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Everyday Materials - *What materials are best to make a stronger rocket for Baby Bear?*

| What I should already know | What I will learn | Important words to help me. (vocabulary) | | Useful Diagram | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|----------------|----------------------------------|--------|--|---------|--------------------------------|---------|-----------------------------|------------|------------------------------|------------------|---------------------------------|-------------------|--|--------|--------------------------------------|--------|--|-------|---|------|---|-------|--|------|---------------------|-------------|------------------------|--------------|---|-----------|--|---|--|--|---|--|---|--|--|--|---|---|---|---|---|---|---|---|--|--|---|---|---|--|--|--|
| <p>I know some materials and their properties.</p> <p>I can discuss why certain materials are used for different objects.</p> | <p>We will learn what we mean when we use the term ‘materials.’</p> <p>We will identify and name materials that are all around us and consider what they are made from.</p> <p>We will be able to identify the difference between an object and a material. We will be able to explain if an object is made from a suitable material and why.</p> | <table><tr><td>material</td><td>Anything used to make something.</td></tr><tr><td>object</td><td>Anything that has shape or form that can be seen or touched.</td></tr><tr><td>texture</td><td>The feel or look of something.</td></tr><tr><td>feature</td><td>A key quality of something.</td></tr><tr><td>properties</td><td>A characteristic or quality.</td></tr><tr><td>Natural material</td><td>A material derived from nature.</td></tr><tr><td>Man-made material</td><td>Made or formed by humans. Not natural.</td></tr><tr><td>Strong</td><td>Something that is not easy to break.</td></tr><tr><td>Cotton</td><td>A soft fabric which is often used to make clothes.</td></tr><tr><td>Brick</td><td>Many of these blocks used for building.</td></tr><tr><td>Clay</td><td>A natural material found in the ground.</td></tr><tr><td>Slate</td><td>A natural material found in the ground and is used to build roofs.</td></tr><tr><td>Roof</td><td>The top of a house.</td></tr><tr><td>Window pane</td><td>The glass in a window.</td></tr><tr><td>Window frame</td><td>The outer part of the window that holds the glass in place.</td></tr><tr><td>Absorbent</td><td>A material that soaks up liquid such as water.</td></tr></table> | | material | Anything used to make something. | object | Anything that has shape or form that can be seen or touched. | texture | The feel or look of something. | feature | A key quality of something. | properties | A characteristic or quality. | Natural material | A material derived from nature. | Man-made material | Made or formed by humans. Not natural. | Strong | Something that is not easy to break. | Cotton | A soft fabric which is often used to make clothes. | Brick | Many of these blocks used for building. | Clay | A natural material found in the ground. | Slate | A natural material found in the ground and is used to build roofs. | Roof | The top of a house. | Window pane | The glass in a window. | Window frame | The outer part of the window that holds the glass in place. | Absorbent | A material that soaks up liquid such as water. | <div>Properties of Materials</div> <table><tr><td>rigid unable to be bent or forced out of shape  Stone is rigid.</td><td>transparent can be seen through  This glass is transparent.</td><td>soft not firm to the touch  The kitten has soft fur.</td></tr><tr><td>flexible able to bend  A flexible spring.</td><td>rough uneven, irregular surface  The log has rough bark.</td><td>waterproof repels water and liquids  A waterproof coat.</td></tr><tr><td>elastic springs back once stretched  An elastic band.</td><td>shiny reflects light, smooth surface  A shiny silver spoon.</td><td>conductor lets heat, electricity or sound to pass through it Some metals are conductors of electricity. </td></tr><tr><td>hard not easily broken or pierced  A hard diamond.</td><td>squashy easily crushed or squeezed  The play dough is squashy.</td><td>smooth an even and regular surface Some smooth pebbles. </td></tr><tr><td>absorbent able to soak up liquid  The sponge is absorbent.</td><td>bumpy uneven, raised patches  This shell is bumpy.</td><td>opaque cannot be seen through She is hidden by the opaque screen. </td></tr><tr><td>dull lacking shine or brightness  The moth's wings are dull.</td><td>brittle hard, but may break easily  The glass is brittle.</td><td>translucent allowing some light to pass through The screen is translucent. </td></tr><tr><td>electrical insulator does not let electricity pass through it  Rubber is an electrical insulator.</td><td>electrical conductor lets electricity pass through it Metal is an electrical conductor </td><td>thermal insulator does not let heat pass through it Oven gloves are a thermal insulator. </td></tr><tr><td>thermal conductor lets heat pass through it  A radiator is a thermal conductor.</td><td></td><td></td></tr></table> | rigid unable to be bent or forced out of shape  Stone is rigid. | transparent can be seen through  This glass is transparent. | soft not firm to the touch  The kitten has soft fur. | flexible able to bend  A flexible spring. | rough uneven, irregular surface  The log has rough bark. | waterproof repels water and liquids  A waterproof coat. | elastic springs back once stretched  An elastic band. | shiny reflects light, smooth surface  A shiny silver spoon. | conductor lets heat, electricity or sound to pass through it Some metals are conductors of electricity.  | hard not easily broken or pierced  A hard diamond. | squashy easily crushed or squeezed  The play dough is squashy. | smooth an even and regular surface Some smooth pebbles.  | absorbent able to soak up liquid  The sponge is absorbent. | bumpy uneven, raised patches  This shell is bumpy. | opaque cannot be seen through She is hidden by the opaque screen.  | dull lacking shine or brightness  The moth'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.  | electrical insulator does not let electricity pass through it  Rubber is an electrical insulator. | electrical conductor lets electricity pass through it Metal is an electrical conductor  | thermal insulator does not let heat pass through it Oven gloves are a thermal insulator.  | thermal conductor lets heat pass through it  A radiator is a thermal conductor. | | |
| material | Anything used to make something. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| object | Anything that has shape or form that can be seen or touched. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| texture | The feel or look of something. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| feature | A key quality of something. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| properties | A characteristic or quality. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Natural material | A material derived from nature. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Man-made material | Made or formed by humans. Not natural. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Strong | Something that is not easy to break. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cotton | A soft fabric which is often used to make clothes. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brick | Many of these blocks used for building. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clay | A natural material found in the ground. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Slate | A natural material found in the ground and is used to build roofs. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Roof | The top of a house. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Window pane | The glass in a window. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Window frame | The outer part of the window that holds the glass in place. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Absorbent | A material that soaks up liquid such as water. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| rigid unable to be bent or forced out of shape  Stone is rigid. | transparent can be seen through  This glass is transparent. | soft not firm to the touch  The kitten has soft fur. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| flexible able to bend  A flexible spring. | rough uneven, irregular surface  The log has rough bark. | waterproof repels water and liquids  A waterproof coat. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| elastic springs back once stretched  An elastic band. | shiny reflects light, smooth surface  A shiny silver spoon. | conductor lets heat, electricity or sound to pass through it Some metals are conductors of electricity.  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| hard not easily broken or pierced  A hard diamond. | squashy easily crushed or squeezed  The play dough is squashy. | smooth an even and regular surface Some smooth pebbles.  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| absorbent able to soak up liquid  The sponge is absorbent. | bumpy uneven, raised patches  This shell is bumpy. | opaque cannot be seen through She is hidden by the opaque screen.  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| dull lacking shine or brightness  The moth'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.  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| electrical insulator does not let electricity pass through it  Rubber is an electrical insulator. | electrical conductor lets electricity pass through it Metal is an electrical conductor  | thermal insulator does not let heat pass through it Oven gloves are a thermal insulator.  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| thermal conductor lets heat pass through it  A radiator is a thermal conductor. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Interesting Facts</div> <p>1. Materials can be natural or man-made. Natural materials include rock and wood. Man-made materials include glass and plastic.</p> <p>2. It takes hundreds of years for plastic to decompose. In fact, a plastic bottle can take 450 years to decompose, and a glass bottle can take up to 4,000 years.</p> | <p>We will be able to describe the key properties of everyday materials. We will compare the similarities and differences and say why they are suitable for different uses. We will be able to group materials based on their simple physical properties.</p> <p>We will be able to use our observational skills to suggest ideas for a suitable material and be able to explain our reasons.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Ideas for Scientific Enquiry</div> <p>Test different materials and consider each material’s properties.</p> <p>Compare different materials and their properties for a range of uses.</p> <p>Investigate different materials to observe which would be most suited for a particular purpose.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |