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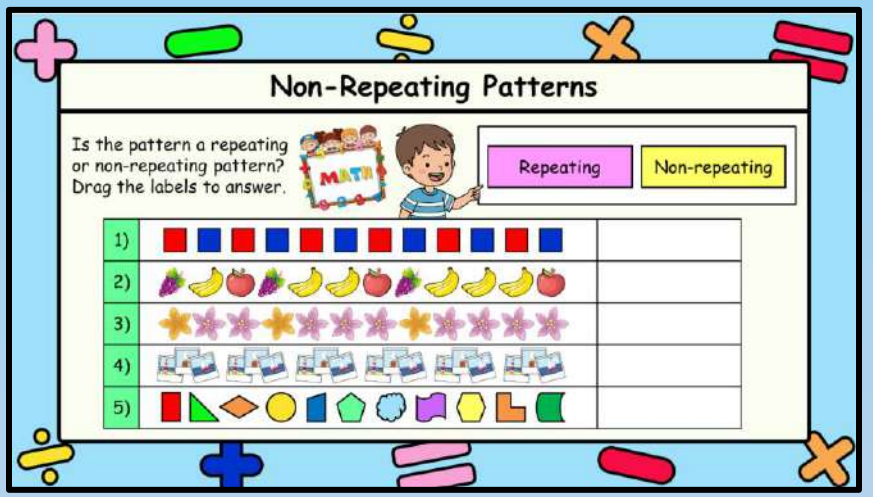
Google Slides Lessons Preview

Saskatchewan Math Curriculum
Patterns & Relations – Grade 2

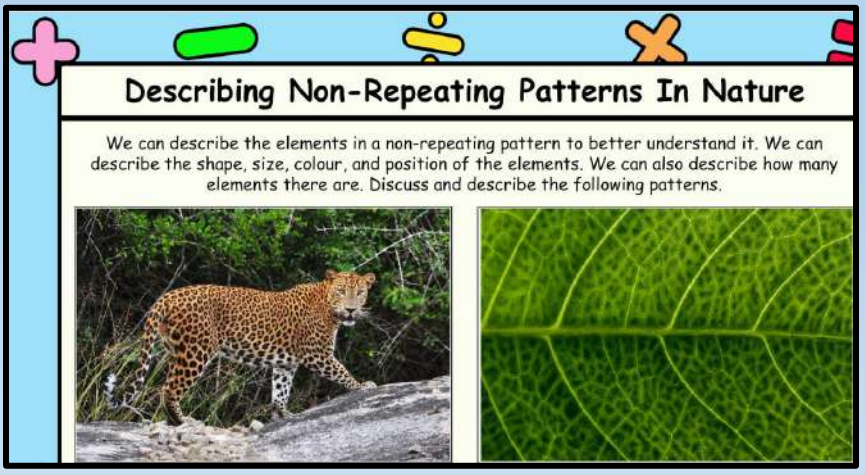
3-Part Lesson Format

Part 1 – Minds On!
- Learning Goals
- Discussion Questions
- Quotes
- And More!

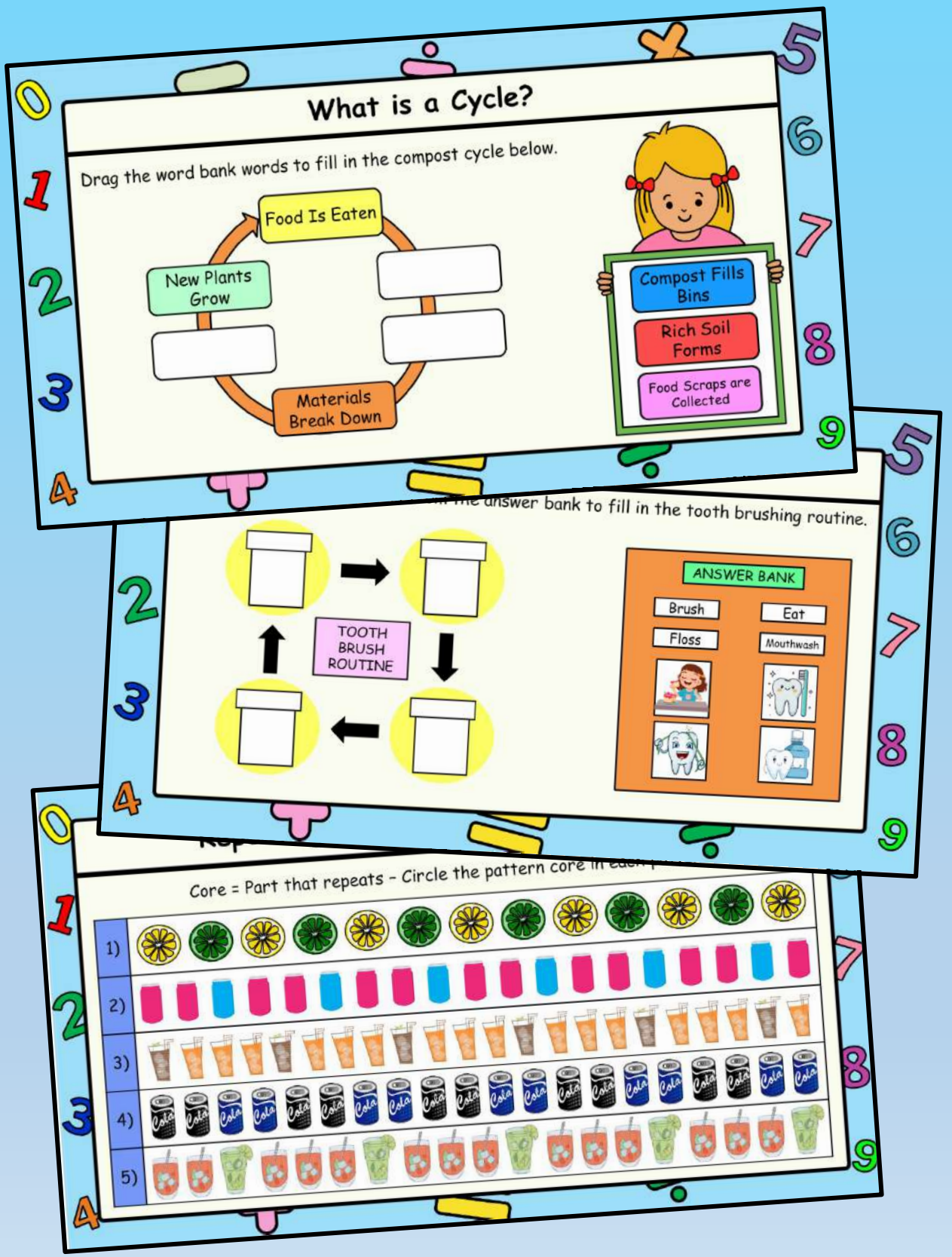


Part 2 – Action!
- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

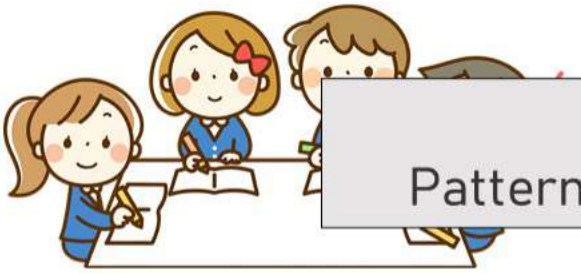
Part 3 – Consolidation!
- Exit Cards
- Quizzes
- Reflection
- And More!



Saskatchewan Math Curriculum
Patterns & Relations – Grade 2



Saskatchewan Math Curriculum
Patterns & Relations – Grade 2



Grade 2
Patterns and Relationships

	Curriculum Expectations	Pages
P2.1	Demonstrate understanding of repeating patterns (three to five elements) by: · describing · representing patterns in alternate modes · extending · comparing · creating patterns using manipulatives, pictures	5 – 46
P2.2	· creating patterns using manipulatives, pictures, sounds, and actions (numbers to 100).	
P2.3	Demonstrate understanding of equality and inequality concretely and pictorially (0 to 100) by: · relating equality and inequality to balance · comparing sets · recording equalities with an equal sign · recording inequalities with a not equal sign · solving problems involving equality and inequality.	98 - 142
TQ	Tests and Quizzes	96 – 97, 143 - 144

Name: _____ 5

Curriculum Connection
P2.1

Non-Repeating Patterns

A **repeating pattern** has the same elements that repeat over and over. A **non-repeating pattern** has similar elements, but the elements could get bigger or smaller. We could also add or remove elements or change the colour of them.

In a repeating pattern, we can find a pattern core. In a non-repeating pattern, there is no core.

Example

Re t	1, 2, 3, 1, 2, 3	
No Repea Patt	1, 2 4, 5, 6, 7	

Questions Is the p a repea non-repeating pattern?

1)	10, 20, 30, 40, 50, 60	peating	Non-Repeating
2)	100, 50, 50, 100, 50, 50, 100, 50, 50	R	Non-Repeating
3)		eating	-Repeating
4)		Repeatin	ng
5)		Repeating	Repeating
6)		Repeating	Non-Repeating

Draw Draw your own repeating and non-repeating patterns

Repeating	
Non-Repeating	

Exit Cards

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

Name: _____

Is the pattern a repeating or non-repeating pattern?

1) 8, 8, 8, 8, 8, 8
Repeating Non-repeating

2) 5, 10, 15, 20, 25, 30, 35
Repeating Non-repeating

3) 
Repeating Non-repeating

4) 
Repeating Non-repeating

Name: _____

Is the pattern a repeating or non-repeating pattern?

1) 8, 8, 8, 8, 8, 8
Repeating Non-repeating

2) 5, 10, 15, 20, 25, 30, 35
Repeating Non-repeating

3)
Repeating Non-repeating

4)
Repeating Non-repeating

Name: _____

Is the pattern a repeating or non-repeating pattern?

1) 8, 8, 8, 8, 8, 8
Repeating Non-repeating

2) 5, 10, 15, 20, 25, 30, 35
Repeating Non-repeating

3) 
Repeating Non-repeating

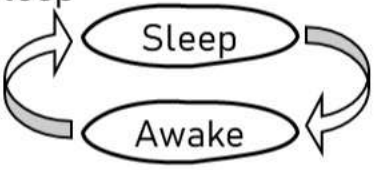
4) 
Repeating Non-repeating

Name: _____ 7

Curriculum Connection
P2.1

What is a Cycle?

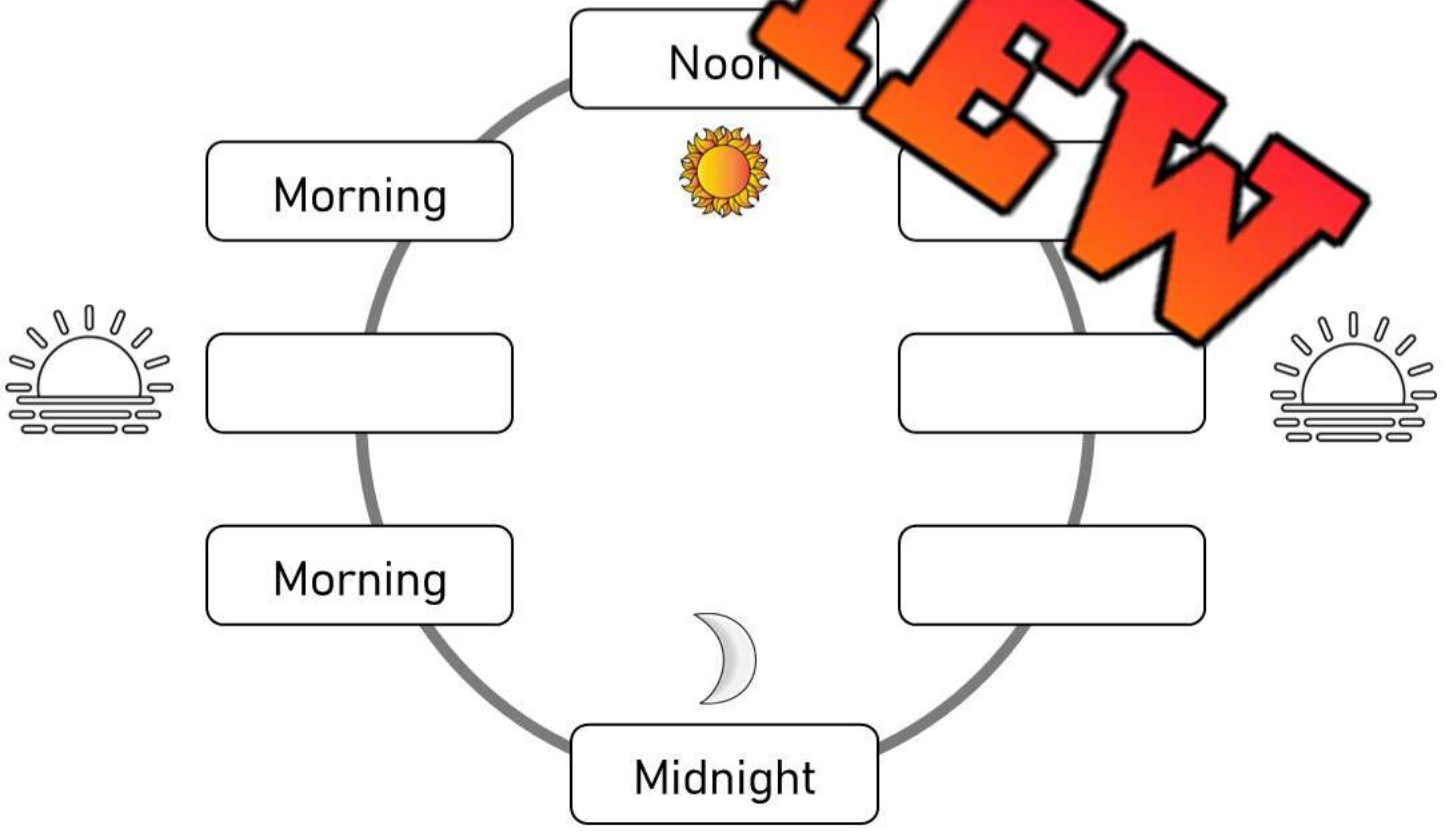
A cycle is when events happen over and over. For example, we all have a sleep and awake cycle. The two events repeat over and over. We sleep and then we wake up and then we sleep again and then we wake up. This is a cycle. Cycles are repeating patterns.



Night and day are two more events that happen over and over. It is daytime and then nighttime, and then daytime again. This is a cycle and repeating pattern has repeated for a long time!

Cycle Use the words to fill in the cycle below

Evening	Sunrise	Afternoon	Sunset



Name: _____ 9

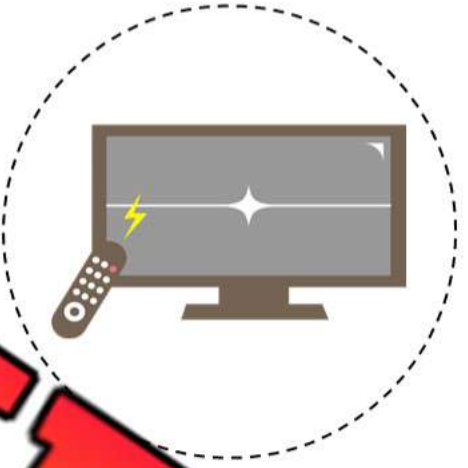
Curriculum Connection
P2.1

Cam's Cycle

Cam has been doing the same things lately. He feels his life is like a cycle. Here is what he does each day.

1) Wake up 2) Go to school 3) Watch TV 4) Practice reading 5) Go to sleep

Cycle ...t the events of Cam's life out below



Name: _____ 10

Curriculum Connection
P2.1

Cam's Cycle

Cycle | Paste Cam's events in the circles below

Name: _____ 14

Curriculum Connection
P2.1

Repeating Patterns

Questions | Label the images as A/B patterns and continue the pattern

Name: _____ 16

Curriculum Connection
P2.1

Activity Title: Sound Clap Patterns

Objective What are we learning about?

Students will create and recognize patterns using clapping and other sounds. This activity helps students understand and identify patterns through a fun and interactive method.

Materials What you will need for the activity.

- None

Instructions How you will complete the activity.

