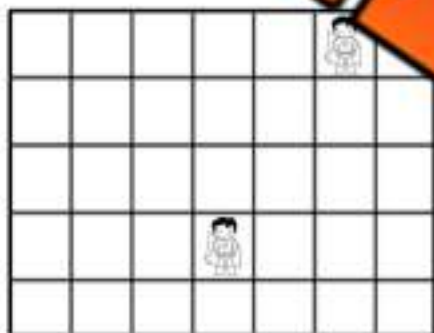
Move \_\_\_\_\_ spaces

Move \_\_\_\_\_ spaces

Move \_\_\_\_\_ spaces

Move \_\_\_\_\_ spaces

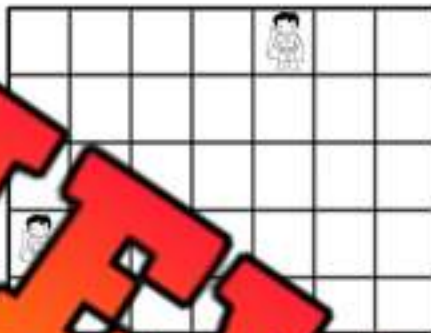
3)



Move \_\_\_\_\_ spaces

Move \_\_\_\_\_ spaces

4)

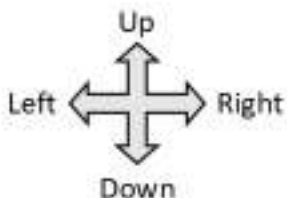
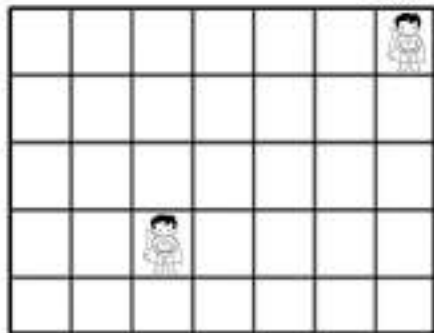


Move \_\_\_\_\_ spaces

Move \_\_\_\_\_ spaces

5)

start

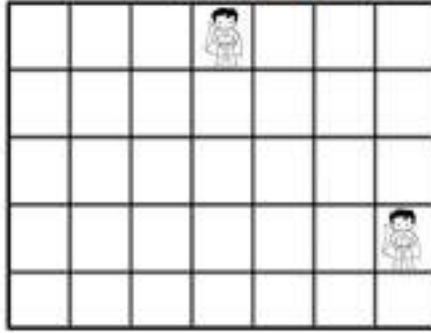


Move \_\_\_\_\_ spaces

Move \_\_\_\_\_ spaces

6)

start



Move \_\_\_\_\_ spaces

Move \_\_\_\_\_ spaces



## Coding – Robot Lawn Mower

This is a self-driving lawn mower

|                                                                                  |  |  |
|----------------------------------------------------------------------------------|--|--|
|                                                                                  |  |  |
|  |  |  |
| It under<br>co                                                                   |  |  |

Right makes it turn right

|                                                                                   |                                                                                   |  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--|
|                                                                                   |                                                                                   |  |
|  |  |  |
| Right                                                                             |                                                                                   |  |

Left makes it turn right

|                                                                                   |                                                                                    |  |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--|
|                                                                                   |                                                                                    |  |
|  |  |  |
| Left                                                                              |                                                                                    |  |

Forward makes the car move forward by the number shown

|           |                                                                                     |                                                                                     |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|           |                                                                                     |                                                                                     |
|           |  |  |
| Forward 2 |                                                                                     |                                                                                     |

### Directions

Use the codes to make the lawn mower to cut the field of grass

| Codes – Forward, Right, Left |  |
|------------------------------|--|
| Line 1                       |  |
| Line 2                       |  |
| Line 3                       |  |
| Line 4                       |  |
| Line 5                       |  |
| Line 6                       |  |
| Line 7                       |  |
| Line 8                       |  |
| Line 9                       |  |

|                                                                                      |  |  |
|--------------------------------------------------------------------------------------|--|--|
|  |  |  |
|                                                                                      |  |  |
|                                                                                      |  |  |
|                                                                                      |  |  |
|                                                                                      |  |  |
|                                                                                      |  |  |
|                                                                                      |  |  |
|                                                                                      |  |  |
|                                                                                      |  |  |

**Directions**

Write code to get the lawn mower to cut the field of grass

**Codes – Forward, Turn Left, Turn Right**

Line 1

Line 2

Line 3

Line 4

Line 5

Line 6

Line 7

Line 8

Line 9

Line 10

Line 11

Line 12

Line 13

Line 14

Line 15

Line 16

Line 17

Line 18

Line 19

Line 20

Line 21



**PREVIEW**

## Roll, Bounce, Slide

### Roll, Bounce, Slide

Objects and animals move in different ways. They can roll, bounce, and slide.

#### Roll

Objects that roll go around and around. Like a ball or a car. When you push a ball, it rolls away. Cars have wheels that roll!

#### Bounce

Objects can bounce. When you drop a bouncy ball, it jumps back up. That's bouncing. It goes down then up again.



#### Slide

Sliding is another way things move. Like a child sliding down a slide at the park. A toy car can slide down a ramp too.

Animals can also move these ways. A panda can roll on its back. A kangaroo bounces. A penguin slides on its belly.

**Draw**

Draw objects or animals moving in the ways below.

**Rolling****Bouncing****Sliding**



# Exit Cards

**Cut Out** Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Mark

Circle how each object moves:  
Roll (R), Bounce (B), or Slide (S).

|                   |   |   |   |
|-------------------|---|---|---|
| 1) Ball           | R | B | S |
| 2) Toy Car        | R | B | S |
| 3) Hockey Puck    | R | B | S |
| 4) Ice Skater     | R | B | S |
| 5) Basketball     | R | B | S |
| 6) Tire           | R | B | S |
| 7) Ping Pong Ball | R | B | S |

Name: \_\_\_\_\_

Mark

Circle how each object moves:  
Roll (R), Bounce (B), or Slide (S).

|                   |   |   |   |
|-------------------|---|---|---|
| 1) Ball           | R | B | S |
| 2) Toy Car        | R | B | S |
| 3) Hockey Puck    | R | B | S |
| 4) Ice Skater     | R | B | S |
| 5) Basketball     | R | B | S |
| 6) Tire           | R | B | S |
| 7) Ping Pong Ball | R | B | S |

Name: \_\_\_\_\_

Mark

Circle how each object moves:  
Roll (R), Bounce (B), or Slide (S).

|                   |   |   |   |
|-------------------|---|---|---|
| 1) Ball           | R | B | S |
| 2) Toy Car        | R | B | S |
| 3) Hockey Puck    | R | B | S |
| 4) Ice Skater     | R | B | S |
| 5) Basketball     | R | B | S |
| 6) Tire           | R | B | S |
| 7) Ping Pong Ball | R | B | S |

Name: \_\_\_\_\_

Mark

Circle how each object moves:  
Roll (R), Bounce (B), or Slide (S).

|                   |   |   |   |
|-------------------|---|---|---|
| 1) Ball           | R | B | S |
| 2) Toy Car        | R | B | S |
| 3) Hockey Puck    | R | B | S |
| 4) Ice Skater     | R | B | S |
| 5) Basketball     | R | B | S |
| 6) Tire           | R | B | S |
| 7) Ping Pong Ball | R | B | S |

## Animals and Objects that Roll

### Things That Roll

Round things, like balls, can roll. If you push a football, it goes round and round. Toy cars roll too because of their round wheels.

### Rolling in Nature

Round rocks can roll down a hill. The hill's slope and gravity make the rock roll.

### Animals That Roll

Some animals can roll. A dog might roll on its back for fun. A roly-poly bug rolls into a ball when it is scared. Hedgehogs roll to get away from dangerous animals.

### Why is Rolling Helpful?

Rolling is an easy way to move round things need just a little push to roll a long way. Animals might roll for fun or just to play.

#### Directions

Will the object roll?



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



## Activity – Rolling Objects

### Objective

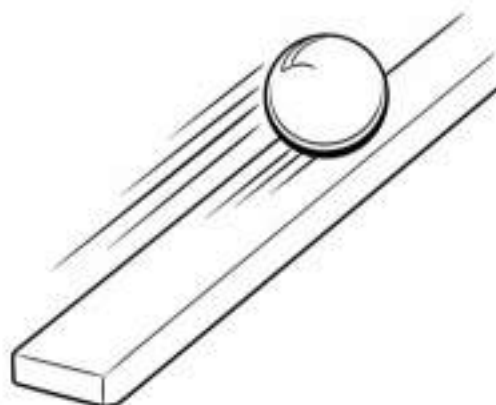
What are we learning about?

To help students understand how and why different objects roll.

### Materials

What do we need?

- ✓ Various objects (balls of different sizes, coins)
- ✓ Various objects that don't roll well.
- ✓ A ramp made of a piece of cardboard or a large book
- ✓ A smooth surface (if available)
- ✓ Markers and paper for each student



### Method

How do we complete the experiment?

- 1) Begin by discussing what rolling means and showing examples with a couple of objects.
- 2) Set up your ramp on a smooth surface.
- 3) Have students take turns selecting an object and predicting if it will roll well or not.
- 4) Let the student place the object at the top of the ramp and let it roll down.
- 5) Ask the student to observe how the object rolls. Does it roll straight? Does it go far?
- 6) Repeat this process with each object.
- 7) After all the objects have been tested, have a group discussion about what they observed. Which objects rolled the best? Which ones did not roll as well? Why do they think this is?



**Results**

Answer the questions below

1) Draw the objects that rolled the best.

2) Draw \_\_\_\_\_ that didn't roll very well.

3) Draw the ramp below and one of the objects rolling down the ramp.

4) Write a sentence about how the object rolled above. Did it roll fast, slow, straight or curved?

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## Invention of the Wheel

### The Invention of the Wheel

A long, long time ago, there were smart people called the ancient Sumerians. They lived in a place we now call Iraq. The Sumerians came up with a wonderful idea - the wheel!

Before the wheel, moving big, heavy things was really tough. People had to lift them up or pull them around, which was really hard work.

The Sumerians thought of a super cool idea - a wheel! A wheel is round and can roll, which makes moving things so much easier.

### Why the Wheel is Important

The wheel is very important because it helps us in many ways. Imagine your cars, bikes, and even your trucks. They all have wheels.

The wheel makes these things move quickly and smoothly. Without wheels, we couldn't have cars or bikes. The Sumerians did an amazing thing when they invented the wheel. We still use wheels every day!

**Colour**

Colour the objects with the wheels.

**Draw**

Draw objects that have wheels



## Activity – Make a Wheel

### Objective

What are we learning about?

To learn about the wheel by making one.

### Materials

What do we need?

- ✓ Cardboard
- ✓ Scissors
- ✓ Pencil
- ✓ A round object to trace (a small bowl or a large coin)
- ✓ Plastic straws



### Method

How do we complete the experiment?

- 1) **Trace Circles:** Help each student to trace circles on the cardboard using the round object.
- 2) **Cut the Circles:** Assist the students in cutting out the circles using scissors. These circles will be their wheels.
- 3) **Punch a Hole:** Carefully help each student to make a hole in the center of their cardboard wheels using a pencil.
- 4) **Insert the Straw:** Guide the students to insert a plastic straw through the holes of the two wheels.
- 5) **Check Your Wheel:** Now students have their wheel! Encourage them to roll their wheels on the table or floor and observe how they move.





**Results**

Answer the questions below

1) Draw your wheel below.

2) Did your wheel roll on a ground?

No

3) Did your wheel roll on a carpet?

Yes

No

4) Is your wheel a perfect circle?

Yes

5) If your wheel was a triangle, would it roll?

Yes

No

6) Which wheel would roll the best?

Bumpy and Round

Smooth and Round

Smooth and Triangular

7) Draw a wheel that wouldn't roll very well.

## Objects and Animals that Bounce

### Objects That Bounce

Lots of things can bounce! Think about a rubber ball. When you drop it on the ground, it doesn't just stay there. It jumps back up! This is because it's made of a stretchy material that pushes back when it hits the ground.

Another object that can bounce is a balloon. Have you ever batted a balloon into the air and watched it bounce back down?

### Animals That Bounce

Some animals can bounce too! Have you ever seen a kangaroo? They have strong back legs that push off the ground, making them bounce forward. Frogs and rabbits can do this too. They hop. They use their strong legs to push off the ground and bounce in the air.

### Questions

Will the object bounce? Does the animal bounce?



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



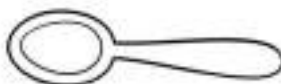
Yes

No



Yes

No



Yes

No



Yes

No

## Experiments – Testing How Bouncy Objects Are

### Objective

What are we learning about?

The students will learn more about how and why objects bounce.

### Materials

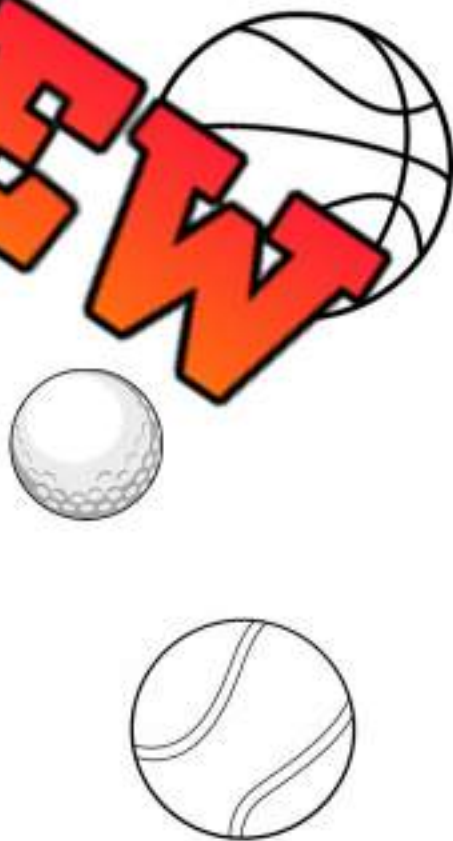
What do we need?

