Springboard 4

Rail Accidents

Written by Alex Moore

Text Type	Lower 1500–1800 words RA 8.8–9.2	Middle 1900–2400 words RA 9.3–9.7	Upper 2500–3000 words RA 9.8–10.2
Procedure	Build Your Own Easel	Making a Cheesecake	So You Want to Be a Cartoonist?
Recount (Explanation)	Ten Milestones in Space	Rail Accidents	Three Terrible Hurricanes
Information Report (Description)	Mythical Creatures	The World of Caves	Top Towers
Information Report (Explanation)	A Weather Counting Book	Two Polar Regions	Seven Ancient Wonders
Interview	Food Science FAQs	Hobbies	Fireflies and Glow-worms
Biography	Ned Kelly	Mother Teresa: Saint of the Gutters	Edmund Hillary
Explanation	How Forensic Scientists Work	How Musical Instruments Work	How Solar Energy Works
Procedural Recount	How I Learned to Be a Nipper	How I Trained for the Junior Triathlon	How I Learned to Snowboard
Realistic Fiction (Out of School)	Junkyard Treasure	Outback Betty's	Harry's Dream
Realistic Fiction (In School)	On the Case	The Real-Life School Project	Ms McMahon
Historical Fiction	The Wooden Horse Trick	Cheung Saves the Day	The Slave
Fantasy	The Cloud Washerwoman	Sammy Stevens Sings	Finbar and the Long Trek
Science Fiction	A New Source of Power	The Intergalactic Race	Eighth Moon
Humour	The Upstairs Dragon	My Rhyming Grandpa	Catty Bimbar and the New-Age Pirates
Mystery	Mystery Under the Big Top	The Mystery of Autoplane 500	The Mystery of the Missing Food
Folktales	The Wicked Witch of the Singing Sands	Gulnara	Momotaro, Little Peachling

Fact — rows: Procedure, Recount, Information Report (Description), Information Report (Explanation), Interview, Biography, Explanation, Procedural Recount

Fiction — rows: Realistic Fiction (Out of School), Realistic Fiction (In School), Historical Fiction, Fantasy, Science Fiction, Humour, Mystery, Folktales

MACMILLAN

We have designed these lesson plans so that you can have the plan in front of you as you teach, along with a copy of the book. Suggestions for teaching have been divided into questions and discussion that you may have with students before, during, and after they read. This is not an arbitrary division. You may prefer to explore the meaning and the language in more detail before students read. Your decisions will depend on the gap between students' current knowledge and the content, vocabulary, and language of the book they are about to read. The more information students have up front, the easier it will be for them to read the text.

RAIL ACCIDENTS

Middle level fact
Text type: Recount (Explanation)
Reading age 9.7
Word count 2,006

Before Reading

Activate prior knowledge by asking students what a recount is. Discuss the difference between a fiction recount and a nonfiction recount. Explain that in a fiction recount, the story is told from the perspective of one of the characters. The story is made up, but the reader hears the story usually from the main character.

A nonfiction recount is different. The story may be told in exactly the same way, but the difference is that the events really happened. The main character may be reflecting on things that actually occurred in his or her life or somebody else's life.

A nonfiction recount may also be the recounting of an event that occurred that is unrelated to the person recounting. For example, you could watch a documentary about volcanoes, and then be telling a friend about one of the volcanic eruptions that occurred. When you do this, you are recounting something that really happened.

COVER

Before Reading

Read the title and examine the cover photograph. Discuss what the book may be about. *What do these images and the title suggest about this book?* Discuss the photograph on the front cover. *Who may have taken this photo? Who are some of the people you can see? What could cause this?*

Read the blurb. What additional information does this give you? What do you expect to find inside this book? Guide the discussion to build understandings that this book will provide information about five terrible rail accidents.

What could make rail travel more dangerous? How did rail networks grow?

What is the purpose of this book? What do you expect to learn from this book?

CONTENTS PAGE

Open the book. Discuss the features of the contents page. *Where would I go to read about*

The Granville Rail Accident? Students should quickly respond with the page number. Repeat for other pages. Encourage quick responses. *What do you know about information books?* Students should indicate that the reader can choose where they would like to start.

Students should mention the terms *glossary* and *index.* Ask students to explain what each term means. Visit each of these pages to clarify that the glossary provides meanings for new or tricky words about the topic, and the index provides the page numbers to help the reader locate particular things in the book.

Revisit the contents page. Discuss the term *introduction. What does this mean?* Lead students to acknowledge that an introduction will provide background information about the topic that will help us to read the book.