1. Begin by explaining to the students that they will create patterns using clapping and other sounds, like snapping or stomping.
2. Demonstrate a simple pattern, such as "clap, clap, snap, clap," and have the students repeat it.
3. Divide the students into small groups and ask each group to come up with their own unique sound pattern.
4. Allow each group to perform their pattern in front of the class.
5. After each performance, ask the rest of the class to identify and extend the pattern. For example, if the pattern is "clap, clap, snap, clap," the next part could be "clap, clap, snap, clap, clap, clap, snap, clap."
6. Repeat the process with each group, encouraging creativity and variation in the patterns they create.

Name: _____ 17

Curriculum Connection
P2.1

Reflection | Answer the questions below.

1) Describe your pattern below.

_____

_____

_____

2) Descri pattern of another group.

_____

_____

_____

3) Translate the pat hapes. For example, if the pattern was clap, clap, snap, clap, c a then ld do square, square, circle, square, square, circle.

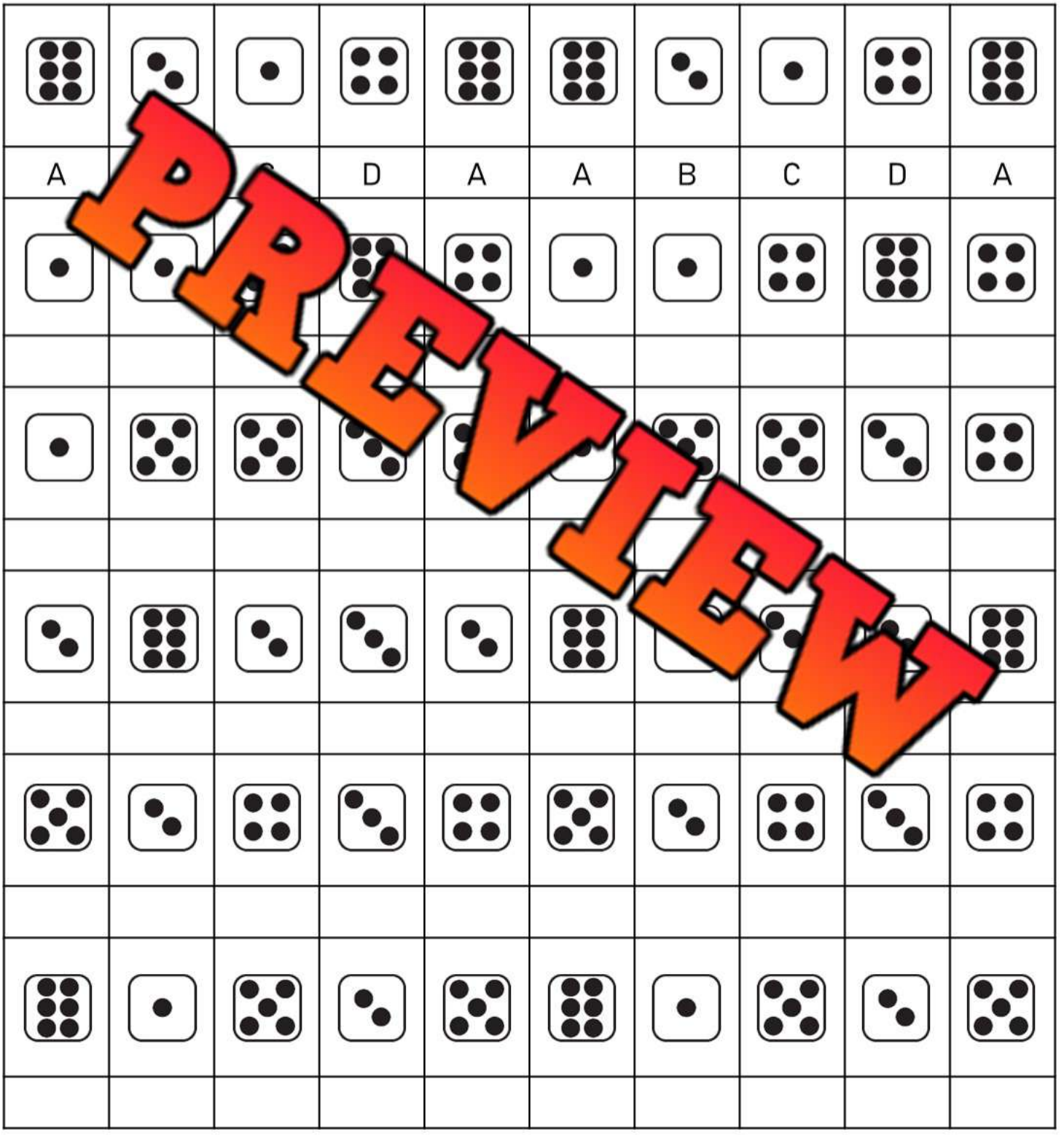
4) Translate the pattern another group made.

Name: _____ 18

Curriculum Connection
P2.1

Repeating A/B Patterns

Questions | Label the A/B patterns below and then extend the pattern



Name: _____ 19

Curriculum Connection
P2.1

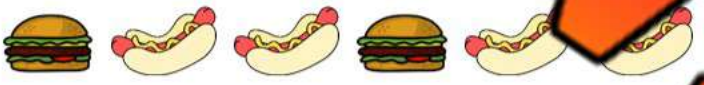
Repeating A/B Patterns

Part 1 Label the A/B/C patterns below and then continue the pattern

1) 

2) 

3) 

4) 

Part 2 Create patterns that use the given A/B pattern

1) A B B A B B A B B

2) A A B C A A B C A

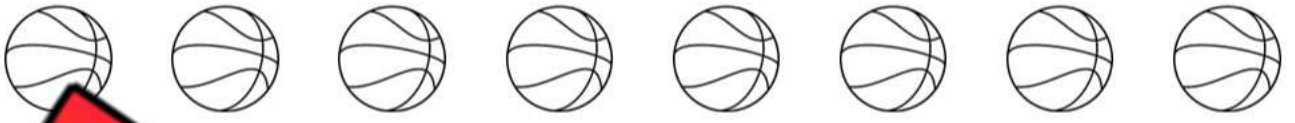
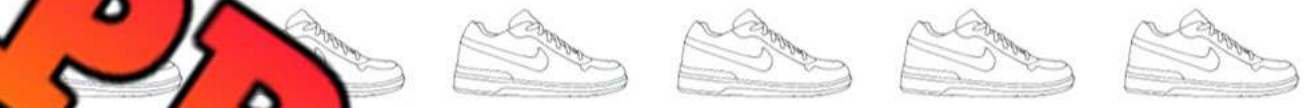
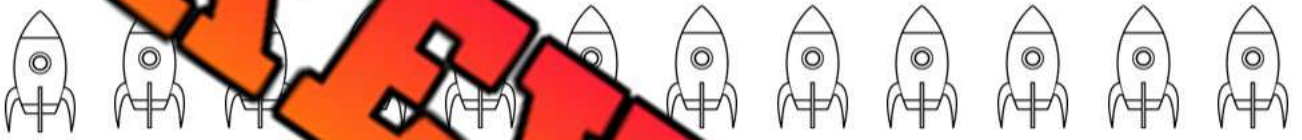
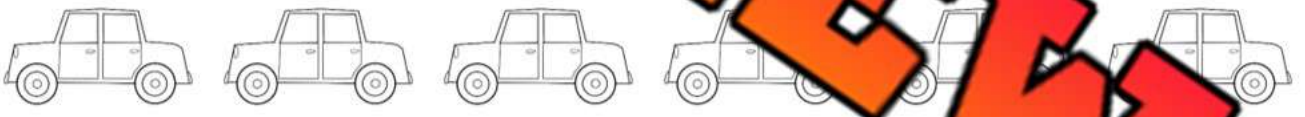
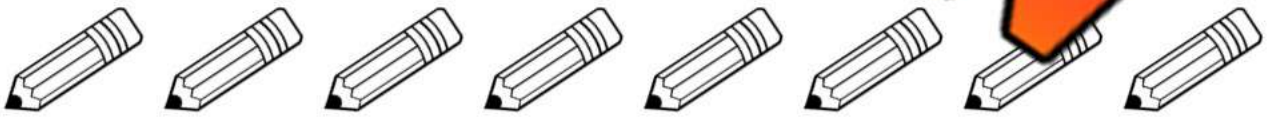
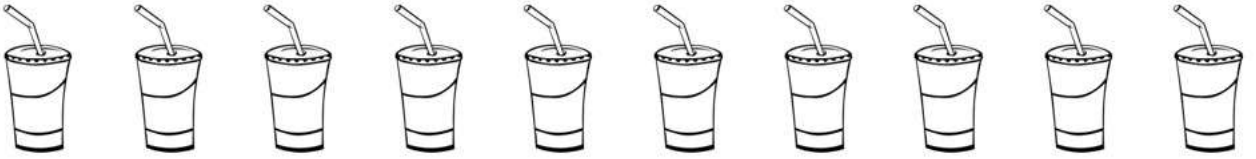
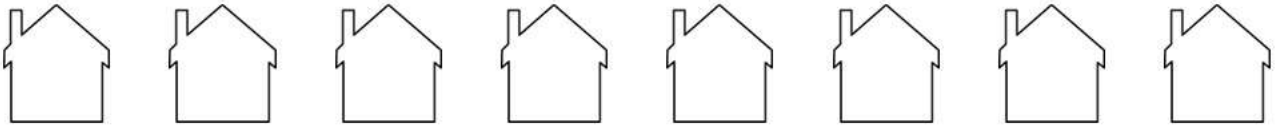
3) A B C A A B C A A

Name: _____ 20

Curriculum Connection
P2.1

Creating Repeating Patterns - Colours

Questions	Colour the shapes below in different colours by creating a pattern

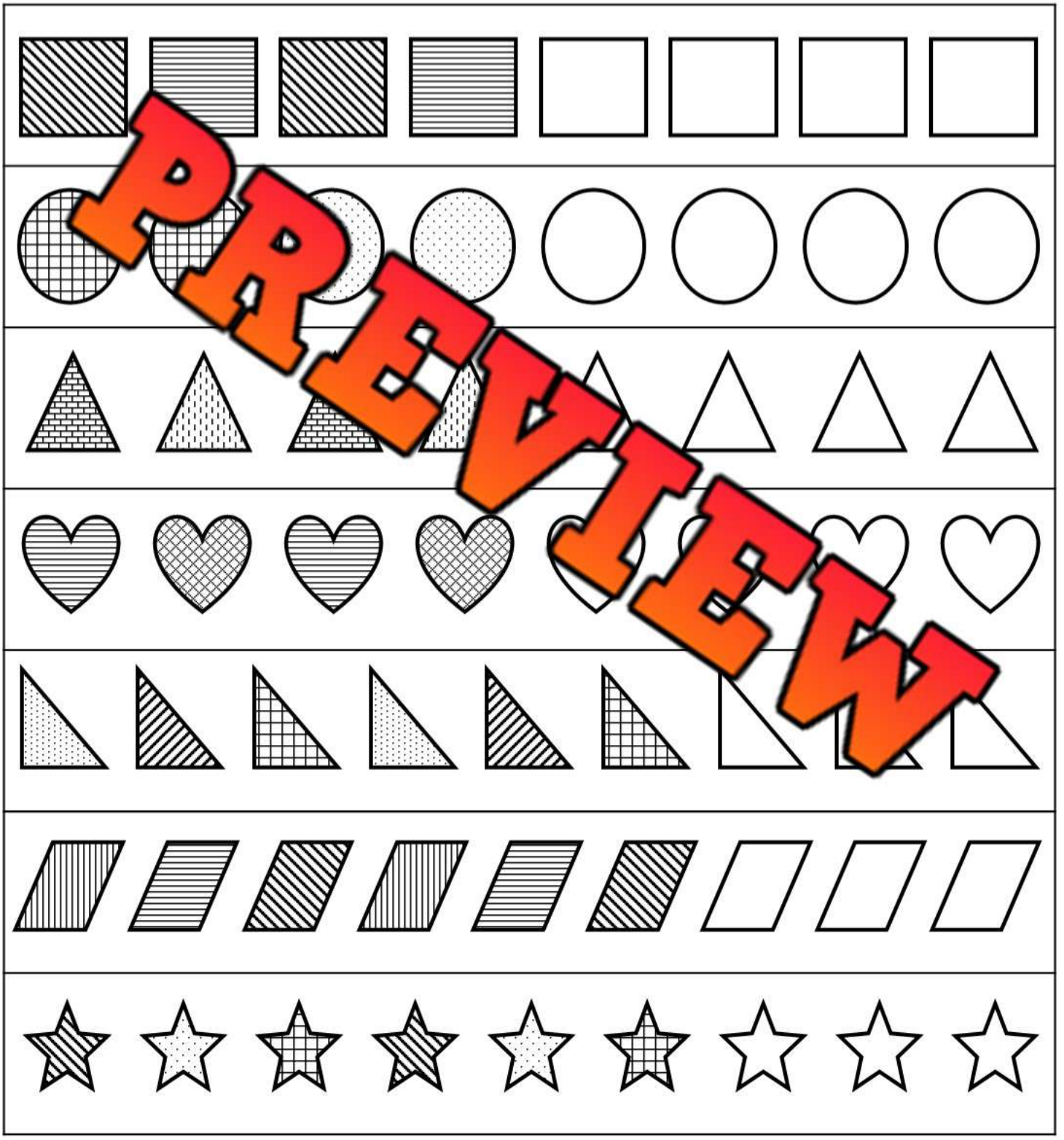
1)	
2)	
3)	
4)	
5)	
6)	
7)	
8)	

Name: _____ 23

Curriculum Connection
P2.1

Extending Repeating Patterns - Texture

Questions Extend the pattern by looking for a pattern in the textures



Exit Cards

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

Name: _____

Circle the pattern core

1) X, Y, Y, Z, X, Y, Y, Z

2) 

3) M, N, O, M, N, O

4) 1, 2, 3, 3, 1, 2, 3, 3

Name: _____

Circle the pattern core

1) X, Y, Y, Z, X, Y, Y, Z

2) 

3) M, N, O, M, N, O

4) 1, 2, 3, 3, 1, 2, 3, 3

Name: _____

Circle the pattern core

1) X, Y, Y, Z, X, Y, Y, Z

2) 

3) M, N, O, M, N, O

4) 1, 2, 3, 3, 1, 2, 3, 3

Name: _____

Circle the pattern core

1) X, Y, Y, Z, X, Y, Y, Z

2) 

3) M, N, O, M, N, O

4) 1, 2, 3, 3, 1, 2, 3, 3

Name: _____ 31

Curriculum Connection
P2.1

Extending Repeating Patterns - Letters

Questions Continue the pattern below by writing more letters

1)	A		B	A	A	B	A	A			
2)				P	R	S		P	R	S	
3)	S	N	E				E		S	N	
4)	E		L	P	E					E	L
5)	Y			B	L	Y	S	B	B		
6)	A		A	C	A	B	A	C		B	
7)	P		K		P	E	K	E		E	

Exit Cards

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

Name: _____

Continue the patterns below by writing more letters and numbers

1) M, L, M, N, ___, L, M, N, M, ___, ___

2) 4, 4, ___, 2, 4, 4, 1, 2, 4, ___, ___

3) 8, 8, ___, 7, 8, 8, 6, 7, 8, ___, 6, ___

4) J, K, J, ___, K, J, K, J, ___, ___, ___

Name: _____

Continue the patterns below by writing more letters and numbers

1) M, L, M, N, ___, L, M, N, M, ___, ___

2) 4, 4, ___, 2, 4, 4, 1, 2, 4, ___, ___

3) 8, 8, ___, 7, 8, 8, 6, 7, 8, ___, 6, ___

4) J, K, J, ___, K, J, K, J, ___, ___, ___

Name: _____

Continue the patterns below by writing more letters and numbers

1) M, L, M, N, ___, L, M, N, M, ___, ___

2) 4, 4, ___, 2, 4, 4, 1, 2, 4, ___, ___

3) 8, 8, ___, 7, 8, 8, 6, 7, 8, ___, 6, ___

4) J, K, J, ___, K, J, K, J, ___, ___, ___

Name: _____ 33

Curriculum Connection
P2.1

Repeating Patterns - Bracelets

Questions Draw the repeating patterns on the bracelets

1)

2)

3)

4)

5)

6)

7)

8)

Name: _____

Curriculum Connection
P2.1

Repeating Patterns - Br...ts

Questions Draw your own bracelets using repeatin...

