How Things Move! Prep Science at Home

You can help! Your child is naturally curious about how things move. Watch things roll, slide and bounce together — it's all science!

Why are we learning this? Movement is everywhere up here

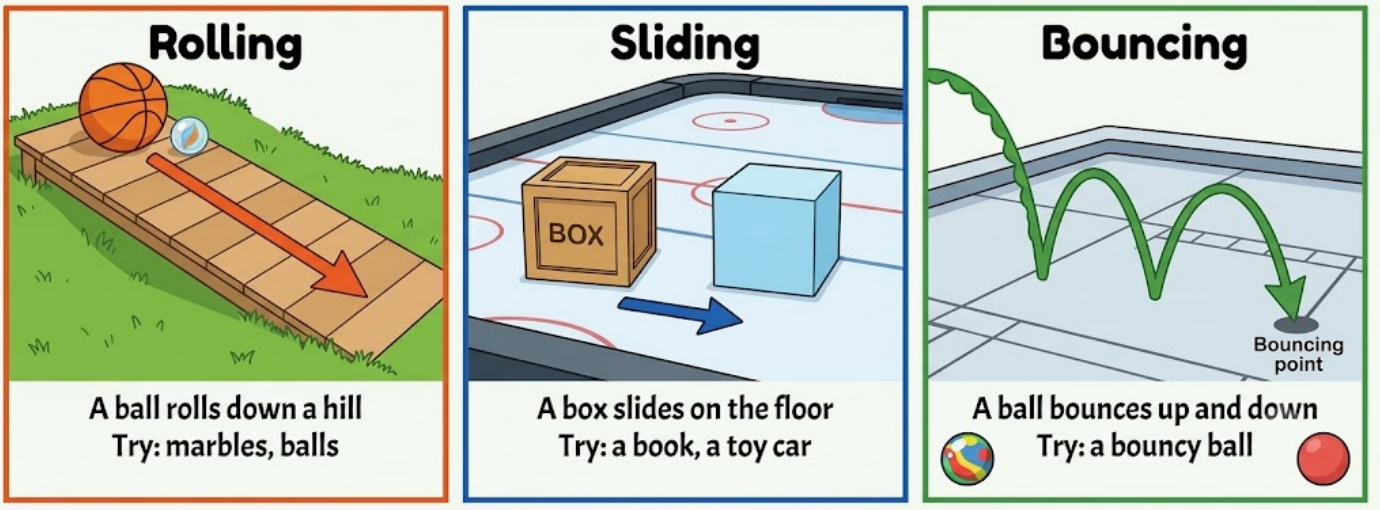
Up here in the north, children move and play outdoors every day. Rolling a tyre, kicking a footy, or watching a ball bounce are all examples of movement. Understanding how size, shape and material affect the way objects move helps your child describe and predict what they see every day — whether that is a rock rolling down a slope, a ball bouncing on the ground, or a toy sliding across a smooth floor.

My child will learn to:

✓ **Observe how things move** Watch and describe how objects roll, slide, spin or bounce.	✓ **Compare how different things move** Notice how a ball moves differently from a block.
✓ **Understand what affects movement** See how size, shape or the material something is made of changes the way it moves.	✓ **Make predictions** Guess how an object will move before trying it — then test it!

Big ideas to know:

Rolling Round objects like balls and cylinders roll easily. The slope and size affect how fast they roll.	**Sliding** Flat objects slide along surfaces. Smooth surfaces make things slide more easily than rough ones.	**Bouncing** Some materials bounce — rubber bounces more than rock! The shape affects how high things bounce.



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How does it move?

Object	How it moves	What affects it
Ball	Rolls and bounces	Round shape, material it is made of
Block / box	Slides, may tip over	Flat sides, size, weight
Egg / oval shape	Wobbles and rolls in a curve	Oval shape, centre of gravity
Wheel / tyre	Rolls in a straight line	Round shape, smooth surface

Think Like a Scientist — Roll It!

Find 5 objects at home. Predict how each one will move — will it roll, slide, spin or bounce? Test each one on a flat surface, then try it on a slope.

Ask: "Did it move the way you predicted? What was different?" Predictions + testing = science!

Objects to try:

1. A ball (or orange or tin can)
2. A book or flat box
3. A piece of fruit (round vs oval)
4. A toy car
5. Something YOU choose!

Questions to ask your child

1. Does that roll or slide? Why do you think it does that?
2. What would happen if we tried a bigger ball? Would it go faster?
3. Does it move faster on the smooth floor or the carpet?
4. Can you find something that both rolls AND slides?
5. What happens if you push it gently? Now push it harder?
6. What shape rolls the best — round, flat or bumpy?
7. Can you find something that does not move easily? Why do you think that is?

You don't need any special equipment — everyday objects from around the home are perfect for exploring movement!

Key words to know:

Roll	To move by turning over and over, like a ball on a slope
Slide	To move smoothly along a surface without turning
Bounce	To spring back after hitting a surface
Shape	The outer form of an object — round, flat, long, bumpy
Material	What an object is made of — wood, rubber, plastic, metal
Predict	To make a smart guess about what will happen before you try it
Observe	To look carefully and notice details

Key words to look up

Roll · Slide · Bounce · Shape · Material · Predict · Observe

What school will check

Your child needs to describe how objects move and explain how size, shape or material affects the way they move.

Try it at home!

Roll an orange and a tin can down a slope. Which goes faster? Which one is easier to steer in a straight line?