- ✓ Different types of balls: tennis ball, golf ball, soccer ball, basketball
- ✓ Measuring tape
- ✓ A hard flat surface (like a floor or a table)

### Method

How do we do the experiment?

- 1) Gather the students in a spacious area. Start with explaining what bouncing means, make sure everyone understands.
- 2) Show the students the different types of balls. Ask them to predict which one will bounce the highest.
- 3) Take the first ball, hold it at a certain height (for example, 1 meter) from the ground, and let it drop. Make sure all the students are observing.
- 4) Measure how high the ball bounces up with the measuring tape. Write down the result on a chart.
- 5) Repeat steps 3 and 4 with the other balls.
- 6) Compare the results. Ask the students if the balls bounced as they predicted.





**Hypothesis**

What do you think will happen?

Order how high you think each ball will bounce. Number them 1 for the highest and 4 for the lowest.

Soccer Ball

Tennis Ball

Basketball

Golf Ball

**Results**

What happened?

1) Write down the order each ball bounced.

Soccer Ball

Tennis Ball

Basketball

Golf Ball

2) Did you guess right? Explain.

3) Order the balls from the highest bounce to the lowest bounce. Draw the balls in the correct order.

HighestSecond HighestSecond LowestLowest

## Rubber: The Bouncy Material

### Why is Rubber Bouncy?

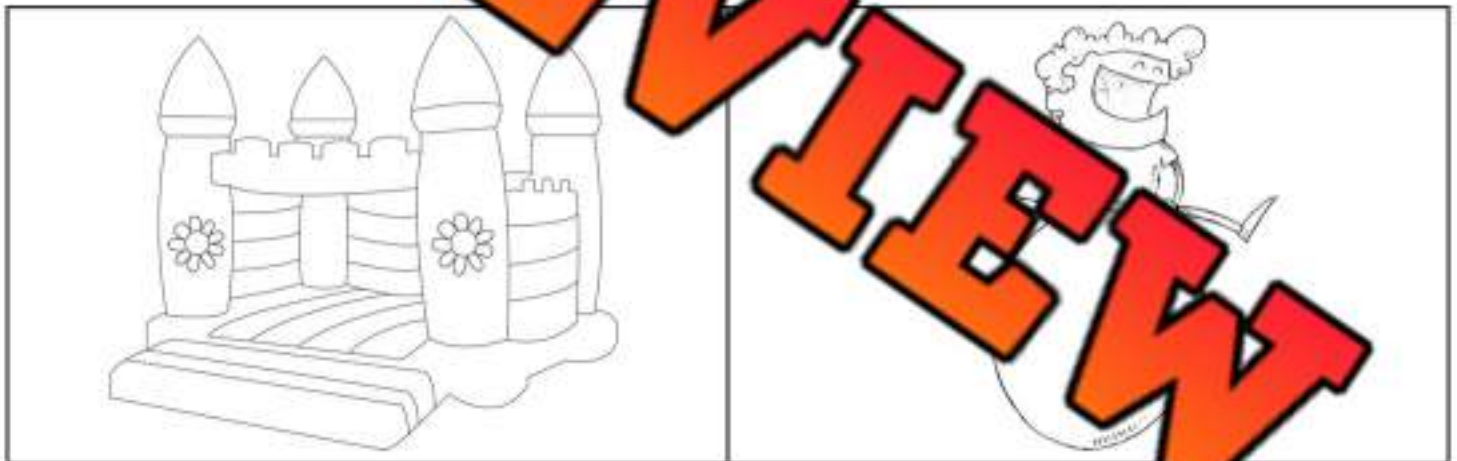
- 1) **Stretchy and Flexible:** Rubber is very stretchy and flexible. When you throw a rubber ball on the ground, it squishes a bit and then springs back to its normal shape. That's why it bounces back up!
- 2) **Strong:** Rubber is strong, so it doesn't break or crack easily. That means it can keep bouncing for a long time.

### Rubber in Bouncy Things

Many things that bounce are made from rubber. Think about rubber balls, bouncy castles, and the soles of some shoes. All of these need to be bouncy, and rubber is perfect for that!

**Colour**

Colour the objects below

**Draw**

Draw objects that are made of rubber and that bounce



## Sliding Animals and Objects

### Objects that Slide

Objects can slide when they are pushed or pulled on a smooth surface. Here are some examples:

Toy slide: Slides are made of slippery plastic. You can put anything slippery on a slide and it will slide down.

Ice cubes: Ice cubes can slide on a table because they are slippery and smooth.

Books: If you push a book on a smooth table, it can slide.

### Animals that Slide

Some animals slide around quickly or to escape from danger. Here are some examples:

Penguins: Penguins slide on ice when they are on snow or ice.

Snakes: Some snakes slide on the ground to move.

Otters: Otters love to slide down mud banks into the water.



### Questions

Will the object slide? Does the animal slide?

|                           |     |    |
|---------------------------|-----|----|
| 1) Rocks on the ground    | Yes | No |
| 2) Person on a slide      | Yes | No |
| 3) Rubber band on a slide | Yes | No |
| 4) Rubber puck on a slide | Yes | No |
| 5) Rubber puck on ice     | Yes | No |

|            |     |    |
|------------|-----|----|
| 6) Cars    | Yes | No |
| 7) Fish    | Yes | No |
| 8) Dogs    | Yes | No |
| 9) Seals   | Yes | No |
| 10) Snakes | Yes | No |

### Draw

Draw 3 objects that will slide on pavement

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|



## Experiment – Testing If Objects Will Slide

### Objective

What are we learning about?

The objective of this activity is to help students understand how and why some objects slide while others do not.

### Materials

What do we need?

- ✓ Objects to test: toy boat, puzzle piece, board game piece and objects that do not slide: sponge, rough rock, stapler
- ✓ A rough surface (like a carpet)
- ✓ A small ramp (can be made from a sturdy piece of cardboard or a book).

### Method

How do we conduct the experiment?

- 1) Gather the students in a circle around the ramp on the floor area where you've set up the small ramp.
- 2) One by one, demonstrate how each object interacts with the ramp. Ask a volunteer to gently push the object along the ramp.
- 3) Observe together if the object slides down the ramp or if it stays put.
- 4) Once all the objects have been tested, ask the students to think about why some objects slid and others did not. Guide them to consider factors like the object's weight, shape, and material.
- 5) Next, try to slide the same objects on the carpet. Discuss whether all the same objects that could slide down the ramp could also slide on the carpet. Ask the students why this might be the case.



**Hypothesis**

What do you think will happen?

1) Do you think the object will slide on the ramp? Will it slide on the carpet?

| On Ramp             |     |    |
|---------------------|-----|----|
| 1) Stapler          | Yes | No |
| 2) Sponge           | Yes | No |
| 3) Board Game Piece | Yes | No |
| 4) Puzzle Piece     | Yes | No |
| 5) Rock             | Yes | No |
| 6) Toy              | Yes | No |

| On Carpet           |     |    |
|---------------------|-----|----|
| 1) Stapler          | Yes | No |
| 2) Sponge           | Yes | No |
| 3) Board Game Piece | Yes | No |
| 4) Puzzle Piece     | Yes | No |
| 5) Rock             | Yes | No |
| 6) Toy              | Yes | No |

**Results**

1) Did the object slide on the ramp? Will it slide on the carpet?

| On Ramp             |     |    |
|---------------------|-----|----|
| 1) Stapler          | Yes | No |
| 2) Sponge           | Yes | No |
| 3) Board Game Piece | Yes | No |
| 4) Puzzle Piece     | Yes | No |
| 5) Rock             | Yes | No |
| 6) Toy              | Yes | No |

| On Carpet           |     |    |
|---------------------|-----|----|
| 1) Stapler          | Yes | No |
| 2) Sponge           | Yes | No |
| 3) Board Game Piece | Yes | No |
| 4) Puzzle Piece     | Yes | No |
| 5) Rock             | Yes | No |
| 6) Toy              | Yes | No |

2) Order the objects from the one that slide the best to the worst.

BestWorst



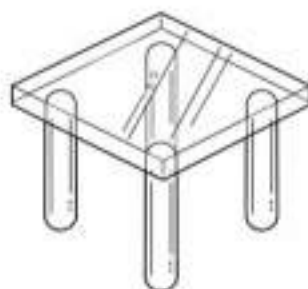
# Smooth vs Rough Surfaces

## Smooth Surfaces

Smooth surfaces, like a glass table, let objects slide easily. A toy car on a table moves fast!

## Rough Surfaces

Rough surfaces, like a carpet, make it hard for objects to slide. A toy car on a carpet doesn't go far.



## Friction

Friction is what happens when two things rub against each other, slowing them down. Rough surfaces have more friction and slow objects down. Smooth surfaces have less friction and let objects move faster.

### Directions

Will an object travel fast or slow?



Smooth

Rough

Fast

Slow



Smooth

Rough

Fast

Slow



Smooth

Rough

Fast

Slow



Smooth

Rough

Fast

Slow



Smooth

Rough

Fast

Slow

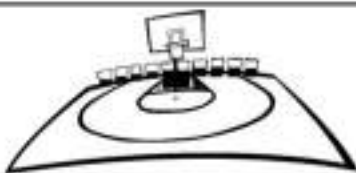


Smooth

Rough

Fast

Slow



Smooth

Rough

Fast

Slow



Smooth

Rough

Fast

Slow



Smooth

Rough

Fast

Slow



## Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Mark

Is the statement true (T) or false (F)?

1) Smooth surfaces help objects move faster.

T

F

2) A toy car moves faster on carpet than on a table.

T

F

3) Grass is usually a smooth surface.

T

F

4) Rough surfaces have more friction.

T

F

Name: \_\_\_\_\_

Mark

Is the statement true (T) or false (F)?

1) Smooth surfaces help objects move faster.

T

F

2) A toy car moves faster on carpet than on a table.

T

F

3) Grass is usually a rough surface.

T

F

4) Rough surfaces have more friction.

T

F

Name: \_\_\_\_\_

Mark

Is the statement true (T) or false (F)?

1) Smooth surfaces help objects move faster.

T

F

2) A toy car moves faster on carpet than on a table.

T

F

3) Grass is usually a rough surface.

T

F

4) Rough surfaces have more friction.

T

F

Name: \_\_\_\_\_

Mark

Is the statement true (T) or false (F)?

1) Smooth surfaces help objects move faster.

T

F

2) A toy car moves faster on carpet than on a table.

T

F

3) Grass is usually a rough surface.

T

F

4) Rough surfaces have more friction.

T

F

## Experiment – Friction Car Ramp

### Research Question

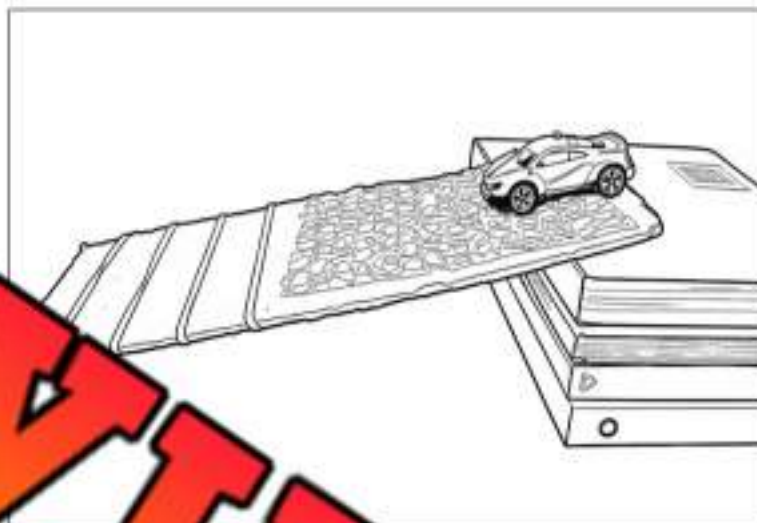
Does more friction slow down a moving car?

If we roll a car down a smooth ramp, will it go further than a bumpy ramp?

### Materials

What do we need?

- ✓ Cardboard to make the ramps
- ✓ Bubble wrap to rest on
- ✓ Toy car
- ✓ Glue
- ✓ Textured materials
  - Bubble wrap
  - Bread tabs
  - Rubber bands
  - Rice
  - Staples



### Method

How do we complete the experiment?

- 1) Each group will make one ramp. The teacher can be responsible for making a smooth ramp that is smooth
- 2) Groups will need cardboard cut into a rectangle that will act as a ramp
- 3) Students can use some of the textured materials listed above to make a textured ramp. They can glue rice to the ramp, put staples in it, glue bubble wrap down, or wrap rubber bands around the ramp. Be creative!
- 4) Have each group test their ramps with their toy car
- 5) When all groups are finished, they can demonstrate their car going down the smooth ramp versus the textured ramp.
- 6) Mark how far the toy car travelled on the smooth ramp versus the textured ramp. Record your results on the back of the page.



**Observations****What happened?**

1) How did you make your textured ramp? Which materials did you use?

---

---

---

2) Did the car travel further on the smooth or textured ramp?

Smooth Ramp

Textured Ramp

**Results****Answer the questions below**

1) Which ramp did the car have more friction? Did it travel down it?

Smooth Ramp

Textured Ramp

2) Why did the car travel further on the smooth ramp?

