

EYFS - Reception – Materials and Changing Materials

Development Matters 2020 – Reception – Understanding the World –

- Explore the natural world around them.
- Describe what they see, hear and feel whilst outside.

Key Vocabulary

Model and encourage children to use vocabulary such as: ice, water, frozen, icicle, snow, melt, wet, cold, slippery, smooth, big, bigger, biggest, smaller, smallest, hard, soft, bendy, rigid, wood, plastic, paper, card, metal, strong, weak, hot, apply heat, waterproof, soggy, not waterproof, best, change, change back
Expose children to supplementary vocabulary such as: solid, liquid, gas, most suited

Working Scientifically Skills

Comparative testing

How does popcorn made in a microwave compare to popcorn made on a fire?

How quickly do ice cubes melt in different areas of the playground?

How are pizza bases different when made with different flours?

How does a loaf cook differently in different tins?

How do cupcakes cook if they have different amounts of mixture?

Observing over time

How does the block of ice change over time?

How does a snowman change over time?

How does cake mixture/bread dough change as it is cooked?

Supporting Key Knowledge

Encourage children to talk about the natural materials they explore, using their senses.

Encourage children to talk about the materials they are using when making pictures.

Encourage children to choose from a range of materials, including natural materials, when making models and identify a key property that was required.

Encourage children to reuse materials and talk about what can be recycled to care for the natural world.

Support children to list the properties the material has.

Encourage children to test that their model is fit for purpose and that the materials are suitable.

Encourage children to compare and describe how materials change over time and in different conditions.

Encourage children to take photographs or draw pictures to record how materials change.

Encourage children to measure how objects change when they melt.

Encourage children to ask questions about materials and how they change.

Curriculum enhancements

Opportunities in the role-play corner to compare materials and explore how they change

- Recycling centre worker • Product designer • Builder • Chef

Possible Misconceptions

Some children may think:

- material only means fabric
- all plastic/wood etc. is the same.

Suggested Activities

Opportunities to explore a range of materials in a sensory way, including natural materials

- Looking for dew, ice, icicles and frost in the playground • Using their senses to explore natural materials in the environment, such as stones, twigs, leaves, feathers, seeds, flowers etc. • Gathering natural materials to make collections

Opportunities to make objects from different materials, including natural materials

- Making pictures using natural materials they have gathered from the environment
- Making dens, nests, bug hotels etc. using natural materials
- Making ice pictures by putting water in a shallow tray and adding natural objects gathered from the environment and then leaving them outside to freeze or putting them in the freezer
- Making junk models with a range of materials, including natural materials they have gathered from the environment

- #### Opportunities to compare how materials change
- Making popcorn in a microwave and on a fire
 - Making pizza dough with different flours
 - Baking bread in different tins or for different times to compare the outcome
 - Baking cupcakes and removing one after every five minutes
 - Choosing where to put ice cubes in the playground and observing how quickly they melt
 - Observing how a large block of ice changes over time, using string to measure around it
 - Putting wax crayons in different areas of the playground and observing how they change
 - Making a snowman and observing how it changes over time
 - Making snowballs and putting them in different parts of the playground and observing how they change over time

This will lead to . . .

- Distinguish between an object and the material from which it is made. (Y1 – Everyday materials)
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 – Everyday materials)
- Describe the simple physical properties of a variety of everyday materials. (Y1 – Everyday materials)
- Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 – Everyday materials)