# Numeracy

### For 6 to 7 year olds

Screen-free learning resources that build multiple skills.



**Content Partners** 





# Check if this Workbook is right for you.

#### Answer the following questions in 20 minutes.

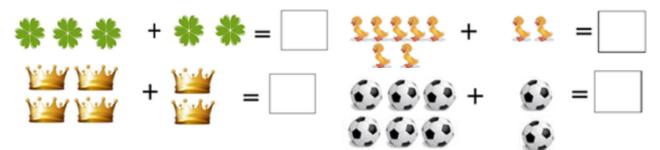
1. Write the number using words:

2

9

8

2. Write the total number of items:



3. Write the missing numbers:

40, \_\_\_\_, 37, 36, \_\_\_\_, 34, 33, \_\_\_\_\_, 31

4. 8 + 2 =

7 - 3 = \_\_\_\_\_

- 5. Arrange the numbers from biggest to smallest: 16, 20, 29, 3
- 6. What comes next in the following patterns?

A A B A A B \_\_\_\_\_ \_\_\_ \_\_\_



1 2 5 1 2 5 \_\_\_\_\_ \_\_\_

7. Draw three objects at home or that you have seen which have the following shapes: rectangle, circle, and triangle.

### **Answer Key**



#### Give the allotted marks for each correct answer.

- two 2 1.
- nine
- 8 eight
- 1 mark each

2.



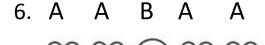
1 mark each

1 mark each

5. **29, 20, 16, 3** 

1 mark

1 mark each





В





B

1

Α

7.



Rectangle



Circle



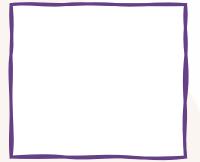
Triangle

1 mark each

(Accept any appropriate response.)

#### If your score is:

9 or less	Use the <b>Numeracy Workbook for Level 0</b>
10 to 16	This workbook is right for you!
17 to 20	Use the <b>Numeracy Workbook for Level 2</b>



### My Learning Journey

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Name:

Draw yourself here.















Day 1

Day 2

Day 3

Day 4

Day 5

Week 2













Day 1

Day 2

Day 3

Day 4

Day 5

Week 3













Day 1

Day 2

Day 3

Day 4

Day 5

DONE!

Week 4











Day 1

Day 2

Day 3

Day 4

Day 5



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# Daily Routine



# My Emotions

Draw how you feel everyday in your notebook.



# Week 1 Overview





#### Project

#### **Number Bonds**

Explore how numbers can be used to create other numbers.

#### **Domino Count**

Count the dots on dominos and make number bonds.



#### Let's Make 10!

Practise 10's number bonds though a game.



#### **Adding Machine**

Explore number bonds by making your own adding machine.



### **Grouping Game**

Practise number bonds through a game.



# 2

### My Friend

Explore the bond you share with your friend.

#### **Materials Needed**

- Paper
- Counters (leaves, stones, rice, etc.)
- Pencil
- Tape/glue





#### **Number Bonds**

Can you use numbers to create other numbers?

Locate 6 items that are a part of a whole. (Eg: leaves are a part of a plant, sleeves are a part of a t-shirt, etc.).

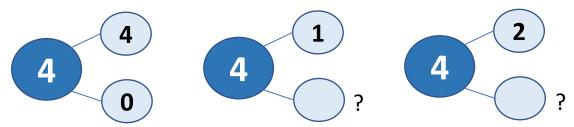
Are numbers part of a whole too? Let's find out!

Collect 4 counters (stones, beads, etc.) and choose 2 people.

How can you split the counters between them?

I had	I gave(Eg: my brother)	I gave(Eg: my sister)
4 counters	4	0
4 counters	3	1
4 counters		
4 counters		
4 counters		

4 is a whole number and the numbers 1, 2, and 3 are parts of it. So, the number bonds for 4 are:



Repeat the activity with **3 counters** and **5 counters**. Draw the number bonds.

### Math Game

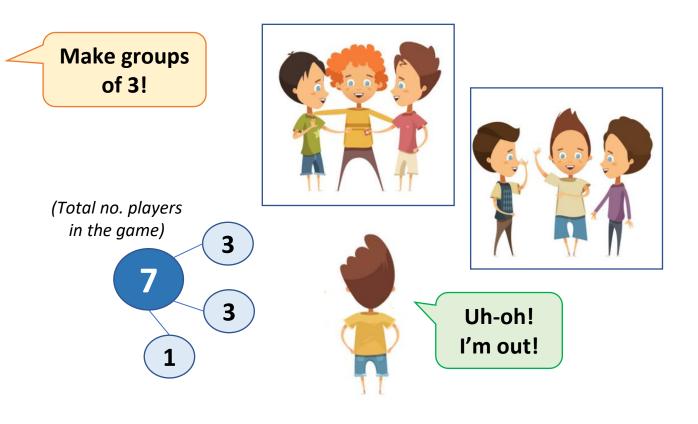


# **Grouping Game**

5 or more players 1 narrator

#### How to Play

- Players form a circle and begin walking and clapping.
- The narrator will say a number from 1 to 5.
   Players quickly get into groups of that number.
- The players who are not in a group are out.
- Draw the number bonds you observe.



The last pair of players are the winners!