---

---

---

3) Draw a picture of the ramp you built.

---

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---

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---

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---

---



# Roll or Slide?

**Questions**

If you drop the object on a slide, will it roll or slide down?



Roll

Slide



Roll

Slide



Roll

Slide



Roll

Slide



Roll

Slide



Roll

Slide



Roll

Slide



Roll

Slide

**Draw**

Draw 2 objects that will roll down the slide and 2 that will slide down

Roll

Roll

Slide

Slide

## Experiment – Roll or Slide

### Objective

What are we learning about?

The objective of this activity is to observe and understand the difference between objects that roll and objects that slide when placed at the top of a slide.

### Materials

What do we need?

- ✓ A ramp or slide
- ✓ Various objects such as a pencil, a ball, a toy car, a block, a book, etc.
- ✓ Observation chart. A simple chart with columns labeled "Object", "Roll", "Slide", "Observations".

### Method

How do we conduct the experiment?

- 1) **Discussion:** Begin by explaining to the students what rolling and sliding means. Make sure they understand that some objects roll because they are round or cylindrical, while others slide because they do not move smoothly.
- 2) **Prediction:** Before you start the activity, ask the students to predict what they think each object will do. Will it roll or will it slide?
- 3) **Experiment:** One by one, place each object at the top of the slide and let it go. Allow the students to observe what happens.
- 4) **Record Observations:** After releasing each object, ask the students to record in their chart whether the object rolled or slid down the slide. They should also note any interesting observations, like if the object did a bit of both (rolled then slid) or if it didn't move at all.



**Hypothesis**

What do you think will happen?

1) Write the objects you will use for this experiment. Do you think the object will slide or roll down the slide? Circle both if you think it will do both.

|  |      |       |
|--|------|-------|
|  | Roll | Slide |
|  | Roll | Slide |
|  | Roll | Slide |

|  |      |       |
|--|------|-------|
|  | Roll | Slide |
|  | Roll | Slide |
|  | Roll | Slide |

**Results**

What happened?

1) Did the object slide or roll down the slide?

|  |      |       |
|--|------|-------|
|  | Roll | Slide |
|  | Roll | Slide |
|  | Roll | Slide |

|  |      |       |
|--|------|-------|
|  | Roll | Slide |
|  | Roll | Slide |
|  | Roll | Slide |

2) Did you guess right? Explain.

---

---

---

3) Which object moved the fastest? Which moved the slowest?

FastestSlowest

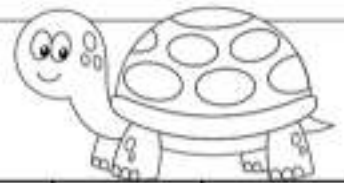


# Speed

## What is Speed?

Speed is how fast an object moves from one place to another. If your toy car goes from one end of your room to the other in a fast time, we say it has a high speed. But if a snail moves the same distance in a lot of time, we say it has a low speed.

A rabbit runs fast, so it has a high speed. A turtle walks slowly, so it has a low speed.



Direction: Is the object/animal fast or slow?

|           |      |      |                      |      |      |
|-----------|------|------|----------------------|------|------|
| 1) Turtle | Fast | Slow | 6) Slug              | Fast | Slow |
| 2) Lion   | Fast | Slow | 7) A falling feather | Fast | Slow |
| 3) Car    | Fast | Slow | 8) A frisbee flying  | Fast | Slow |
| 4) Snail  | Fast | Slow | 9) Shark             | Fast | Slow |
| 5) Bird   | Fast | Slow | 10) Fish             | Fast | Slow |

Draw

Draw 3 objects or animals that are fast or slow.

Fast

|      |  |  |
|------|--|--|
| Fast |  |  |
|      |  |  |

Slow

|      |  |  |
|------|--|--|
| Slow |  |  |
|      |  |  |

# Speed – Fast and Slow

## Questions

Circle whether the animal is fastest or slowest

1) The fox is the \_\_\_\_\_.



Fastest  
Slowest

2) The \_\_\_\_\_ is the \_\_\_\_\_.



Fastest  
Slowest

3) The frog is the \_\_\_\_\_.



Fastest  
Slowest

4) The cow is the \_\_\_\_\_.



Fastest  
Slowest

5) The crocodile is the \_\_\_\_\_.



Slowest

6) The elephant is the \_\_\_\_\_.



Fastest  
Slowest

7) The shark is the \_\_\_\_\_.



Fastest  
Slowest

## Questions

Order the vehicles from fastest (1) to slowest (3)

1)



2)



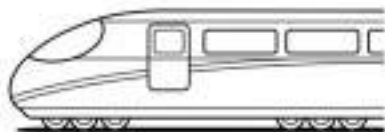
3)



4)



5)

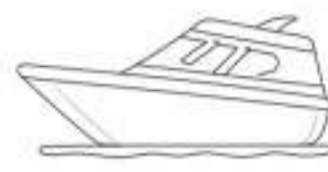
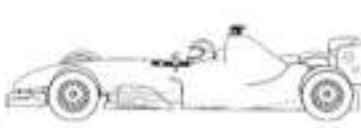
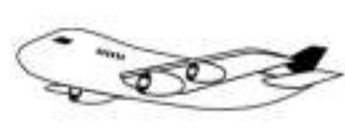




# Speed – Faster and Slower

## Questions

Circle the relationship between column 1 and column 2

| Column 1                                                                            | Comparative Language<br>Column 1 is ____ Column 2              | Column 2                                                                              |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    | <p>slower than</p> <p>faster than</p> <p>the same speed as</p> |    |
|    | <p>slower than</p> <p>faster than</p> <p>the same speed as</p> |    |
|   | <p>slower than</p> <p>faster than</p> <p>the same speed as</p> |  |
|  | <p>slower than</p> <p>faster than</p> <p>the same speed as</p> |  |
|  | <p>slower than</p> <p>faster than</p> <p>the same speed as</p> |  |
|  | <p>slower than</p> <p>faster than</p> <p>the same speed as</p> |  |
|  | <p>slower than</p> <p>faster than</p> <p>the same speed as</p> |  |

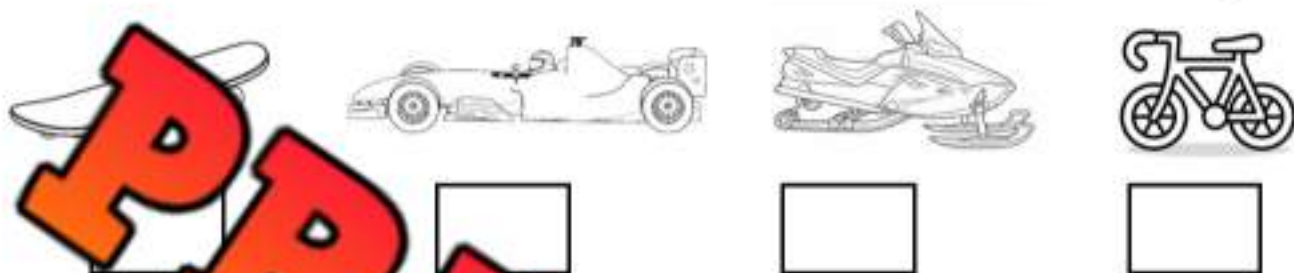
# Exit Cards

**Cut Out** Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Mark

Order the objects from slowest to fastest.



Name: \_\_\_\_\_

Mark

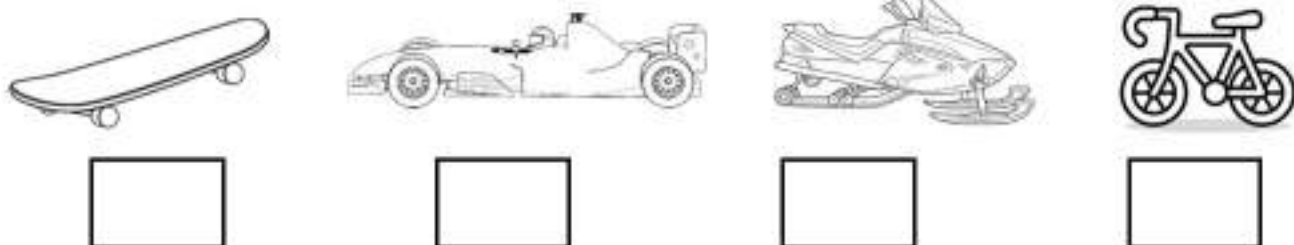
Order the objects from slowest to fastest.



Name: \_\_\_\_\_

Mark

Order the objects from slowest to fastest.





## Experiment – Racing Cars

### Objective

What are we learning about?

To understand the concept of speed (how fast or slow something moves) by observing toy cars racing down a ramp.

### Materials

What do we need?

- ✓ 4 toy cars for each group.
- ✓ A board or book to act as a ramp.
- ✓ Something to prop up one end of the ramp, such as a stack of books.
- ✓ Marking tape to mark the starting and finishing lines.



### Method

How do we complete the experiment?

- 1) Start by explaining to the students that speed is how fast or slow something moves.
- 2) Setup your ramp by propping one end of the board up on a stack of books. Make sure the angle of the ramp is safe for the cars to go down.
- 3) Mark a starting line at the top of the ramp and a finish line at the bottom of the ramp.
- 4) Divide the students into groups of 4 and give each group 4 different toy cars.
- 5) Each student in the group will hold their car at the top of the ramp at the same time. On the count of 3, they will drop their car.
- 6) The students will observe which car reaches the finish line first and last. They will decide among themselves which car was the fastest and which was the slowest. Optional: take all the fastest cars in the class and do one race with them.
- 7) Have a discussion with the class about why they think some cars moved faster than others. This can lead to an introductory conversation about factors that can affect speed.



**Observations****What happened?**

1) Who had the fastest car?

2) Draw a picture of your car and the fastest car.

**Your Car****Fastest Car****PREVIEW****Results****Answer the questions below**

1) Were the wheels bigger or smaller on the fastest car?

Bigger

Smaller

2) Was the car big or small?

Big

Small

3) Was the car heavy or light?

Heavy

Light

## Describing Changes in Speed

### How Do Objects Change Speed?

Objects such as vehicles can change their speed too. For example, a bicycle can go slow, medium, or fast. When we pedal lightly, the bike moves slowly. But if we pedal harder, the bike moves faster. So, we change the speed of the bike by how hard or softly we pedal.

### How Do Animals Change Speed?

Animals can change speed too! Think about a pet dog. When a dog is resting, it doesn't move at all. Its speed is zero. But when it hears the dinner bell, it might get up and walk slowly. Then, it might get excited and start to run fast. The dog has changed its speed from slow to fast.



### Directions

How does each object or animal move?

#### Driving a car

|                               |      |        |      |
|-------------------------------|------|--------|------|
| 1) Driving up to a stop sign  | Fast | Medium | Slow |
| 2) Driving on the highway     |      | Medium | Slow |
| 3) Driving in a neighbourhood | Fast | Medium | Slow |

#### A dog moving around

|                                    |      |        |      |
|------------------------------------|------|--------|------|
| 1) Chasing a chipmunk              | Fast | Medium | Slow |
| 2) Going for a walk with its owner | Fast | Medium | Slow |
| 3) Sneaking up on a rabbit         | Fast | Medium | Slow |

#### A soccer ball in a game of soccer

|                                 |      |        |      |
|---------------------------------|------|--------|------|
| 1) Being passed to a teammate   | Fast | Medium | Slow |
| 2) Rolling to a stop in the net | Fast | Medium | Slow |
| 3) Being kicked into the net    | Fast | Medium | Slow |



## Activity – Speed Detectives!

### Objective

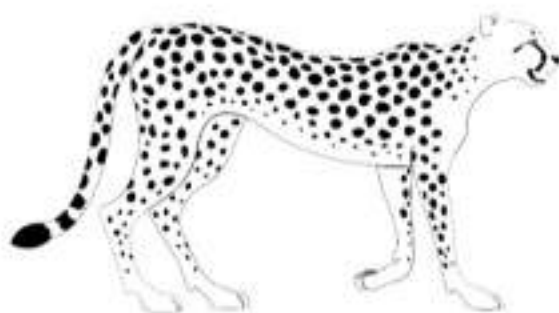
What are we learning about?

To understand and identify when an object or animal is changing its speed.

### Materials

What do we need?

- ✓ Objects that can change speed
- ✓ A large, open space for movement
- ✓ A video (or videos) of animals moving at varying speeds



### Method

How do we complete the experiment?

- 1) Start by discussing what it means for an object or animal to change its speed. Recap that speed can change from slow to fast, or fast to slow.
- 2) First, use the objects you've gathered. Roll or move them across the room and ask the students to raise their hands when they think the object is changing.
- 3) Next, move to the large open space. Select one student to be the runner. Have the runner change their speed from slow to fast, or fast to slow, on your command. Have the rest of the students observe and signal when they notice the runner changing speed.
- 4) Now, move on to the videos. Show the students videos of different animals moving, pausing after each one to ask if the animal changed its speed in the video. Encourage them to describe when and how the speed changed.
- 5) Wrap up by reviewing what they learned about how the speed of objects and animals can change.

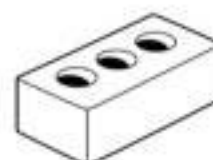


Name: \_\_\_\_\_

## Unit Test - Movement

### Part 1

Will the object roll?



Yes

No

Yes

No



Yes

No



Yes

No



Yes

No

### Part 2

Will the object bounce? Does it have a spring?



