

EARLY YEARS SCIENCE PROVISION MAP

Play, Observe & Ask

Sensory Play



Learn: how biscuits change in different liquids

You need: bowls, mini gingerbread man biscuits, milk, vinegar, oil, juice, timers

Play, observe & ask

- What does the (solid) biscuit feel /look/smell like?
- What might happen if the gingerbread man falls into puddles of different liquids? Can you make predictions and test out your ideas? How long shall we leave them?
- Was your prediction about the [liquid] correct? Can you describe how they look, feel, smell now? Are you surprised? Why?

Malleable Play

Learn: that some materials are stretchy

You need: gingerbread dough, pastry, Curly Wurly®, marshmallows, spaghetti

Play observe & ask:

- Can we stretch all these foods?
- Which can be stretched the longest?
- Can they go back to their original shape? Why / why not?

Outdoors

Learn: that some materials absorb liquids.

You need: trays containing cornflour, rice, rice crispies/corn flakes, pasta, oats, grapes, raisins, lentils, jugs of water, spoons to stir, cloths to wipe messy hands

Invite children to use their hands to explore the different trays of dry food before adding water.

Play, observe & ask:

- How do they feel/look/smell?
- What do you predict will happen to each tray if we pour on water? Which might change? Will any stay the same? Why?
- What would you like to find out next? E.g. what happens when changing the temperature of water, leaving raisins overnight. Encourage the children to test out their ideas and use their senses and lots of descriptive language to explain what happens.

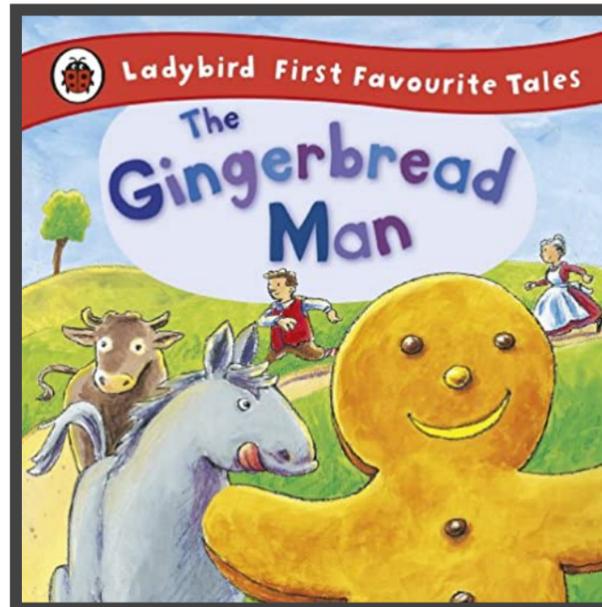
Construction

Learn: some objects float and some sink.

You need: junk modelling resources, tape, glue, scissors, gingerbread men biscuits, pebbles, cubes

Play, observe & ask:

- Can you make a floating boat for the gingerbread man? Which materials will you use? Why?
- Does it matter what shape or size your boat is?
- How many gingerbread men/pebbles/cubes can it hold before it sinks?



Small World



Learn: how to build strong bridges

You need: lolly sticks, variety of clothes pegs, toy animals from the story, gingerbread man

Play, observe & ask:

- Can you use the different lolly sticks and pegs to make a bridge for the gingerbread man to cross the river?
- Which types of clothes pegs work best?
- Can you improve your design to make it stronger? How many toy animals can it hold?

Role Play

Learn: common features of different animals

You need: pictures/masks/costumes of different animals from the story

Play, observe & ask:

- How are the animals the same/different?
- Do they all have four legs/a tail/fur/teeth?
- Can you show me how they move?

Water/Sand Play

Learn: waterproof materials

You need: gingerbread man biscuits, a selection of materials e.g. kitchen roll, foil, cling film, tissue paper, bin bag, fabric, plastic containers, tape, watering cans

Encourage children to put the gingerbread man in a container and use different materials to make a 'roof'.

Play, observe & ask:

- Which material will keep him dry from the (watering can) rain?
- Which material would make the worst roof? Why?

Key Science Vocabulary

material, solid, liquid, absorb

properties of materials - dry, wet, soggy, waterproof, float, sink, strong, stretchy

animal body parts - legs, body, head, ears, tail, mane, fur, udder, etc.

Further Science

Exploring how heat/cooking changes materials, e.g. malleable gingerbread dough to hard biscuit, jelly dissolving, eggs becoming opaque, chocolate melting, popcorn exploding!

Tasting experiments, e.g. sweet gingerbread, sour lemon slices, salty crisps. Can children guess which flavour (even if they hold their nose)?

Comparing types of animal teeth, e.g. fox, cow, mouse. What do they eat?