



# Year group: Nursery

Area/topic: Materials

(objectives from NC/ELG/Development matters)

- \*Use all their senses in hands-on exploration of natural materials. (Understanding the world)
- \*Explore collections of materials with similar and/or different properties. (Understanding the world)
- \*Talk about the differences between materials and changes they notice. (Understanding the world)

Prior learning	Future learning
*Explore materials with different properties. (Birth to three)	*Explore the natural world around them. (Reception)
*Explore natural materials, indoors and outside. (Birth to three)	*Describe what they see, hear and feel whilst outside. (Reception)
·	*Distinguish between an object and the material from which it is made. (YI -
	Everyday materials)
	*Identify and name a variety of everyday materials, including wood, plastic,
	glass, metal, water, and rock (YI - Everyday materials) *Describe the simple
	physical properties of a variety of everyday materials. (YI - Everyday materials)
	*Compare and group together a variety of everyday materials on the basis of
	their simple physical properties. (YI - Everyday materials)

#### Working scientifically & encouraging scientific enquiry

### Classification

\*Sorting materials based on simple properties.

### Observations

\*Children to be encouraged to make observations of materials and describe their properties.

### Observing over time

\*Children to complete an investigation to see how materials change e.g. ice cubes or chocolate melting.

What pupils need to know or do to be secure	
Key knowledge and skills	Possible evidence
Children will be taught to:	*Can name the material they are using:
-Talk about materials they explore, using their senses.	*Can talk about one property of a material

- -Join materials to make models.
- -Recognise different properties of materials when creating art work e.g. describe something as dark, light or shiny
- -Be supported by adults to name the materials they are using.
- -Develop scissor skills and explore how different materials cut. Adults to encourage children to comment on how some materials are more difficult to cut than others.
- -Explore and experiment with different construction materials to build models
- -Understand the use and purpose of materials within the classroom for example knowing to draw onto paper and where not to draw.
- -Choose appropriate materials for completing an activity within their classroom. Children may not necessarily use the correct names of materials but will understand their use within the classroom.
- -Explore and experiment with different construction materials to build models. Children will be taught to choose their own materials from a range of options.
- -Begin to explain why they have chosen a particular material, naming one property.

- \*Can talk about ingredients for recipes.
- \*Can talk about how mixtures change when ingredients are added.
- \*Can talk about how materials change when cooked.
- \*Can talk about how materials change when heated.
- \*Can talk about how materials change when frozen.

#### Key vocabulary

Mix, stir, cook, hot, oven, microwave, change, burn, melt, hard, runny, set, freeze, freezer, cold, blended, hard, soft, bendy, stiff, woobly, wood, plastic, paper, card, fabric, shiny

Common misconceptions	Books linking to this area
Some children may think:	*Gingerbread man
*A material is better to use because it is 'bigger' not thicker, rigid etc.	*Pat a cake
*The material is 'box' not cardboard.	*Little Red Hen
Memorable first hand experiences	Opportunities for communication
*Following recipes to cook	*Children to be given opportunities for communication with partners, groups and
*Building models:	whole class to discuss as completing practical activities.
	*Adults to model and encourage discussion during play.

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### Reasonable adjustments for pupils with SEND

#### Communication and Interaction

- \*Visual aids, pictures of equipment with words labelled, word mats with pictures for key words in that lesson.
- \*Freedom to explore scientific equipment and investigate in own way.

  \*Hands on experiences to encourage communication and interaction with others.

  \*Pre teaching any new vocabulary.

### Cognition and Learning

- \*Opportunity for lots of hands on exploration and verbally sharing thoughts and ideas:
  - \*Freedom to explore scientific equipment and processes.
    - \*Pre teaching new vocabulary or concepts.
    - \*Activities adapted if needed for safety and ease.
- \*Visual aids, pictures of equipment, mats with key words and pictures
  \*Learning recorded through photos and adult quotes, children not expected to write
  for recording their understanding.
  - \*Using working walls to aid learning and remind of previous learning.

## Social, Emotional and Mental health

- \*Awareness of individual needs, any potential triggers within the curriculum and the child's background.
- \*Pre prepare children for any activity they could find triggering or difficult in some way.
- \*Practical activities or experiments to be completed within a smaller group or 1:1 if needed.
- \*If the class are sharing their learning within a large group, take the child in a smaller focus group if they struggle with social situations.
  - \*Adjustments made where needed to suit individual.

## Sensory and Physical

- \*Adult support with any practical activities.
- \*Awareness of the individual's likes or dislikes and their own reactions to sensory activities.
- \*If a child enjoys sensory activities, then plan for this wherever possible within the lesson.