Name: _____ 35

Curriculum Connection
P2.1

Repeating Patterns - Necklace

Questions	Draw your own necklace using a repeating pattern

Name: _____ 37

Curriculum Connection
P2.1

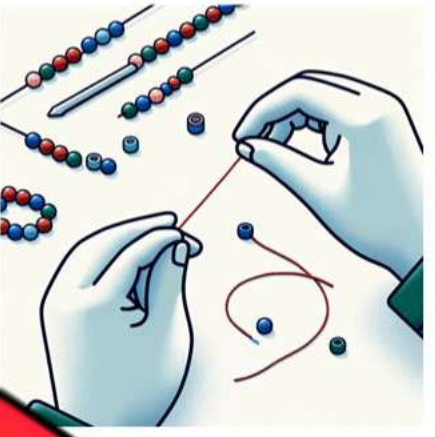
Activity Title: Pattern Palooza Necklace

Objective — What are we learning about?

To help students understand and create growing patterns by making their own patterned necklaces. This activity will enhance their ability to recognize, predict, and extend patterns, while allowing them to engage in a hands-on craft.

Materials — What you will need for the activity.

- Coloured [illegible] beads (multiple colours)
- String or yarn
- Scissors
- Paper and pencil (for planning the pattern)



Instructions — How you will complete the activity

1. Distribute a length of string or yarn to each student, ensuring it is long enough to make a necklace.
2. Provide each student with a variety of coloured beads.
3. Instruct students to sketch out a pattern on paper before starting their necklace. Encourage them to think of patterns that grow, such as adding one more bead of the same colour before switching to a new colour, or creating a sequence that grows in number and then repeats.
4. Once they have planned their pattern, students should start threading the beads onto the string according to their design.
5. When they have finished adding beads, help them tie off the necklace securely.
6. Have each student present their necklace and explain the pattern they chose.

Name: _____ 38

Curriculum Connection
P2.1

Planning | Sketch your necklace below

Name: _____ 40

Curriculum Connection
P2.1

Extending Repeating Patterns – Word Problems

Questions	Answer the question below

1) A traffic light follows a sequence of colours: red, green, yellow, red, green, yellow, ...

Based on the repeating pattern, what will be the colour of the traffic light on the 12th change?

2) A teacher uses a [illegible] of teaching tools for her class: flashcards, video, quiz, ...

Identify the repeating pattern and determine which teaching aid will be used on the 15th day.

3) A gardener plants flowers in a row, following a specific pattern: roses, tulips, lilies, sunflowers, roses, tulips, lilies, sunflowers, ...

According to the repeating pattern, what type of flower will be planted in the 28th position?

Exit Cards

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

Name: _____

In a toy factory, cars are painted in a sequence of colours: red, red, blue, green, yellow, red, red, blue, green, yellow. According to the repeating pattern, which colour will be used for the 20th car?

Answer: _____

Name: _____

In a toy factory, cars are painted in a sequence of colours: red, red, blue, green, yellow, red, red, blue, green, yellow. According to the repeating pattern, which colour will be used for the 20th car?

Answer: _____

Name: _____

In a toy factory, cars are painted in a sequence of colours: red, red, blue, green, yellow, red, red, blue, green, yellow. According to the repeating pattern, which colour will be used for the 20th car?

Answer: _____

Name: _____

In a toy factory, cars are painted in a sequence of colours: red, red, blue, green, yellow, red, red, blue, green, yellow. According to the repeating pattern, which colour will be used for the 20th car?

Answer: _____

Name: _____ 43

Curriculum Connection
P2.1

Translating Patterns – AB Patterns

Translating Patterns
The pattern red, blue, red, blue can be translated to clap, stomp, clap stomp. These are both A/B patterns.

Questions	Translate the first pattern into a new pattern using different colours

1)	A	B	A	B	A	B
Translated	△	△	△	△	△	△

2)	A	B	A	B	B
Translated	△	△	△	△	△

3)	A	B	C		C
Translated	△	△	△	△	△

4)	A	A	B	A	A	B
Translated	△	△	△	△	△	△

5)	A	B	A	A	B	A
Translated	△	△	△	△	△	△

Name: _____ 44

Curriculum Connection
P2.1

Translating Patterns – AB Patterns

Questions	Draw your own A/B patterns using shapes, numbers, or letters

1)	A	B	A	B	A	B
Translat						

	A	B	A	A	B
Translated					

3)	A		A	B	C
Translated					

4)	A	B	B		B
Translated					

5)	A	B	A	B	A	B
Translated						

6)	A	B	A	A	B	A
Translated						

Name: _____ 45

Curriculum Connection
P2.1

Translating Patterns – AB Patterns

Questions Translate the first pattern into a new pattern using different colours

1)	2	5	2	5	2	5
Translat	♡	♡	♡	♡	♡	♡

	T	G	T	T	G
Translated		♡	♡	♡	♡

3)	3			3	5	5
Translated	♡	♡	♡		♡	♡

4)	F	B	B			B
Translated	♡	♡	♡	♡		

5)	7	8	7	7	8	7
Translated	♡	♡	♡	♡	♡	♡

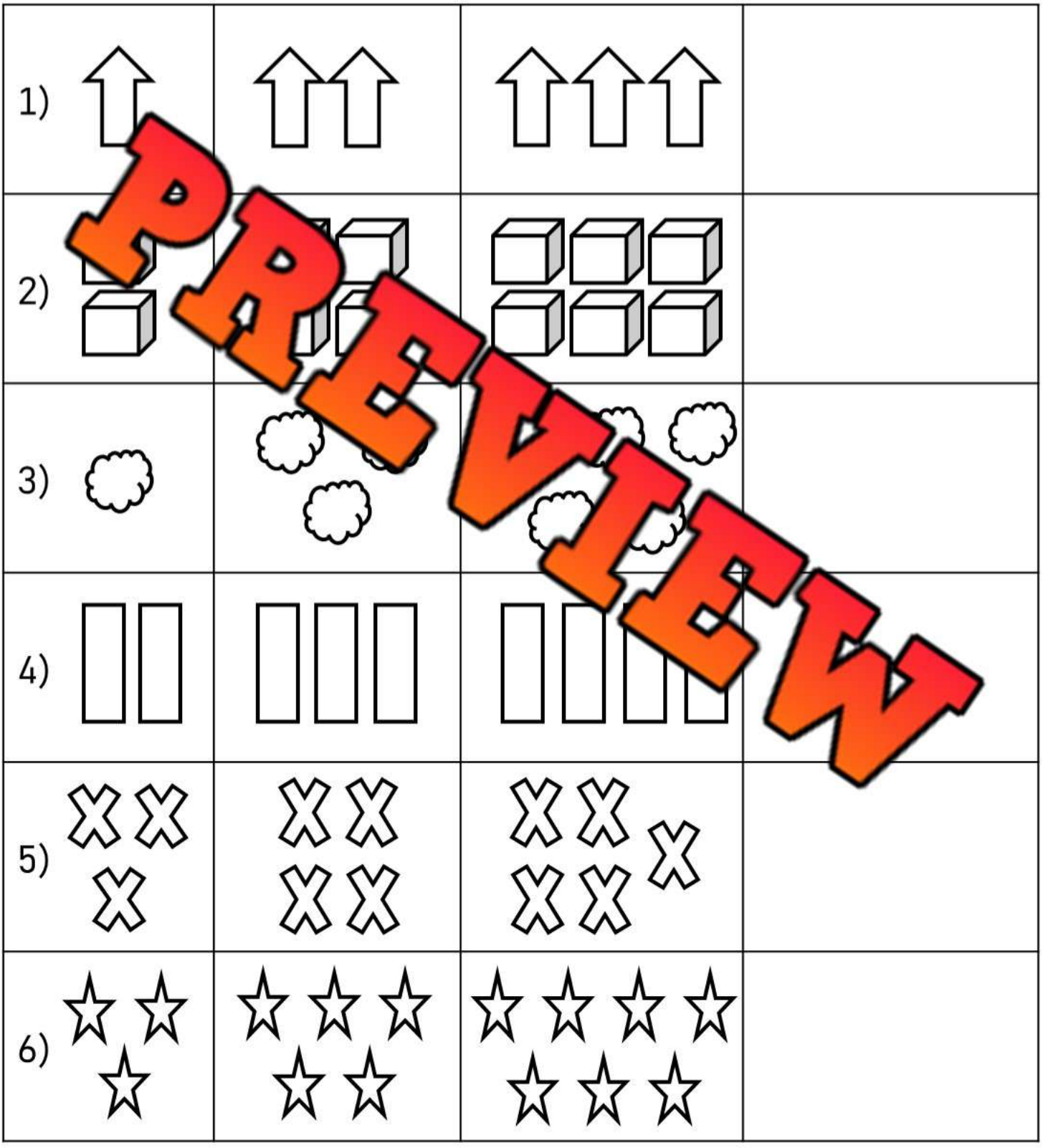
6)	B	B	L	L	B	B	L	L
Translated	♡	♡	♡	♡	♡	♡	♡	♡

Name: _____ 47

Curriculum Connection
P2.2

Increasing Patterns - Shapes

Questions | Draw the shapes in the last column



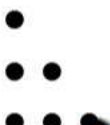
Name: _____ 49

Curriculum Connection
P2.2

Increasing Patterns - Shapes

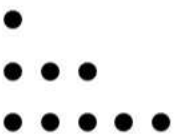
Questions | Draw the next line of the increasing pattern

1) Draw the next line in the pattern.



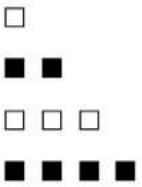
Answer

2) Draw the next line in the pattern.



Answer

3) Draw the next line in the pattern.

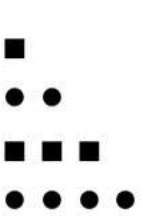


Answer

4) Draw the next line in the pattern.

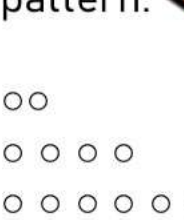
Answer

5) Draw the next line in the pattern.



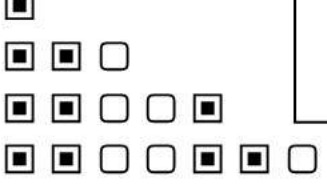
Answer

6) Draw the next line in the pattern.



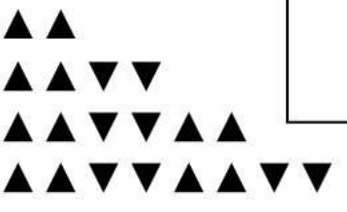
Answer

7) Draw the next line in the pattern.



Answer

8) Draw the next line in the pattern.



Answer

Exit Cards

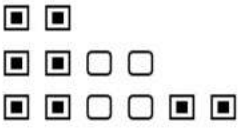
Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Draw the next 2 lines in the pattern.

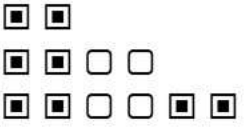
Name: _____

Draw the next 2 lines in the pattern.



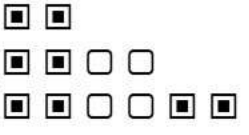
Name: _____

Draw the next 2 lines in the pattern.



Name: _____

Draw the next 2 lines in the pattern.

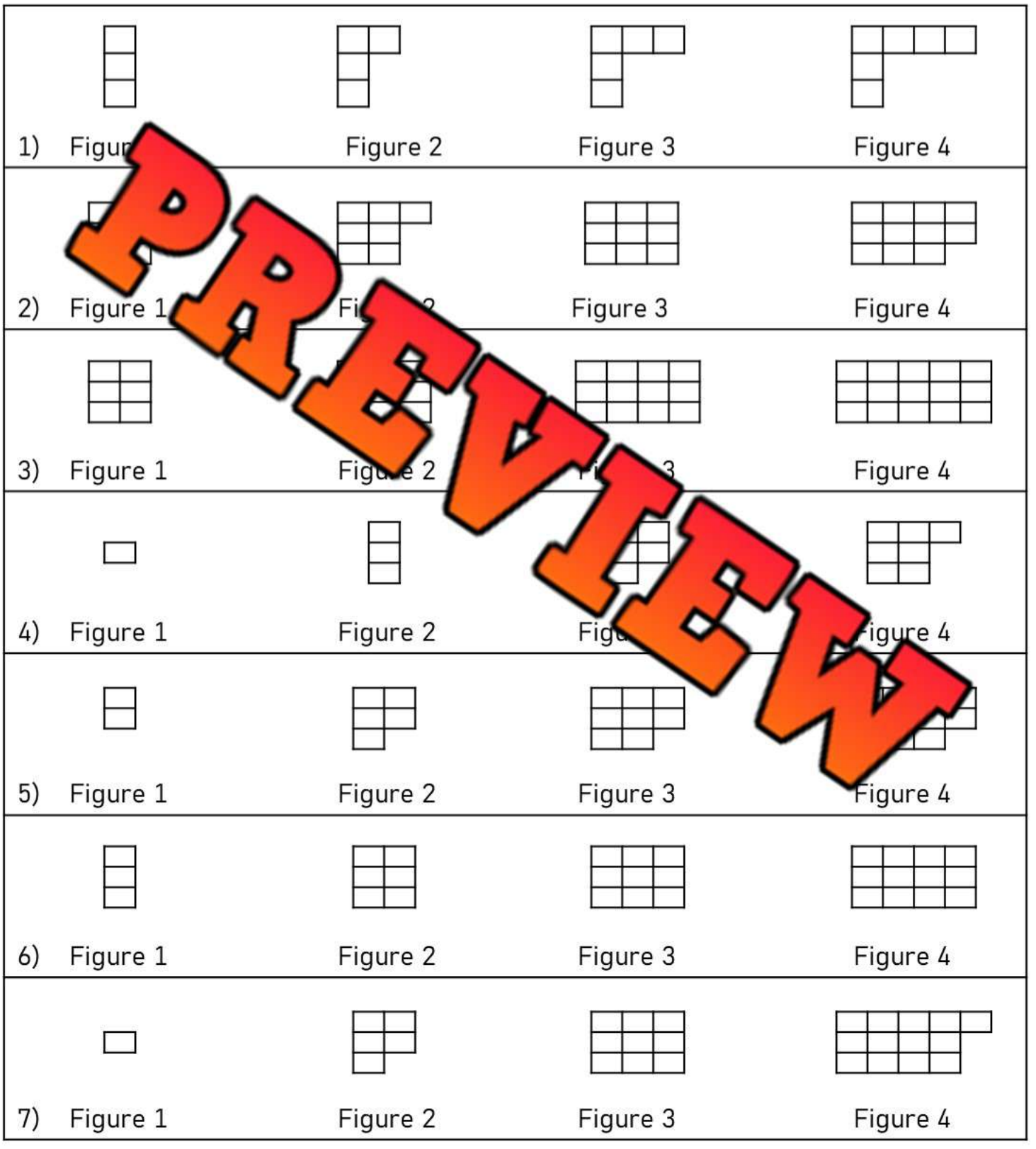


Name: _____ 51

Curriculum Connection
P2.2

Increasing Patterns - Shapes

Directions Shade in the blocks that were added to the pattern



1) Figure 1 Figure 2 Figure 3 Figure 4

2) Figure 1 Figure 2 Figure 3 Figure 4

3) Figure 1 Figure 2 Figure 3 Figure 4

4) Figure 1 Figure 2 Figure 3 Figure 4

5) Figure 1 Figure 2 Figure 3 Figure 4

6) Figure 1 Figure 2 Figure 3 Figure 4

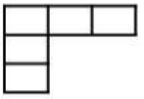
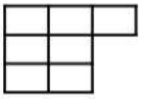
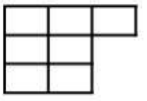
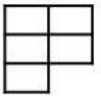
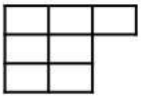
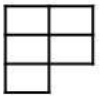
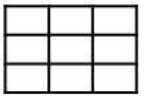
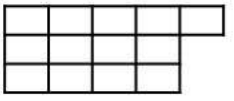
7) Figure 1 Figure 2 Figure 3 Figure 4

Name: _____ 52

Curriculum Connection
P2.2

Increasing Patterns - Shapes

Directions Write how many blocks are below. Then continue the pattern

1)				
2)				
3)				
4)				
5)				

Name: _____ 53

Curriculum Connection
P2.2

Growing Patterns Found in Real Life

Directions Describe how the pattern is growing. Is there an increase in the number of elements or the size of the elements from one term to the next?

