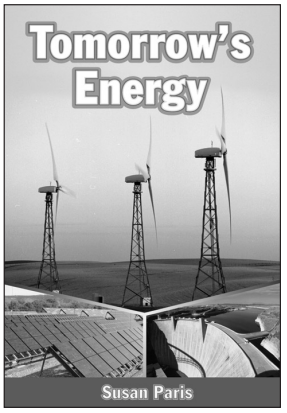
Tomorrow's Energy



by Susan Paris

Book Summary

People have used fossil fuels for hundreds of years, but these sources of energy are running out. This book looks at how we have made and used energy in the past and sources of energy for the future.

Features of the Book

- Flow chart and graph
- Specialised vocabulary – *fossil fuels, solar, turbines, generator, carbon dioxide, methane, nuclear, toxic, uranium*
- Questions addressed to the reader
- Statistics

Purpose

Tomorrow's Energy can be used to introduce and reinforce the following skills and understandings:

- **S** identifying and summarising the main ideas;
- **S** determining the author's purpose;
- **S** exploring word derivations;
- **S** recognising cause-and-effect relationships;
- **S** using graphic aids such as charts to convey information;
- **S** recognising different kinds of energy and their limitations.

Investigation Tools

- What's the Background? – Early Energy, page 5
- Digging Deeper – Fossil Fuels, page 8
- Step-by-step – Making Electricity from Fossil Fuels, pages 10–11
- Making Connections – Global Warming, page 13
- Digging Deeper – Finding Fuel, page 16
- Weighing Both Sides – Nuclear Energy, pages 22–23
- Looking Closer – A Home of the Future, pages 26–27

The Guided Reading Lesson

- **S** Identifying and summarising the main ideas
- **S** Determining the author's purpose

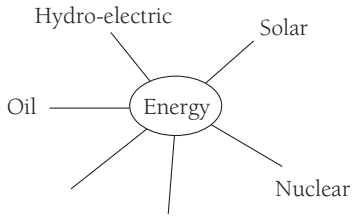
You may need to spend extra time familiarising your students with the concepts and specialised vocabulary in this book. This lesson could be taken over two or more days.

Introducing the text

Ask the students to think about different kinds of energy.

- *How do people heat their homes?* (electric or gas heaters, fires, central heating)
- *What makes cars go?* (oil and petrol)
- *Where do these things come from?*
- *What other kinds of energy do you know of?* (hydro-electric, nuclear, wind, solar)

On the board, list the students' answers on a star chart that has "Energy" in the middle.



Reading and discussing the text

Read the title of the book, then look at the contents page together. Draw a T-chart on chart paper, listing the chapter headings in the left-hand column.

– *What information do you expect to find in each chapter?*

Ask the students to read chapter 1 and to think about the main ideas. Write their suggestions on the T-chart. For example:
Chapter 1: Everything we do uses energy; We use a lot of energy.

Ask the students to read chapters 2 and 3 and to find the main ideas in each chapter. Discuss these and add them to the T-chart. For example:
Chapter 2: The sun is our most powerful source of energy; Coal, oil, and gas are fossil fuels.
Chapter 3: Fossil fuels will run out; Burning fossil fuels causes global warming; We need new energy sources.

Ask the students to read the last two chapters of the book. Discuss and list the main ideas.

Discuss how the main ideas can be linked to make a summary of the text. The students can use the T-chart as a guide to orally summarise the text.

Reread pages 24 and 25 together.

– *What does the author say about our energy use?*
– *What do you think? Has she persuaded you to save energy?*
– *Why do you think the author wrote this book?*

Discuss the author's purpose and encourage the students to think about the purposes they have for their own writing.

Revisiting the Text

The activities below can be used immediately after the guided reading lesson, during later reading sessions as mini-lessons, or as independent activities.

S Exploring word derivations

Write "solar" on the board.

– *What is solar energy?*
– *What do you think "solar" means?* (relating to the sun)

Ask the students to check the meaning in the dictionary.

– *What language does "solar" come from?* ("Sol" is Latin for sun.)
– *What other words or phrases use the word "solar"?* (solar power, solar system, solar panel)

Encourage the students to look for more words in the dictionary.

S Recognising cause-and-effect relationships

Look at the flow diagram on pages 10–11 together. Explain that each box contains an action (cause) that brings about an event (effect). Discuss other cause-and-effect relationships in the book, for example, friction makes fire. Ask the students to use the information on page 13 to create a cause-and-effect chain.

S Recognising different kinds of energy and their limitations

Together, look at the star chart made at the start of the lesson. Add other kinds of energy that the students have learnt about.

– *What are the benefits of using oil for energy? What are the problems?*

Make statements about using a source of energy. Use "but" to indicate the problems with using this energy, for example:

– *Oil is cheap and efficient to use, but there is a limited amount left.*
– *Solar power is a good source of energy, but sometimes it is expensive to set up.*

✎ The students can use the blackline master on page 83 to show the advantages and disadvantages of different energy sources.