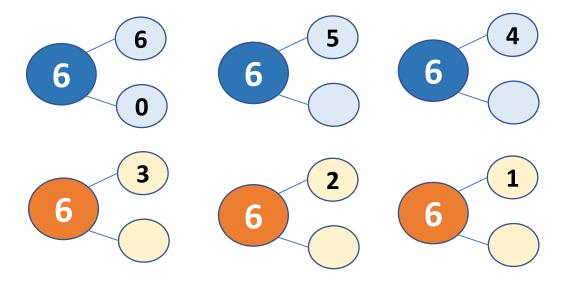
#### **Number Bonds**

In how many ways can you split 6 counters between 2 people?

I had	I gave	I gave
6 counters	6	0
6 counters	5	1
6 counters		

When is the division fair (split equally)? When is it unfair?

Fill in the number bonds for 6.



Repeat the activity with **7 counters** and draw the number bonds.

### Day 2 Mindfulness



# My Friend

Just like numbers have bonds, we bond with people too. They are our friends or family.

Think of one person you bond well with. Fill the table:



My	name:		
•		 	 _

What I am good at: \_\_\_\_\_

What I like to eat: \_\_\_\_\_

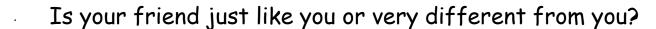
What I like about my friend: \_\_\_\_\_

Μy	friend's name:	

What my friend is good at: \_\_\_\_\_

What my friend likes to eat: \_\_\_\_\_

What my friend likes about me: \_\_\_\_\_

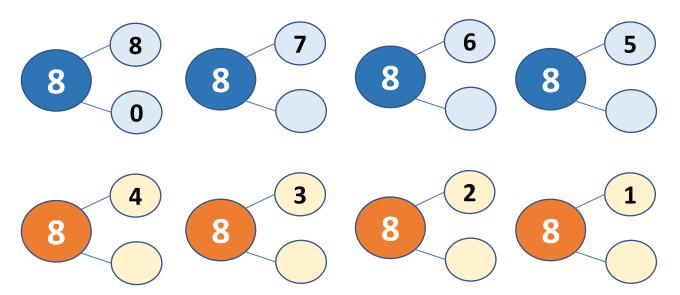


- What are some things that are nice to have in common with our friends?
- Can we be different from each other and still be friends?



#### **Number Bonds**

Explore the different ways in which **8 counters** can be split between 2 people. Complete the number bonds below.

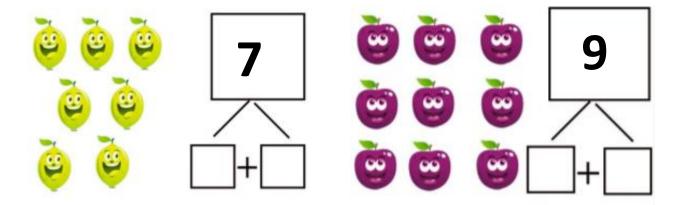


Are there more fair ways to split the number between more people?

Repeat the activity with **9 counters** and draw the number bonds.

#### Let's Revise!

Count the items and note down all the different number bonds you can create:



### Day 3 Activity



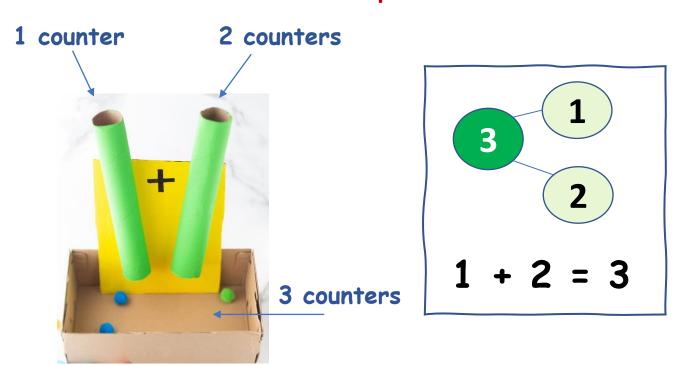
# **Adding Machine**

- Fold two pieces of paper to create 2 cylindrical tubes.
- Stick them on the wall in a V-shape.
- Below the two tubes, place a bucket or container.



Pass some counters through the tubes and note down the final number you see. Write out the number bonds.

#### **Example**

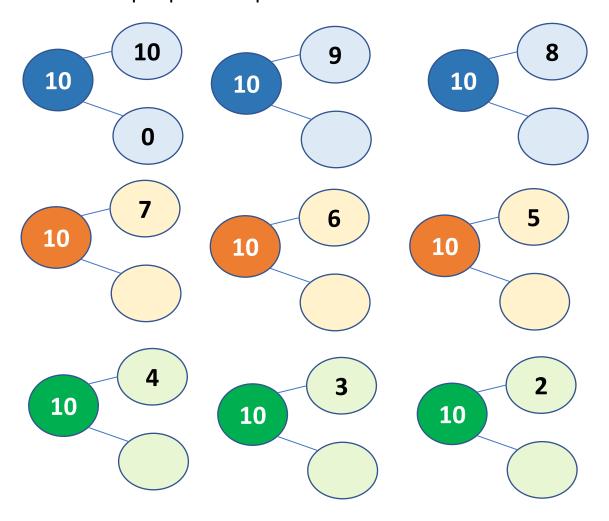


Create 6 different number bonds using your Adding Machine.



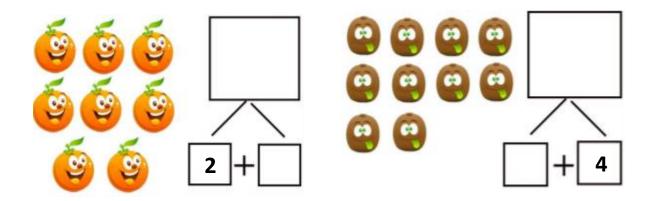
#### **Number Bonds**

Explore the different ways in which **10 counters** can be split between 2 people. Complete the number bonds below.



