

MATERIALISTIC

Chemical Sciences

P4, P5 & P10



22.7.21

Dear Parents / Caregivers and (of course) **Superstar Students**,

Please email me with any questions about the learning. claudine.green536@schools.sa.edu.au

STUDYLADDER

This year I have provided each student with a login to Studyladder which has set tasks to complete under the Science curriculum. If your child is unable to find their Science login please email me and I'll send it to you.

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<https://iview.abc.net.au/show/david-attenborough-s-great-barrier-reef>

What properties do materials have? – I

Read the text.

Natural and synthetic (made using chemicals) materials have properties and characteristics that distinguish them from other materials. These properties can be detected using our senses. For example, one way to tell the difference between rubber and wood is we can see and feel that rubber stretches because it's elastic, but wood doesn't because it's rigid.

Materials are made up of molecules and atoms, too small to be seen without an electron microscope. How these are arranged determines the properties of a material.



The table below lists properties of materials, explains each term and gives examples of materials with that property. Some of the examples are actual materials and others are objects made from materials.

Property description	Explanation	Examples
Transparent	allows light to pass through so we can see objects clearly through it	clear glass, clear plastic
Translucent	allows some light to pass through but we cannot see objects clearly through it	tissue paper, frosted glass
Opaque	allows no light through so we cannot see anything through it	brick, wood
Absorbent	able to soak up water and other fluids	sponge, paper towel
Waterproof	prevents water and other fluids from penetrating	plastic, glass
Hard	solid and firm to touch, resists changing shape when pressure applied	wood, rock
Malleable	able to be worked into a different shape by hammering or rolling	copper, gold
Flexible	able to be bent or stretched without breaking	wool, leather
Elastic	able to return to its original shape when a force is removed	rubber band, balloon
Magnetic	attracted to a magnet	iron filings, paperclips
Reflective	able to give off a reflection	mirror, aluminium foil
Soluble	able to dissolve in a liquid such as water	sugar, salt
Rough	having a coarse surface	sandpaper, brick
Brittle	easily broken	china, glass

What properties do materials have? – 2

Use the text on page 35 to complete the following.

1. Circle true or false.

(a) Only natural materials have properties.

True

False

(b) Materials can have more than one property.

True

False

(c) Rubber and wood are both rigid.

True

False

2. Why do different materials have different properties?

3. Circle the two properties that are opposite.

transparent *translucent* *opaque*

4. Which material(s) listed would be best to use if you wanted to:

(a) make a raincoat? _____

(b) mop up some spilt water? _____

(c) make a window? _____



5. What is similar between a material that is flexible and one that is elastic?

6. Why is gold one of the metals used in jewellery making?

7. Describe one property each of these objects should have.

(a) bath mat _____

(b) umbrella _____

(c) hammock _____

(d) door _____

8. Why do we need to be careful when stacking glasses in a dishwasher?