Visual	1) Are the number of elements growing in size?
	
	2) Are the elements increasing in number?

Visual	1) Are the number of elements growing in size?
	
	2) Are the elements increasing in number?

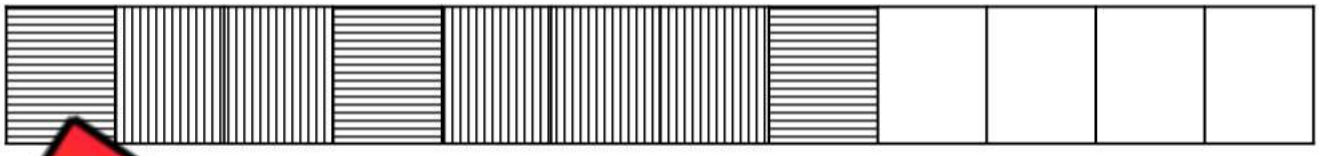
Visual	1) Are the number of elements growing in size?
	
	2) Are the elements increasing in number?

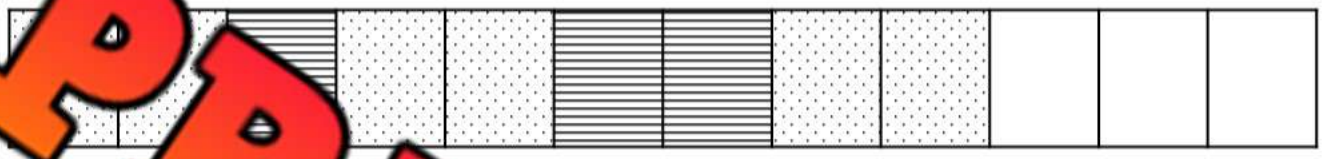
Name: _____ 55

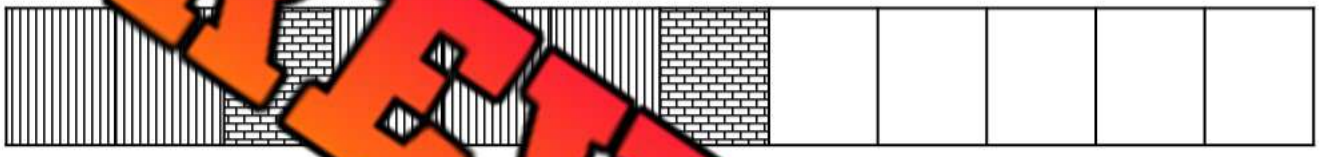
Curriculum Connection
P2.2

Increasing Patterns - Beading

Questions Draw the remaining patterns on the bracelets

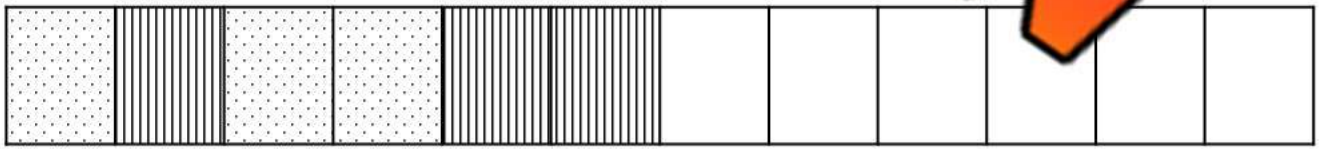
1) 

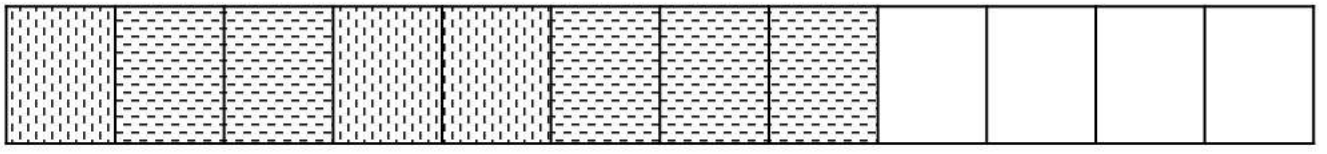
2) 

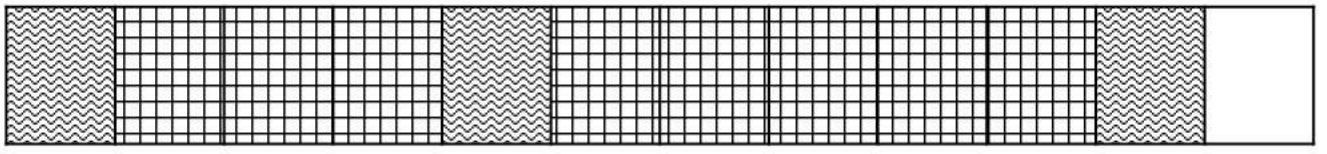
3) 

4) 

5) 

6) 

7) 

8) 

Name: _____

Curriculum Connection
P2.2

Increasing Patterns - B...ing

Questions Draw your own bracelets using increasi...

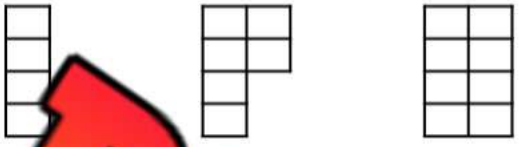
Name: _____ 58

Curriculum Connection
P2.2

Representing Picture Sequence With Numbers

Questions Write the numerical sequence that represents the picture sequence

1) Figure 1 Figure 2 Figure 3 Figure 4

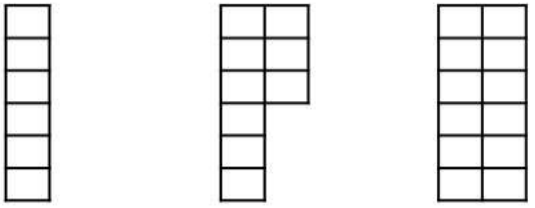


Numerical Sequence
_____, _____, _____, _____

2) Figure 1 Figure 2 Figure 3 Figure 4

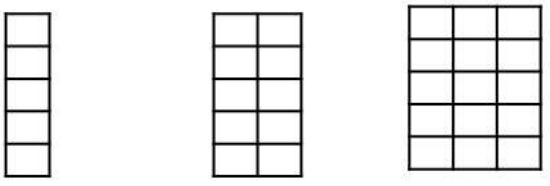
Numerical Sequence
_____, _____, _____, _____

3) Figure 1 Figure 2 Figure 3 Figure 4



Numerical Sequence
_____, _____, _____, _____

4) Figure 1 Figure 2 Figure 3 Figure 4



Numerical Sequence
_____, _____, _____, _____

Name: _____ 59

Curriculum Connection
P2.2

Activity Title: Pattern Pass Along

Objective — What are we learning about?

To engage students in understanding and creating growing patterns using blocks, enhancing their pattern recognition skills and encouraging cooperative learning. Students will start a pattern and then adapt and extend patterns started by their peers.

Materi — will need for the activity.

- A variety [illegible] stacking cubes
- Timers or [illegible]nes
- Paper and pen[illegible] record their original patter[illegible]

Instructions — How you will comple[illegible]

1. Each student receives an equal numbe[illegible]olours.
2. Allow three minutes for every student to start [illegible] growing pattern on their desk or designated workspace.
3. After three minutes, instruct every student to move to the [illegible] right.
4. Give students two minutes to analyze the pattern in front of them and then add on to it, continuing the growing sequence. They should only add 1 more figure.
5. Repeat step 4 until each student has returned to their original starting position or until students begin running out of blocks.
6. Once back at their starting position, each student should observe how their initial pattern has evolved.
7. Have students write down any changes they notice and what additions were made by others. Does the pattern still work?

Name: _____ 60

Curriculum Connection
P2.2

Reflection | Answer the questions below.

1) Describe the pattern you made.

2) Did an[illegible]hange the pattern so that it didn't work any more? Explain.

3) Did you find it cha[illegible]eone else's pattern? Why or why not?

4) Draw the best pattern you saw below.

Exit Cards

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

Name: _____

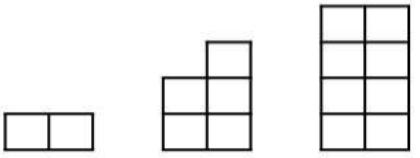
a) Draw the next figure.

b) Write the numerical sequence that represents the picture sequence.

_____, _____, _____, _____

Name: _____

a) Draw the next figure.

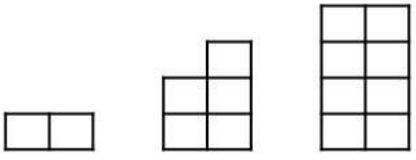


b) Write the numerical sequence that represents the picture sequence.

_____, _____, _____, _____

Name: _____

a) Draw the next figure.

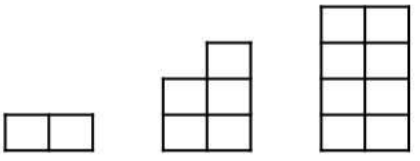


b) Write the numerical sequence that represents the picture sequence.

_____, _____, _____, _____

Name: _____

a) Draw the next figure.



b) Write the numerical sequence that represents the picture sequence.

_____, _____, _____, _____

Name: _____ 63

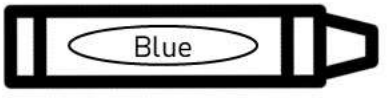
Curriculum Connection
P2.2

Hundreds Chart Patterns

Questions Fill in the missing numbers

1	2	3		5	6	7	8		10
11			14	15	16		18	19	20
21			24		26	27	28		30
31					36		38	39	40
	42	43				47	48		50
51	52	53			56			59	60
61		63	64	65				69	
71	72		74	75	76				
	82	83	84		86	87	88		
91	92		94	95	96		98	99	100

Directions Follow the instructions below

1) Colour the odd numbers 

2) Colour the even numbers 

Name: _____ 64

Curriculum Connection
P2.2

Hundreds Chart Patterns

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21		23	24	25	26	27	28	29	30
31	32		34	35	36	37	38	39	40
41	42			45	46	47	48	49	50
51	52	53		55		57	58	59	60
61	62	63	64		66		68	69	70
71	72	73	74	75				79	80
81	82	83	84	85	86	87	88		90
91	92	93	94	95	96	97	98	99	100

Directions Follow the instructions below

A number pattern needs to have a rule that the pattern follows. Colour the numbers in the hundreds chart that show the pattern rule

Rule: start at 5, add 5 each time

Name: _____ 65

Curriculum Connection
P2.2

Hundreds Chart Patterns

Directions Follow the instructions below

Colour the pattern rule: start at 3, add 3 each time

1	2	3	4	5	6	7	8	9	10
11		13	14	15	16	17	18	19	20
21			24	25	26	27	28	29	30
31			34	35	36	37	38	39	40
41	42			45	46	47	48	49	50
51	52				56	57	58	59	60
61	62					67	68	69	70
71	72	73				77	78	79	80
81	82	83	84		86		88	89	90
91	92	93	94	95		97		99	100

Colour the pattern rule: start at 1, ch ti

1	2	3	4	5	6	7	8		10
11	12	13	14	15	16	17			20
21	22	23	24	25	26	27	28		30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Name: _____ 67

Curriculum Connection
P2.2

Number Patterns 1 - 20

Questions | Fill in the blanks below

1. 2, 4, 6, 8

2. 1, 3, 5, 7

3. 0, 3, 6, 9

4. 1, 4, 7, 10

5. 7, 9, 11, 13

Name: _____ 69

Curriculum Connection
P2.2

Number Patterns – 2s, 5s, 10s

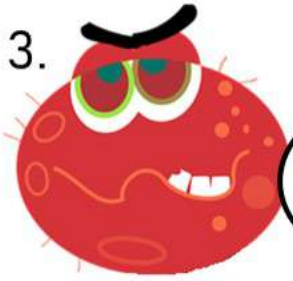
Questions	Fill in the blanks below

1. 

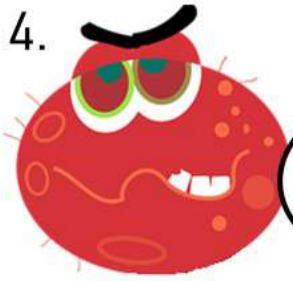
2, 4, 6, 8, ____, ____, ____, ____

2. 

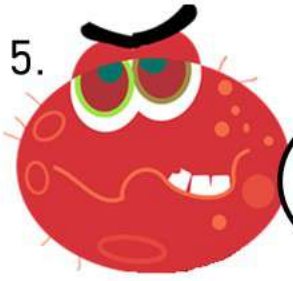
____, ____, ____, 20, ____, ____, ____, ____

3. 

10, 20, 30, ____, ____, ____, ____, ____

4. 

15, 20, 25, 30, ____, ____, ____, ____

5. 

20, 22, 24, 26, ____, ____, ____, ____

Name: _____ 70

Curriculum Connection
P2.2

Number Patterns – 2s, 5s, 10s

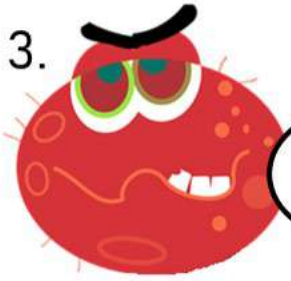
Questions | Fill in the blanks below

1. 

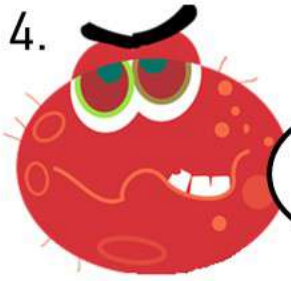
	4		8		12		16

2. 

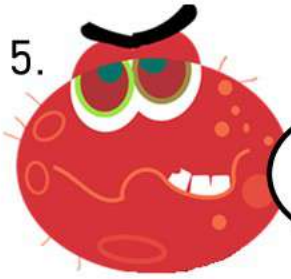
			25	30			

3. 

0	10				60		

4. 

	25		35		45		55

5. 

