

CHAPTER 1: The Energy We All Use

Aim

The aim of this chapter is to critically explore renewable energy and examine its advantages and disadvantages.

Overview of Chapter

The first lesson in this chapter explores how energy is used in the school environment. Lesson two examines renewable sources of energy.

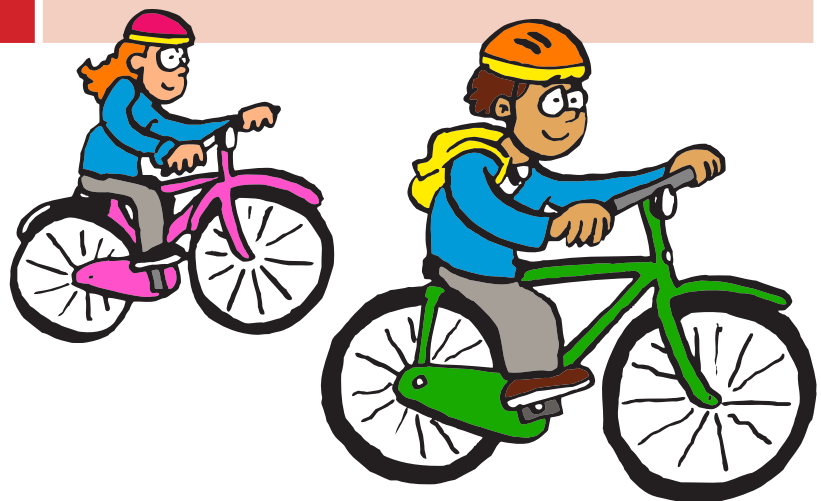
Working Scientifically Skills

Through discussion of, engagement with and reflection on the content in these lessons, children will be applying and developing the following working scientifically skills:

- Analysing and classifying
- Recording and communicating

Primary Science Curriculum link

Strand unit: Caring for my locality and area; magnetism and electricity



Lesson 1 – Energy in our school

Resources

IWB1 / PowerPoint 1: Energy in our school

Activity type: Discussion

Use **IWB1 activities/ PowerPoint 1** to discuss how energy is used in the school.

Questions to promote discussion

Scenario 1: Getting to school

- 1 How did you travel to school today?
- 2 If you travelled by car/bus what source of energy was used?
- 3 Did you travel by train or tram? What source of energy was used?
- 4 Did you walk or cycle to school? What source of energy was used?
- 5 What do you think is the most environmentally friendly way to travel to school?

Scenario 2: Energy in the school

- 1 What kinds of energy are being used in the picture?
- 2 Do you think renewable sources of energy are being used? Why/ Why not?
- 3 Do you think non-renewable sources of energy are being used? Why/ Why not?
- 4 What are the consequences of our dependency on non-renewable sources of energy?

The children could work in small groups to discuss energy use in the school.

Lesson 2 – Renewable energy sources: Advantages and disadvantages

Lesson link

1st and 2nd Class Programme Chapter 2 Lesson 1: Sources of energy and Lessons 2 and 3: Renewable and non-renewable energy (i) and (ii)

Resources

A3 sheets of paper, Markers/ crayons/ colouring pencils
PCMs 1 – 6: Renewable energy factsheets

Teacher note: Fossil fuels have environmental disadvantages such as causing pollution and climate change. But there are also advantages to using fossil fuels. For example, they are cheaper and are more easily accessible to the public. There are advantages and disadvantages in using renewable energy sources. Disadvantages include cost and dependency on the weather. One advantage is that they are environmentally friendly. In this lesson children are encouraged to think critically about renewable sources of energy.

Activity type: Discuss and research

Split your class into groups. Give each group a set of Renewable energy factsheets (PCMs 1 – 6).

- 1 In each group the children work in pairs. Each pair selects two sources of renewable energy from the sheets and lists two advantages and two disadvantages associated with their sources. Encourage the children to think about the global and Irish contexts.
- 2 Each pair reports back to the rest of their group on the two advantages and disadvantages they have selected from their fact sheets.
- 3 Each group then compiles a poster of the advantages and disadvantages of using different renewable energy sources.

Afford the children time to read other groups' posters. Ask the children to see if they can find similarities and differences between the different posters.

