Year 1 – Everyday Materials



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| National Curriculum Outcomes: Knowledge   * Distinguish between an object and the material from which it is made * Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock * Describe the simple physical properties of everyday materials * Compare and group together a variety of everyday materials on the basis of their simple physical properties | | | | | | | | National Curriculum Outcomes: Working Scientifically   * Asking simple questions and recognising that they can be answered in different ways * Observing closely, using simple equipment * Performing simple tests * Identifying and classifying * Using their observations and ideas to suggest answers to questions * Gathering and recording data to help in answering questions | |
| Children might work scientifically by:  Performing simple tests to explore questions, for example: ‘What is the best material for an umbrella? …for lining a dog basket? …for curtains? …for a bookshelf? …for a gymnast’s leotard?’ (Taken from the National Curriculum) | | | | | | | |
| Links to prior learning  **EYFS:** Children know about similarities and differences in relation to places, objects, materials and living things (Understanding the World). They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (Expressive Arts & Design) | Links to future learning  **Year 2:** Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.  **Year 3:** Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.  **Year 4:** Compare and group materials together, according to whether they are solids, liquids or gases. Recognise some common conductors and insulators, and associate metals with being good conductors.  **Year 5:** Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. | | | | | | | | |
| Key Vocabulary  Object, material, wood, plastic, metal, glass, fabric, rock, paper, hard, soft, rigid, flexible, smooth, rough, dull, shiny, waterproof, permeable, see-through, not see-through | | | | Common Misconceptions   * Children often think the term ‘material’ refers to fabric * Children often confuse the terms soft/smooth and hard/rough * Children can confuse an object with the material it is made from * Children can think materials can have only one property * Children sometimes confuse glass and metal | | | | | |
| Important Scientists  **William Addis** – Toothbrush inventor  **Charles Mackintosh** – Invented the waterproof coat  **John MacAdam-Roads Chester** – invented earmuffs | | | STEM Career Links  **Builder** (build structures using a range of materials)  **Chemist** (studies chemistry)  **Materials scientist** (studies structures and properties of materials) | | | Links to real life   * What materials are our toys made from? * What materials can you identify in the classroom? * What if our coats were made of metal? * Plastic is not good for the environment, what alternatives can we use? | | | |
| Key knowledge/facts that the children need to know  Objects are made from materials. Some common materials are wood, plastic, metal, glass, rock, fabric and paper.  Some objects are made from more than one material.  Different materials have different properties which makes them suitable for different purposes.  Materials can be hard or soft, dull or shiny, bendy (flexible) or not bendy (rigid), waterproof or not, rough or smooth. | | | | | | | | | |
| Suggested Enquiry Activities | | | | | | | | | |
| Identifying and Classifying   * What materials are our toys made from? * Which materials can we recycle in our area? * Which materials float and which don’t? * How can we group materials according to their texture? | | Simple Comparative Testing   * Which kind of paper is the best for writing on? * Which material is best for fixing a hole in an umbrella? * Which material is the most absorbent/flexible/strong etc? | | | Observation over Time   * What properties does foam soap have? Do they change over time? | | Pattern Seeking   * Are all hard things shiny? * Are all metals rigid? * Are all plastics flexible? | | Research using Secondary Sources   * How are materials recycled? |

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| Wow Factor Experiences   * Build a product or toy using knowledge of materials learned in this unit (for example a boat, puppet or toy) * Go on a ‘materials hunt’ around school or, even better, a local park or adventure playground | | |
| Maths Links   * Record findings from investigations in tables * Sort materials into Venn diagrams | Literacy Links   * Write a simple letter to a relevant person to explain findings from an investigation, for example writing to the headteacher who needed a material to fix their umbrella with, or writing to an animal rescue who wanted to know which is the best material for pet bedding * Write a simple list of materials and their properties, using appropriate adjectives * Write a ‘That’s Not My…’ style book describing different properties of materials, e.g., ‘That’s not my unicorn, it’s hair is too rough.” | Broader Curriculum Links  **Art:** Create collages using a range of different materials  **Design Technology:** Choose appropriate materials for building a product or model There are **potential links to D&T**, depending on the topic being taught, so **make sure that children are currently learning this topic, or already have done** when making choices about materials for building and making |
| Story Links  The Great Paper Caper – Oliver Jeffers  Little Lumpty – Miko Imai  Aliens Love Underpants – Claire Freedman  The Three Little Wolves and the Big Bad Pig  This unit can be taught at any point in the year, but it is useful to **link it to stories/topics being covered in class**. For example, it links will with The Three Little Pigs (which is the best material to build a house?) or Cinderella (is it a good idea to make shoes out of glass?) and could be taught alongside topics about toys (which is the best material to make a toy for a baby out of?). | | |
| Helpful Weblinks  Assessment exemplification (could also be useful with planning ideas) – https://www.planassessment.com/product-page/examples-of-work-everyday-materials-y1-tahmeed  Teacher CPD on this topic (free) - https://www.reachoutcpd.com/courses/lower-primary/everyday-materials/  BBC Class Clips relating to this topic (useful videos) – https://www.bbc.co.uk/bitesize/topics/zrssgk7/resources/1  STEM Learning’s online resource library for Animals including Humans in Year 1 - https://www.stem.org.uk/resources/community/collection/12725/year-1-everyday-materials | | |