Let's Revise!

Count the items and fill the number bonds.



### Math Game



## Let's Make 10!

4 or more players
1 narrator

#### Game Set-Up

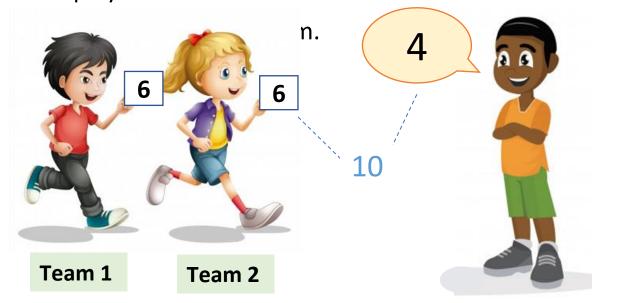
#### Each team should have:

Number cards (1 to 9) OR Counters (from 1 to 9)



#### How to Play

- Create 2 teams. Split the number cards/counters among team members.
- All players should stand 10 to 15 steps from the narrator.
- The narrator will say a number from 1 to 9 out loud.
- The player who has the card to make the number 10 with the called-out number runs to the person.
- The player who reaches first to make the number bond





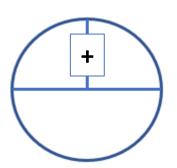
#### **Number Bonds**

#### **Activity Set-Up**



With an adult's help, make a die.

- Draw and cut the picture.
- Fold along the lines and stick together to form a cube.



- On paper (or the ground), draw this shape.
   Add a '+' sign as shown.
- Keep 10 counters/small stones ready.

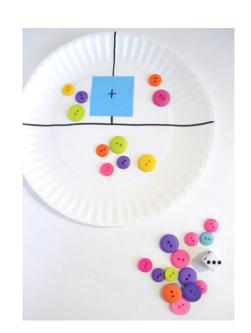
#### **Activity Time!**

- Roll the die. Place that many counters in the first section.
- Roll the dice again. Place that many counters in the second section.
- Add the counters in the third section.
- Draw the number bond.

Create 6 such number bonds.



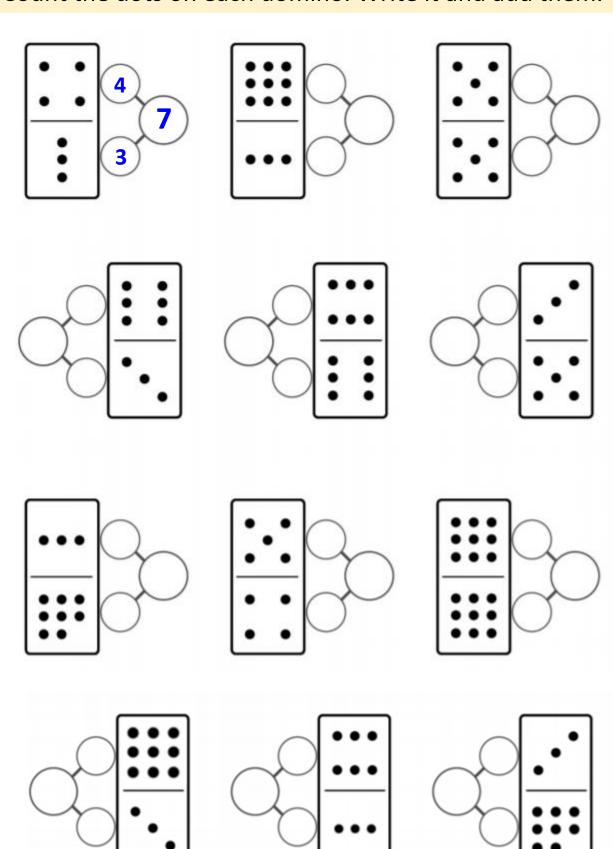
- Can you use numbers to create other numbers?
- Where are number bonds used in daily life?



### Worksheet Domino Count



Count the dots on each domino. Write it and add them.



# Weekly Reflection



Did I enjoy learning this week?











What are some new things I learned?

What did I do well?

What can I do better next week?

# Week 2 Overview





#### Project

### My Place Value Machine

Explore the place values of numbers.

### Many Forms

Explore different ways to show a number through this game.



#### Math Signs

Challenge your peers and practise place values!



#### Garden of Leaves

Count and observe the beauty of leaves around you.



#### **Number Names**

Practise writing number names from 11 to 15.



2

#### **Number Names**

Practise writing number names from 16 to 20.

