BBC DIG In

Grow your own grub.

Design Technology
(To take place over a series of lessons)

Objective

To investigate, design, create and evaluate a protective cover for outdoor plants

Resources

- Three sheets of A4 paper, folded in half and stapled to create a 'scrapbook'
- Garden centre magazines and brochures
- Resources to make the protectors from e.g. chicken wire, plastic sheeting, empty plastic bottles
- Tools needed to make the protectors e.g. scissors, wire cutters, protective gloves
- Digital camera
- Dictaphone

Teaching activity

Introduction

Ask the class to…

- Discuss the dangers salad leaves might encounter when planted outdoors.
- Working in pairs, decide how they can be protected.
- Watch the SOW animations on the BBC Dig In website.

Activity

Investigate

- Investigate what plant-protecting products are already on the market, using magazines, brochures and the internet.
- Cut out or print pictures of existing products to stick in pupils' scrapbook. Label the main features of each product, including the material it is made from and any specific design points.

Design

- Design a plant protector using findings from the investigate stage. Get the class to think carefully about what materials to use, the finished design and how it will be made.
- Measure the area to be covered by the new product and draw the design to scale.
- Create a detailed drawing with a list of resources, equipment and procedures to go in the scrapbook.
- Suggest alternative ways of making the protector in case the original needs further development.

Make

- Make the plant protectors following the design plans.
- Take photos of each of the production stages to record in the scrapbook.

- Conduct interviews with fellow pupils about the successes and challenges. These interviews could be recorded or filmed.

Evaluate

- Evaluate how effective the finished produce is for its role. Get the pupils to think about the good points and what things they would change.
- Record the results in the scrapbook. Pupils could create a video diary documenting the project.

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Plenary

As a class, share successes and watch video diaries, discuss ideas for improvement.

Extension

- Ask a local gardener or keen parent to come and answer questions about protecting plants and the best materials to use for the cover.
- Ask the children: "If you were to do this project again, what would you do differently?" and record ideas in the scrapbook.

National Curriculum
Design Technology KS2

- Developing planning and communicating ideas (1a-d)
- Working with tools, equipment, materials and components to make quality products (2a-d)
- Evaluating processes and products (3a, c)

ICT – Finding things out (1a, 3b, 5a, b)
En1 speaking and listening KS2 (2,a, b)
Maths measures (4a, b)

Scottish Curriculum for Excellence

By applying my knowledge and skills of science and mathematics, I can engineer 3D objects which demonstrate strengthening, energy transfer and movement. TCH 2-12a

Through discovery and imagination, I can develop and use problem-solving strategies to construct models. TCH 2-14a

Throughout all my learning, I can use search facilities of electronic sources to access and retrieve information, recognising the importance this has in my place of learning, at home and in the workplace. TCH 2-03b

NI Curriculum:

Lang+Lit: talking and listening, reading, writing, presentation skills, ICT

World Around Us: design and make, why materials are chosen, plants and plant growth, (Science and Technology, ICT)

Mathematics and Numeracy: measures, handling data, processes