



These notes are designed so that you can use them as a guide for teaching or alternatively you can give them to a group of students who will then complete the reading and activities independently or with a partner.

Each set of notes has:

- An activity grid
- The science content and knowledge
- The science vocabulary in the glossary
- The answers to the quiz
- Questions for each chapter to guide reading

There is more than one way to read this book. Here are four examples. No one way is better than the another. You may also like to use the graphic organizers to help guide your reading.

- You can skim through the pages of the entire book, stopping at and studying the diagrams. Then check the glossary to clarify your understanding of any unknown science-related words. This will give you the background science information before you read the story. Then go back and read the story.
- You can read the blurb on the back cover, then jump straight into reading Chapter 1. Read the story as if there were no diagrams or bolded words at all. When you have finished, go back and study the diagrams and glossary words to add to your knowledge.

- You can do a combination of both the above. Read the back cover blurb to find out the storyline. Study the initial diagrams. Then read the book, stopping to consolidate your understanding of the science concepts. Check out the bolded words in the glossary if you are unsure of their meaning.
- You can read the book chapter by chapter, stopping and discussing the story and the science as you go.

When you have finished reading, take the test. You should get six out of six. If you aren't sure of an answer, follow the quiz clues at the end of the book.

Now do one or both of the activities. When you have finished these, complete the black line master activities.

Book Title	Book Activity 1	Book Activity 2	Graphic Organiser 1	Graphic Organiser 2	Black Line Master 1	Black Line Master 2	Black Line Master 3
The Funniest Ferret	Literacy Vocabulary	Science Inquiry	Comprehension Literal	Science Inquiry	Comprehension Inferential	Multiple Intelligence Musical	Values Tolerance
Sky Farmer	Multiple Intelligence Linguistic	Science Experiment	Comprehension Literal	Science Inquiry	Science Vocabulary	Comprehension Inferential	Values Caring
Net Navigator	Comprehension Inferential	Science Experiment	Comprehension Literal	Science Inquiry	Literacy Vocabulary	Multiple Intelligence Visual Spatial	Values Understanding
Rumbling Beneath the Surface	Comprehension Inferential	Science History	Comprehension Literal	Science Inquiry	Literacy Vocabulary	Multiple Intelligence Intrapersonal	Values Care & Compassion
Slimy Slug Planet	Comprehension Inferential	Science Inquiry	Comprehension Literal	Science Inquiry	Literacy Vocabulary	Multiple Intelligence Visual Spatial	Values Respect
Revenge	Comprehension Inferential	Science Experiment	Comprehension Literal	Science Inquiry	Literacy Vocabulary	Multiple Intelligence Intrapersonal	Values Feelings
Bad moon Rising	Comprehension Literal	Science History	Comprehension Inferential	Science Inquiry	Literacy Vocabulary	Multiple Intelligence Naturalist	Values Freedom
T.C. Ami	Comprehension Inferential	Science Numbers	Comprehension Literal	Science Inquiry	Literacy Vocabulary	Multiple Intelligence Logic	Values Caring
Against the Odds	Comprehension Inferential	Science Inquiry	Comprehension Literal	Science Vocabulary	Literacy Vocabulary	Multiple Intelligence Bodily Kinesthetic	Values Doing Your Best
Get Me Out of Here	Comprehension Literal	Science Inquiry	Comprehension Inferential	Science Inquiry	Literacy Vocabulary	Multiple Intelligence Visual Spatial	Values Caring
Jed and the Master Robot	Comprehension Inferential	Science Experiment	Comprehension Literal	Science Inquiry	Science Vocabulary	Multiple Intelligence Interpersonal	Values Honesty
The Useless Tree	Comprehension Literal	Science Experiment	Comprehension Inferential	Science Inquiry	Science Vocabulary	Multiple Intelligence Logic	Values Fair Go Freedom & Responsibility

Rumbling Beneath the Surface

Science Content and Knowledge:

Earth Science: Earthquakes

Level: Lower

Genre: Contemporary Fiction

Reading age: 8.9 years

Science Vocabulary

convergent	molten rock
crust	outer core
divergent	P waves
earthquake	Richter Scale
epicentre	sea-floor spreading
fault	Seismic Intensity Scale
geologists	seismic waves
inner core	seismograph
L waves	S waves
magnitude	tectonic plates
mantle	

Quiz Answers

Question 1:

Convergent

Question 2:

P waves are primary waves that move fast.