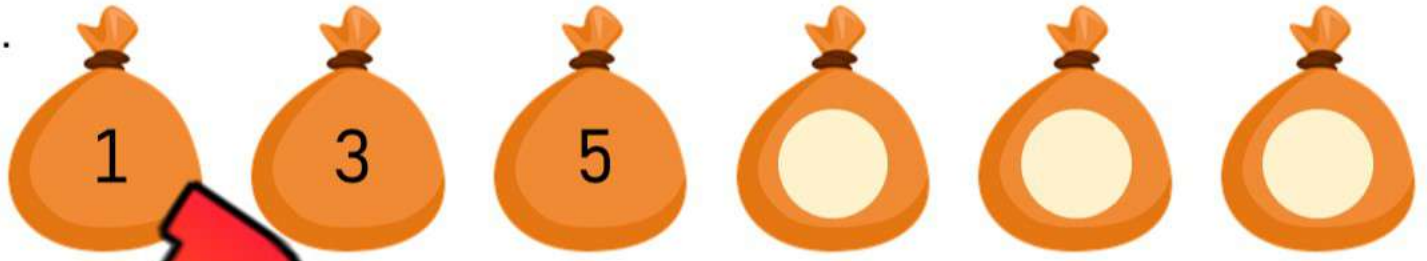
30	32			38		42	

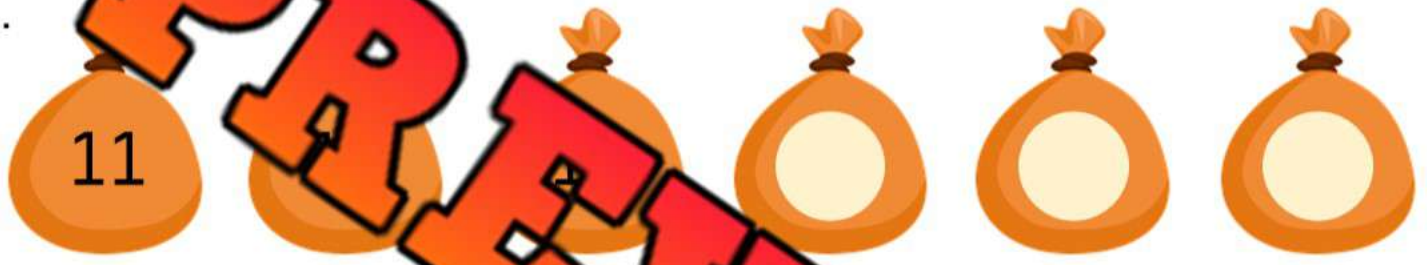
Name: _____ 71

Curriculum Connection
P2.2

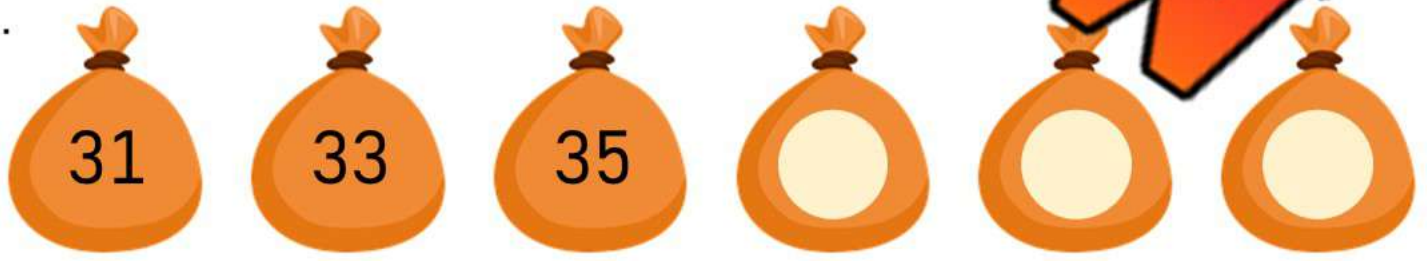
Number Patterns – 2s

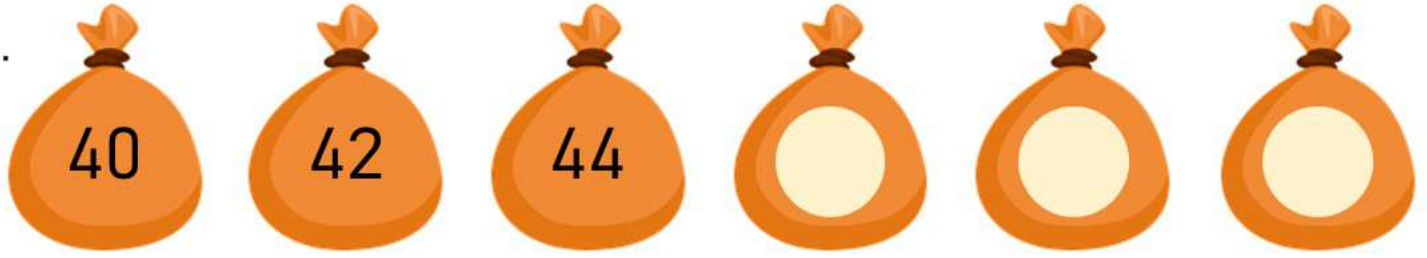
Questions	Fill in the blanks below

1. 

2. 

3. 

4. 

5. 

Name: _____ 72

Curriculum Connection
P2.2

Number Patterns – 5s

Questions	Fill in the blanks below

1. 5, 10, 15, ___, ___, ___

2. 6, ___, ___, ___, ___, ___

3. 21, 26, 31, ___, ___, ___

4. 13, 18, 23, ___, ___, ___

5. 24, 29, 34, ___, ___, ___

Name: _____ 74

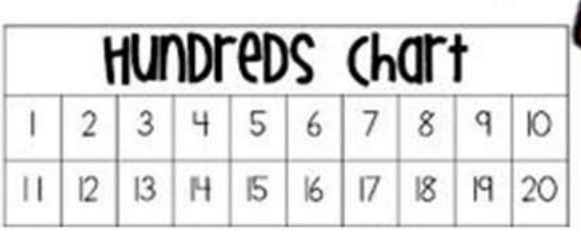
Curriculum Connection
P2.2

Increasing Patterns - Rules

Questions Colour the numbers that follow the pattern on the hundreds chart

1) [illegible] each time

2) Start at 5, add 2 each [illegible]e



3) Start at 1, add 2 each time

4) Start at 5, add 5 each time

5) Start at 3, add 3 each time

6) Start at 1, add 3 each time

7) Start at 4, add 2 each time

8) Star[illegible]2, [illegible]e

9) Start at 3, add 5 each time

10) Start at 5, add 3 each time

Name: _____ 75

Curriculum Connection
P2.2

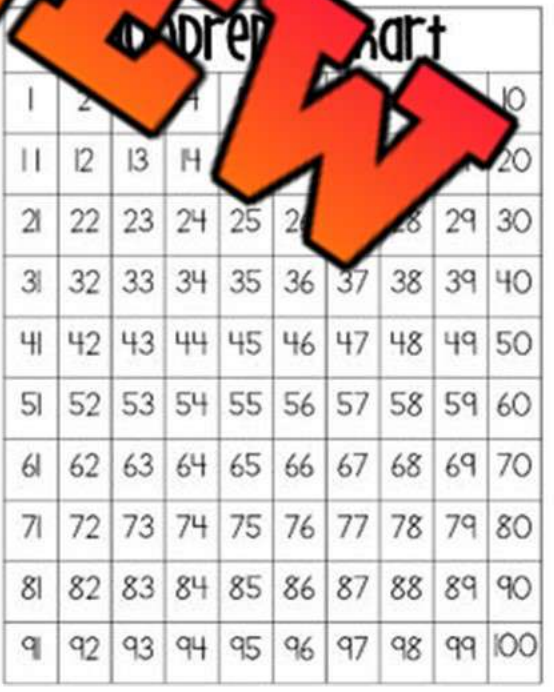
Increasing Patterns - Rules

Questions Colour the numbers that follow the pattern on the hundreds chart

1) Start at 5, add 5 each time

Sta dd 2 each time

3) Start at 3, add 3 each time



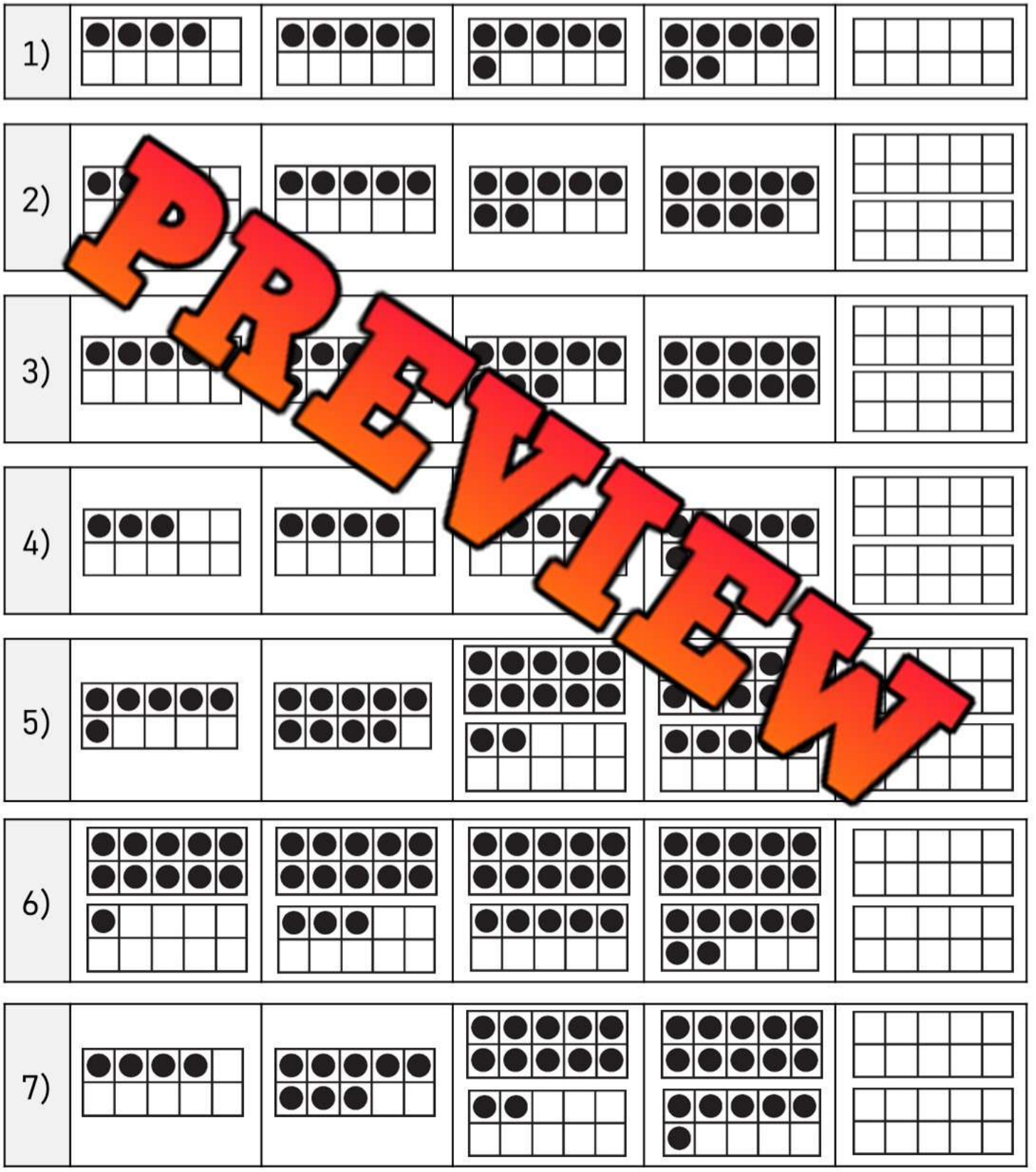
4) Start at 10, add 10 each time

Name: _____ 76

Curriculum Connection
P2.2

Increasing Patterns - Rules

Questions	Figure out the pattern and draw the dots on the last 10 frame(s)



Name: _____ 77

Curriculum Connection
P2.2

Increasing Patterns - Rules

Questions Fill in the blanks by figuring out the pattern rules

2, 4, 6, 8, 10, 12, 14, 16

t at _____, then add _____ each time

5, 20, 25, 30, 35, 40

Sta add _____ each time

10, 2 0 60, 70

Start at _____, then ad time

5, 8, 11, 14, 17, 2

Start at _____, then add _____ eac

12, 22, 32, 42, 52, 62, 72

Start at _____, then add _____ each time

4, 8, 12, 16, 20, 24, 28, 32

Start at _____, then add _____ each time

Name: _____ 79

Curriculum Connection
P2.2

Creating Rules

Questions | Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 2, add 2 each time

2) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 10, add 10 each time

3) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 5, add 5 each time

4) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 3, add 3 each time

5) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 4, add 4 each time

Exit Cards

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

Name: _____

Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 8, add 3 each time.

2) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 0, add 5 each time.

3) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 6, add 2 each time.

Name: _____

Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 8, add 3 each time.

2) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 0, add 5 each time.

3) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 6, add 2 each time.

Name: _____

Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 8, add 3 each time.

2) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 0, add 5 each time.

3) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 6, add 2 each time.

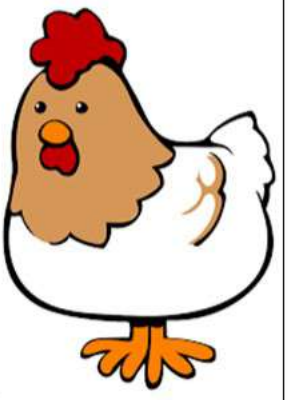
Name: _____ 85

Curriculum Connection
P2.2

The Egg Challenge

Challenge | Answer the word problem below

If a hen laid 1 egg on Monday, 2 eggs on Tuesday, 3 eggs on Wednesday and the pattern continued, how many eggs would it lay on the Sunday?



How many days would the hen need to lay 5

Name: _____ 86

Curriculum Connection
P2.2

Patterning – Word Problems

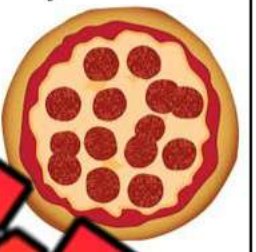
Questions | Answer the questions below

1) Jill's pool uses 2 chlorine pucks in May, 5 pucks in June, and 8 pucks in July. If the pattern continued, how many pucks would Jill use in August and November?

Augu_____

November: _____

2) Henry's pizza store s_____e same _____of pizza each week. He sells 3 pizzas on Monday, 6 pizzas on Tue_____piz_____nesday, and 12 pizzas on Thursday. If the pattern contin_____s, h_____piz_____ill he sell on Friday?



Bonus: How many pizzas will he sell for the week?

3) Sam makes 6 dollars on Monday, 10 dollars on Tuesday, 14 dollars on Wednesday, and 18 dollars on Thursday. How much money did he make on Saturday?

Name: _____ 87

Curriculum Connection
P2.2

Patterning Word Problems - Halloween

Questions | Follow the problem-solving steps below

- ☐ Read the problem carefully
- ☐ Underline important information
- ☐ Draw pictures
- ☐ Write a number sentence
- ☐ Solve the problem
- ☐ Check your answer

Bill is t[illegible]ing for Halloween. He leaves his house with 5 candies to s[illegible]. He gets[illegible]dies for each house he visits. He visits 10 houses.

a) Draw the[illegible]e below

b) How many total candies does he get?

Name: _____ 88

Curriculum Connection
P2.2

Patterning Word Problems – Growing Hair

Questions | Follow the problem-solving steps below

- ☐ Read the problem carefully
- ☐ Underline important information
- ☐ Draw pictures
- ☐ Write a number sentence
- ☐ Solve the problem
- ☐ Check your answer

Tyler's [illegible] long in January. In February his hair is 58mm long. In [illegible] mm long.

a) How long [illegible] April if the pattern continues?

b) How long will his hair be in July?

Name: _____ 89

Curriculum Connection
P2.2

Patterning Word Problems - Snowfall

Questions | Follow the problem-solving steps below

- ☐ Read the problem carefully
- ☐ Underline important information
- ☐ Draw pictures
- ☐ Write a number sentence
- ☐ Solve the problem
- ☐ Check your answer

The s[illegible] outside Rayna's house. She records the heig[illegible] each hour. After the 1st hour, it is 20cm. After the 2nd hou[illegible] fter the 3rd hour it is 32cm.

a) What will th[illegible] ow be after the 4th hour?

b) What will the height of the snow be after the 7th hour?

Exit Cards

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

Name: _____

Sarah is building a tower with blocks. She starts with 3 blocks in the first level. Each next level, she adds 3 more blocks than the previous level. How many blocks are in the fourth level?

Name: _____

Sarah is building a tower with blocks. She starts with 3 blocks in the first level. Each next level, she adds 3 more blocks than the previous level. How many blocks are in the fourth level?

Name: _____

Sarah is building a tower with blocks. She starts with 3 blocks in the first level. Each next level, she adds 3 more blocks than the previous level. How many blocks are in the fourth level?

Name: _____

Sarah is building a tower with blocks. She starts with 3 blocks in the first level. Each next level, she adds 3 more blocks than the previous level. How many blocks are in the fourth level?

Name: _____ 91

Curriculum Connection
P2.2

Activity Title: Pattern Treasure Hunt

Objective

What are we learning about?

To reinforce students' understanding of growing addition and shrinking subtraction patterns through a dynamic and engaging treasure hunt game. This activity aims to improve problem-solving speed and accuracy while promoting teamwork and active learning.

Materials

What you will need for the activity.

- Stop[w]atch or [use a smartphone)
- Index card[s]
- Markers
- Small prizes or [t]reats (fo[r]
- Tape

Instructions

How you will comp[lete] acti[vity]

1) Cut out the index cards provided. These wil[l] [be] trea[sure] challenge questions.
2) Hide these cards around the classroom or in a [designated] safe ou[t]area, taping them under chairs, desks, or tucked into non-obvio[us] [spots].
3) Divide the class into small teams and give each team a stopwat[ch].
4) Explain the game: each team will hunt for a card, solve the problem [on] it as quickly as they can, and return to you for verification.
5) Start the timer when you say "Go!" Each team rushes to find their first card.
6) When a team thinks they have the correct answer, they come back to you for verification. If they get it right, the teacher keeps the card. If the answer is wrong, they can try again or hide the card back in its original spot and find a new card.
7) The game continues until all cards are found or you call time. The team with the most correct answers wins.
8) Discuss the game, focusing on the concepts taught on the cards.

