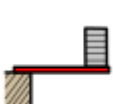
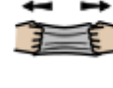


# Year 2 Science – Properties of Materials

| Vocabulary  |                                                                     |                                                                                      | Knowledge                                                                                                                                                                                                                       |                                                                                       |
|-------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Materials   | What something is made from                                         |    | <p><b>Materials</b></p> <p><b>Metals</b> are strong, shiny, hard and long lasting. They can be hammered into different shapes. Metals can be used to make things like pots and pans.</p>                                        |    |
| Suitability | How good a material is for a job                                    |    | <p><b>Glass</b> can be strong, but thin glass shatters. It is transparent and waterproof. It can be made into different shapes. Glass is most often used to make windows and glasses.</p>                                       |    |
| Properties  | What a material is like and how it responds to different situations |    | <p><b>Wood</b> is hard and strong. It is long-lasting and is a natural material. Wood is often used to build furniture, like benches and desks. Wood can be used to build houses.</p>                                           |    |
| Natural     | A material found in nature and not made by humans                   |    | <p><b>Rubber</b> is very tough but also very flexible. It is elastic and also waterproof. It doesn't tear easily. Rubber is used for birthday balloons and erasers. It is used in rubber bands because it is very stretchy.</p> |    |
| Man-made    | A material made by humans                                           |    | <p><b>Cardboard</b> is thicker and tougher than paper. It is more difficult to tear but goes soggy when wet. Cardboard is often turned into boxes and used for packaging items.</p>                                             |    |
| Absorbent   | A material that soaks up liquid easily                              |    |                                                                                                                                                                                                                                 |                                                                                       |
| Fragile     | A material that can break easily                                    |   | <p><b>Changing Materials</b></p> <p><b>Squashing</b> - Crush something so that it becomes flat, soft, or out of shape.</p>                                                                                                      |   |
| Flexible    | A material that is easy to bend                                     |  | <p><b>Bending</b> - Change a straight object so that it is curved.</p>                                                                                                                                                          |  |
| Waterproof  | A material that doesn't allow liquid through                        |  | <p><b>Twisting</b> - Change the shape of an object by turning it.</p>                                                                                                                                                           |  |
| Rigid       | A still material                                                    |  | <p><b>Stretching</b> - Make something longer or wider without tearing</p>                                                                                                                                                       |  |

| Quizzing                                                                                                                                                                                                                                                  |                                                                                                                                                           |                                                                                                                                                                                 |                                                                                                                                                                                                                      | Quiz at home                                                                                                         |                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Ask your partner the questions below. Can they find the correct answer on the right-hand side?                                                                                                                                                            |                                                                                                                                                           |                                                                                                                                                                                 |                                                                                                                                                                                                                      | Ask your adult to look at the KO.                                                                                    |                                                                                                                 |
| What is a material?                                                                                                                                                                                                                                       |                                                                                                                                                           | If you can see clearly through it                                                                                                                                               |                                                                                                                                                                                                                      | Quiz them using the vocabulary and knowledge section or the quiz questions.                                          |                                                                                                                 |
| What does it mean if a material is described as 'hard'?                                                                                                                                                                                                   |                                                                                                                                                           | Solid, does not bend or break easily                                                                                                                                            |                                                                                                                                                                                                                      | • Can they beat your score?                                                                                          |                                                                                                                 |
| How can you tell if a material is transparent?                                                                                                                                                                                                            |                                                                                                                                                           | Glass – you can see through it                                                                                                                                                  |                                                                                                                                                                                                                      | • Can they score more than 5? 10?                                                                                    |                                                                                                                 |
| What material would make a good window? Why?                                                                                                                                                                                                              |                                                                                                                                                           | Stiff                                                                                                                                                                           |                                                                                                                                                                                                                      |                                   |                                                                                                                 |
| Is metal bendy or stiff?                                                                                                                                                                                                                                  |                                                                                                                                                           | What objects are made from                                                                                                                                                      |                                                                                                                                                                                                                      |                                                                                                                      |                                                                                                                 |
| Questions                                                                                                                                                                                                                                                 |                                                                                                                                                           | Beat the teacher                                                                                                                                                                |                                                                                                                                                                                                                      | Big Questions                                                                                                        |                                                                                                                 |
| 1. Can you name three different materials that we might find in our classroom?<br>2. Name a material that is not suitable for making a drinking cup. Explain why.<br>3. Give an example of a waterproof material. Why might we use a waterproof material? |                                                                                                                                                           | Your teacher can give <b>10 facts</b> in <b>3 minutes</b> about this topic.<br><br>How many can you give to your partner?                                                       |                                                                                                                                                                                                                      | If you could mix two materials to make something new, what would you make? Why?<br><br>Where do materials come from? |                                                                                                                 |
| Scavenger hunt                                                                                                                                                                                                                                            |                                                                                                                                                           | Word search – Can you find all the words?                                                                                                                                       |                                                                                                                                                                                                                      |                                                                                                                      |                                                                                                                 |
| <b>Natural</b><br><input type="checkbox"/> A leaf<br><input type="checkbox"/> A rock<br><input type="checkbox"/> A flower                                                                                                                                 | <b>Fragile</b><br><input type="checkbox"/> An eggshell or broken piece<br><input type="checkbox"/> A dried leaf<br><input type="checkbox"/> A tiny stick  | <b>Waterproof</b><br><input type="checkbox"/> A shiny leaf (a waxy one)<br><input type="checkbox"/> A plastic bag or wrapper<br><input type="checkbox"/> A raincoat or umbrella |                                                                                                                                   |                                                                                                                      |                                                                                                                 |
| <b>Man-Made</b><br><input type="checkbox"/> A piece of litter<br><input type="checkbox"/> A coin<br><input type="checkbox"/> Something made of plastic                                                                                                    | <b>Flexible</b><br><input type="checkbox"/> A blade of grass<br><input type="checkbox"/> A rubber band<br><input type="checkbox"/> A piece of soft fabric | <b>Bonus Challenges:</b><br> Take a picture or draw something cool you found!                |                                                                                                                                                                                                                      |                                                                                                                      |                                                                                                                 |
| <b>Rigid</b><br><input type="checkbox"/> A solid rock<br><input type="checkbox"/> A wooden stick<br><input type="checkbox"/> A coin or key                                                                                                                | <b>Absorbent</b><br><input type="checkbox"/> A sponge<br><input type="checkbox"/> A napkin or piece of paper<br><input type="checkbox"/> A clump of soil  |  Can you draw some objects for each category                                                 |                                                                                                                                                                                                                      |                                                                                                                      |                                                                                                                 |
|                                                                                                                                                                                                                                                           |                                                                                                                                                           |                                                                                                                                                                                 | w a t e r p r o o f s f<br>a b s o r b e n t m s r<br>s u i t a b i l i t y a<br>j v y n a t u r a l m g<br>m a n m a d e v v a y i<br>b m m a t e r i a l s l<br>f l e x i b l e i r n e<br>t p r o p e r t i e s o |                                                                                                                      | Suitability<br>Properties<br>Waterproof<br>materials<br>absorbent<br>flexible<br>natural<br>man-made<br>fragile |