S waves are secondary waves that move slower than the P waves.

Question 3:

It is the place on Earth's surface that is directly above the point from which the earthquake waves radiate. There would be violent shaking at the epicentre.

Question 4:

Seismograph

Question 5:

Geologist

Question 6:

The extending of the ocean floor when two tectonic plates move apart.

Study Guide

Prologue

A prologue set the scene for the story. Read the prologue and note the dates at the start. Why do you think the author has used these features?

Chapter 1 – Shaking It Up

Look at the title of the chapter. Use the title, back cover blurb and cover page to predict what the story is about.

Chapter 2 – Inside Earth

Read Chapter 2 to find out about Earth's interior. Jot down any new information about Earth that you did not know.

Chapter 3 – Grandma's Story

Chapter 3 introduces Grandma in the story. Read the chapter to find out what past experiences make her fear earthquakes. How have they affected the way she lives her life? Make a list of these as you read.

Chapter 4 – San Francisco Today

How do you think San Francisco would have changed since Grandma was last there? How do you think she will feel returning there?

Chapter 5 – Grandma's Fears

Chapter 5 provides a twist to the end of the story. How do you think the story will end?

Epilogue

An epilogue concludes a story. It can be fact or fiction. Read the epilogue to find out about the Loma Prieta earthquake.

Graphic Organizer 1– Literacy

Rumbling Beneath the Surface

Name _____

- Comprehension – Literal

As you read, jot down what you learn about Grandma Betty

What happened to her during the 1906 earthquake	
How her life has changed since the 1906 earthquake	
Things she does as a result of the 1906 earthquake	



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Graphic Organizer 2 – Science

Rumbling Beneath the Surface **Name** _____

- Science Inquiry

As you read write down information about the key words listed below.

San Andres Fault Line	
Plate Movement	
Richter Scale	
Epicentre	



Rumbling Beneath the Surface **Name** _____

• Vocabulary

Copy the San Francisco board game onto an A3 sheet. Play the game. You will need counters and a dice.

31 Tremors felt GO DOWN	32	33	34 1989 Earthquake GO DOWN	35 FINISH
30	29	28	27	26
21	22	23 San Francisco rebuilt in 6 years GO FORWARD	24	25
20	19 United States Mint building survives fire GO UP	18	17	16 Fires cause more damage GO DOWN
11	12 1906 Earthquake GO DOWN	13	14	15
10	9 Tremors felt GO DOWN	8	7	6
1 START	2 San Francisco develops GO FORWARD	3	4	5 San Francisco develops GO UP



BLM 2 – Multiple Intelligences

Rumbling Beneath the Surface **Name** _____

- Intrapersonal Intelligence

The story *Rumbling Beneath the Surface* uses dates as a feature to organise and tell the story. Each day sets the scene for the big event. Make up an event of your own. Fill in the days leading up to your event.

My major event is...

Day 1 _____

Day 2 _____

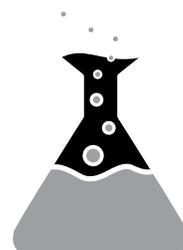
Day 3 _____

Day 4 _____

Day 5 _____

Day 6 _____

Day of the event _____



Rumbling Beneath the Surface **Name** _____

- Care and Compassion

What was Simon’s relationship with Grandma Betty. Answer the questions below.

How did Simon react when Grandma wanted to leave San Francisco, meaning he would miss the World Series baseball game?

How did Simon’s dad react when Grandma wanted to leave San Francisco?

What does this tell you about Simon? What does this tell you about his dad?