#### **Materials Needed**

- Paper
- Glue / Tape and Scissors
- Think Sticks

- Pencil
- Counters (beads/ small stones, etc.)
- Thread
- Dice

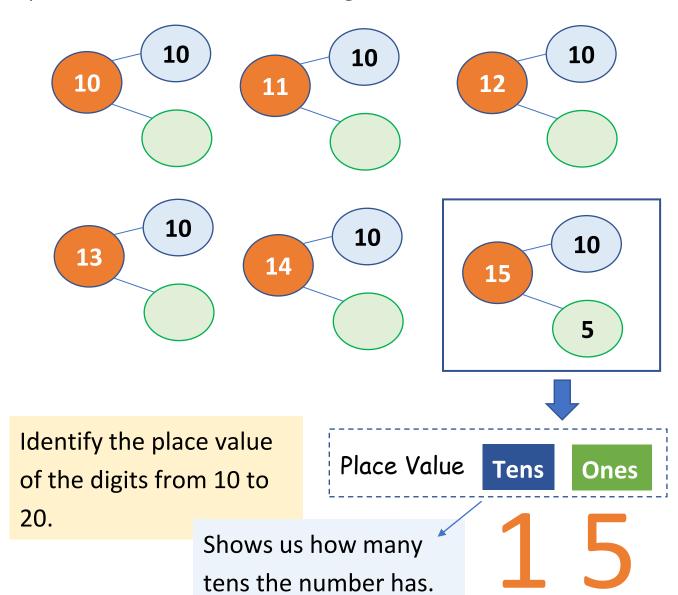




### My Place Value Machine

# What other numbers make up a given number?

Collect 15 small objects to count. (stones, beads, leaves, etc.) Explore the number bonds using the counters:



### Worksheet



# Number Names (10 to 15)

Say and trace the number names:

10	ten	1611
	eleven	eleven
12	twelve	twelve
13	thirteen	thirteen
14	fourteen	fourteen



#### My Place Value Machine

- Put 10 beads or paper balls through a thread.
- Knot it up on either side of the thread to make them stay in place.
- Make 4 such threads.

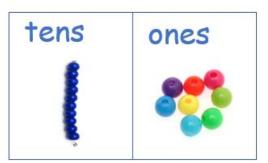


tens	ones

On paper or the ground, make 2 sections - 'Tens' and 'Ones'.

Represent the numbers 10 to 20 in your place value machine. 18





Using the machine, explore the numbers 20 to 25:

Whole Number	Tens	Ones
20	2 (10 + 10)	0
21	2	1
22		
23		
24		
25		

Where can you find these numbers around you?



# Number Names (16 to 20)

Say and trace the number names.

16	sixteen	sixteen
17	seventeen	seventeen
18	eighteen	eighteen
19	nineteen	nineteen
20	twesty	twenty

Can you write the missing numbers?

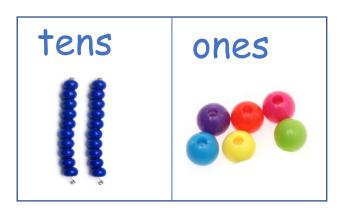


#### My Place Value Machine

Represent the numbers 26 to 30 in your place value machine.

26





Whole Number	Tens	Ones
26	2	6
27		
28		
29		
30		

#### **Backward Counting Game**

- Write the numbers 0 to 30 in a line on the floor.
- Each player should start at '30' and have 1 counter.
- Each player rolls the die and moves backwards that many steps. Say the numbers out loud as you cross them to get to the right number.
- The player that reaches 0 first, wins the game.







•••



### Garden of Leaves

Go for walk outside and look around. Do you see any trees or plants? Look at their leaves.

What colour are they? Are they big or small? Notice how different they are from each other.

If you see any fallen leaves, pick them up and place them in a circle.

Otherwise, you can draw the different types of leaves you see. Do not pluck out leaves from plants.



#### How many leaves did you collect/draw?

Each plant and tree is different from the other.

Yet they live close to each other.

Can you think of how this is similar to your friends/family?





#### My Place Value Machine

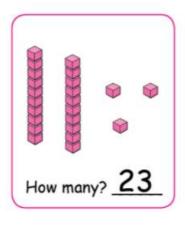
Collect thin sticks so they are easy to break into different sizes. Use those sticks to form the numbers 30-40. You can also use paper strips to create these numbers

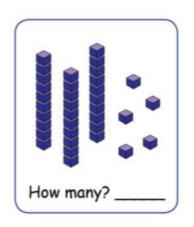


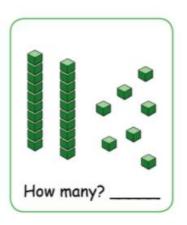
Represent the numbers 31 to 40 in your place value machine.

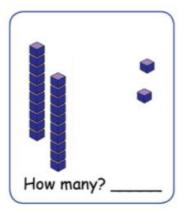
Let's Revise!

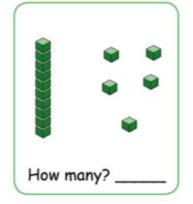
Count and write.

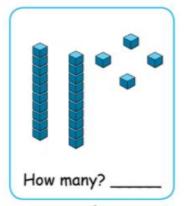












#### Math Game



# Math Signs

2 teams of 2 or more players

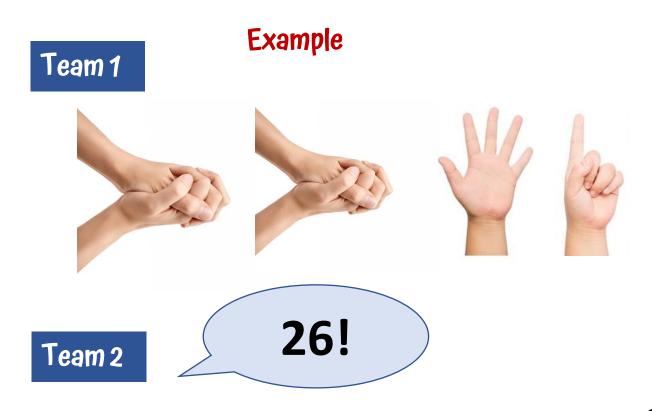
#### How to Play

Players will show the **tens** place like this:

Players will show the **ones** place on their fingers:



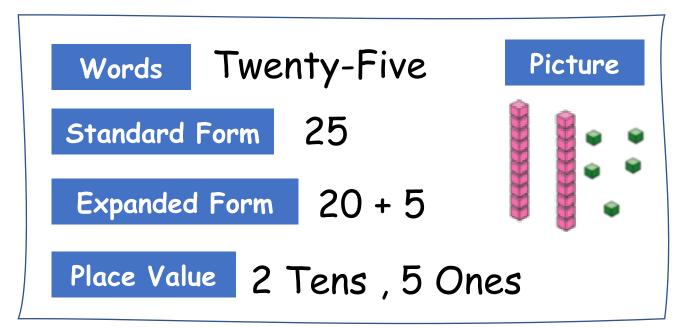
- Team 1 will create a number using the symbols.
- Team 2 will say the number and will earn a point if correct.
- The team with the most points wins.