Name: _____ 92

Curriculum Connection
P2.2

Instructions | Cut out the cards below

1) 2, 4, 6 _____, _____, _____	2) 5, 10, 15 _____, _____, _____
3) (Add 1) 1, 3, [illegible] _____, _____, _____	4) (Add 5) 20, 25, 30 _____, _____, _____
5) 30, 25, 20 _____, _____, _____	[illegible] _____, _____
7) Start at 4, add 4 each time. _____, _____, _____	8) Start at 90, subtract 5 each time: 85, 80 _____, _____, _____, _____

Name: _____ 93

Curriculum Connection
P2.2

Instructions | Cut out the cards below

9) An apple tree has 10 apples and people take 1 apple from the tree each day. How many apples will be left on the 5th day?	10) Start with 15 cars, add 2 more each day. How many cars will there be on the 4th day?
11) (Add 2) 10, 2_ _____, _____, _____	12) (Subtract 2) 18, 16, 14 _____, _____, _____
13) Sam earns $1 each day, What is the total after 6 days?	14) A bus drives at 20 km/h and reduces speed by 2 km/h each hour. What is the speed after 2 hours?
15) 8, 16, 24 _____, _____, _____	16) 25, 50, 75 _____, _____, _____

Name: _____ 94

Curriculum Connection
P2.2

Instructions | Cut out the cards below

17) Kelly read 5 pages today. She plans to read 5 more pages each day. What day will she read 50 pages?	18) Add $2 each week starting from $3. What is the total after 4 weeks?
19) [illegible]0, 80 _____, _____, _____	20) 60, 70, 80 _____, _____, _____
21) Tom buys 2 candies and gets 2 more each day. How many candies will he have on the 4th day?	22) [illegible] 1 eac[illegible]e: 15, 14, 13 _____, _____, _____
23) (Add 20) 40, 60, 80 _____, _____, _____	24) (Subtract 10) 100, 90, 80 _____, _____, _____

Name: _____ 95

Curriculum Connection
P2.2

Instructions	Cut out the cards below

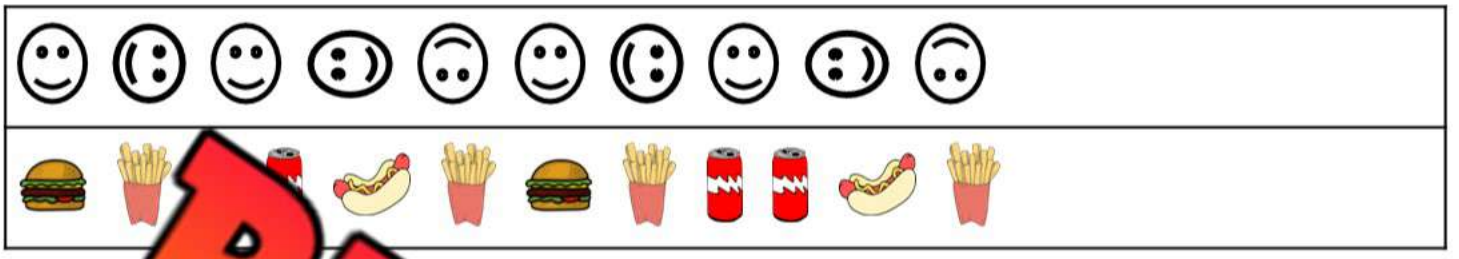
25) Start with $5, earn $2 more each day. What is the total after 5 days?	26) Subtract 3 starting from 15. _____, _____, _____
27) You pla[illegible]ees e[illegible] starting with 10. [illegible] will there be afte[illegible]s?	28) (Add 7) 14, 21, 28 _____, _____, _____
29) Katie has 20 candies, and she ate 2 each day. How many candies will be left after 5 days?	30) [illegible]es 5 p[illegible]in a game and sc[illegible]m[illegible]ch round. What is h[illegible]he 4th roun[illegible]
31) Cam starts the match with 10 golf balls. He loses 2 golf balls each hole. On which hole will he run out of golf balls?	32) A garden starts with 10 flowers. Each day, 4 new flowers bloom. How many total flowers are there after 6 days?

Name: _____ 96

Curriculum Connection
TQ

Patterning Quiz

Part 1 Continue the repeating patterns below by drawing 3 more pictures

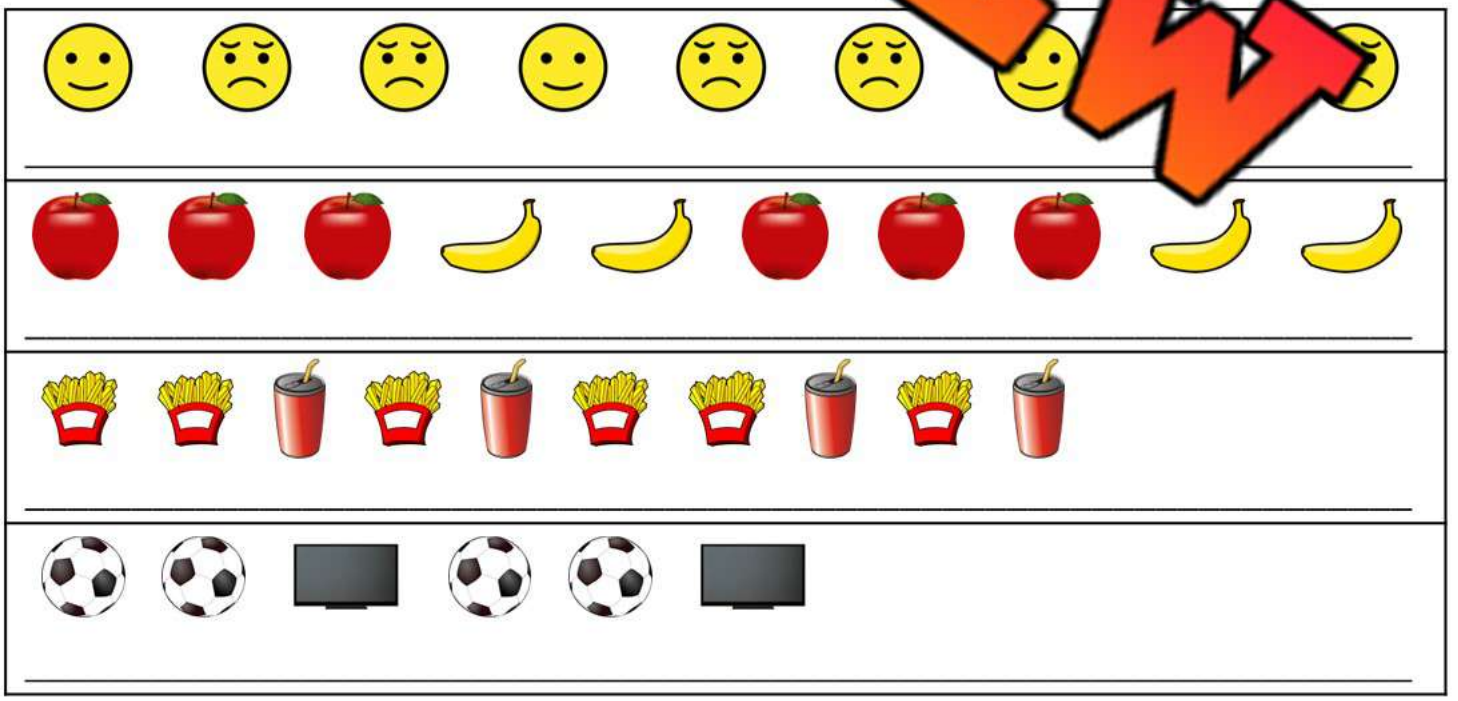


Part 2 Circl rn core and continue the pattern

1 1 2 3 1 1 2 3 1 _____ _____ _____

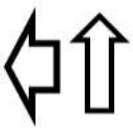
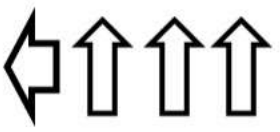
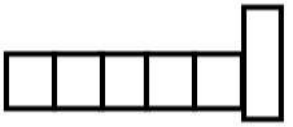
3 6 2 2 2 3 6 2 2 2 _____ _____ _____

Part 3 Circle the pattern core and label



Curriculum Connection
TQ

Part 4 — Draw the last part of the pattern

1) 			
2) 			
3) 			
4) 			

Part 5 — Solve the word problem below.

If you read 1 book on Monday, 2 books on Tuesday, 3 books on Wednesday, how many books would you read on Sunday if the pattern continued?

How many days would it take you to read 45 books?

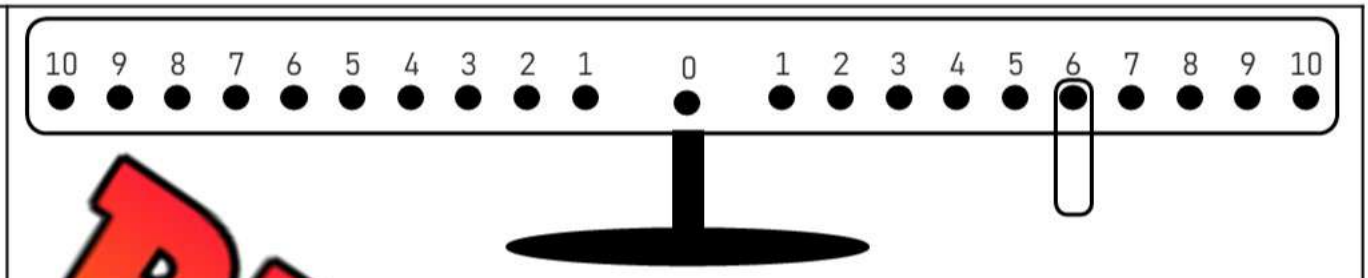
Name: _____ 98

Curriculum Connection
P2.3

Balance Pan Equations

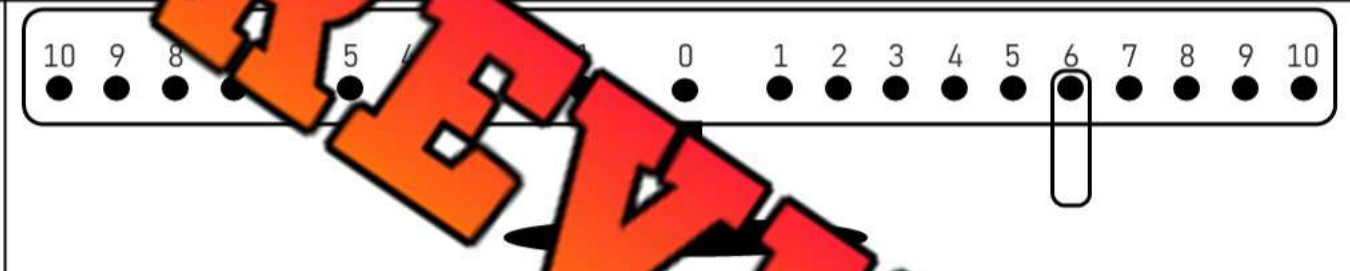
Questions How many ways can you balance the equation to equal 6

1)



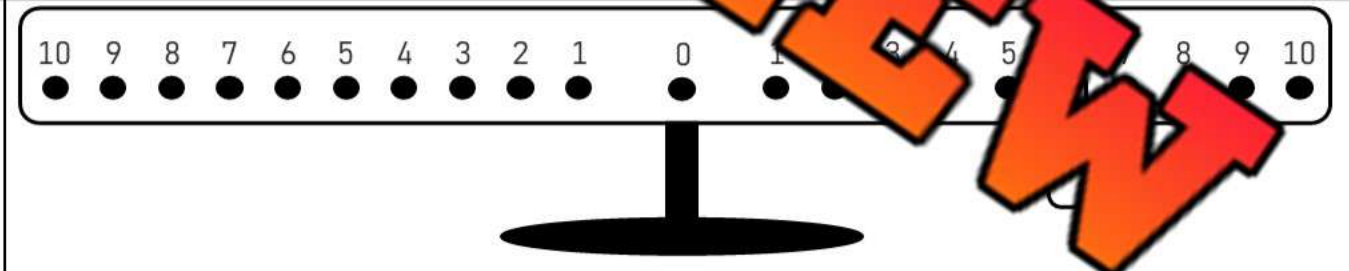
_____ + _____ = 6

2)



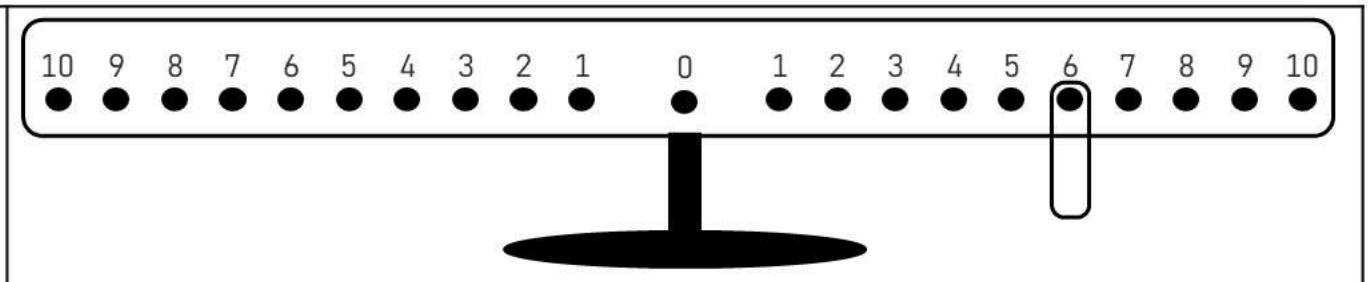
_____ + _____ =

3)



_____ + _____ = 6

4)



_____ + _____ = 6

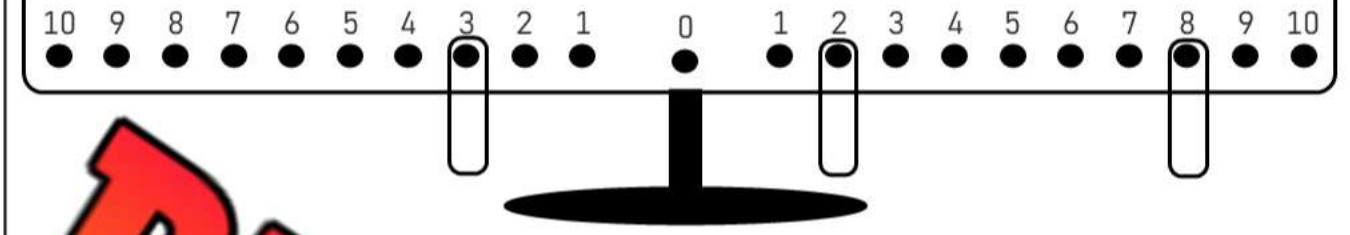
Name: _____ 102

Curriculum Connection
P2.3

Balance Pan Equations

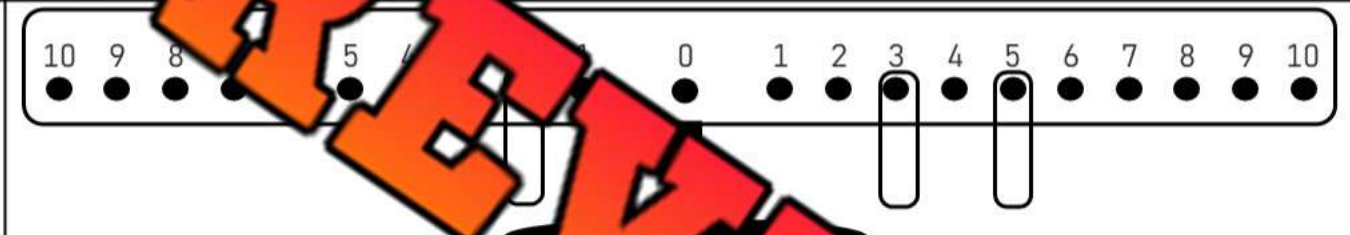
Questions	Balance the equations below

1)



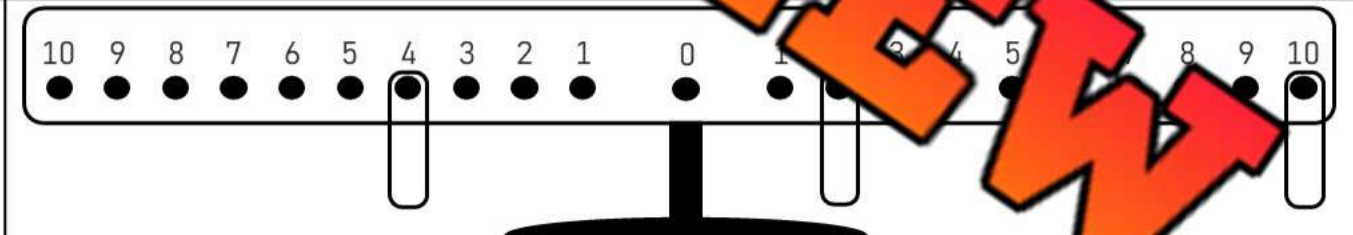
3 + _____ = 2 + 8

2)



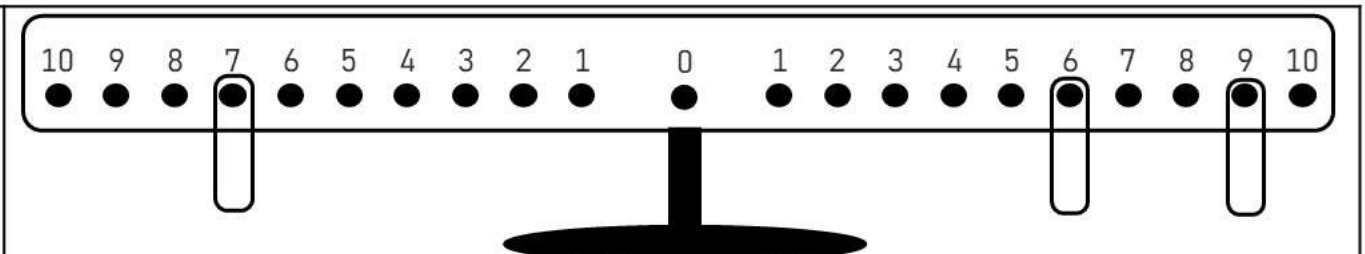
2 + _____ +

3)



4 + _____ = 2 + 10

4)



7 + _____ = 6 + 9

Name: _____ 104

Curriculum Connection
P2.3

Pre-Algebra – Balancing Addition Equations

Balance the scales by putting the same amount of circles on each scale.

