

EARLY YEARS SCIENCE PROVISION MAP

Play, Observe & Ask

Sensory Play



Learn: how some materials can change; coloured inks can be separated into many colours

You need: filter paper or paper towels, felt tips, jug of water, plastic pipettes

Ask the children to write their names or make drawings using felt tips.

Play, observe & ask:

- What happens when you pipette/drip water onto your filter paper drawing?
- Tell me what you notice about the brown/purple/black when the water touches it?
- Can you put the ink colours back together again?

Construction

Learn: to describe the properties of materials (shiny/dull)

You need: big boxes or a table and blanket, torches, reflective and dull fabrics, shiny card, foil, black paper

Play, observe & ask:

- Can you build a cave like the octopus' home?
- Why is it dark inside?
- Shine torches on a variety of materials. Which materials look shiny?
- Why are some materials shiny? (Some surfaces are so smooth they 'bounce' the light back to us.)

Malleable Play



Learn: that some objects float and some sink

You need: water tray, objects to test, sorting hoops, modelling clay (e.g. Plasticine®)

Play observe & ask:

- Can you predict what might float and sink, then test out your ideas?
- What materials are these objects made from? Can you describe them?
- What happens if you put a ball of plasticine in the water? Can you change its shape, so it floats? Why does it float now?

Water Play

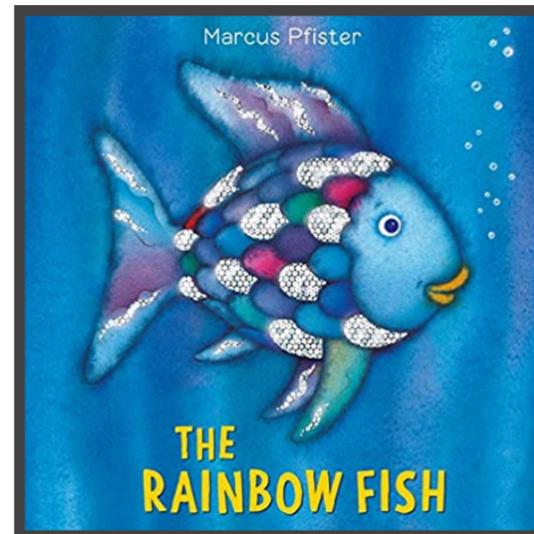


Learn: that colours can be mixed to make new colours

You need: three transparent containers, jug of water, water colour changing bath tablets or food colouring, plastic pipettes, small plastic pots, colour charts from DIY stores

Play, observe & ask:

- What might happen when I put this tablet into the water? What do you notice? (bubbles, water changing colour)
- How can we make new colours? Encourage children to pipette small amounts of the primary colours into new pots and mix.
- Can you make each shade of green/orange/purple from the paint charts?



Outdoors



Learn: that water has some unexpected properties (surface tension)

You need: a paddling pool or big water tank, plastic bottles, plastic nets from shop garlic, oranges, etc, elastic bands

Encourage children to fill and empty bottles with water. After free play, secure garlic nets on the top of full water bottles using elastic bands. Turn the bottles upside down.

Play, observe & ask:

- What happens if you hold the bottle upside down?
- Do other nets work? Why/why not?
- Does the water still stay inside if you angle/squeeze the bottle? Why/why not?

Role Play

Learn: the characteristics of fish; the similarities and differences between different types of fish

You need: pictures/masks of sharks, rainbow fish, puffer fish, goldfish, eels, sword fish, etc.

Play, observe & ask:

- Can you choose a fish to be? What does its body look like? How is it different to this fish?
- Show me how it swims? Which body parts help it swim?
- What does it eat?
- Could humans live under the sea? Why/why not?

Small World

Learn: which plants and animals live in the ocean

You need: toy sea creatures, shells, pebbles, seaweed/aquatic plants

Play, observe & ask:

- Where does Rainbow Fish live? What do you think it would be like to live here?
- What other animals/plants live in the sea?
- How are their bodies different to ours?
- What might they eat?
- Are the plants alive?

Key Science Vocabulary

colour, change, pipette, mix, mixture, separate, water
fish, fins, tail, scales, gills, head, mouth, eyes
habitat, sea, ocean, animal, fish, human, plant
sea creatures - fish, crabs, sharks, whales, starfish, etc.
properties of materials - float, sink, light, dark, shiny, dull

Further Science

Investigate other sea life, e.g. in coral reefs, deep sea, arctic. Discuss how are these sea creatures are adapted to survive in different conditions.

Visit the coast/local pond/stream. What can we find living in these places?

Are people causing problems for sea life with pollution/plastics? What can we do to help?