INTRODUCTION

During Reading
What do you notice first about this page? Guide students to discuss the illustrations and captions. Describe the early steam locomotive. *What made it safe? How does speed impact on the safety of a vehicle?* Discuss. *What can you tell from the photo and caption on page 5?* Discuss the sleek design. *Why is the train designed this way?*

What do you notice about the text on page 10? Students should notice the bold text on *human error* and *derailments,* and suggest that these words are located in the glossary. Ask students to predict what these words may mean. Direct students to the glossary and ask students to read the definitions aloud.

Read pages 4 and 5 and be ready to discuss what you find out about trains.

After Reading
When was it first developed? What do you know about safety in the early days? Why were there few accidents? Prompt students to the three key factors: short trips, slow speed, and few trains.

What happened as rail networks grew? What else happened at the time? Students should indicate that night travel began. Describe the accidents that occurred. Prompt students to the words *major disasters. What does this term suggest?*

What is a head-on collision? How did this occur?

How many people died from rail travel in 1853?

When did rail safety become a priority?

What are the causes of many rail accidents? What sorts of mistakes could be considered human error?

THE NASHVILLE RAIL ACCIDENT

During Reading
Read the title. When and where did this accident occur? Discuss the photo and caption on page 6. *Which part of the train is derailed?* Walk through pages 8 to 11. Read the caption and look at the photo on page 10.

Read pages 7 to 11. As you read, take note of the factors that contributed to the accident. While you read, think about how this accident occurred. Look carefully at the diagram on pages 8 and 9 after you have read about the accident. This diagram will help you to build a picture of what happened.

Be ready to discuss this accident and explain the diagram.

After Reading
What is significant about this accident? Prompt students to page 6 for the answer.

Describe Union Station on the day of the

accident. Students should indicate that it was very busy.

Reread the text on page 4. Build understandings by writing the times and train numbers on the board with arrows to indicate that the trains were headed towards each other. *What was the mistake that caused the accident?*

Turn to pages 8 and 9 and reread the text, discussing what was occurring.

Examine the diagram together. Explain that this diagram shows how the accident occurred. Discuss the diagram to reinforce how the accident occurred. *What caused this accident?* Students should indicate that it was human error.

How many people helped in the rescue? Tell of some lucky escapes.

Discuss the organizer on page 11.

THE TANGIWAI RAIL ACCIDENT

During Reading
Read the title. When did this accident occur? Where did it occur? What do you notice about the photo and caption? What is a lahar? Direct students to navigate quickly to the glossary to check. Describe what you think happened.

Walk through the photos and read the captions. Discuss the diagram on page 17. *Do you think there was any way of avoiding this accident?* Revisit the glossary and discuss what debris is.

Read pages 12 to 17 and jot down when the accident occurred, how fast the train was traveling, when the accident occurred and what caused the lahar. Find out the details about survivors, casualties, and the rescue.

After Reading
Discuss where and what time the accident occurred. *What day of the year was it? Where*

might many of the passengers have been going? What would Christmas have been like for the families of those who were killed?

What caused the lahar? Revisit page 13 to find precise details. *Do you think this could have been predicted?* Invite inferences.

How many people were on the train? Did more people survive or die in the accident? Not everyone died from the fall. What killed others?

Who was involved in the rescue and what made the rescue difficult? Discuss the details on page 15.

What is a mass funeral?

Describe how it happened. Ask students to explain the diagram on page 17.

THE GRANVILLE RAIL ACCIDENT

During Reading
Read the title. Where did this accident occur? When did it happen? Examine the photos and read the captions on page 19 *. What is an aerial shot? What does an aerial shot help us to see?*

Prompt students to notice the word *overbridge* and ask what they think this is. Read the definition in the glossary. Discuss the overbridges in your area.

As you read pages 18 to 21, find out what caused this accident. Jot down notes about who was on the train, where it was travelling to and from, and how the accident occurred.

When you read the diagram on page 21, think about this accident, and be ready to explain the diagram.

After Reading
At what time of day did this accident occur? When was it expected to reach its destination? Who was on the train? Where did the train depart from? Where was it travelling to?

What happened at 8.07am? What was the problem as the train began to slow down? Should the driver have done something differently? Discuss.

What happened at the left-hand turn? What did the first two carriages hit when they derailed? What impact did this have?

Who died in the accident? Which carriages were the worst affected? Why?

How many people died?

Who was involved in the rescue?

What was the cause of the accident? What can be learned from this accident?

What did passengers notice about 6 km from Eschede? What do you think this was?

What did the driver feel as the front carriage came out from under the bridge? What was the tug? What did the driver see when he looked behind?