#### My Place Value Machine

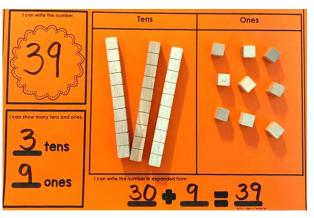
Numbers can be represented in different ways.



Choose any 5 numbers from 10 to 40 and show them creatively. Share it with your friends and family.



#### **Examples**







# Many Forms

2 or more players

#### How to Play

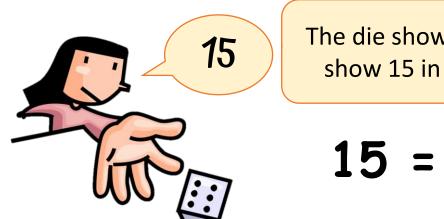
- Each player says a number from 1 to 40 and rolls the die.
- Everyone writes the number based on the die:







• The first player to do it correctly, earns a point. The player with the most points wins.



The die shows 6. So, we should show 15 in **expanded form**.

$$15 = 10 + 5$$

# Weekly Reflection



Did I enjoy learning this week?











What are some new things I learned?

What did I do well?

What can I do better next week?

# Week 3 Overview





**Project** 

### **Beauty in Shapes**

Explore shapes and measurements.

### Cunnu Cida

Think and draw what makes you happy!

#### Sunny Side

### What Shape Are You?

Create shapes using your body!



#### Story Time

Read about The Shape Family.



#### Story of a Circle

Bring a circle to life!



2

#### Measurements

Measure objects using digits, handspans and footspans.

#### Materials Needed

- Paper
- Colours
- Pencil
- Chalk





### Beauty in Shapes

How do shapes help us make drawings?

What is the difference between 2D and 3D Shapes?

# 2D Shapes









Rectangle

Square

Circle

Triangle

Oval

#### **3D Shapes**











Cuboid

Cube

Sphere

Cone

Cylinder

Draw 2 objects at home that look like each shape.

Shape	Object 1	Object 2

### Math Game

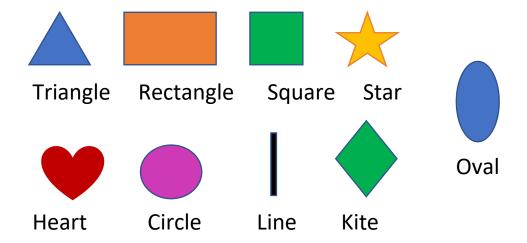


## What Shape Are You?

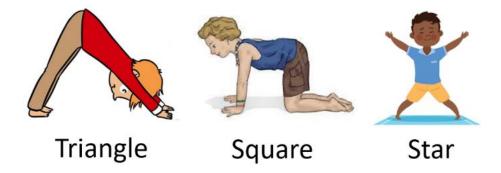
#### How to Play

3 or more players

Whisper one of the shapes to a player.



 Player 1 acts out the shape. Others have to guess the shape.



If the shape is guessed correctly, they earn a point.

The team with the most points wins the game!



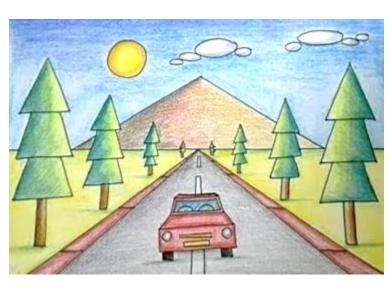
### Beauty in Shapes

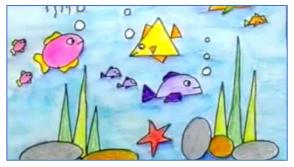
Which shapes do you see in this drawing?



#### **Drawing Activity**

Choose a place or scene that you want to draw.





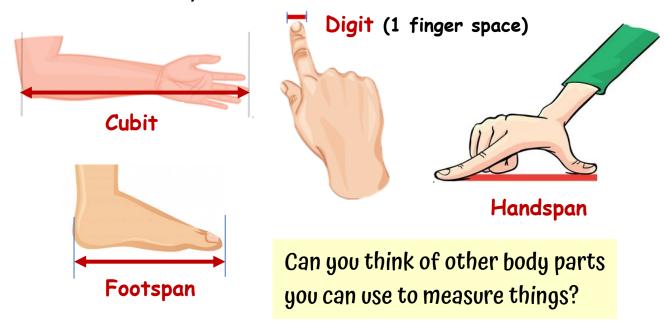


- Make a list of the people, objects or animals you want to include in your drawing.
- Draw any 2 of those using shapes.



### Measurements

In the olden days, people measured using their bodies. Let's learn 4 ways:



- Explore the relationship between the measurements. (Eg: 1 handspan equals how many digits?)
- How many digits is the length of your drawing sheet?

Draw the outline of your or your body.