Yes

No



Yes

No



Yes

No



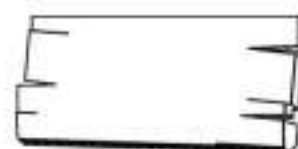
Yes

No



Yes

No



Yes

No

### Part 3

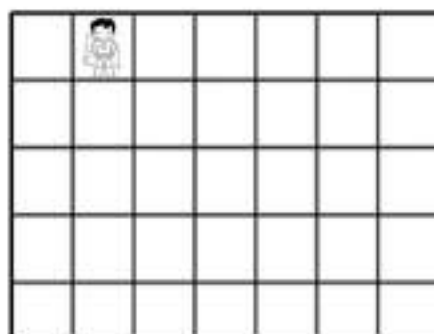
Will the object slide? Does the animal slide?

|                           |     |    |
|---------------------------|-----|----|
| 1) Rocks on the ground    | Yes | No |
| 2) Person on a slide      | Yes | No |
| 3) Rubber band on a slide | Yes | No |
| 4) Rubber puck on ice     | Yes | No |
| 5) Penguin                | Yes | No |
| 6) Snake                  | Yes | No |
| 7) Dog                    | Yes | No |
| 8) Seals                  | Yes | No |

### Part 4

Follow the path and the child will end up

1) Down 2 steps, right 3 steps, down 1 step, up 2 steps, up 3 steps, right 4 steps



### Part 5

Is the surface smooth? Will an object move fast or slow?

|                                                                                     |      |
|-------------------------------------------------------------------------------------|------|
|  |      |
| Yes                                                                                 | No   |
| Fast                                                                                | Slow |

|                                                                                     |      |
|-------------------------------------------------------------------------------------|------|
|  |      |
| Yes                                                                                 | No   |
| Fast                                                                                | Slow |

|                                                                                       |      |
|---------------------------------------------------------------------------------------|------|
|  |      |
| Yes                                                                                   | No   |
| Fast                                                                                  | Slow |



# Google Slides Lessons Preview







# Alberta Science Curriculum Matter Unit – Grade 1

## 3-Part Lesson Format

### Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

### WHAT ARE OBJECTS?

#### LEARNING GOAL

We are learning to tell what an object is and what is not an object so we can think and talk about things we see and touch.

### Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

### SORTING ACTIVITY – OBJECTS OR NOT OBJECTS?

(PLACE A ☒ IN THE OBJECT COLUMN.)

|   | Item   | Object | Not an Object |
|---|--------|--------|---------------|
| 1 | Love   |        |               |
| 2 | Desk   |        |               |
| 3 | Time   |        |               |
| 4 | Lamp   |        |               |
| 5 | Bottle |        |               |
| 6 | Idea   |        |               |

Use this to complete the activity:

### Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

### Consolidation – Reflection

Complete these sentences to show what you learned about objects. Use what you know about what an object is and what is not an object.

- 1) I learned that an object is something I can \_\_\_\_\_
- 2) An object takes up \_\_\_\_\_
- 3) Time is not an object because \_\_\_\_\_
- 4) One object I see at school is \_\_\_\_\_



# Alberta Science Curriculum Matter Unit – Grade 1

## SORTING ACTIVITY - MEASURE IT!

Look at each object. Decide if you would measure it by height, width, or depth. Drag the object to the correct box.

| Height (How tall?) | Width (How wide?) | Depth (How deep?) |
|--------------------|-------------------|-------------------|
|                    |                   |                   |
|                    |                   |                   |
|                    |                   |                   |
|                    |                   |                   |



## HEAVY OR LIGHT?

Read each item. Decide if the object is Heavy or Light.

|                |  |
|----------------|--|
| 1. A truck     |  |
| 2. An elephant |  |
| 3. A balloon   |  |
| 4. A couch     |  |
| 5. A feather   |  |
| 6. A pencil    |  |



Heavy

Light

Read the paragraph about bending. Use the word bank to complete the paragraph.

When we \_\_\_\_\_ an object, we change its \_\_\_\_\_. If you bend something too much, it might \_\_\_\_\_. Bending is a \_\_\_\_\_ change because the object is still the same thing.

break      bend      physical      shape



# Alberta Science Curriculum Matter Unit – Grade 1

## CHOOSE THE CORRECT STRETCHING FACT

Read each question. Drag the correct letter (A, B, or C) to the empty box.



- 1) What happens when you stretch a rubber band?  
A) It gets heavier      B) It gets longer      C) It gets smaller
- 2) Which object can stretch easily?  
A) Rock      B) Brick      C) Slime
- 3) Why can a rubber band stretch?  
A) It is flexible      B) It is heavy      C) It is sharp
- 4) What changes when you stretch an object?  
A) Its colour      B) Its shape      C) Its name

**A**  
**B**  
**C**

## WORD SEARCH – ONE

Find the 8 words in the puzzle. Circle each word. Use the list below.

|   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | N | B | G | E | C | P | A | P | E | R | J | U |
| M | P | Y | E | B | I | H | I | N | U | R | R | F |
| L | E | S | U | K | V | T | A | C | P | U | R | N |
| Q | K | S | X | B | Y | M | S | I | R | J | O | H |
| X | W | H | V | O | J | M | T | W | N | E | C | B |
| W | P | K | T | Q | I | T | I | M | K | Z | K | R |
| N | H | J | C | U | P | R | C | U | G | C | Y | I |
| G | L | A | S | S | F | T | K | E | R | M | G | C |
| E | R | S | G | S | V | L | N | Q | R | V | V | K |

|       |       |
|-------|-------|
| Glass | Rock  |
| Stick | Toy   |
| Cup   | Brick |
| Paper | Chain |

|                    | Description |
|--------------------|-------------|
| Heavier than       |             |
| Lighter than       |             |
| The same weight as |             |
| Heaviest           |             |
| Lightest           |             |

Has less weight

Has equal weight

Has the least weight in a group

Has more weight

Has the most weight in a group





# Workbook Preview



# Grade 1 – Science Unit

Organizing Idea Matter: Understandings of the physical world are deepened by investigating matter and energy.

Guiding Question: How can properties of an object be altered?

|                                            | Learning Outcome - Students analyze properties of objects and investigate how they can be changed.                                                                                                                                                                                                                                                                                                                                                                                    | Pages                           |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| MO.1                                       | Measurable properties of objects include: <ul style="list-style-type: none"><li>• length</li><li>• how much flat space an object covers (area)</li></ul>                                                                                                                                                                                                                                                                                                                              | 39                              |
| MO.2                                       | <div>Preview of 60 pages from this product that contains 110 pages total.</div> <ul style="list-style-type: none"><li>▪ weight (mass)</li><li>▪ shape</li><li>▪ texture</li></ul> Actions that physically change properties of an object include: <ul style="list-style-type: none"><li>▪ bending</li><li>▪ twisting</li><li>▪ stretching</li><li>▪ cutting</li><li>▪ breaking</li></ul> Not all objects respond the same way to bending, twisting, stretching, cutting, or breaking. | 40 – 42,<br>47 – 67,<br>71 – 72 |
| <b>Computer Science - Learning Outcome</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 |
| CS.1                                       | Students follow instructions and relate them to outcomes.                                                                                                                                                                                                                                                                                                                                                                                                                             | 43 – 46,<br>68 – 70             |

NAME: \_\_\_\_\_

# OBJECTS





## What are Objects?

An object is something that you can touch or see.

- ✓ You can see it: An object is something that you can see. For example, a pencil, toy, book, or chair are all objects because you can see them with your eyes.
- ✓ You can touch it: An object is something you can touch or hold in your hand. Your lunchbox, table, and backpack are all objects.
- ✓ It takes up space: This means if you put it somewhere, like on your desk or in your room, it takes up some of the space there.

Directions: Write Yes or No to show whether it is an object or not.

Dream



Yes

No

Meal



Yes

No

Shoes



Yes

No

Love



Yes

No

Time



Yes

No

Tea



Yes

No

Chair



Yes

No

Desk



Yes

No

Table



Yes

No

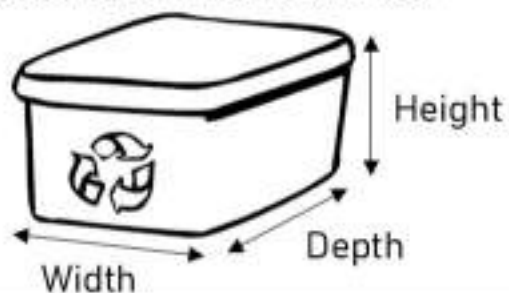
## Length of Objects – Height, Width, Depth

**Length** is the distance between two points. Objects have three different lengths:

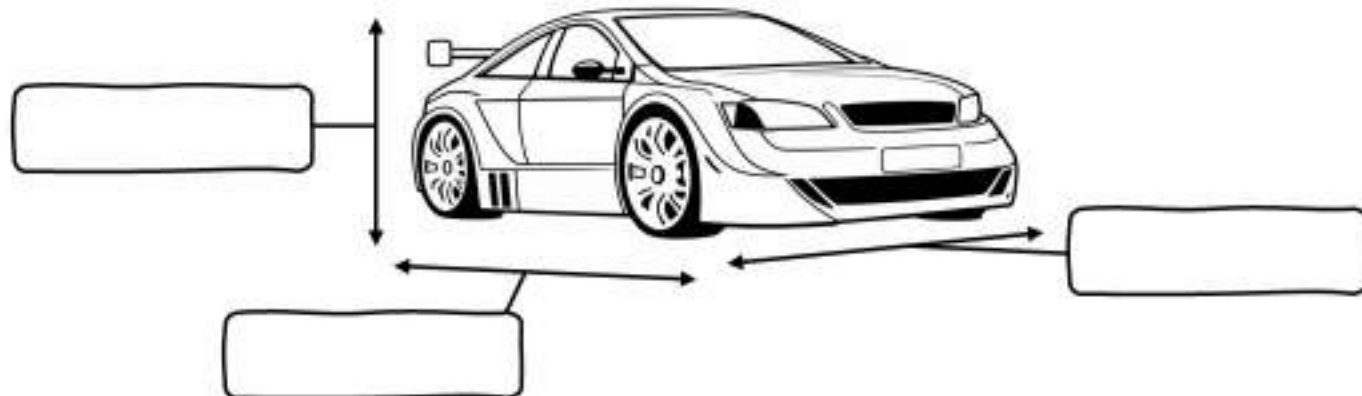
**Height** – how tall something is

**Width** – how wide something is

**Depth** – how deep something is



Question: Measure the height, width, and depth of the objects



# Length of Objects – Height

**Part 1**

Which object is taller?

1)



2)



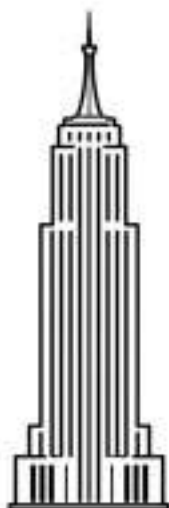
3)



4)

**Part 2**

Draw a tower with more height and on the right.



Less Height - Shorter

Empire State Building

More Height - Taller



Name: \_\_\_\_\_

9

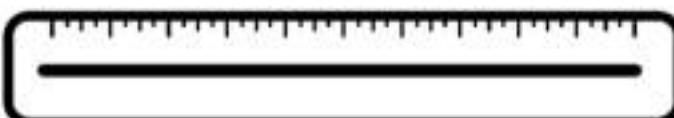
Curriculum Connection  
MO.1

## Comparing Length – Scavenger Hunt

### Questions

Find objects in your class that are shorter/taller than your pencil



| Shorter                                                                           | Taller                                                                             |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |
|                                                                                   |                                                                                    |
|                                                                                   |                                                                                    |
|                                                                                   |                                                                                    |
|                                                                                   |                                                                                    |
|                                                                                   |                                                                                    |
|                                                                                   |                                                                                    |

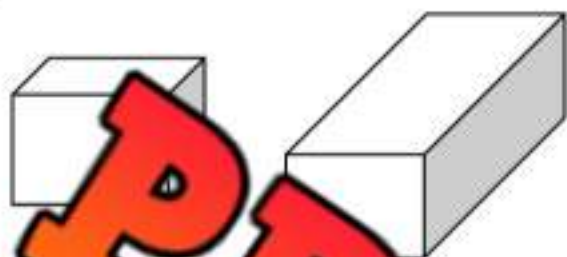
**PREVIEW**

## Length of Objects – Depth

### Part 1

Which object is deeper?

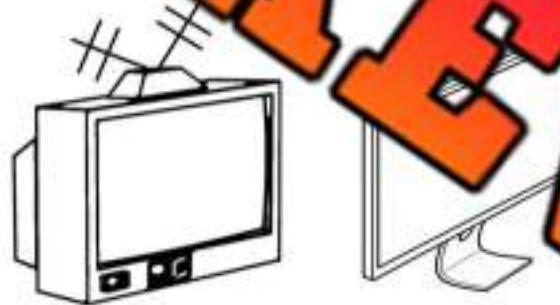
1)



2)



3)



4)



### Part 2

Draw one object that is shallower and one that is deeper.



Less Depth - Shallower

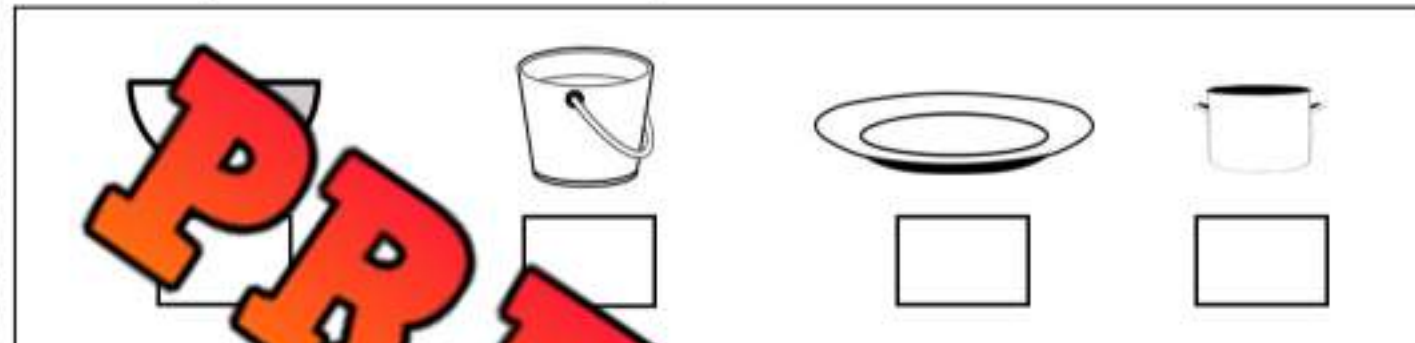
More Depth - Deeper

# Exit Cards

**Cut Out** Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Order the objects from shallowest to deepest



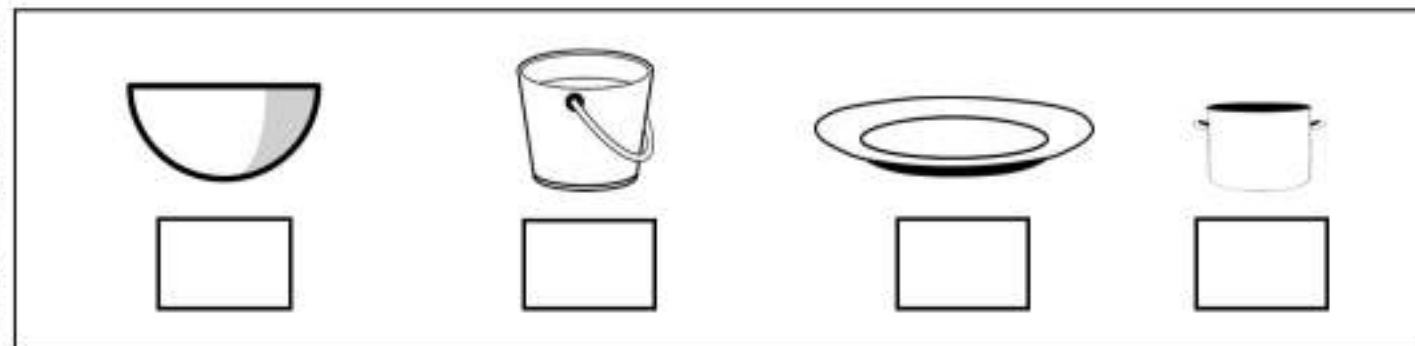
Name: \_\_\_\_\_

Order the objects from shallowest to deepest



Name: \_\_\_\_\_

Order the objects from shallowest to deepest





## Activity – Width

### Objective

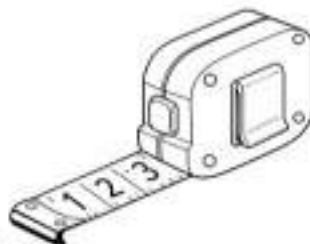
What are we learning more about?

This activity is designed to help students understand the concept of width and how it applies to different objects.

### Materials

What do we need for our activity?

- ✓ Various objects of different widths (e.g., a pen, a paper, a book)
- ✓ Large sheet of paper
- ✓ Markers or crayons
- ✓ Measuring tape or ruler (optional)



### Method

How do we complete the activity?

- 1) Start by explaining the concept of width (the measurement of an object from one side to the other).
- 2) Present the various objects to the students and discuss their widths. If available, use a measuring tape or ruler to show width.
- 3) Ask the students to arrange the objects in order from narrowest to widest.
- 4) Hand out sheets of paper and markers or crayons.
- 5) Instruct the students to draw the objects in their order, trying to represent their relative widths accurately.
- 6) Once the students are finished, ask them to present their drawings and explain why they arranged the objects as they did.

**Results**

Answer the questions below

1) Draw the objects from narrowest to widest below.

**PREVIEW**

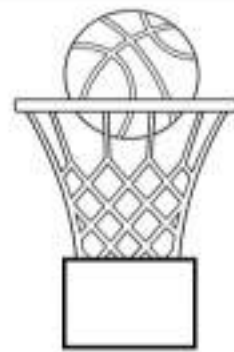
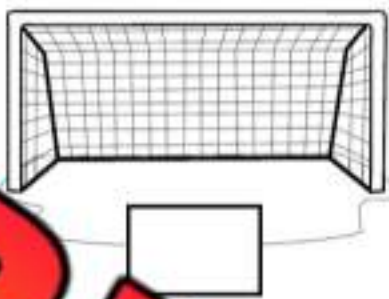
2) Draw an object that is as wide as you can.

## Length of Objects – Width

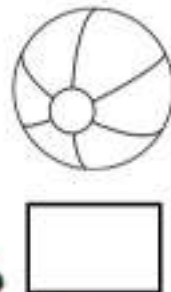
### Part 1

Order the objects from narrowest to widest

1)



2)



### Part 2

Draw 1 object that is narrower and 1 that is wider

|  |                                                                                      |  |
|--|--------------------------------------------------------------------------------------|--|
|  |  |  |
|--|--------------------------------------------------------------------------------------|--|



## Comparing Length

**Think**

Compare the objects below. Which one is...



Deeper

Shallower

Taller

Shorter

Wider

Narrower

Deeper

Shallower

Taller

Wider

Narrower



CN Tower

Deeper

Shallower

Taller

Shorter

Wider

Narrower



Hotel

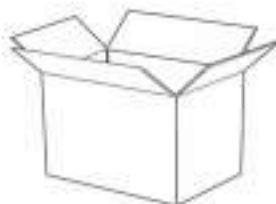
Deeper

Shallower

Taller

Shorter

Wider



Deeper

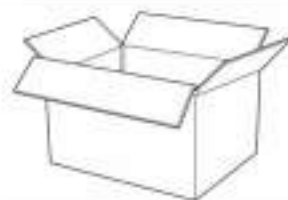
Shallower

Taller

Shorter

Wider

Narrower



Deeper

Shallower

Taller

Shorter

Wider

Narrower

**Area**

**Area** is how much space is taken up by an object. The area of your table or desk is how large the surface is. Does your teacher's desk have more or less area than your desk?



**Question:** Circle which surface has more area

1)



2)



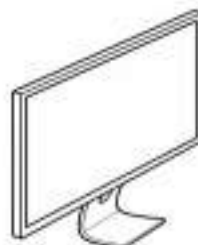
3)



5)



6)

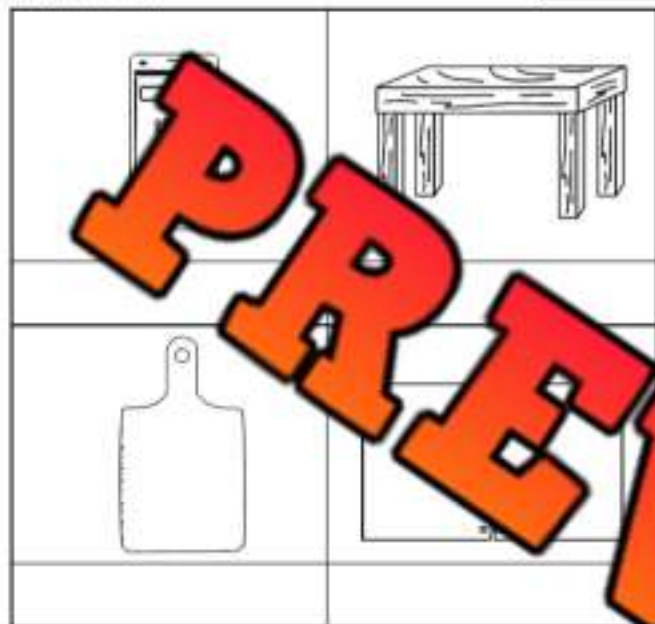


# Exit Cards

**Cut Out** Cut out the exit cards below and have students complete them at the end of class

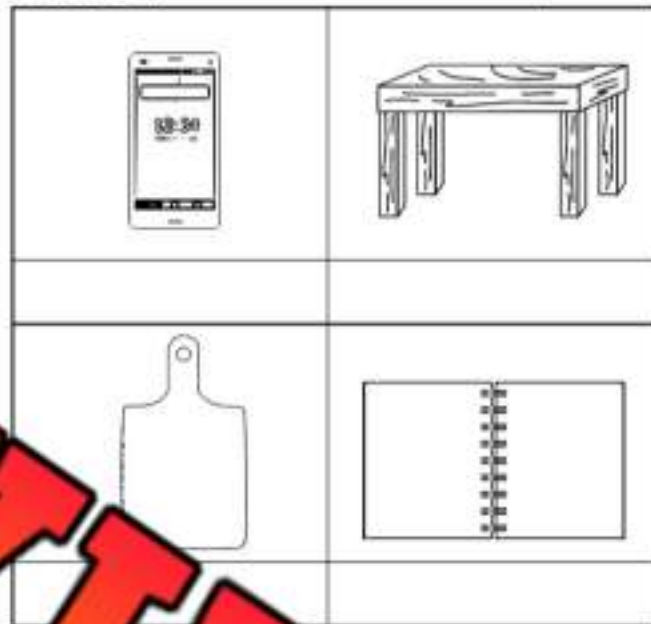
Name: \_\_\_\_\_

Mark

Order from smallest to largest area.  
Label 1-4.

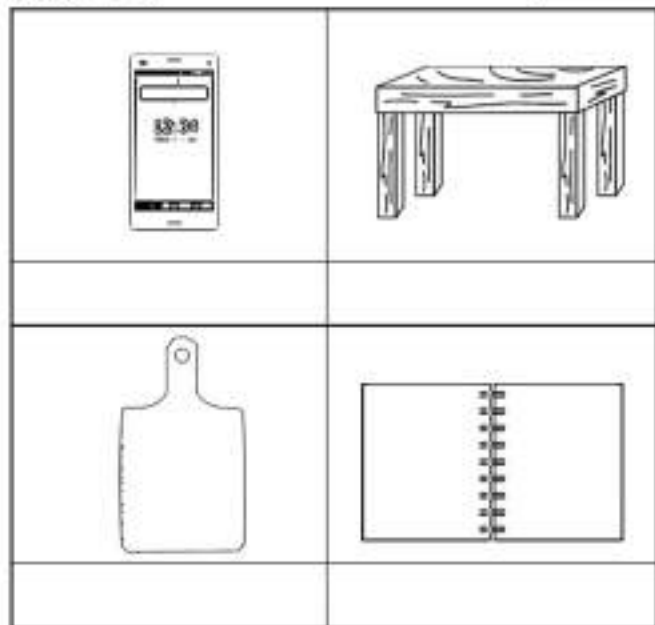
Name: \_\_\_\_\_

Mark

Order from smallest to largest area.  
Label 1-4.

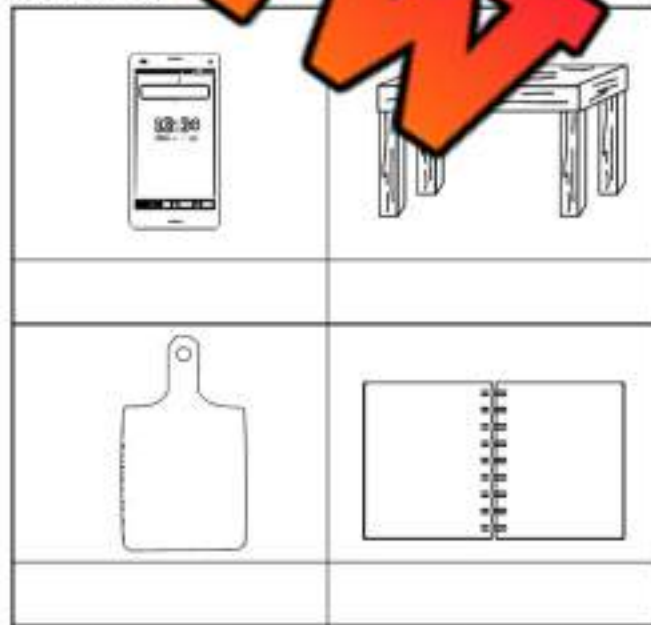
Name: \_\_\_\_\_

Mark

Order from smallest to largest area.  
Label 1-4.

Name: \_\_\_\_\_

Mark

Order from smallest to largest area.  
Label 1-4.



## Activity – Area of Objects

### Objective

What are we learning more about?

The objective of this activity is for students to understand the basic concept of area by observing and comparing different objects.

### Materials

What do we need for our activity?

- ✓ Different objects like a book, a plate, or a toy
- ✓ Crayons and markers
- ✓ Paper cut-outs in the shape of a foot (all the same size)



### Method

How do we complete the activity?

- 1) Begin by explaining the concept of area to the children. It is the space that an object covers.
- 2) Place an object on the ground and ask the children to draw the footprints they think the object would cover.
- 3) Next, have them place the foot cut-outs on the object to see how many it takes to cover the area of the object.
- 4) Have the students draw the object on their paper. Inside the drawing, they should draw as many footprints as they counted.
- 5) Repeat this process with different objects.
- 6) Discuss the relative sizes of the areas of the different objects, based on the number of footprints.