Which carriages were the worst affected by the accident? Why?

How many people died?

Who was involved in the rescue?

What was done to prevent more of the concrete from the bridge falling onto carriages?

THE ICE HIGH-SPEED TRAIN ACCIDENT

During Reading
Read the title and discuss where and when this accident occurred. *Examine the photos and captions on pages 23 to 26. Describe what is happening. Would you expect there to be many deaths from this accident? Can you tell what has happened?* Invite predictions.

As you read pages 22 to 26, find out what the letters ICE *mean, and what sort of train this was. List a couple of interesting facts about the ICE. Jot down notes about the signs that indicated that something might be wrong. Take note of what the driver noticed when he looked around and be ready to discuss what was later found that explains how this train derailed.*

After Reading
What is significant for the Germans about this accident?

What do the letters ICE *stand for? What kind of train was this? What is interesting about this train?*

THE NEYSHABUR RAIL ACCIDENT

During Reading
Read the title. Where did this accident occur? When did it occur? Look at the photos on pages 28 and 29 and read the captions. Discuss what is different about this accident compared to the others in this book. *What might have happened?* Invite students to infer.

Read pages 27 to 29. As you read, find out what caused the fire and led to the accident. Write down the things on the train that were responsible for taking lives. This accident looked like it would not claim human lives. However, something happened that caused devastating results. Jot down what you learn as you read pages 28 and 29. Find out who the casualties were and what the impact was on the community. Take note of the time the accident occurred.

After Reading
At what time of day did this accident occur? What was thought to be the cause of the train moving? Was anyone on board?

What was inside the wagons? How did the contents of these wagons cause disaster? How would the situation have been different if the wagons were filled with dirt?

What do you think the rescue teams were thinking once the fire was out?

What happened next? How many people died? Who died?

How many villages were destroyed? How did the homes collapse? What caused the collapse?

What is a crater? How big was it? What does the crater tell us about the blast?

What is the Richter Scale?

⬤ CODE BREAKER

Ask students to turn to the table on page 30. Explain that this table helps to organize the information about when and where accidents occurred, the reason for the accident and how many people died. A table is a way to present this information without lots of words, and just showing the facts. Learning how to take the information out of the table is very important.

Here is a sentence about what happened in 1915:

On the 22nd of May, 1915 a train collision in Quintinshill, in the UK, caused 227 deaths.

Ask students to work alone or with a partner to write a sentence about what happened in 1917. Discuss responses and, as the sentence is read aloud, support students to read these sentences with the correct punctuation to support meaning.

Repeat using another example.

⬤ MEANING MAKER

Ask students to open the book at the title page. Discuss who this person may be. Invite

predictions and ask students to justify their thinking. *What protective clothing is he wearing? Why might he need protective clothing?* Discuss this person's footwear, covered arms and legs, gloves and mask. *How might these things be useful?*

What do you think this person has been doing? Invite students to predict a variety of things that need to be done after an accident. For example, first aid, assisting rescues, lifting concrete or metal, putting out fires, etc.

How do you think this person may feel about being at this accident? If the rescuers at the Neyshabur rail accident had this type of protective clothing, would it have saved their lives? Why not?

⬤ TEXT USER

Turn to page 11. Ask students what this type of picture is called. Students may respond that it is a mind map, word web, concept web, organizer, etc. Ask students to explain the purpose for these organizers. Guide the discussion to build understandings that visual organizers, that is pictures that help us to organize our thinking, are useful tools for reading and writing. They help us plan and organize our ideas. Ask students how they think visual organizers help us to do this. Invite discussion.

What does the organizer on page 11 tell us? Discuss. How is it different to read this information on the organizer from reading it in a paragraph? Write the paragraph representing this information onto the board. Explain that the same information can be presented in different ways.

Write a shared organizer on the board about car accidents; for example, causes of car accidents. Quickly record students' responses around the heading/drawing in the centre.

◉ TEXT CRITIC

Explain that all authors write books for a reason. The purpose may be to entertain, to inform, or to persuade. Sometimes the purpose is clear, but at other times the purpose may not be clear. An information book may be written in such a way that only the facts are presented to the reader. Other information books may be written in such a way that the authors' feelings about the topic are communicated to the reader through the writing. This is called bias. Often the best way to get information is to *just get the facts*, or to get an unbiased account. That way the reader is not influenced by the authors' opinions or feelings.

Scan through this information book and find out whether this book just gives the facts, or whether the author's opinions or feelings about rail accidents are showing.