| Write the definition for each of the following words |  |                                                                                      | Write the vocabulary word for each definition |                                                                     |                                                                                       |
|------------------------------------------------------|--|--------------------------------------------------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Vocabulary                                           |  |                                                                                      | Vocabulary                                    |                                                                     |                                                                                       |
| Materials                                            |  |    | M_____                                        | What something is made from                                         |    |
| Suitability                                          |  |    | S_____                                        | How good a material is for a job                                    |    |
| Properties                                           |  |    | P_____                                        | What a material is like and how it responds to different situations |    |
| Natural                                              |  |    | N_____                                        | A material found in nature and not made by humans                   |    |
| Man-made                                             |  |    | M_____                                        | A material made by humans                                           |    |
| Absorbent                                            |  |    | A_____                                        | A material that soaks up liquid easily                              |    |
| Fragile                                              |  |   | F_____                                        | A material that can break easily                                    |   |
| Flexible                                             |  |  | F_____                                        | A material that is easy to bend                                     |  |
| Waterproof                                           |  |  | W_____                                        | A material that doesn't allow liquid through                        |  |
| Rigid                                                |  |  | R_____                                        | A still material                                                    |  |

## Scientific Enquiry

What is the same? What is different?



Scientific equipment

Circle the equipment you have used during your topic.



What do I know about suitability?

These shoes have been made out of paper. Explain why paper is not a suitable material for shoes.




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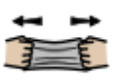
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Spelling

Complete the spellings, then test your partner

|            |            |
|------------|------------|
| m_t_l      | pipe__e    |
| wat__pr__f | d_ra_le    |
| sq_ash__g  | tw__ting   |
| fr_g_le    | pr_p__ties |
| m_ter__ls  | Su_tab_e   |

| Knowledge                                                                                                                                                                                                                             |  | Knowledge                                                                             |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|
| <b>Materials</b><br><input type="text"/> are strong, shiny, hard and long lasting. They can be hammered into different shapes. Metals can be used to make things like pots and pans.                                                  |  |    |  |
| <b>Glass</b> can be strong, but thin glass shatters. It is <input type="text"/> and waterproof. It can be made into different shapes. Glass is most often used to make windows and glasses.                                           |  |    |  |
| <b>Wood</b> is hard and strong. It is long-lasting and is a <input type="text"/> material. Wood is often used to build furniture, like benches and desks. Wood can be used to build houses.                                           |  |    |  |
| <b>Rubber</b> is very tough but also very <input type="text"/> . It is elastic and also waterproof. It doesn't tear easily. Rubber is used for birthday balloons and erasers. It is used in rubber bands because it is very stretchy. |  |    |  |
| <b>Cardboard</b> is thicker and tougher than paper. It is more difficult to tear but goes soggy when <input type="text"/> . Cardboard is often turned into boxes and used for packaging items.                                        |  |    |  |
| <b>Changing Materials</b><br><input type="text"/> - Crush something so that it becomes flat, soft, or out of shape.                                                                                                                   |  |   |  |
| <b>Bending</b> - Change a straight object so that it is <input type="text"/>                                                                                                                                                          |  |  |  |
| <b>Twisting</b> - Change the shape of an object by <input type="text"/> it.                                                                                                                                                           |  |  |  |
| <b>Stretching</b> - Make something longer or wider without <input type="text"/>                                                                                                                                                       |  |  |  |