Name: \_\_\_\_\_

22

Curriculum Connection  
MO.1

Directions

Cut out the footprints below



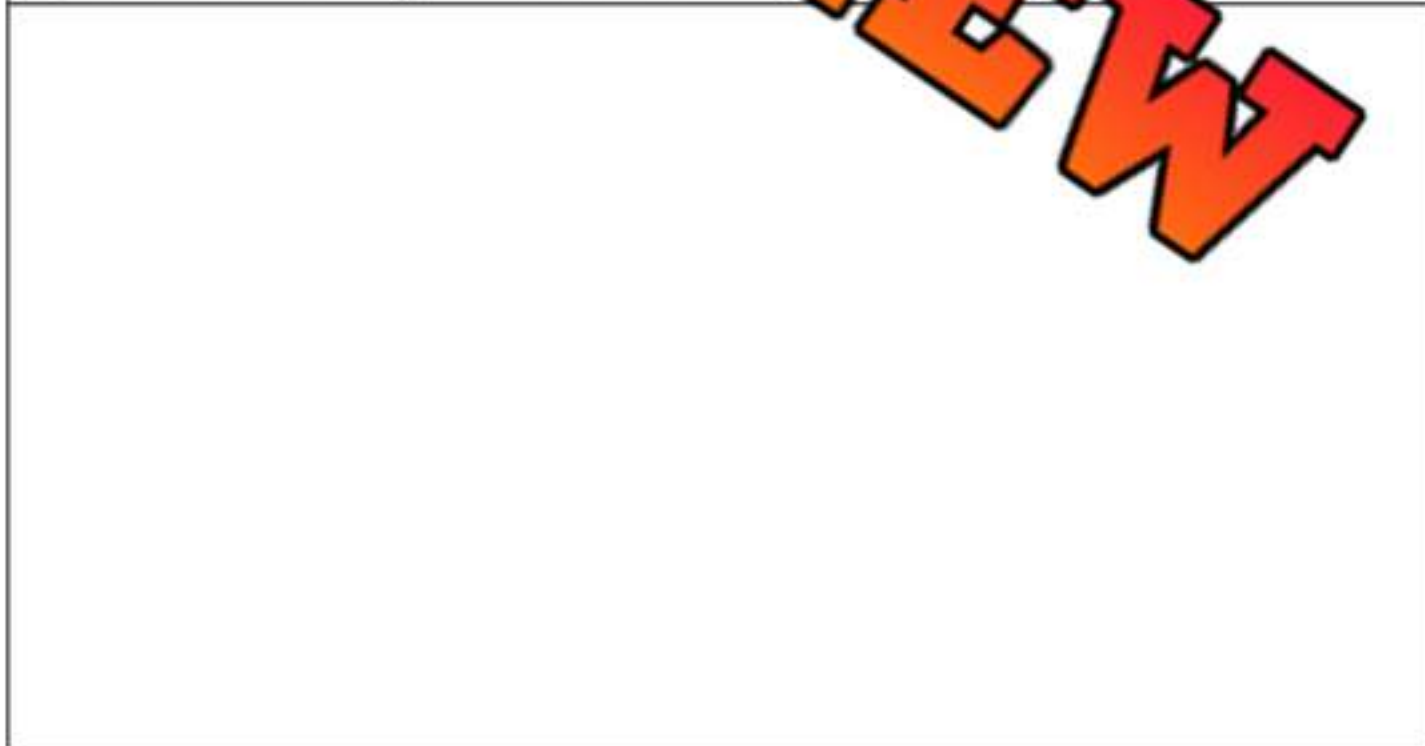
**Results**

Answer the questions below

1) Draw the first object below. Then draw how many footprints fit inside.



2) Draw the second object below. Then draw how many footprints fit inside.





**Results**

Answer the questions below

1) Order the objects from smallest area to largest. Draw them below.



2) Can you draw a different area? How many footprints it might cover?



3) Can you imagine what would happen if we used a smaller footprint? Would we need more or fewer footprints to cover the same object?

Name: \_\_\_\_\_

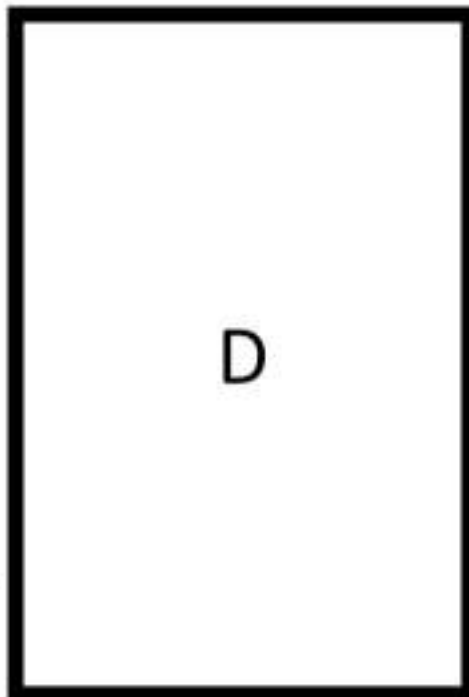
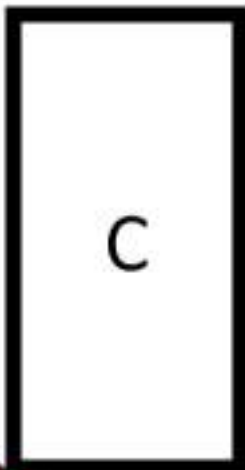
25

Curriculum Connection  
M0.1

## Area

### Questions

Cut A out and find out how many times it fits into the other shapes



| Shape | # of Times |
|-------|------------|
| F     |            |
| G     |            |
| H     |            |



**Comparing Area – Ordering****Questions**

Order the area of the shapes from smallest (1) to largest (3)





## Which Object Has More Mass?

**Mass** is the amount of matter in an object. Objects with more mass have more weight. But, weight depends on where the object is and mass is always the same.

**Example** - We weigh very little on the moon because gravity isn't as strong, but our mass is the same.

### Questions

Circle which object you think has more mass

1)



2)



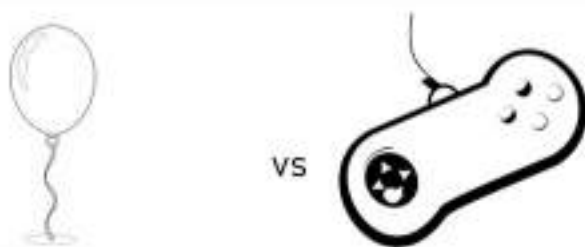
3)



4)



5)



6)



7)



8)



9)



10)

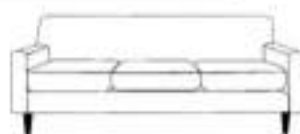


# Comparing Mass – Heavy and Light

## Questions

Circle whether the object is heaviest or lightest

1) The chocolate bar is the \_\_\_\_\_.



Heaviest

Lightest

2) The \_\_\_\_\_ is the \_\_\_\_\_.



Heaviest

Lightest

3) The TV is the \_\_\_\_\_.



Heaviest

Lightest

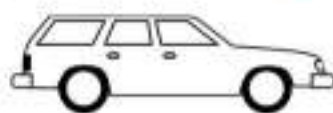
4) The boot is the \_\_\_\_\_.



Heaviest

Lightest

5) The car is the \_\_\_\_\_.



Heaviest

Lightest

6) The deer is the \_\_\_\_\_.



Heaviest

Lightest

7) The pencil sharpener is the \_\_\_\_\_.



Heaviest

Lightest

## Comparing Mass – Ordering Vehicles

**Questions**

Order the vehicles from heaviest (1) to lightest (3)

1)



2)



3)



4)



5)

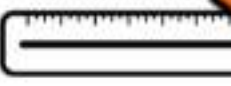
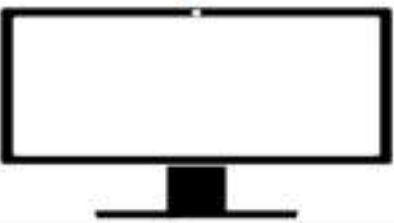




# Comparative Language

**Questions**

Circle the relationship between column 1 and column 2

| Column 1                                                                            | Comparative Language<br>Column 1 is ____ Column 2  | Column 2                                                                              |
|-------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------|
|    | lighter than<br>heavier than<br>the same weight as |    |
|    | lighter than<br>heavier than<br>the same weight as |    |
|  | lighter than<br>heavier than<br>the same weight as |  |
|  | lighter than<br>heavier than<br>the same weight as |  |
|  | lighter than<br>heavier than<br>the same weight as |  |
|  | lighter than<br>heavier than<br>the same weight as |  |

# Comparative Language

**Questions**

Circle the relationship between column 1 and column 2

| Column 1                                                                            | Comparative Language<br>Column 1 is ____ Column 2 | Column 2                                                                              |
|-------------------------------------------------------------------------------------|---------------------------------------------------|---------------------------------------------------------------------------------------|
|    | the same weight as<br>a different weight than     |    |
|   | the same weight as<br>a different weight than     |   |
|  | the same weight as<br>a different weight than     |  |
|  | the same weight as<br>a different weight than     |  |
|  | the same weight as<br>a different weight than     |  |
|  | the same weight as<br>a different weight than     |  |

## Comparing Weight - Baseball

|                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| Ball                                                                              | Bat                                                                               | Player                                                                            | Stadium                                                                            | Glove                                                                               | Cap                                                                                 |

Question: Write whether the object is the shortest or the longest

|                                              |                              |
|----------------------------------------------|------------------------------|
| 1) The ball is _____ the bat                 | heavier than<br>lighter than |
| 2) The player is _____ the bat               | heavier than<br>lighter than |
| 3) The stadium is _____ all the other things | heavier than<br>lighter than |
| 4) The bat is _____ the player               | heavier than<br>lighter than |
| 5) The cap is _____ all the other things     | heavier than<br>lighter than |
| 6) The glove is _____ the ball               | heavier than<br>lighter than |
| 7) The player is _____ the cap               | heavier than<br>lighter than |
| 8) The stadium is _____ the ball             | heavier than<br>lighter than |



# Comparing Weight – Ordering Heaviest to Lightest

## Part 1

Rank the animals from heaviest (1) to lightest (6)

|                                                                                  |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| Elephant                                                                         | Bear                                                                              | Mouse                                                                             | Dog                                                                                | Cat                                                                                 | Tiger                                                                               |
|                                                                                  |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |

## Part 2

Rank the objects from heaviest (1) to lightest (6)

|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| Car                                                                                 | Feather                                                                             | Brick                                                                               | Can                                                                                  | Soul                                                                                  | Crayon                                                                                |
|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |

## Part 3

Rank the vehicles from heaviest (1) to lightest (6)

|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| Snowmobile                                                                          | Plane                                                                               | Car                                                                                 | Skateboard                                                                           | Bike                                                                                  | ATV                                                                                   |
|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |

# Comparing Weight – Ordering Lightest to Heaviest

## Part 1

Rank the fruits from lightest (1) to heaviest (6)

|                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| Pumpkin                                                                           | Strawberry                                                                        | Apple                                                                             | Pineapple                                                                          | Watermelon                                                                          | Blueberry                                                                           |
|                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |

## Part 2

Rank the foods from lightest (1) to heaviest (6)

|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| Noodle                                                                              | Steak                                                                               | Hot Dog                                                                             | Granola Bar                                                                          | Milk Carton                                                                           | Turkey                                                                                |
|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |

## Part 3

Rank the objects from lightest (1) to heaviest (6)

|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| Phone                                                                               | Laptop                                                                              | Paper                                                                               | Headphones                                                                           | Boat                                                                                  | Wheelbarrow                                                                           |
|                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |



## Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Mark

Circle Yes or No for each question.

1) A book weighs less than a desk.

Yes

No

2) My shoes are lighter than my backpack.

Yes

No

3) My water bottle is heavier than my eraser.

Yes

No

4) A spoon weighs the same as a book.

Yes

No

5) A rock weighs more than a feather.

Yes

No

Name: \_\_\_\_\_

Mark

Circle Yes or No for each question.

1) A book weighs less than a desk.

Yes

No

2) My shoes are lighter than my backpack.

Yes

No

3) My water bottle is heavier than my eraser.

Yes

No

4) A spoon weighs the same as a book.

Yes

No

5) A rock weighs more than a feather.

Yes

No

Name: \_\_\_\_\_

Mark

Circle Yes or No for each question.

1) A book weighs less than a desk.

Yes

No

2) My shoes are lighter than my backpack.

Yes

No

3) My water bottle is heavier than my eraser.

Yes

No

4) A spoon weighs the same as a book.

Yes

No

5) A rock weighs more than a feather.

Yes

No

Name: \_\_\_\_\_

Mark

Circle Yes or No for each question.

1) A book weighs less than a desk.

Yes

No

2) My shoes are lighter than my backpack.

Yes

No

3) My water bottle is heavier than my eraser.

Yes

No

4) A spoon weighs the same as a book.

Yes

No

5) A rock weighs more than a feather.

Yes

No



## Measuring Mass Activity

### Background

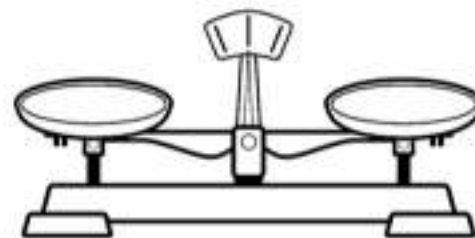
What is a pan balance?

We can use a pan balance to measure the mass of an object. A **pan balance** allows us to compare the mass of one object to the mass of another object.

### Materials

What do we need?

- Pan balance
- 15 g mass
- Recording Sheet



### Method

What have we done in our experiment?

