

The Flourish Federation—Knowledge Organiser

Brookfield Infant and Junior Schools



Science Focus:

Uses of Everyday Materials

Year 2

Term 4

What? (Key Knowledge)

Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	Label a range of materials and group them based on different criteria eg hard/soft, stretchy/not stretchy, shiny/dull, rough/smooth, bendy/not bendy, transparent/not transparent, sticky/not sticky. Answer questions such as 'Which materials would be good for making children's toys?' giving reasons why. Make the three little pigs houses and evaluate them. Which materials were most successful? What didn't work?
Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	Investigate which materials you can squash, bend, twist and stretch. Observe what happens to each and record your findings in a table.

What? (Key Vocabulary)

Spelling	Definition
Elastic	Elastic materials can be stretched and when one stops pulling them, they return to their original shape (e.g. rubber and nylon). However, materials have an elastic limit , a point at which the material is permanently changed in shape.
Texture	The feel of a material is its texture. Smooth means that it doesn't have lumps so things easy to slide. Rough means having a coarse, uneven surface. Sharp means have edges that are able to cut. Abrasive means that it will wear away other surfaces if rubbed against them.
Hardness	A soft material is easy to scratch. The hardness of some materials (e.g. minerals) is judged using the Mohs index.
Strength	A strong material is one that is difficult to break. In order to test
Viscosity	is a measurement of resistance to flow. The higher the viscosity the slower the flow

Who? (Key Scientists)

Leo Hendrik Baekeland (1863 - 1944)	Made 'Bakelite' - the first synthetic plastic.
Charles Goodyear (1800 - 1860)	Vulcanized rubber making it stronger and more reliable.

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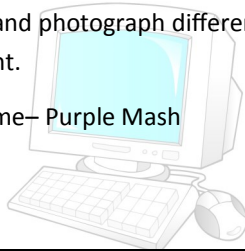
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ICT Opportunities

Using I-pads to find and photograph different materials in the local environment.

Materials sorting game— Purple Mash



Cross - Curriculum Links

Art- testing strength using different materials

Maths - measuring elasticity of different materials

Maths - weight/mass of different materials

Visuals



Properties of Materials		
hard not easily broken or pierced A hard diamond	squashy easily crushed or squeezed The play dough is squishy	smooth an even and regular surface Some smooth pebbles
absorbent able to soak up liquid The sponge is absorbent	bumpy uneven, raised patches This road is bumpy	opaque cannot be seen through She is hidden by the opaque screen
dull lacking shine or brightness The metal's wings are dull	brittle hard, but may break easily The glass is brittle	translucent allowing some light to pass through The screen is translucent

