

Year 2 - Autumn Knowledge Organiser

Materials

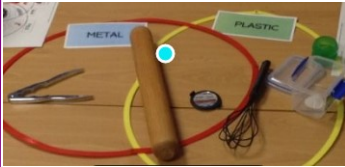


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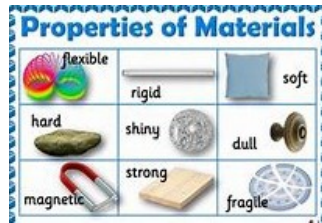
This Science unit follows on from previous studies of Materials in Year 1. The unit will deepen the children's understanding and confidence when using terms 'materials', 'properties' and 'objects'. They will learn how the property of a material affects how it is used and so the objects it can make. Through simple comparative tests the children will also explore and compare the suitability of materials for different uses.

Key knowledge

Using real objects children will sort them according to their material.



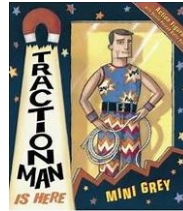
Children to be able to explain that a material is what the object is made from.



Having found a classroom object children will name both the object and any properties it s material has.

Children to be able to explain that a property describes a material.

Children will be introduced to 'Traction Man'. Through this story there will be activities to investigate the properties of different materials, starting with plastic.



Having learned what paper is and where it comes from the children will investigate the properties of paper.



Children will be exploring the uses and properties of fabric. They will be investigating what fabrics are good for and whether all fabrics have the same uses.



Consolidating their learning the children will be asked to design a new outfit for traction man if he were to go to a different destination. What would be the best materials to use?

Key Vocabulary

Rigid—The material won't bend or change

Flexible— The material can bend easily

Waterproof— The material does not let water in

Absorbent— The material does let water soak in

Transparent— The material is see-through

Opaque— The material is not see-through

Key Questions

What are the properties of wood and what are they used for?

What are the properties of plastic and what are they used for?

What are the properties of fabric and what are they used for?

If it was raining would it be a good idea to wear a coat made from plastic? Why or why not?

What is an example of a solid that can be squashed, bent, twisted or stretched?

What is an example of a solid that can not be squashed, twisted or stretched?

If it was a hot day, would it be suitable to wear a woolly jumper? Why or why not?

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Animals including humans



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This Science unit follows on from previous studies of 'animals including humans' in Year 1. In this unit the children will find out about and describe the basic needs of animals, including humans, for survival. Additionally they will also be developing their research skills using a range of resources to discover that all living things reproduce and have offspring, making a new living thing of the same kind.

Key knowledge

The children will learn that humans belong to the 'animal' group. They will also learn the difference between things that make them happy and the essential requirements for survival: air, water and food.



The children will explore how the ways that animals meet their basic needs differ. They will identify and explain the differences between wild and domesticated animals.



The children will complete activities to reinforce their knowledge that all living things reproduce and have offspring.



They will be able to explain how the offspring of mammals, reptiles, birds, fish and amphibians differ.

Key Vocabulary

Reproduce—making a new living thing of the same kind

Offspring— the child of an animal

Mammals — animals that breathe air, grow hair or fur and feed on their mother's milk as a baby.

Reptiles — animals that breathe air and have scales on their skin

Amphibians — Live in water as babies and on land as they grow older.

Life cycle — the stages a living thing goes through during its life time.

Wild —living independently finding their own food, water and shelter

Domesticated — pets who are dependent on their owner to provide food, water and shelter

Key Questions

What are the three basic needs of animals including humans?

How do the ways that animals meet their basic needs differ?

How are the offspring of mammals, reptiles, birds, fish and amphibians different?

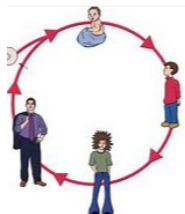
What is the life cycle of a human?

What is the life cycle of a frog?



The children will be using both time lines and life cycles to explore the changes that animals and humans go through during their lifetime.

The children will be able to identify the main changes that occur from a baby to an adult. They will be able to name the stages and explain the process of the human life cycle.



The children will learn the stages of a frog's lifecycle and label a diagram to show this order.

