

Resistant Materials in our Environment

Lesson 4: Designs in a nature reserve

Learning Objectives:

- To understand the range of products needed to develop and interpret a nature reserve.
- To understand some of the criteria in the design of the products.
- To consider the environmental impact of the design and the materials used in some of the products.

Resources:

- Photocopy of Activity Sheet 4 per pupil.
- Clipboard per pupil if this activity is part of a guided visit.

Activity:

This activity is a focused practical task based on a local nature reserve.

It could be completed in one of three ways:

1. During an educational visit to the reserve;
2. Using a visiting speaker with photographs, plans and models of the reserve;
3. Photographs, plans and models of the reserve produced by school staff.

Explain to the pupils that they are going to look closely at the products designed to:

- improve the nature reserve both for plants and animals;
- provide safe access and information for members of the public.

Tell the pupils that they will:

- be looking at the design, location and materials used in fencing, habitat creation (ponds, nesting boxes, hedgehog boxes, log piles etc.) bird feeding stations, paths, soil profiles, information boards, etc;
- use the results of the activity to inform the design and make assignment in Lesson 6.

Give out Activity Sheet 4 to each pupil and ensure they understand how to complete it.

Designs in a Nature Reserve

Identify the products that have been designed and installed in the Nature Reserve.
Write their name in the correct column.

Products that have been designed to		
Improve or create habitats for plants or creatures	Manage access for members of the public	Provide information for members of the public

2. Look closely at one of the products listed above.

a) Draw an annotated sketch showing the main design features of the product and the materials used in its construction.

Now think about the product and on the back of this sheet write the answers to the following questions.

3) What features of the product do you really like?

4) Have you any ideas for improving the design of the product?

5) What other materials could be used to make this product? Explain why they would be more or less suitable than the chosen material.