USING MULTIPLE INTELLIGENCES

Partner activity

Research: Conduct research about other accidents involving passenger travel. For example, plane, car, bus, boat, helicopter accidents. Of the information you find, choose one accident to complete the following tasks. (P)

Record: the details of the accident. Make sure you include when and where the accident occurred, how many people died and suffered injuries, and the reason for the accident. (V)

Sketch: some ground level and aerial photographs. (S)

Draw: a diagram to show how the accident occurred. (S)

MULTIPLE INTELLIGENCES

The theory of multiple intelligences was developed by Howard Gardner, a professor of education at Harvard University. Howard Gardner's theory suggests that the current view of intelligence, as measured by IQ tests, is far too limited and discriminates against students who think in different ways. He proposes taking a broader perspective and has identified eight different intelligences. These are:

· verbal-linguistic intelligence – word smart

· logical-mathematical intelligence – number/reasoning smart

· visual-spatial intelligence – picture smart

· bodily-kinaesthetic intelligence – body smart

· musical-rhythmic intelligence – music smart

· interpersonal intelligence – people smart

· intrapersonal intelligence – self smart

· naturalist intelligence – nature smart

Multiple intelligences have enormous potential as a tool in furthering reading and language development. Traditionally, the teaching of language and reading has focused mainly on two intelligences: logical-mathematical and verbal-linguistic. This means that many students who possess different intelligences do not receive the necessary opportunities, encouragement, instruction, or reinforcement to succeed with reading as well as they might.

Rail Accidents

Name _____

Find the information from the book to complete the table below.

Year	Date	Place	Country	Deaths	Reason

Rail Accidents

Name _____

Multiple Intelligences (visual-spatial intelligence)

Choose one accident from the book. Draw the accident from ground level and then draw the aerial view of the same accident.

Accident _____

Ground level

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Aerial view

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Rail Accidents

Imagine that you are near the scene when a terrible rail accident occurs. What would you expect to see and hear? How would you expect to feel? Write your descriptions below.

I would see –

I would hear –

I would feel –

Rail Accidents

Name_____

The words who, what, which, whose, and whom are called pronouns. When these pronouns are used at the start of a question, they are called interrogative pronouns. Complete the questions by adding the correct pronoun. On the line underneath each one, answer the questions. Use the book to help you.

who   what   which   whose   whom

_____ train accident occurred first in the book?

_____

_____ was responsible for the Nashville accident?

_____

_____ carriages from the Tangiwai disaster fell off the bridge?

_____

_____ struggled to pull survivors from the raging river in Tangiwai?

_____

For _____ was there a mass funeral at Karori Cemetery?

_____

_____ fault was the Granville accident?

_____

_____ was the time when the Granville train began to slow down for the 32 km per hour speed limit?

_____

_____ did the driver of the ICE see when he turned around after feeling a tug?

_____

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Rail Accidents

Name_____

Use the table on page 30 to answer the questions.

1. Record the year with the most rail accidents and write down the countries in which they occurred.

_____

_____

2. Record the number of accidents caused by derailments and write down the countries in which the derailments occurred.

_____

_____

3. What was the cause of the highest number of rail deaths in one accident? How many people died?

_____

_____

4. What is the total number of deaths prior to 1970?

_____

_____

5. When and where was a train derailed by a tsunami?

_____

_____

6. What happened on the 18th February, 2004?

_____

_____

7. What occurred in a tunnel in 1944? Explain.

_____

_____

8. In which month/s did most rail accidents occur?

_____

_____

Rail Accidents

Name_____

This book is a recount that explains the causes and effects of five rail accidents. It is a nonfiction book and that makes us think that everything in the book is true.

1. Did you think that this book would give facts about rail accidents that are true and correct? Why or why not?

_____

_____

2. Do you think the author presented just the facts in this book? Explain.

_____

_____

3. Which word in the blurb describes the accidents? Think of other words that could have been used.

_____

_____

4. Some accidents were caused by human error. What do you think of this?

_____

_____

5. Speed and human error were responsible for the Granville accident. These factors also cause many motor vehicle accidents. What could be done to prevent these accidents?

_____

_____

6. What do you think the author thought of these accidents when she was writing the book?

_____

_____

7. Why might the author have written this book?

_____

_____

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Rail Accidents

Name_____

In nonfiction books, the photographs, captions, diagrams, tables, and pictures help us understand better what the book is about. Use your book to complete the table. The first one is done for you.

Page number/s	Feature	What it helps me understand
8–9	How the Nashville Collision Occurred	I can see the direction the trains were heading and I can see why the operator got confused. I also see the way the trains would have collided.
11		
14		
16		
17		
19		
21		
25		
29		

Notes

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