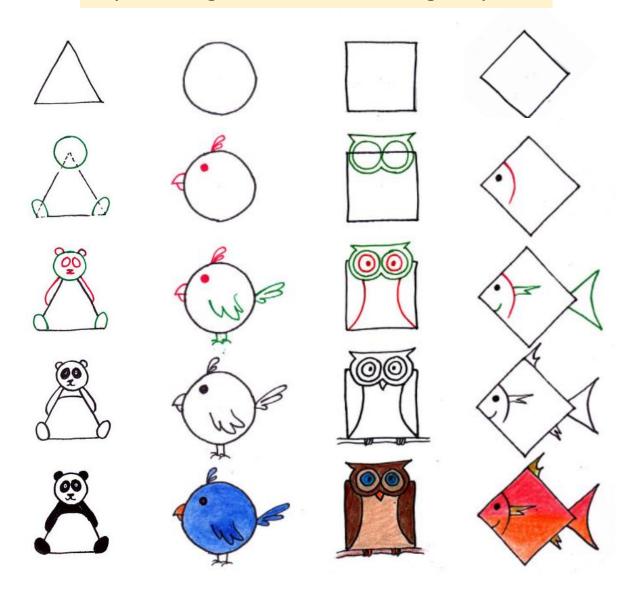
Measure the following using footspans and cubit:

- Hand Length
- Leg Length
- Full Body Length



### Beauty in Shapes

Try drawing these animals using shapes.



### **Drawing Activity**

- Include any animal in your drawing using any shape.
- Why did you choose that animal?
- Explore 3 fun facts about the animal.

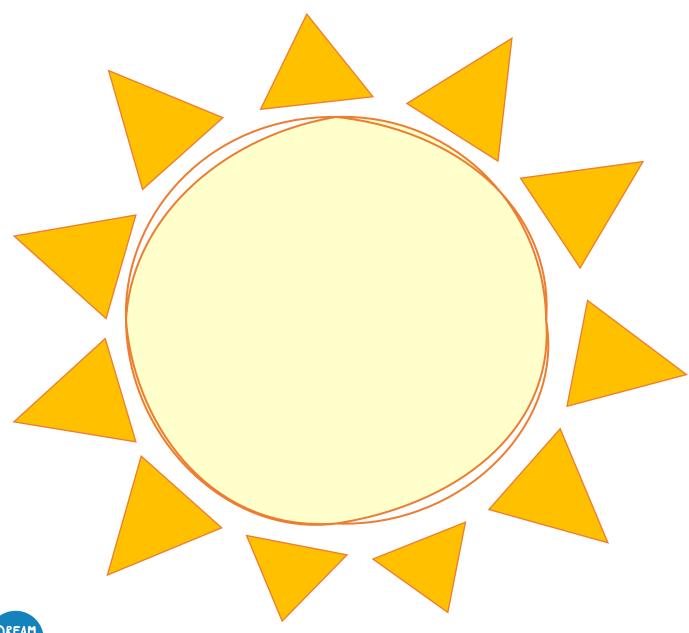
## Day 3 Mindfulness



# Sunny Side

- Take 3 deep breaths.
- Close your eyes. Say all the things that make you happy.

Draw what comes to your mind in the sun below.



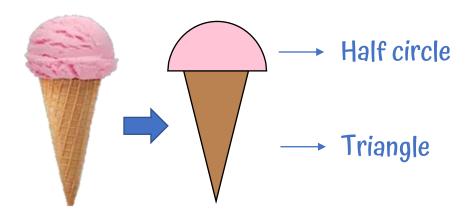




## Beauty in Shapes

Complete your drawing by adding more details to it.

Some objects have 2 or more shapes put together. Choose any 3 objects at home and the draw the shapes it is made of.

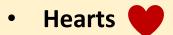


Let's Revise!

How many of each piece should Rita buy to make this butterfly?









Ovals



# Story Of a Circle

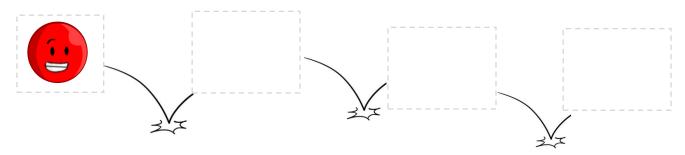


This is your pet circle. How will he introduce himself?



He loves to bounce! Every time he does,

he changes his **shape**, **colour**, and **emotion**! Draw it out:



He goes to a park to a park to play. He becomes a ball. He becomes a merry-go-round. What else can he become in the park? Draw it!



It is time for him to take his family to a shop. He calls 3 of his circle friends and they become **wheels**. Can you draw the vehicle?

The family prepares lunch. Circle wants to help too. He becomes different circular food items. Draw 3 of them below:

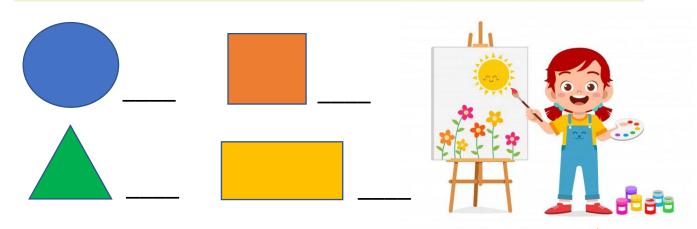


## Beauty in Shapes

#### **Presenting Your Drawing**

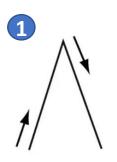
- Show your final drawing to your family and friends.
- Explain the shapes you used in the drawing.
- Discuss with your family and add another shape to your drawing.