1. Fill out the table below with the objects you will compare
2. Put object 1 on one side of the pan balance and object 2 on the other
3. Circle which object is heavier

### Observations

Which object was heavier?

| Object 1 | Object 2 | Heavier (1 or 2) |
|----------|----------|------------------|
|          |          |                  |
|          |          | 2                |
|          |          | 1      2         |
|          |          | 1      2         |
|          |          | 1      2         |
|          |          | 1      2         |

Name: \_\_\_\_\_

39

Curriculum Connection  
MO1

| Object 1 | Object 2 | Heavier (1 or 2) |
|----------|----------|------------------|
|          |          | 1      2         |
|          |          | 1      2         |
|          |          | 1      2         |
|          |          | 1      2         |
|          |          | 1    2           |
|          |          | 1      2         |
|          |          |                  |
|          |          | 1      2         |
|          |          | 1      2         |
|          |          | 1      2         |

**PREVIEW**

## Changing Objects

### Changing Objects

We can change objects physically or chemically. A **physical change** is when only the look of the object has changed. A **chemical change** is when we change the object so that it is a new object.

#### Examples of Physical Changes

- ✓ Stretching an object
- ✓ Bending an object
- ✓ Twisting an object
- ✓ Cutting an object



#### Examples of Chemical Changes

- ✓ Cooking or heating objects
- ✓ Burning an object like wood
- ✓ An object rusting
- ✓ A food rotting

Draw

Draw examples of objects that have changed physically

#### Twisting an Object

A large, bold, orange-to-red gradient watermark with a black outline, slanted diagonally from the bottom-left to the top-right, reading 'PREVIEW'.

#### Cutting an Object

#### Bending an Object

#### Stretching an Object

#### Breaking an Object



# Activity – Physical or Chemical Change

**Directions**

Is the picture showing a chemical or physical change?

Cutting Hair



Physical

Burning



Physical

Chemical

Boiling



Physical

Chemical

Chopping



Physical

Chemical

Baking



Physical

Chemical

Freezing



Physical

Chemical

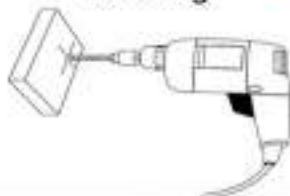
Boiled Egg



Physical

Chemical

Drilling



Physical

Chemical

Sawing



Physical

Chemical

Rotting Food



Physical

Chemical

Fireworks



Physical

Chemical

Mixing



Physical

Chemical

## Bending Objects

To bend an object means to change its shape by making it curved or angled instead of straight. When you bend something, you make it move by applying force, but you don't break it or make it completely different, you just change its shape a little bit.

Many things that are thin or flexible can be bent. Here are some examples:

- A pipe cleaner
- A spoon (the thin part where you hold it)
- A paper
- A pin

Directions

Can the object be bent?



Yes

No



Yes



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No

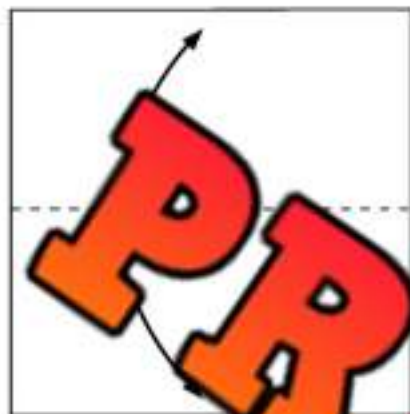


Yes

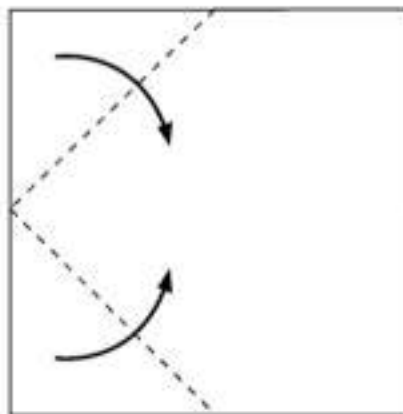
No

**Activity – Physical Change – Bending/Folding****Instructions**

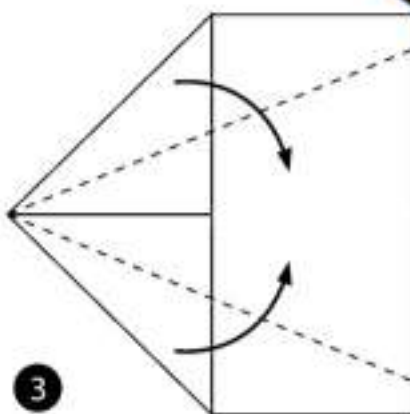
Bend and fold the paper to make a paper airplane



1

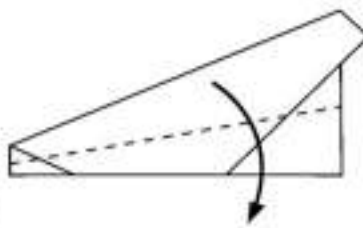


2

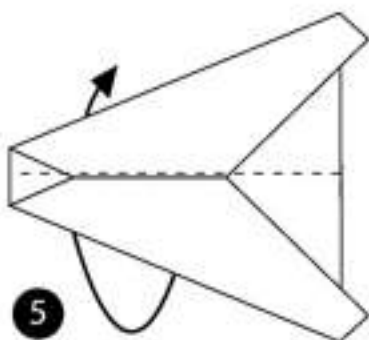


3

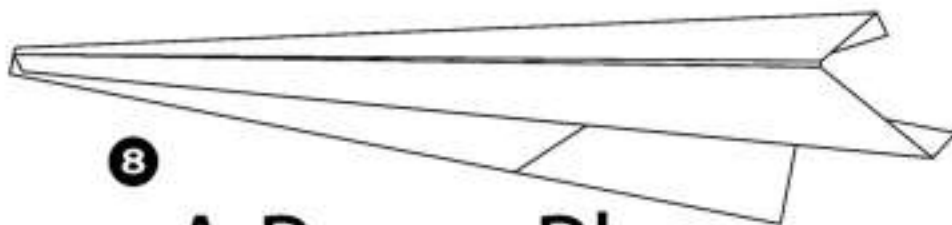
6



7



5



8

**A Paper Plane**



## Twisting Objects

To twist an object means to turn it around many times, like when you're turning a knob on a door or wringing out a wet towel. It's like spinning the object around and around in place, making it take a different shape, almost like a spiral.

Many things that are thin or flexible can be twisted. Here are some examples:

- Paper
- String
- Washcloth
- Rubber band



Directions

Object twisted?



Yes

No



Yes



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No

# Exit Cards

**Cut Out** Cut out the exit cards below and have students complete them at the end of class

Name: \_\_\_\_\_

Mark

Draw 1 object that twists and  
1 that does not.

|  |  |
|--|--|
|  |  |
|  |  |

Name: \_\_\_\_\_

Mark

Draw 1 object that twists and  
1 that does not.

|  |  |
|--|--|
|  |  |
|  |  |

Name: \_\_\_\_\_

Mark

Draw 1 object that twists and  
1 that does not.

|  |  |
|--|--|
|  |  |
|  |  |

Name: \_\_\_\_\_

Mark

Draw 1 object that twists and  
1 that does not.

|  |  |
|--|--|
|  |  |
|  |  |

## Activity – Twisty Sculptures

### Objective

What are we learning more about?

The aim of this activity is for students to understand the concept of twisting and to create a fun and unique sculpture using objects that can be twisted.

### Materials

What do we need for our activity?

- ✓ Variety of objects that can be twisted such as pipe cleaners, rubber bands, and soft, thin wires.
- ✓ Play dough or clay.
- ✓ Cardboard base.
- ✓ Safety scissors.

### Method

How do we complete this activity?

- 1) Begin by explaining what it means to twist and show them a few examples using the materials provided.
- 2) Give each student a cardboard base, a few pieces of play dough or clay, and a selection of twistable materials.
- 3) Encourage the students to create their own sculptures by twisting the materials and attaching them to the base with the play dough or clay. They can twist the materials together, twist them into spirals, or come up with their own twisting techniques.
- 4) Once they have finished their sculptures, have a gallery walk where each student can show off their artwork and explain how they twisted the materials to create it.
- 5) Afterward, discuss as a class the different ways the materials could be twisted and how that changed the way their sculptures looked.





**Results**

Answer the questions below

1) What objects did you choose for your sculpture?

---

---

---

2) Describe your sculpture below.

**PREVIEW**

3) Were some materials harder to twist? Write them below.

**Hard****Easy**

## Cutting Objects

Cutting an object means dividing it into two or more pieces using a tool like scissors or a knife. When we cut an object, we change the object. It will get shorter in length and will weigh less.

Objects that can be cut are often soft or thin. Here are some examples:

- Paper
- String
- Play dough
- Soft fruit like banana or apple (with an adult's help)



Questions \_\_\_\_\_ questions below

1) Draw tools that are used to cut objects?

2) Can the object be cut? Yes or no?

1) Paper

2) Leaf

3) Rock

4) Steel

5) Bread

6) Computer

7) Fruit

8) Wooden block

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

## Activity – Cutting Objects Safely

### Objective

What are we learning more about?

The objective of this activity is for students to explore the concept of cutting using different safe tools, and to compare how different tools are suited for different materials.

### Material

What do we need for our activity?

- ✓ Different safe tools: safety scissors, plastic knife, playdough cutting tool
- ✓ A range of safe materials: playdough, soft fruit like a banana, string

### Method

How do we complete the activity?

- 1) Begin by explaining what it means to cut an object and that today they will be using different tools to cut different things. Review the safety rules for each tool.
- 2) Lay out the different materials and cutting tools.
- 3) Demonstrate how to use each tool safely to cut the different materials.
- 4) Have the students take turns using the different tools to cut the materials. Encourage them to observe and compare how each tool works with each material.
- 5) Ask them to compare which tool was easiest to use for each material and which was the hardest.





**Results**

Answer the questions below

1) Which tool was best at cutting the soft fruit? Which was the worst?

| Best | Worst |
|------|-------|
|      |       |

2) Which tool was best at cutting the play dough? Which was the worst?

|  | Worst |
|--|-------|
|  |       |

3) Which tool was best at cutting the paper? Which was the worst?

| Best | Worst |
|------|-------|
|      |       |

4) Which tool was best at cutting the string? Which was the worst?

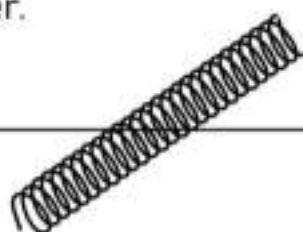
| Best | Worst |
|------|-------|
|      |       |

## Stretching an Object

To "stretch" means to pull on something so that it becomes longer or wider. When we stretch an object, we're trying to make it take up more space from one end to the other. Imagine pulling on a rubber band. When you pull on both ends, it gets longer. That's stretching!

Objects that can be stretched often have some flexibility. Here are a few examples:

- Rubber bands: You can stretch them out to make them longer.
- Slime or dough: You can pull on it and watch it stretch.
- A spring: When you pull a spring, it stretches out.



Question \_\_\_\_\_ Write your answer below

What happens when you stretch an object? Circle your answers.

It gets longer

It gets shorter

It could get wider

It could get narrower

It will weigh more

It will weigh less

Directions \_\_\_\_\_ Can the object be stretched?



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No



Yes

No

## Activity: Stretch It Out!

### Objective

What are we learning more about?

The objective of this activity is for students to explore the concept of stretching by manipulating a variety of objects and observing the changes.

### Materials

What do we need for our activity?

- ✓ Objects that can be stretched: Rubber bands, balloons, slime or playdough, a spring, hair ties, etc.
- ✓ Objects that cannot be stretched: A book, a pencil, a small toy, a plastic water bottle, Lego bricks, etc.

### Method

How do we complete the activity?

- 1) Start by explaining what it means to stretch an object. Use an object, like a rubber band or a piece of playdough, to demonstrate.
- 2) Distribute the worksheet and explain that the students will be testing different objects to see if they can be stretched or not.
- 3) Divide the class into pairs and give each pair a set of objects. Make sure each set includes objects that can and cannot be stretched.
- 4) Have the students take turns trying to stretch each object in their set. They should mark on their worksheet whether each object can or cannot be stretched.
- 5) Once all pairs have finished testing their objects, discuss the results as a class. Which objects could be stretched? Which ones couldn't? Were there any surprises?





**Results****What happened?**

Can you stretch the object?

|                |     |    |
|----------------|-----|----|
| a) Rubber band | Yes | No |
| b) Balloon     | Yes | No |
| c) Book        | Yes | No |
| d) Pen         | Yes | No |
| e) T           | Yes | No |
| f) Playdough   | Yes | No |
| g) Lego brick  | Yes | No |
|                | Yes | No |
|                | Yes | No |

**Questions**

Answer the questions below.

1) Draw other objects that can be stretched below.

2) Draw other objects that can't be stretched below.

## Breaking Objects

Breaking is when something is divided into parts, often by force or accident, and it's no longer in its whole form. For example, when you have a whole cookie and you split it into two pieces, you have broken the cookie.

Different objects can be broken in different ways. A glass can break if it falls on the floor. A toy might break if it is stepped on. A stick can break if you bend it too much. Some things break easily, like a fragile ornament. Some things are very hard to break, like a big rock.



Directions: Is each object easy to break?

|     |    |
|-----|----|
|     |    |
| Yes | No |

|     |    |
|-----|----|
|     |    |
| Yes | No |

|     |    |
|-----|----|
|     |    |
| Yes | No |

|     |    |
|-----|----|
|     |    |
| Yes | No |

|     |    |
|-----|----|
|     |    |
| Yes | No |

|     |    |
|-----|----|
|     |    |
| Yes | No |

Write and Draw

When have you broken something? What did you break?

|                   |  |
|-------------------|--|
| <hr/> <hr/> <hr/> |  |
|-------------------|--|

## Activity: Changing Objects

### Objective

What are we learning more about?

