

Glitter Discovery Jar

Exploring materials, light and shadows



INTRODUCTION

Have you ever shaken a snow globe and watched the 'snow' falling? The first snow globe was created by accident in 1900 by Erwin Perzy I, when he was experimenting, trying to improve the brightness of the newly invented electric light bulb!

In this activity, we create a 'not quite snow' globe, to explore material properties, with the added interest of shining a torch through the liquid to watch the shadows that are created.

LEARNING INTENTIONS



- ☑ To learn about shadows and how they are formed
- ☑ To explore and observe closely
- ☑ To offer explanations, describe and record what is observed

KEY QUESTIONS

1. Why have we chosen: a smooth, transparent jar, coloured water, glittery pieces?
2. How does everything move when you turn or shake the jar? Why do you think this happens?
3. Which materials float or sink? Can you change how the objects float or sink?
4. Which materials reflect the light really well?
5. How can you produce a clearer shadow?

KEY VOCABULARY



Liquid	Reflect/ reflection
Solid	Light
Transparent	Sink/float
Opaque	Gravity
Shadow	



RESOURCES (PER GROUP)



- Jam jar with lid – transparent ones
- Water
- Food colouring
- Glitter
- A range of foil/glittery/shiny items (sweet wrappers)
- Aluminium foil
- Torch
- White screen or A3 paper

EXTENSION / FOLLOW UP ACTIVITIES

Children could investigate changes to the glitter jar to explore the outcomes, e.g. using different jars, colours or glittery items.

They could change the liquid and explore whether the movement of materials changes, e.g. adding glycerine to the water or using baby oil, etc.

ADDITIONAL RESOURCES (IF REQUIRED):

- Glycerine
- Beads
- Other liquids; oil, shampoo, bubble bath

WHAT TO DO:

Today we are going to be physicists and materials scientists

1. Encourage the children to explore the resources and discuss the properties of the materials.
2. Fill a jam jar with water and add a small amount of the glitter.
3. Give the children time to predict what will happen when the top is fitted to the jar and it is turned upside down.
4. Ask them to describe what happens and why.
5. Add food colouring to the water, along with some foil pieces – crumpled up into different sizes and shapes. Replace the lid and shake. Children should observe what happens and could change the shapes of foil included. Older children could focus on why the objects float or sink, the movement of liquids and solids and whether this changes over time.
6. Set up the jar so the torch light can shine through the jar onto the white paper. Observe what happens and discuss ideas about this. For older children, discuss how shadows are formed and encourage the use of vocabulary related to light.

ANTICIPATED ACTIVITY TIME: 30 – 60 MINS