

Young children naturally build knowledge by being curious about the world around them.

When you do science with your children, you can share their sense of wonder about the natural world.

They'll develop self confidence when they ask and answer their own questions.

How to get the most out of your explorations:

- Dress for the mess
Science explorations can be messy.
- Take your time
Play for as long as the activity holds your child's interest. Don't rush towards the 'right' answer.
- Be curious
Ask "What would happen if..." and then find out. Let your child's questions guide you.

Marbles and Paint

Make a record of where something has rolled.

What You Need

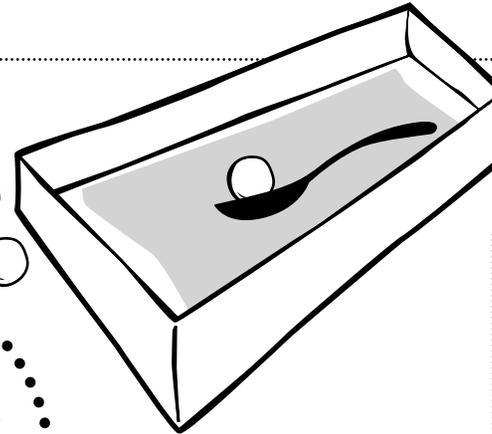
- liquid tempera paint
- marbles or small balls
- shallow box*
- paper
- spoon
- small bowl

Hands-on

1. Cut paper to fit the bottom of each box.
2. Pour a little bit of paint into the bowl. Drop a marble into the paint.
3. Scoop the marble out of the paint with the spoon and drop it into the box on top of the paper.
4. Tip the box to roll the marble around.

***Hint**

Make a suitable box by cutting one of the large sides off a cereal box, or use a rectangular cake pan.



What Next?

- Use more than one colour of paint.
- Roll more than one marble at a time.
- Use small balls with textured surfaces instead of marbles.
- Use a rock dipped in paint instead of a marble.
- Start with a dry marble and put a blob of paint on the paper. Challenge your child to roll the marble through the paint.
- Use a bigger tray and have two children work together to steer the marble.
- Use toys with wheels to make wheel tracks in paint, play dough, or sand.

Questions to Ask

- Where did the marble go?
How do you know where it went?
- Can you make a curved line?
- Can you get the marble to the middle?

Ramp Rollers

Round things will roll, square-ish things won't.
We use wheels to help move things that aren't round.

Things roll and slide more slowly on a sticky or bumpy surface.
(The sticky or bumpy surface has more friction.)

Things roll faster down a steeper ramp.

What You Need

- ramp*
- variety of small balls and cylinders
- rectangular, square, or triangular blocks
- empty (or full) plastic bottles
- toy cars or trucks

Hands-on

1. Set up a ramp and collect a variety of balls and blocks.
2. Roll and slide different things down the ramp.
3. Ask questions to encourage observation.

Hint

Plastic 'Easter' eggs or Kinder Egg containers can be used to make rollers with strange behaviour. Put a large marble or lump of Plasticine inside the egg and seal it shut.

Bring out the toy cars after you have experimented with the other materials.

*Hint

Use a big piece of cardboard, a storage box lid, or a piece of wood. Prop up one end with blocks or cushions.

What Next?

- What would happen if the ramp were steeper?
- What would happen if the ramp were bumpy/ fuzzy/ sticky?
Cover your ramp with a towel, a rug, or a piece of non-slip carpet underlay and find out.
- Try a really big ramp—use the slide at the playground!

Looking for More?

Online:

More science activities for young children can be found at:
www.scienceworld.ca/preschool.html

This website has short videos, games and activities for 3–5 year olds:
www.peepandthebigwideworld.com

Our favourite books:

Science Play by Jill Frankel Hauser
ISBN 1-885593-20-1

Science Arts by MaryAnn F. Kohl and Jean Potter
ISBN 0-935607-04-8



Questions to Ask

- Can you make each object move from the top of the ramp to the bottom?
- Which shapes move easily and which don't move so well?
- Which shapes roll and which shapes slide?
- What can you use to help a block move to the bottom?