Answer: Add 6 circles to the scale to make them equal.

3	+	6	=	9

Question: How many balls do you need to add to balance the scales?

8	+		=	11

6	+		=	

8	+		=	14

5	+		=	9

7	+		=	12

2	+		=	13

6	+		=	10

3	+		=	14

1	+		=	12

Name: _____ 105

Curriculum Connection
P2.3

Pre-Algebra – Balancing Addition Equations

Balancing equations means both sides of the equal sign must be the same.

Examples:

$3 + 7 = \boxed{10}$ (10)

$24 + 6 = \boxed{30}$ (30)

Questions Fill in the missing number to balance the equation

1) 4 + ☐ = ○○ ○○○○

2) 3 + 6 = ☐

3) 4 + 5 = ☐

4) 1 + ☐ = 8

6) 4 + ☐ = 12

7) ☐ + 6 = 10

8) ☐ + 7 = 11

5 = 11

10) ☐ + 2 = 9

11) 3 + ☐ = 8

12) 6 + 7 = ☐

13) ☐ + 6 = 16

14) 7 + ☐ = 9

15) 3 + 12 = ☐

Name: _____ 106

Curriculum Connection
P2.3

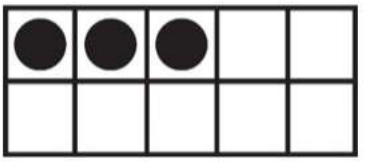
Making Tens – Changing Variables

When we make tens, we are using a variable. The ten is the constant and the number we use to add to 10 is the variable.

Questions How many more dots do you need to add to make 10?

1) 

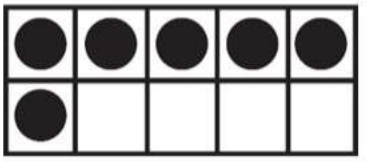
8 + ____ = 10

2) 

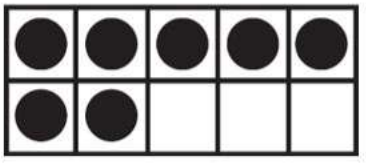
3 + ____ = 10

3) 

2 + ____ = 10

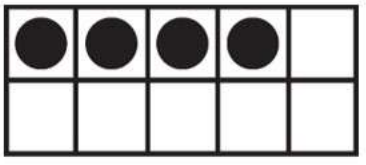
4) 

+ ____ = 10

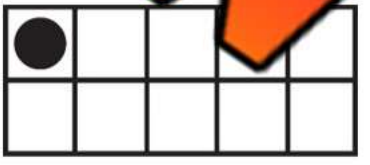
5) 

7 + ____ = 10

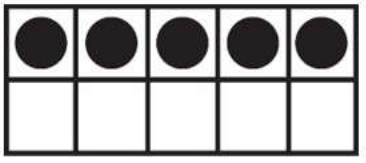
9 + ____

7) 

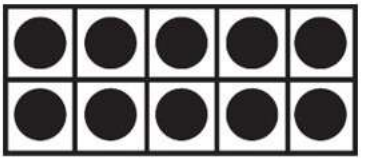
4 + ____ = 10

8) 

1 + ____ = 10

9) 

5 + ____ = 10

10) 

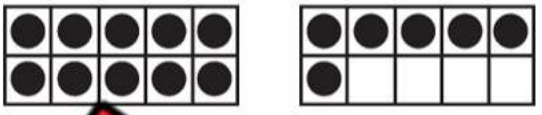
10 + ____ = 10

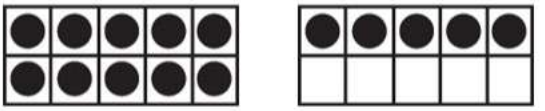
Name: _____ 107

Curriculum Connection
P2.3

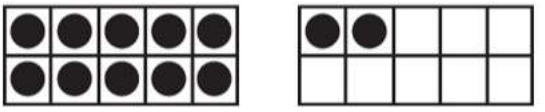
Making 20 – Changing Variables

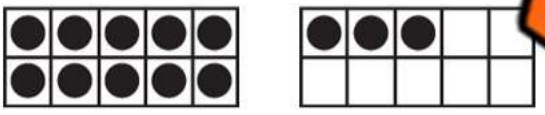
Questions How many more dots do you need to add to make 20?

1)  _____ = 20

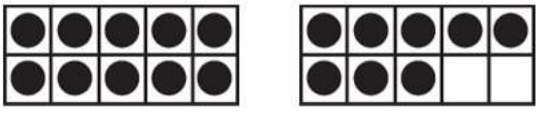
2)  15 + _____ = 20

3)  10 + _____

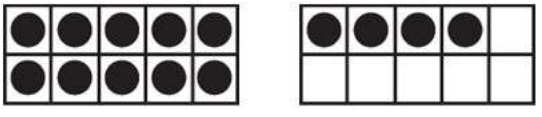
4)  12 + _____ = 20

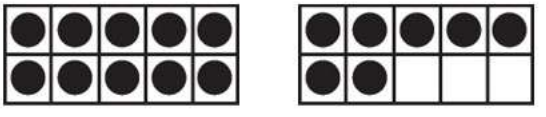
5)  13 + _____ = 20

6)  20

7)  18 + _____ = 20

8)  11 + _____ = 20

9)  14 + _____ = 20

10)  17 + _____ = 20

Name: _____ 108

Curriculum Connection
P2.3

Algebra Jeopardy

Objective What are we learning about?

To reinforce students' understanding of basic algebraic concepts and their application to solve simple equations and word problems in a fun and competitive game for

Mat will need for the activity.

- Jeopardy b the n
- Buzzer or bell

Instructions How you will comp activ

1. Print the Jeopardy board on the next pa
2. Divide the class into two teams.
3. Ask one team to go first by selecting a dollar value.
4. Read the question aloud from the dollar value.
5. The first team to ring the bell or buzzer gets to answer.
6. If they answer correctly, award them the points. If not, another team can answer.
7. Continue the game until all questions have been answered.
8. Tally the points to determine the winning team.
9. Conclude by discussing what they learned about the topic in the questions.

Name: _____ 109

Curriculum Connection
P2.3

Jeopardy Questions | Ask students the questions below

$100	$200	$300	$400	$500
__ + 2 = 7	__ + 3 = 6	10 + __ = 20	3 + __ = 12	4 + __ + 3 = 10
__ + 15 = 25	__ + 12 = 32	20 + __ = 53	__ + 15 = 40	40 + 25 + __ = 100
Balance the equation: 1 + 1 = 1	Balance the equation: 2 = 4	Balance the equation: 5 + 2 = __ + 4	Balance the equation: 6 + 4 = __ + 7	Balance the equation: 8 + 6 = __ + 10
Balance the equation: 2 + 2 = 1 + __	Balance the equation: 3 + 4 =	Balance the equation: 7 + 3 =	Balance the equation: 9 + 2 + __ = 8 + 11	Balance the equation: __ + 10 = 12 + __
Emily had 5 books. She received some more and now has 12 books. How many books did she receive?	David had 10 Legos. He received some more and now has 22 Legos. How many Legos did he receive?	Ethan had 21 rocks. He found some more and now has 28 rocks. How many rocks did he find?	Sarah has some marbles. She receives 5 more and now has 20 marbles. How many marbles did she start with?	Emma has some seeds. She then buys 7 seeds from one store and 14 from another. She now has a total of 25 seeds. How many seeds did she start with?
John had 3 apples. He bought some more and now has 10 apples. How many apples did he buy?	Emma had 9 pencils. She bought some more and now has 16 pencils. How many pencils did she buy?	Sarah has some apples. She buys 6 more and now has 15 apples. How many apples did she start with?	Kevin has some stickers. He then gets 8 stickers, then 3 more, and now has 18 stickers. How many stickers did he start with?	Sophia has some coins. She then finds 5 coins, then 6 more, and now has 28 coins. How many coins did she start with?

Name: _____ 110

Curriculum Connection
P2.3

Addition to 20 – Are They Equal?

Are the equations equal? Put a slash through the equal sign for any equations that are not equal.

5 + 3 = 8 8 + 4 ≠ 13 14 + 6 = 20

Questions Put a slash (≠) through the equal sign if it is not balanced

+ 5 =	2) 4 + 4 = 8	3) 3 + 3 = 5
4) 4 + 6 = 11	5) 10	6) 3 + 5 = 8
7) 9 + 3 = 13	8) 7 + 5	+ 7 = 16
10) 8 + 4 = 13	11) 11 + 5 = 16	15
13) 10 + 10 = 19	14) 8 + 10 = 18	15) 13 + 6 = 19
16) 13 + 3 = 17	17) 11 + 6 = 18	18) 14 + 6 = 20

Name: _____ 112

Curriculum Connection
P2.3

Addition Expressions – Equal?

Are the expressions equal? Put a slash through the equal sign for any equations that are not equal.

Examples: 5 + 3 = 2 + 6 4 + 5 ≠ 7 + 1

Questions Put a slash (≠) through the equal sign if it is not balanced

1) [illegible] + 7	7) 6 + 3 = 2 + 5
2) 7 + 3 = [illegible]	6 + 5 = 4 + 8
3) 8 + 5 = 4 + 7	[illegible] 1 + 9
4) 7 + 7 = 5 + 8	10) 9 + 3 = [illegible] 4
5) 14 + 2 = 11 + 5	11) 16 + 3 = 14 + 5
6) 23 + 4 = 20 + 7	12) 30 + 5 = 33 + 3

Exit Cards

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

Name: _____

Put a slash (≠) through the equal sign if the equations are not balanced.

a) 12 + 3 = 15

b) 20 + 6 = 25 +

c) 25 + 10 = 30 + 5

d) 30 + 2 = 29 + 4

Name: _____

Put a slash (≠) through the equal sign if the equations are not balanced.

a) 12 + 3 = 15 + 0

b) 20 + 6 = 25 + 10

c) 25 + 10 = 30 + 5

d) 30 + 2 = 29 + 4

Name: _____

Put a slash (≠) through the equal sign if the equations are not balanced.

a) 12 + 3 = 15 + 0

b) 20 + 6 = 25 + 10

c) 25 + 10 = 30 + 5

d) 30 + 2 = 29 + 4

Name: _____

Put a slash (≠) through the equal sign if the equations are not balanced.

a) 12 + 3 = 15 + 0

b) 20 + 6 = 25 + 10

c) 25 + 10 = 30 + 5

d) 30 + 2 = 29 + 4

Name: _____ 114

Curriculum Connection
P2.3

Addition – Which Equation Matches?

Two of the equations equal the same number. Which one matches the shaded in equation?

Example

4 + 7 (9 + 2) 5 + 5

Questions Circle the equation that matches the shaded in equation

1)	5 + 2	6 + 2	4 + 3
2)	6 + 3	5	2 + 8
3)	8 + 4	7 + 7	6 + 6
4)	5 + 8	4 + 7	6
5)	8 + 2	7 + 3	5 + 6
6)	10 + 3	8 + 5	6 + 6
7)	3 + 6	4 + 7	8 + 1

Name: _____ 115

Curriculum Connection
P2.3

Addition – Which Equation Doesn't Belong?

Two of the equations equal the same. One of the equations does not belong!

Example

4 + 3 (5 + 1) 2 + 5

Questions: Circle the equation that doesn't belong!

1)	4	3 + 7	2 + 9
2)	7 +	+ 7	9 + 3
3)	2 + 3	5 +	4 + 2
4)	3 + 8	7 + 7	
5)	8 + 4	6 + 9	10 + 5
6)	12 + 3	10 + 5	8 + 6
7)	7 + 4	10 + 2	8 + 3

Name: _____ 116

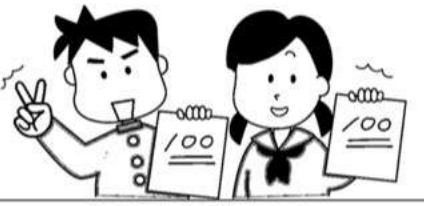
Curriculum Connection
P2.3

Addition – Find the Variable

A **variable** is a letter that represents an unknown number. When we don't know a number, we can use a letter to take the place of the unknown number.

Example: 8 + n = 15

We can figure out the unknown number by balancing the equation. In this equation, n = 7.



Question: Find out the value of the variable

1) 7 + n = 10 n =	+ 5 = 8	3) 10 + n = 13 n =
4) 6 + 6 = p p =	+ p p =	6) p + 4 = 12 =
7) 7 + y = 14 y =	8) y + 6 = 14 y =	y =
10) 5 + t = 15 t =	11) 14 + t = 20 t =	12) 20 + t t =
13) 22 + a = 28 a =	14) 30 + a = 40 a =	15) 24 + a = 30 a =
16) 27 + 6 = s s =	17) 35 + s = 41 s =	18) 42 + s = 48 s =

Name: _____ 117

Curriculum Connection
P2.3

Using Variables to Solve Addition Equations

There are some instances where we know the values of variables and need to plug them into an equation. For example:

a + b + c = ? a = 5 b = 3 c = 7

5 + 3 + 7 = 15

Question: Find out the value of the variable

a + b + [illegible] = [illegible] 8 c = 2 ____ + ____ + ____ = ____	n + y + t = n = 5 y = 10 t = 5 ____ + ____ + ____ = ____
c + r + p = c = 4 r [illegible] = 6 ____ + ____ + ____ = ____	[illegible] + k = g = 8 h = 4 k = 5 ____ + ____ + ____ = ____
e + c + g = e = 3 c = 7 g = 10 ____ + ____ + ____ = ____	a c [illegible] = 8 c = 3 ____ + ____ + ____ = ____
a + b + c = a = 5 b = 5 c = 6 ____ + ____ + ____ = ____	n + y + t = n = [illegible] y [illegible] t = 5 ____ + ____ + ____ = ____
c + r + p = c = 4 r = 8 p = 6 ____ + ____ + ____ = ____	g + h + k = g = 8 h = 10 k = 10 ____ + ____ + ____ = ____
e + c + g = e = 2 c = 4 g = 12 ____ + ____ + ____ = ____	a + b + c = a = 5 b = 15 c = 20 ____ + ____ + ____ = ____

Name: _____ 118

Curriculum Connection
P2.3

Finding the Missing Information – To 20

Find out how many coins are in the bag using the information given to you.