How many of each shape can you see in your drawing?

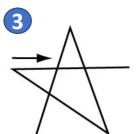


Draw a star for yourself for completing your drawing!











- List the shapes you learnt in this project. What does each shape remind you of?
- Which is your favourite shape? Imagine you are that shape and write/draw a story about its life!

# Story Time



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# Who Will Win?



This is the Shapes Family. In their town, there is a Lantern Competition.

The Shapes are getting ready for it. Circle and his sister Triangle got to work.





Circle made a lantern with circles.

Triangle made one with triangles.



# Who Will Win?



Mr. Square and Mrs. Rectangle said, "Isn't it boring to use the same shapes all the time?"

"Let us try something new!" said Circle.

Together, they made a lantern with circles and triangles.



Mr. Square loved the new lanterns. Who do you think won the competition?



- What is the character and setting of the story.
- Draw your own lantern using shapes.



# Weekly Reflection



Did I enjoy learning this week?











What are some new things I learned?

What did I do well?

What can I do better next week?

# Week 4 Overview





Project

# Patterns Everywhere

Explore patterns around you.

#### Story Time

Explore patterns with Paul, the Pattern Detective.



## Shape Patterns

Explore patterns with different shapes.



#### Free Flow

Create shapes and patterns with your hands.

3

## My Habits

Observe patterns in your daily actions and behaviour.



2

# Complete the Pattern

Observe and continue different patterns.

#### Materials Needed

- Paper
- Pencil





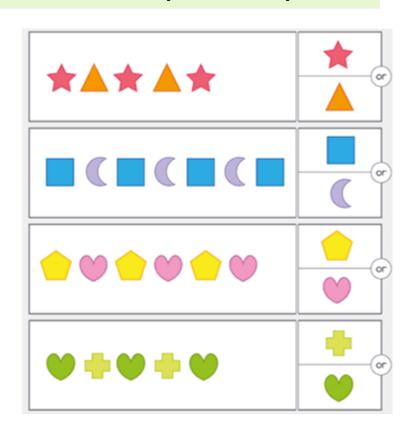
# Patterns Everywhere

How can patterns help us understand the world?

Patterns are things, numbers, or shapes that repeat.

Circle what will come next in these patterns.

Draw 3 other patterns you see around you.



## Patterns Around Us









Days and nights repeat and happen regularly as a pattern. Observe the sky. Do you see patterns in the clouds? What are some other patterns you see around you?

# Activity





# My Habits

Let us observe patterns in our daily actions. Fill the table below. (Add your own questions too.)

		<b>V</b> ∣d	id	I didn	't
Question	Day 1	Day 2	Day 3	Day 4	Day 5
Did I wake up early?					
Did I get angry?					

Continue tracking your habits over the next 2 weeks.

After each week,	list 2 observations	this way:
"When I	, then	happened."
(Example: "Wher	ı I didn't sleep well,	then I woke up irritated.",

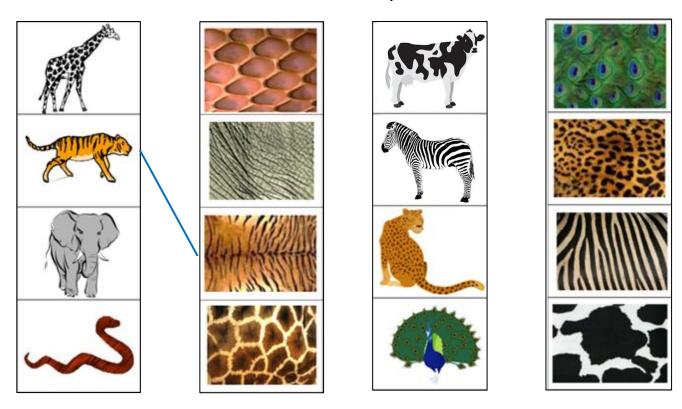
Are there "good" or "bad" habits?



#### Patterns Everywhere

#### **Patterns in Nature**

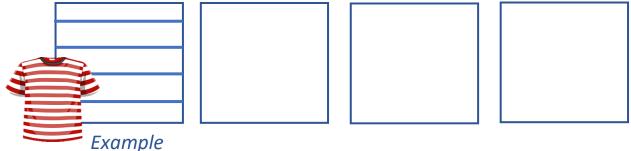
Name and match the animal with the pattern on their skin.



Find 3 patterns in nature and draw them.

#### Patterns in our Clothes

Observe the shapes and designs that repeat in your clothes or other objects at home. Draw at least three such patterns in the boxes below.





# Complete the Pattern

Circle the repeating item and continue the pattern 2 more times. One has been done for you.





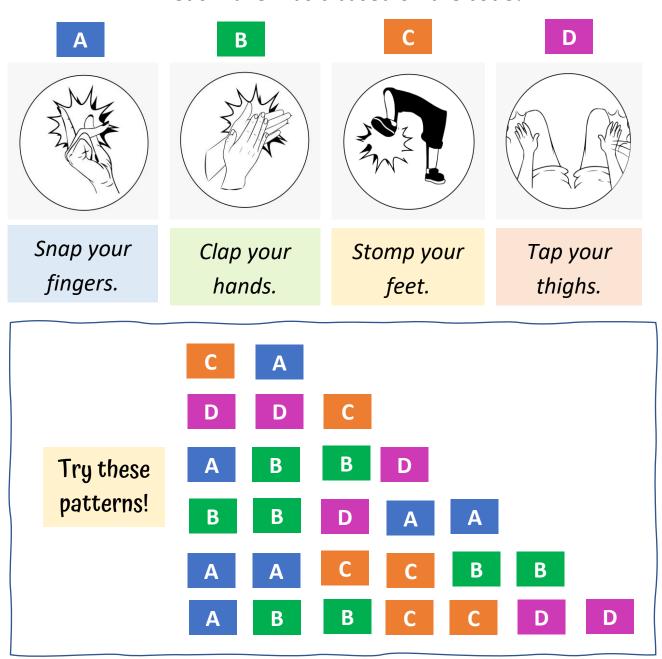
#### Patterns Everywhere

#### **Patterns in Music**

Which is your favourite song? Sing it out loud!

