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| Properties and changes of materials | Macintosh HD:Users:mrsgsinclair:Desktop:BL:Bishops Lydeard Logo.png |
| Year 5 – Year B Terms 3 and 4 |
| Prior LearningIn KS1 children should:* 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 a variety of everyday materials.
* Compare and group together a variety of everyday materials on the basis of their simple physical properties.
* 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 5 Learning* Solids, liquids and gases are described by observable properties.
* Materials can be divided into solids, liquids and gases.
* Heating causes solids to melt into liquids and liquids evaporate into gases. d) Cooling causes gases to condense into liquids and liquids to freeze into solids.
* The temperature at which given substances change state are always the same.
 | Key Questions* How does the amount of water added to flour affect its state?
* How does the amount of detergent added to water affect how slippy it is?
* How does the temperature affect how viscous a liquid is (use cooking oil)?
* Place a peach in a glass of lemonade and watch it spin. Why does it behave that way and can you prove it?
* How does the material sprinkled on ice and snow affect how quickly it melts?
* What chocolate would be best to smuggle? How does the type of chocolate affect its melting temperature?
* What is the melting temperature of ice and how does it compare with the freezing temperature of water?
* Is the melting temperature of wax the same as its freezing temperature?
 | Future Learning* 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.
* Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.
* Use knowledge of solids, liquids, and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.
* Give reasons based on evidence from comparative and fair tests, for the particular uses of everyday materials, including wood, metals and plastic.
* Demonstrate that dissolving, mixing and changes of state are reversible changes.
* Explain that some changes result in the formation of new materials, and this kind of change is usually not reversible, including changes associated with burning and the action of acid on bicarbonate of soda.
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