Example

There are 9 coins in total and 5 outside of the bag.
Therefore, there are 4 in the bag

5 + **4** = 9

Instructi How many coins are in the bags below?

1) 7

Answer: _____

2) 10

Ans _____

3) 12

Answer: _____

15

Answer: _____

5) 17

Answer: _____

6) 20

Answer: _____

Name: _____ 119

Curriculum Connection
P2.3

Finding the Missing Information – To 30

Instructions How many coins are in the bags below?

1) 15

Answer: _____

2) 17

Answer: _____

3) 22

Answer: _____

4) 24

Answer: _____

5) 25

Answer: _____

6) 27

Answer: _____

7) 20

Answer: _____

8) 30

Answer: _____

Name: _____ 121

Curriculum Connection
P2.3

Pre-Algebra – Balancing Subtraction Equations

Balance the scales by taking away circles from the scale.

Answer: take 4 circles from the scale to make them equal.

7	-	4	=	3

Instruction How many balls do you need to take away to balance the scales?

11	-		=	8

8			=	

10	-		=	4

8	-		=	1

11	-		=	3

13	-		=	2

10	-		=	4

14	-		=	1

4	-		=	0

Name: _____ 122

Curriculum Connection
P2.3

Pre-Algebra – Balancing Subtraction Equations

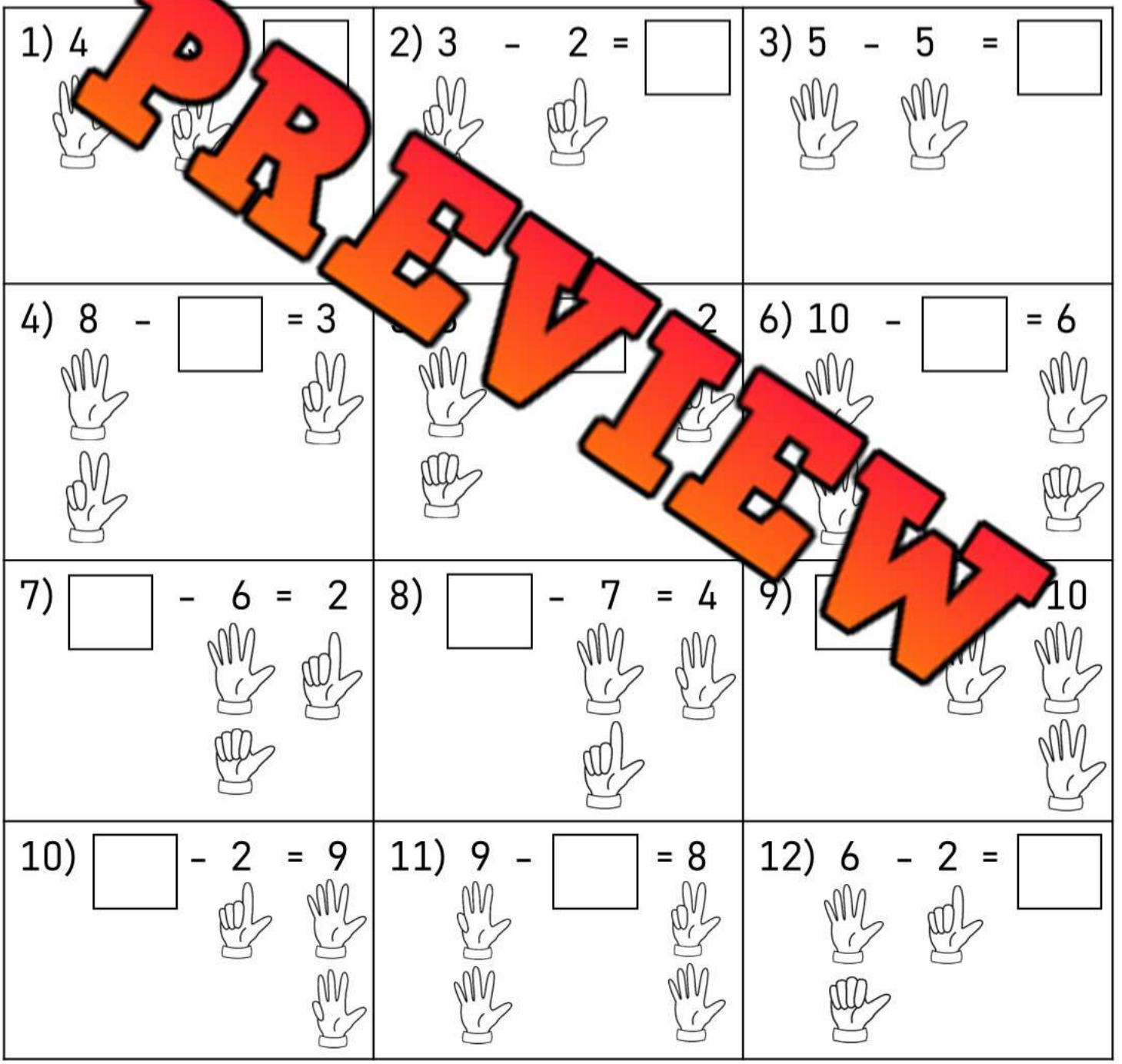
Balancing equations means both sides of the equal sign must be the same.

Examples:

$7 - 4 = \boxed{3}$ (3)

$14 - 6 = \boxed{8}$ (8)

Questions Fill in the missing numbers to balance the equations



Name: _____ 123

Curriculum Connection
P2.3

Subtraction to 20 – Are They Equal?

Are the equations equal? Put a slash through the equal sign for any equations that are not equal.

7 - 2 = 5 12 - 3 ≠ 8 15 - 3 = 12

Questions Put a slash ≠ through the equal sign if it is not balanced

1) 3 - 2	2) 4 - 2 = 3	3) 5 - 2 = 3
4) 6 - 3 = 3	5)	6) 8 - 3 = 4
7) 7 - 2 = 5	8) 9 - 3 =	- 4 = 6
10) 12 - 4 = 9	11) 11 - 3 = 8	12) 1 = 10
13) 15 - 5 = 11	14) 16 - 3 = 13	15) 17 - 4 = 12
16) 18 - 0 = 0	17) 16 - 3 = 13	18) 20 - 5 = 14

Name: _____ 128

Curriculum Connection
P2.3

Subtraction – Which Equation Matches?

Two of the equations equal the same number. Which one matches the shaded in equation?

Example:

9 - 4 (8 - 3) 10 - 6

Questions: Circle the equation that matches the shaded in equation

1)	5 - 2	4 - 1	7 - 3
2)	8 - 4	2	7 - 3
3)	10 - 2	9	9 - 1
4)	7 - 2	6 - 1	
5)	12 - 3	11 - 2	9 - 1
6)	15 - 5	9 - 0	10 - 0
7)	9 - 5	8 - 3	10 - 6

Name: _____ 130

Curriculum Connection
P2.3

Matching Game: Do The Equations Match

Objective What are we learning about?

To enhance students' understanding of equality within addition and subtraction equations. Students will identify and match pairs of equations that yield the same result, fos ing critical thinking and problem-solving skills in a collaborative group set

Mate will need for the activity.

- Pre-prepared re- cards.
- Small bags or envel ld t ts for each group

Instructions How you will complete the ac

1. Before the class, the teacher will cut out the p red m ng game cards.
2. Divide the students into small groups and give each group ba elope containing a set of the matching cards.
3. In their groups, students will spread out the cards face down on their table.
4. Each person takes a turn to try to match two cards. They will need to solve both equations to see if they match (equal the same).
5. If they find a correct match, they keep the cards out and continue with their next turn. If the cards don't match, they turn them back over in the same place, and the next player takes a turn.
6. The activity continues until all pairs are correctly matched within each group.

Name: _____ 131

Curriculum Connection
P2.3

Cards | Matching Game Cards

12 + 8	10 + 10
30 – 10	25 - 5
18 + 22	2 + 20
40 – 5	30 + 5
20 + 12	10 + 22

Name: _____ 132

Curriculum Connection
P2.3

Cards | Matching Game Cards

50 – 25	40 – 15
15 – 10	10 + 25
60 – 15	20 + 5
38 + 12	25 + 25
70 – 30	40 + 10

Name: _____ 133

Curriculum Connection
P2.3

Cards | Matching Game Cards

45 + 15	30 + 30
80 – 5	60 + 10
55 + 5	4 + 15
90 – 40	50 +
65 + 10	50 + 25

Name: _____ 134

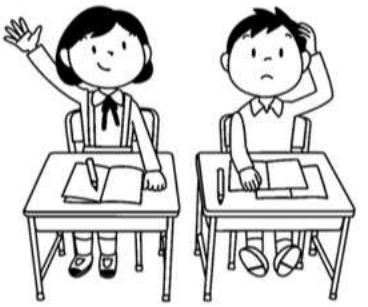
Curriculum Connection
P2.3

Subtraction – Find the Variable

A **variable** is a letter that represents an unknown number. When we don't know a number, we can use a letter to take the place of the unknown number.

Example: 18 – n = 5

We can figure out the unknown number by balancing the equation. In this equation, n = 13.



Ques[illegible] out the value of the variable

1) 9 – n = [illegible] n =	[illegible] – 5 = 5 n =	3) 3 – n = 0 n =
4) 6 – 2 = p p =	5) 9 – [illegible] p =	6) p – 4 = 2 [illegible]
7) 10 – y = 3 y =	8) y – 7 = 0 y =	12 – y y =
10) 15 – t = 5 t =	11) 17 – t = 13 t =	12) 19 – [illegible] t =
13) 22 – a = 14 a =	14) 25 – a = 20 a =	15) 27 – a = 23 a =
16) 29 – 4 = s s =	17) 30 – s = 30 s =	18) 40 – s = 19 s =

Exit Cards

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

Name: _____

Find out the value of the variables

a) n - 6 = 12 n = _____

b) 28 - y = 19 y = _____

c) 41 - t = 15 t = _____

Name: _____

Find out the value of the variables

a) n - 6 = 12 n = _____

b) 28 - y = 19 y = _____

c) 41 - t = 15 t = _____

Name: _____

Find out the value of the variables

a) n - 6 = 12 n = _____

b) 28 - y = 19 y = _____

c) 41 - t = 15 t = _____

Name: _____

Find out the value of the variables

a) n - 6 = 12 n = _____

b) 28 - y = 19 y = _____

c) 41 - t = 15 t = _____

Name: _____ 136

Curriculum Connection
P2.3

Using Variables to Solve Subtraction Equations

There are some instances where we know the values of variables and need to plug them into an equation. **For example:**

a – b = c a = 7 b = 4
7 – 4 = c
c = 3

Question | Find out the value of the variable

a – [illegible] a [illegible] b = 2 _____ – _____ c =	e – n = f e = 10 n = 5 _____ – _____ = f f =
r – y = k r = 8 [illegible] _____ – _____ = k k =	[illegible] g = h t = 9 g = 6 _____ – _____ = h h =
a – b = c a = 10 b = 8 _____ – _____ = c c =	e [illegible] f [illegible] 12 n = 6 _____ – _____ f =
r – y = k r = 15 y = 4 _____ – _____ = k k =	t – g = h t = [illegible] _____ – _____ = h h =
a – b = c a = 18 b = 5 _____ – _____ = c c =	e – n = f e = 22 n = 7 _____ – _____ = f f =
r – y = k r = 27 y = 5 _____ – _____ = k k =	t – g = h t = 29 g = 4 _____ – _____ = h h =

Name: _____ 138

Curriculum Connection
P2.3

Task Cards: Mystery Number Detectives

Objective

What are we learning about?

To help students understand and solve one-step algebraic equations by finding the value of a missing number.

Materials

What you will need for the activity.

- 2
- Se e shee for answers
- Pencils

Instructions

How o activity

1. Introduce the concepts cove d in
2. Organize the students into pairs and rovide e air heir sets of task cards.
3. Give each pair an answer recording sheet t do ses.
4. Encourage teamwork by having students collabora ir p on finding solutions.
5. Allow students to select any task card to begin with, emphasizi tha an complete the cards in any order they prefer.
6. Instruct students to record the letter of their chosen answer (A, B, or C) on their answer sheet beside the task card's number.
7. Consider using a timer to create a dynamic challenge, adjusting the duration to fit the lesson's objectives and complexity.
8. After the activity, review the answers collectively, discussing any challenging questions and strategies used to solve them.
9. Have students reflect on the activity, sharing the methods they applied and obstacles they overcame.

Name: _____ 139

Task Cards | Cut out the task cards below

Card 1:
25 - x = 20

solve for x
a) [illegible] b) 3 c) 4

Card 2:
50 - ● = 30

solve for ●
a) 20 b) 15 c) 10

Card 4:
35 - ● = 28

solve for ●
[illegible] b) 5 c) 6

Card 5:
12 - n = 9

solve for n
a) 2 b) 3 c) 4

Card 7:
Sara has 32 apples. She gets some more and now has 50. How many did she get?

a) 18 b) 20 c) 22

Card 8:
Ben had 40 marbles. He lost some marbles and now has 25. How many did he lose?

a) 12 b) 14 c) 15

Name: _____ 140

Curriculum Connection
P2.3

Task Cards | Cut out the task cards below

Card 9:

A plant was 5 cm tall. It grew ___ centimeters and is now 27 cm tall. How much did it grow?

a) 2[illegible] m c) 18 cm

Card 10:

Lucy baked 48 cupcakes. She gave some away and now has 30. How many did she give away?

a) 16 b) 18 c) 20

Card 11:

60 [illegible] = 45

solve for p

a) 12 b) 15 c) 14

Card 12:

17 + k = 29

solve for k

a[illegible] b) 15 c) 12

Card 13:

30 – a = 10

solve for a

a) 20 b) 18 c) 15

Card [illegible]

b[illegible]

solve for [illegible]

a) 20 b) 15 c) 25

Card 15:

22 + c = 40

solve for c

a) 18 b) 20 c) 25

Card 16:

35 – d = 15

solve for d

a) 18 b) 20 c) 25

Name: _____ 141

Curriculum Connection
P2.3

Task Cards | Cut out the task cards below

Card 17:
25 + e = 55

solve for e
a) 3 b) 32 c) 28

Card 18:
70 – f = 40

solve for f
a) 35 b) 28 c) 30

Ca
Sam has / s. l gets some mor now 0. How many did et?

a) 25 b) 30 c) 28

Card 20:
Emma had 50 candies. She lost some candies and now has 30. How many did she lose?

a 0 b) 18 c) 22

Card 21:
A balloon was 10 inches. It expanded by ___ inches and is now 40 inches. How much did it expand?

a) 30 b) 28 c) 32

d 22:
n cookies. She a coo and now has 50. w e ee

a) 25 b) 30 c) 28

Card 23:
100 – k = 60

solve for k
a) 40 b) 35 c) 50

Card 24:
19 + l = 40

solve for l
a) 21 b) 22 c) 20

Name: _____ 142

Curriculum Connection
P2.3

Task Cards: Mystery Number Detectives

Answers | Record your answers below

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

Name: _____ 143

Curriculum Connection
TQ

Variables and Equations – Unit Quiz

Part 1 Put a slash (≠) through the equal sign if it is not balanced

1) 5 + 10 = 15	2) 10 + 6 = 12	3) 15 + 10 = 25
4)	5) 18 + 6 = 24	6) 19 + 5 = 24
7) 5 – 5	10 – 4 = 6	9) 16 – 5 = 11
10) 21 – 6 = 15	11)	12) 28 – 5 = 22

Part 2 Circle the equation that mat… the s… …uation

1)	7 – 2	8 – 1	
2)	11 – 4	7 – 0	10 – 4
3)	8 + 6	9 + 5	10 + 5
4)	11 + 6	9 + 9	7 + 10

Curriculum Connection
TQ

Part 3 How many coins are in the bags below?

1) 9

Answer: _____

2) 12

Answer: _____

3) 15

Answer: _____

4) 20

Answer: _____

Part 4 Circle the equation that doesn't belong!

1)	4 + 6	3 +	+ 9
2)	9 - 5	12 - 7	

Part 5 Solve the word problem below. Make sure to write the [illegible]tion

Alexa saved 27 dollars from her allowance. She was given some money from her grandmother for her birthday. She now has 40 dollars. How much did her grandmother give her?