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PHOTOCOPY MASTERS

Practical Science

Natural and Processed Materials for 6-8 year olds

- Practical hands-on science activities
- Contains comprehensive teachers' notes and lesson ideas

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Contents

Teachers' Notes

This book contains a package of photocopiable worksheets designed to be used to cover the Science learning area of "***Natural and Processed Materials***" with 6-8 year old students.

At this level the students are aware that the things they use in their daily lives are made from different materials. Children will be involved in collating information about materials and their properties, writing observations, making assessments and graphing data. Specific tasks include a 'feel test' activity, a study of common materials found in the classroom and at home, a taste test using fruit, and altering the properties of materials through simple actions.

Each lesson has the potential to:

- extend into more than one lesson by having separate parts to the lesson sheet. Some sections of a lesson may need planning on other paper before final copies are transferred to the lesson sheet. Some lessons may be too long for one lesson and could be completed at another time.
- expand into other curriculum areas using a similar theme. There are ideas for cross-curricular integration with other learning areas. Sometimes a whole day's work could be planned around one lesson sheet.

Science Materials and Equipment

The equipment needed has been kept to a minimum to facilitate ease of planning. It is readily available in schools or is easily acquired.

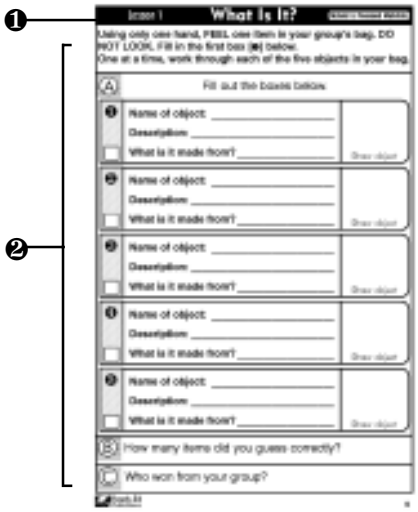
All lesson sheets are outcome linked to the various curriculum documents (see page 6).

Answers are provided where necessary (see page 24).

Other books in the Practical Science series:

- *Earth and Beyond*
- *Life and Living*
- *Energy and Change*
- *Working Scientifically*

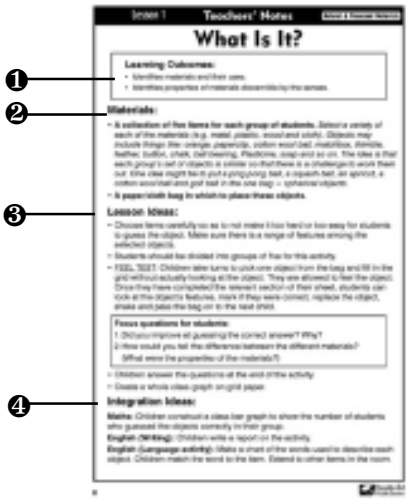
Lesson Sheets Layout



STUDENT LESSON SHEET

❶ Lesson title

❷ Student learning activities



TEACHERS' NOTES INCLUDE:

(FOR EACH LESSON)

❶ Outcome links;

❷ Required materials;

❸ Lesson plan ideas including extension ideas and teaching tips;

❹ Cross-curricular/integration ideas.

What Is It?

Learning Outcomes:

- Identifies materials and their uses.
- Identifies properties of materials discernible by the senses.

Materials:

- **A collection of five items for each group of students.** *Select a variety of each of the materials (e.g. metal, plastic, wood and cloth). Objects may include things like: orange, paperclip, cotton wool ball, matchbox, thimble, feather, button, chalk, ball bearing, Plasticine, soap and so on. The idea is that each group's set of objects is similar so that there is a challenge to work them out. One idea might be to put a ping pong ball, a squash ball, an apricot, a cotton wool ball and golf ball in the one bag = spherical objects.*
- **A paper/cloth bag in which to place these objects**.

Lesson Ideas:

- Choose items carefully so as to not make it too hard or too easy for students to guess the object. Make sure there is a range of features among the selected objects.
- Students should be divided into groups of five for this activity.
- FEEL TEST: Children take turns to pick one object from the bag and fill in the grid without actually looking at the object. They are allowed to feel the object. Once they have completed the relevant section of their sheet, students can look at the object's features, mark if they were correct, replace the object, shake and pass the bag on to the next child.

Focus questions for students:

1. Did you improve at guessing the correct answer? Why?
2. How could you tell the difference between the different materials? (What were the *properties* of the materials?)

- Children answer the questions at the end of the activity.
- Create a whole class graph on grid paper.

Integration Ideas:

Maths: Children construct a class bar graph to show the number of students who guessed the objects correctly in their group.

English (Writing): Children write a report on the activity.

English (Language activity): Make a chart of the words used to describe each object. Children match the word to the item. Extend to other items in the room.

What Is It?

Using only one hand, FEEL one item in your group's bag. DO NOT LOOK. Fill in the first box [❶] below.
One at a time, work through each of the five objects in your bag.

Ⓐ Fill out the boxes below.

❶ ☐
Name of object: _____
Description: _____
What is it made from? _____
Draw object

❷ ☐
Name of object: _____
Description: _____
What is it made from? _____
Draw object

❸ ☐
Name of object: _____
Description: _____
What is it made from? _____
Draw object

❹ ☐
Name of object: _____
Description: _____
What is it made from? _____
Draw object

❺ ☐
Name of object: _____
Description: _____
What is it made from? _____
Draw object

Ⓑ How many items did you guess correctly?

Ⓒ Who won from your group?