

5 Ways to Play with Numbers



ENHANCE YOUR CONTINUOUS PROVISION

This Number Day, put away the worksheets and PLAY with maths!

These activities turn mathematical thinking into playful challenges. Use them with a group, set them up within your classroom or add them to your continuous provision for children to revisit independently.

1. TARGET TOTAL

YOU NEED

Numbered hoops, chalk circles or paper plates and beanbags.

PLAY!

Create numbered targets on the floor.

Children throw two beanbags and add their scores together.

Once they understand the game, introduce different challenges.

ASK

- Can you score exactly 50?
- Can you make 100?
- Can you make the same total in two different ways?
- What is the highest score you could make?

LEVEL IT UP!

Allow three throws or introduce special targets worth double the number.

Ask children to decide which target they should aim for next to reach a given total.

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2. HUMAN NUMBER LINE

YOU NEED

Chalk or number cards to create a large number line.

PLAY!

Create a giant number line on the playground or classroom floor.

Children become the counters!

Give them a starting number and then roll a dice to move forwards or backwards.

For example:

Start on 7.
Move forward 5.
Where will you land?

ASK

- Start on 14 and move backwards 6.
- What is 5 more than 12?
- How far is it from 8 to 15?
- What number is halfway between 20 and 40?

LEVEL IT UP!

Turn the problem around.

"I landed on 17 after moving forward 8. Where did I start?"

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3. BUILD MY NUMBER

YOU NEED

Number cards and blocks, counters, sticks, straws, LEGO bricks or other construction materials.

PLAY!

Choose a two-digit number and challenge children to build its value, rather than simply making the shape of the numeral.

For example:

34 = 3 groups of ten and 4 ones

Then ask children to represent 34 in another way.

ASK

Could 34 also be:

$$30 + 4?$$

$$20 + 14?$$

$$17 + 17?$$

LEVEL IT UP!

Give children a transformation challenge.

“You have built 34. Can you change it into 44 by adding as little as possible?”

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4. ARRAY ARCHITECTS

YOU NEED

Blocks, counters, natural objects, cubes or construction materials.

PLAY!

Give children a number and challenge them to arrange that many objects into equal rows.

For 12, they might discover:

1 row of 12
2 rows of 6
3 rows of 4

Encourage children to explore which arrangements work and which don't.

ASK

- How many rows have you made?
- How many are in each row?
- Can you arrange 12 another way?
- What happens when you try 11?

LEVEL IT UP!

Give children several numbers to investigate.

Which numbers can be arranged into lots of different rectangular arrays?

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5. POTION PROBLEMS

YOU NEED

Water, containers, cups, spoons, scoops and coloured water, simply add in a couple of drops of different food colourings to water.

PLAY!

Turn your water provision into a mathematical potion lab. If you don't have a water provision, use plastic boxes full of water – see through under the bed storage boxes are ideal.

Give children a target amount and ask them to create a potion recipe.

For example:

Magic Potion Number 10

3 scoops of blue

2 scoops of yellow

How many more scoops are needed to make 10?

Or challenge children to invent their own recipe using exactly 12 spoonfuls.

ASK

- How many have you used so far?
- How many more do you need?
- Can you make the same total using a different recipe?
- How could you record your recipe?

LEVEL IT UP!

Introduce different-sized scoops or measurement markings and challenge children to create an exact quantity.

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Add a Mathematical Mission

Add open-ended Mathematical Missions to the areas children already choose to play in. The key is to create a problem worth solving rather than simply telling children what calculation to complete.

TRY:

Construction:

Build a bridge at least 30cm long that can hold 10 cubes.

Small World:

There are 24 animals. Can you design equal-sized fields for them?

Creative Area:

Create a repeating pattern. Can somebody else identify your rule and continue it?

Loose Parts:

Choose a number. How many ways can you represent it?

Water:

Which container holds the most? How could you prove it?

Role Play Shop:

Give children coins, price labels and shopping challenges such as:

"You have £10. What could you buy?"

Outdoor Provision:

Add numbered targets, measuring tapes, chalk number lines, dice and scoreboards for children to invent their own mathematical games.

MMT PLAY TIP

Over Number Day, change the challenge, not necessarily the provision.

A block area can explore place value one day, measure the next and multiplication another day.

Thoughtful mathematical prompts allow familiar play to become increasingly sophisticated while keeping children active, curious and in control of their learning.

Play it. Investigate it. Explain it.

experiment, collaborate and explain their reasoning while remaining active participants in their learning.

Play it. Challenge it. Prove it.