The aim of this activity is for students to understand that objects can be changed in a variety of ways, such as bending, twisting, stretching, cutting, and breaking.

### Materials

What do we need for our activity?

- ✓ The following objects: paper clips, straws, rubber bands, clothespins, and dry pasta noodles
- ✓ The recording sheet on the back of the page



### Method

How do we complete the activity?

- 1) Begin the lesson by explaining that objects can be changed in different ways, like bending, twisting, stretching, cutting, and breaking.
- 2) Show each object and ask the students to predict what will happen if you try to bend, twist, stretch, cut, or break it. Record their predictions.
- 3) Put students in groups or pairs. Give each group a set of the objects. Have them test whether each object can be changed in the ways mentioned above.
- 4) Have students complete the back of the page by drawing what some of the objects looked like before and after they were changed.
- 5) Discuss how the actual outcomes matched up with the students' predictions.



**Observations**

Circle whether each object could be changed in the ways below

| Paper Clip    | Stretched | Twisted | Cut | Bended | Broken |
|---------------|-----------|---------|-----|--------|--------|
| A Straw       |           |         |     |        |        |
| A Rubber Band |           |         |     |        |        |
| Pipe Cleaner  |           |         |     |        |        |
| Pasta         |           |         |     |        |        |

**Results**

Circle whether the object can be changed in the ways below

1) Draw an object before and after it was bent?

|               |              |
|---------------|--------------|
|               |              |
| <b>Before</b> | <b>After</b> |

2) Can you draw an object before and after it was cut?

|               |              |
|---------------|--------------|
|               |              |
| <b>Before</b> | <b>After</b> |

## Changing Objects

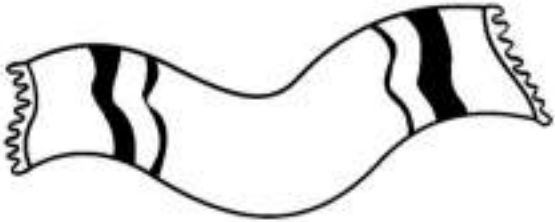
When we change objects by cutting, breaking, twisting, bending or stretching them, we change their shape, weight, length and area.

**Directions**

Draw the pictures below after they have been changed

| Before Being Cut                                                                  | After Being Cut |
|-----------------------------------------------------------------------------------|-----------------|
|  |                 |

| Before Being Bent                                                                   | After Being Bent |
|-------------------------------------------------------------------------------------|------------------|
|  |                  |

| Before Being Twisted                                                                | After Being Twisted |
|-------------------------------------------------------------------------------------|---------------------|
|  |                     |

**Directions**

Draw the pictures below after they have been changed

**Before Being Stretched****After Being Stretched****Before Being Broken****After Being Broken****Think**

How do objects change when they are cut, bent, stretched, or twisted?

|                  |                 |            |         |         |
|------------------|-----------------|------------|---------|---------|
| <b>Stretched</b> | Bigger          | Smaller    | Heavier | Lighter |
| <b>Broken</b>    | Different Shape | Same Shape | Heavier | Lighter |
| <b>Twisted</b>   | Different Shape | Same Shape | Heavier | Lighter |
| <b>Bent</b>      | Different Shape | Same Shape | Bigger  | Smaller |
| <b>Cut</b>       | Bigger          | Smaller    | Heavier | Lighter |



## Activity: Changing Objects - Textures

### Objective

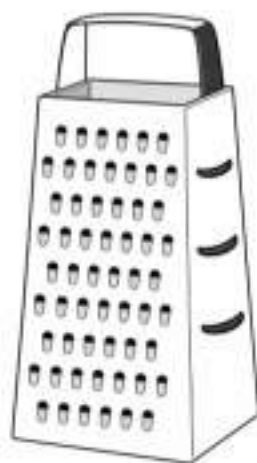
What will you learn?

The objective of this activity is to help students understand how the texture of an object can be changed through a hands-on, interactive process.

### Materials

What do we need for our experiment?

- 1) A variety of fruits (such as bananas, oranges, and apples)
- 2) Plastic knife (safety)
- 3) Grater
- 4) Plastic zip-lock bags



### Method

How do we complete the experiment?

- 1) Begin the activity by explaining what texture means. Texture is the way something feels when we touch it.
- 2) Ask students to touch the different fruits and describe how they feel. Are they smooth, rough, bumpy, or squishy?
- 3) Split the class into small groups and distribute the materials to each group.
- 4) With adult supervision, have the students cut a piece of fruit in half with the plastic knife. How has the texture changed? Is the inside different from the outside?
- 5) Now, have them place a piece of the fruit into a zip-lock bag and mash it up. Once it's mashed, they can feel the bag. How has the texture changed now?
- 6) If possible, grate a piece of fruit (like the apple). This should be done by an adult, but the students can feel the grated fruit (within the bag for cleanliness) to experience another texture change.
- 7) Ask students to draw pictures of the fruits before and after the texture changes. They can use crayons to try and show the different textures in their drawings.

**Results**

Answer the questions below

1) Which fruit did you feel first? Draw it or write it below.

2) How did it feel before you changed it?

Bumpy

Smooth

Rough

Hard

Soft

3) How did it feel after you changed it?

Bumpy

Smooth

Rough

Hard

Soft

1) Which fruit did you feel next? Draw it or write it below.

2) How did it feel before you changed it?

Bumpy

Smooth

Rough

Hard

Soft

3) How did it feel after you changed it?

Bumpy

Smooth

Rough

Hard

Soft

**Coding - Making Objects****Directions**

Follow the code to design a hot air balloon

run program

cut out all the shapes

paste the balloon in the middle

paste the stripes on the balloon

paste the clouds on the top of the page

paste the ropes below the balloon

paste the top to the balloon

paste the top of the balloon



Balloon



Stripe



Top



Ropes



Cloud



Cloud



**Directions**

Follow the code to design a rocket

run program

cut out all the shapes

paste the rocket in the middle

paste the stripes on the rocket

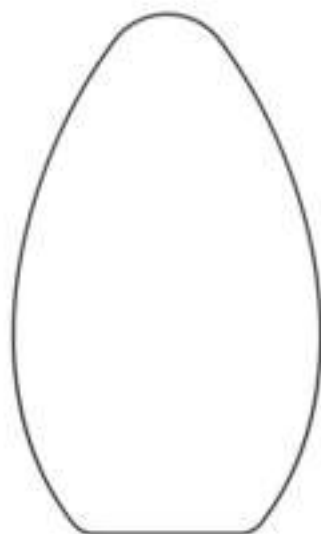
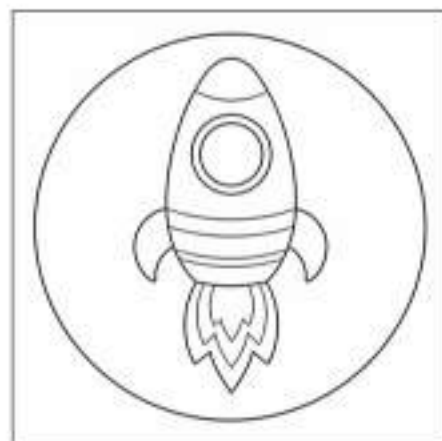
paste the feet on the rocket

paste the big flame on the bottom

paste the small flame on the big flame

paste the circle above the stripes

paste the top part on the top



Rocket



Circle



Big Flame



Foot



Big Stripe



Top



Small Flame



Small Stripe



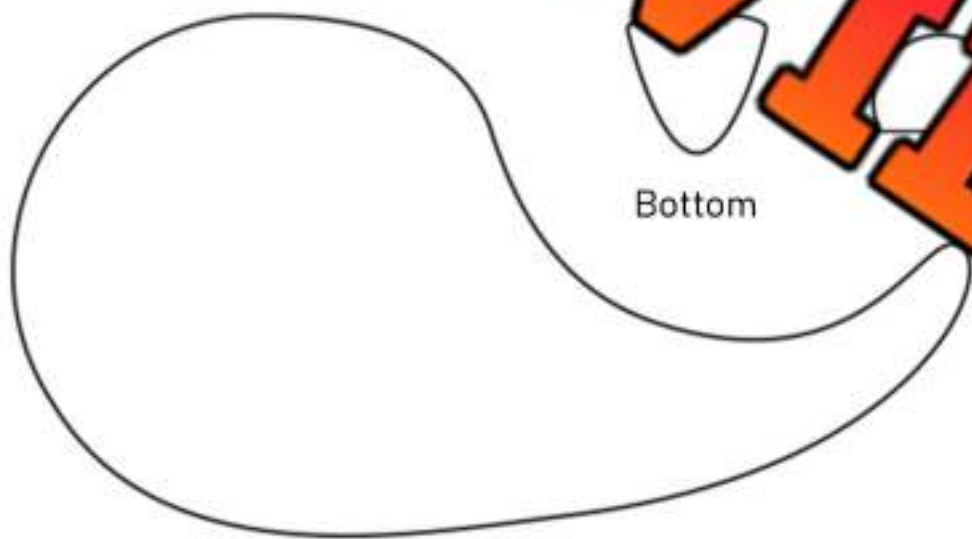
Medium Flame

**Directions**

Follow the code to design a rocket

**run program**

cut out all the shapes  
paste the plane on the paper  
paste the bottom below the plane  
paste the wheel on the bottom part  
paste the window on the front  
draw a line around the window  
paste the wings on the back  
paste the top on the top part  
paste the big wings on the top part



Plane

Bottom



Window Outline

Small  
Wing

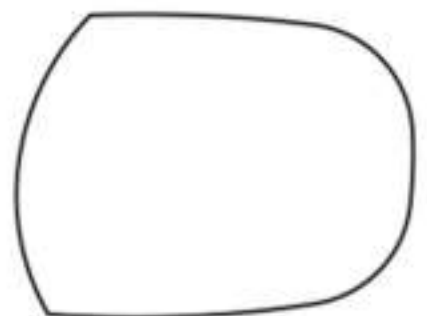
Wheel

Small  
Wing

Big Wing



Big Wing



Window

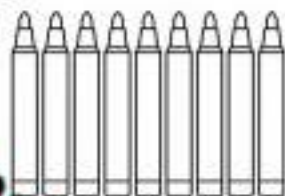
## Activity: Making a Pencil Holder

You can build a pencil holder out of many different materials. Choose materials that you have to make a pencil holder that can stand on its own and hold pencils inside.

### Materials

What do we need for our activity?

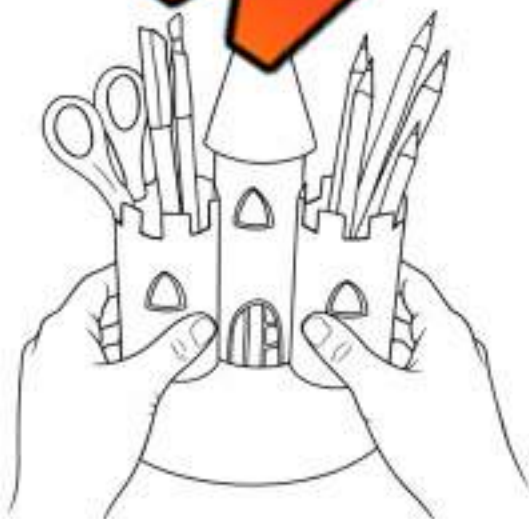
- ✓ Materials for the frame of the holder. The options below will work
  - ✓ Toilet paper rolls
  - ✓ Mason jars
  - ✓ Plastic bottle - e.g. for juice
- ✓ Paper to cover the frame
- ✓ Glue, tape, or hot glue to secure paper to the frame
- ✓ Materials to decorate
  - ✓ Ribbons
  - ✓ Stickers
  - ✓ Markers, crayons, paint



### Method

How do we complete the activity?

- 1) Bring materials in and let students see what they have to work with
- 2) Look up pictures of homemade pencil holders to help the planning phase
- 3) Make a plan on the back of this page of what materials you will use
- 4) Make a rough copy of the design you will use on the back of the page
- 5) Begin construction!





**Plan**

Plan your pencil holder below

1) What materials will you use to make your pencil holder?

| Cardboard | Paper | Glass | Wood | Plastic | Other |
|-----------|-------|-------|------|---------|-------|
|           |       |       |      |         |       |

2) Are the materials strong enough to hold pencils up?

3) Draw a design for your pencil holder.



Name: \_\_\_\_\_

## Unit Test – Matter: Objects

### Part 1

Order the objects from narrowest to widest

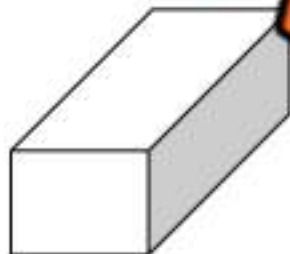
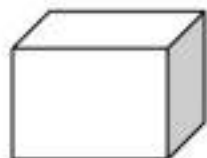
1)



### Part 2

Order the objects from narrowest to widest

1)



### Part 3

Circle which surface has more area

1)

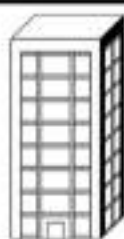


2)



# Part 4

Compare the objects below. Which one is...



Deeper

Shallower

Taller

Shorter

Wider

Narrower



Deeper

Shallower

Taller

Shorter

Wider

Narrower

# Part 5

Can the object be bent?



Yes

No



Yes

No



Yes

No

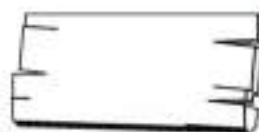
# Part 6

Can the object be twisted?



Yes

No



Yes

No



Yes

No

# Part 7

Can the object be stretched?



Yes

No



Yes

No



Yes

No