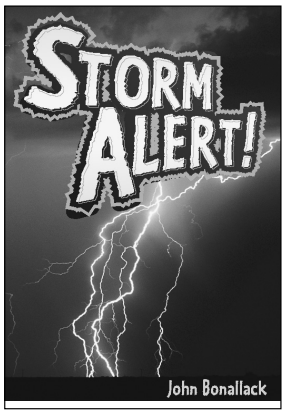
Storm Alert!



by John Bonallack

Book Summary

Storms can be terrifying. A hurricane can contain more energy than all the electricity generated on Earth at any one time. This book examines the different kinds of storms and asks whether we are prepared for the next one.

Features of the Book

- Report
- Present tense
- Tables, charts, maps
- Case study
- Comparative information
- Use of analogy
- Quiz

Purpose

Storm Alert! can be used to introduce and reinforce the following skills and understandings:

S exploring the use of comparative language and analogy;

S interpreting graphic sources of information;

S exploring the impact of global atmospheric changes on the weather;

S recognising that certain events in Earth's atmosphere can lead to extreme weather events;

S exploring how the actions of people may lead to changing patterns in the weather.

Investigation Tools

- Weighing Both Sides – Storm Chasers, pages 10–11
- Step by Step – How a Hurricane Forms, pages 16–17
- What's the Background? – Satellites, page 20
- Making Connections – Forecasting a Volcanic Eruption, page 22
- Digging Deeper – The Greenhouse Effect, pages 24–25
- Looking Closer – Emergency Survival Kit, page 29

The Guided Reading Lesson

S Exploring the use of comparative language and analogy

S Exploring the impact of global atmospheric changes on the weather

Introducing the text

Discuss extreme weather.

– *When people talk about dramatic weather events, what are some of the words and comparisons they make?*

Explain that in this lesson, the students will be reading about storms. They will also be describing storms and the damage they cause.

Reading and discussing the text

Ask the students to read the introduction and find the descriptive words and phrases.

– *Why did the author compare the storm with a roller coaster? How does he show that it's not the same as a roller coaster?* (at first … but now)

– *How well does the introduction set the scene?*

The students can read to the end of page 5, then discuss the chart.

- *How are the differences in these storms described? Can you compare the storms based on this information?* (Fact column gives information but it's not directly comparable – for example, numbers killed, costs of damage, height of river.)
- *What information would be more helpful in understanding and comparing storms?* (Ideas could include, how they are formed, wind speeds, descriptions of the effects, rainfall, temperatures.)

Tell the students that they will learn about different kinds of storms and how they are described.

- *As you read the rest of the chapter, pay attention to the differences between the storms and the words that describe them.*

When the students have finished reading the chapter, ask them to explain the main differences between tornadoes, hurricanes, blizzards, and dust storms.

- *Look at the Fujita Scale on page 7. Compare the information in each column. How precise are the names in the second column?*
- *How does this differ from the information in the third column?*
- *How well does the information in the fourth column describe the differences among tornadoes?*

Prompt the students to identify the subjective terms, for example, what one person describes as "moderate" may be "considerable" to someone else.

- *Could wind speed be interpreted differently?* (No – it's an objective, measurable indicator.)
- *How accurately could the effects in the fourth column be used to judge the strength of a storm?* (Somewhat accurate but some depend on factors such as the kinds of trees and building constructions.)

The students can now read Chapter 2 silently. This chapter contains scientific terms and explanations. Monitor the students as they read and offer assistance if they lose the meaning.

- *How did the comparison with a tyre on page 15 help you to understand air pressure?*
- *What do you understand by the "eye" of a storm? What happens there?*

Remind the students of weather forecasts on TV as they read Chapter 3 silently. Monitor their reading by moving around the group and asking questions or giving prompts. These could include:

- *Where do the weather forecasters get their information?*
- *How are storms tracked? Why is it important to do this?*
- *Why do scientists think we're getting so much bad weather?*
- *Why would we have more hurricanes if the seas became warmer?*

Discuss any questions the students may have, then ask them to read the final chapter.

- *As you read the last chapter, think about whether you need to be prepared for a storm.*

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 the use of comparative language and analogy

✎ The students can look for examples of descriptive language in the text and record them on the blackline master, adding a scale for one kind of weather.

S Exploring the impact of global atmospheric changes on the weather

The students can use the quiz in Chapter 4 to assess how well their family is prepared for a storm. They can research weather information for their area to assess the risks.

The students can make an evacuation plan for their family. They may also like to use the information on page 29 to create a poster encouraging people to make an emergency survival kit.

S Interpreting graphic sources of information

The students can reread the information on page 20, then examine the satellite maps. The students can bring other examples of weather maps to discuss how the information is presented, how frequently they are updated, what the markings on the maps mean, and how the information is interpreted.