Can you identify a pattern in it?

Let's make music based on the code!



# Day 3 Mindfulness



# Free Flow

Scribble freely inside these boxes.

with your left hand	

with your right hand





## Patterns Everywhere

Make a pattern with any 3 items in your home.

#### **Example:**



#### What comes next in these letter patterns?

Α	В	Α	B A B,,,
K	L	L	K L L K L L,,,
Р	Р	Q	P P Q,,,

#### What comes next in these number patterns?

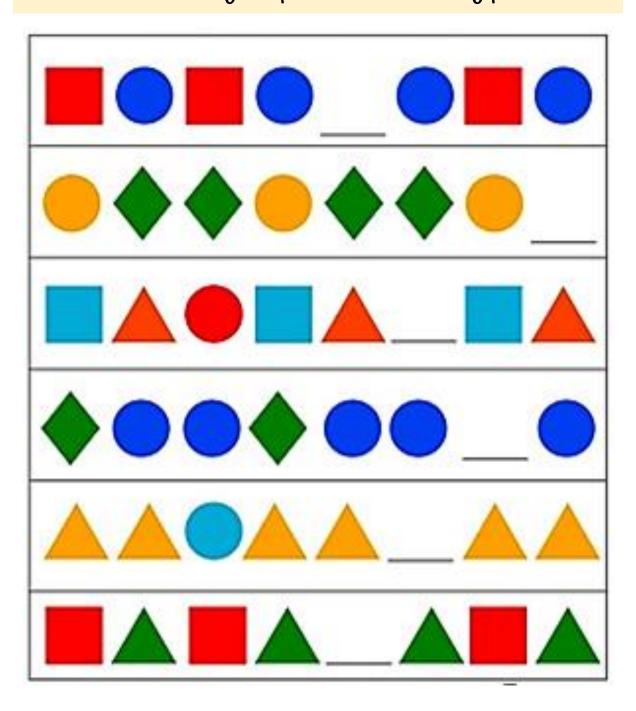
1	0	1	0	1	0	1 _	
2	3	5	2	3	5		
5	5	9	2	5	5 9	9 2	

Make your own number, letter, and shapes patterns. Challenge your family or friends to complete it!



# Shape Patterns

Draw the missing shapes in the following patterns



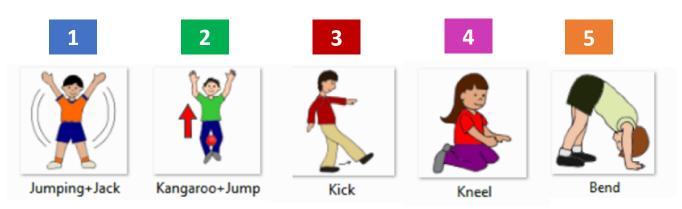
Create a pattern using 2 shapes.



## Patterns Everywhere

#### **Exercise Patterns**

Give a number code to 5 different body movements. Example:



Make 3 of your own exercise patterns! Example:



Teach the exercise patterns to your friends and family!

#### **Dance Pattern**

Select a song to dance to. Create a code for different steps and make your own pattern. Teach the dance to your family!



- Did they enjoy the exercise and dance?
- Were they able to follow the pattern?
- Are patterns important in our lives? Why or why not?

# Paul, The Pattern Detective



Paul loves searching for patterns. "I am going to be a pattern detective today! Let's find patterns!" said Paul.

Paul found a pattern hanging on the tree. It is called a hive and bees live in it. It is made up of many hexagons stuck to each other. A hexagon is a shape with 6 sides.





Before going inside the house, he notices that the bricks of house make a pattern.

The bricks are	brown, and	ir
the shape of a _		<b>_</b> ·
It has	sides.	



# Paul, The Pattern Detective



Inside the house, Paul saw a pattern on the carpet.

The carpet's colour is blue.

He went to the kitchen and saw a pattern on the table.

"What is this fruit?" Paul asked his Mom. "It is a \_\_\_\_\_," she said. "It is \_\_\_\_\_ in colour."





The next day at school, he told his friends all about the patterns he found.

"Join me today! Let's all be pattern detectives!" said Paul.

- Where did Paul see patterns?
- Where do you see patterns around you?
- Draw your favourite pattern.



# Weekly Reflection



Did I enjoy learning this week?











What are some new things I learned?

What did I do well?

What can I do better next week?

# CERTIFICATE OF COMPLETION



This certificate is awarded to

for the successful completion of the **Numeracy** workbook.





**Facilitator** 

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**Pg. 9, 23, 35, 48:** These activites were designed by Dream A Dream, India.

**Pg. 52, 53:** Pranav, The Pattern Detective (English), Written by Aditya Swaminathan Illustrated by Jemma Jose, Re-levelled and renamed by EAA, published by Pratham Books (© Pratham Books, 2006) under a CC BY 4.0 license on StoryWeaver.

