

天生我材

材料科學與設計

MATERIAL TALES

The Life of Things

Activity Sheet (Secondary Level)

Name : _____

Class : _____

My Material Science Notebook

Get ready to explore the exciting world of material science! Like Professor Atom, use your senses to observe and feel the materials, and then record your thoughts and findings.

Origins

Let's start our exploration journey by examining the origins of materials – raw materials and their properties.



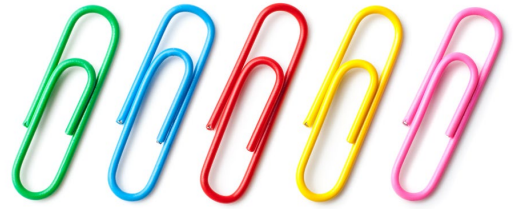
Look around and find some raw materials that you think are interesting. Pick your favourite, draw it here and label anything special that you observe.

What is the name of your material? What does it feel like? / What do you think it would feel like?

What do you like about this material?

Transformation

Different materials can be combined to form products that we can use. Walk through the exhibition, think about how we transform materials to fit our needs, and figure out how materials can be converted into a product.



Look at all of the different things that have been made from materials. Which one is your favourite? Draw your favourite item.

How many materials can you name that make up your favourite item?

Why did you choose this item instead of others?

A product is often made of more than one material to meet the design goal. What are the properties of the materials that make up your favourite item? Why are these materials used?

Consequences

Materials can help solve problems, but sometimes they cause other problems. Activities such as material extraction, processing and disposal can have a negative impact on our environment.



Describe a related environmental issue that you would like to solve. Use diagrams and drawings to help with your explanation.

How did this problem arise, and how would you solve it?

Describe the problem, why you chose it, and your solution to a friend. Discuss how different parties can help.

Evolution

In response to environmental issues and new needs, scientists, designers and makers are looking at ways to use materials more wisely and sustainably.



Find a new material that interests you. Draw it here and label its features.

What are the properties of your new material?

What do you like about your favourite material?

How can this material be applied in different fields for the sustainable development of the Earth?