

The Volcano Book: Erupting Near You

By Dr Gill Jolly

About the book

Written for primary school students, *The Volcano Book* takes the young reader on a spectacular journey to the centre of the earth. Clearly laid out, with information presented in a way children can manage and absorb, and accompanied by brilliant photographs along with maps and diagrams, this book is a very user-friendly resource.

Being about volcanoes, the book is also about fireworks, danger, death and destruction and survival against the odds — the very things certain to capture a child's imagination.

Book's contents (30 pages)

THE BIGGEST BANG ON EARTH

INSIDE THE GUTS — WHAT IS A VOLCANO?

LAVA AND ASHFALLS

WHERE IN THE WORLD — THE RING OF FIRE

Super volcanoes — TAUPO

Atomic volcanoes — MONTSERRAT

Total destruction — VERSUVIUS

Gentle giants — HAWAII

Fountain and flows — THE GALAPAGOS

Fire and ice — EREBUS

Moving mountains — MOUNT ST. HELENS

Rivers of concrete — RUAPEHU

Buried towns — NEVADO DEL RUIZ

Pimples on the face of the earth — AUCKLAND

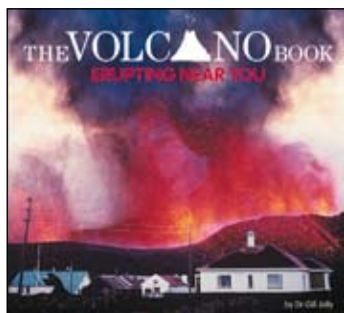
Long-lived eruptions — STROMBOLI

Where the earth splits apart — LAKI

Molten Limestone — OLDOINYO LENGAI

Survival stories

Glossary and Index



Learning activities

Arrange for class to speak with the author on-line, asking prepared questions. You can contact her through black dog books.

Seek the art teacher's assistance with the class's volcano model-making activity.

National Geographic has made a documentary DVD called *Volcano: Nature's Inferno* which would complement the study of this book. (Warner Home Video 1990).

Literacy

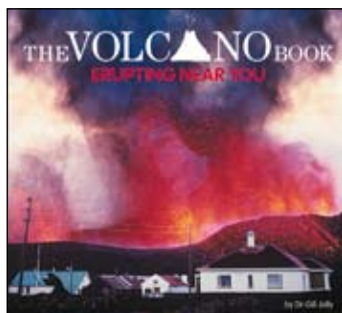
Introducing the book:

The book format

- What is the book's title?
- Who is the author?
- Where in the book can you find some information about the author?
- Look at the contents page — what are the first four chapters about?
- Go to p. 8 — what are the remaining chapters to p. 27 about?
- What information is contained in the sidebars?
- Where is the glossary and index?

Visual literacy

- What is the clever technique used in the front cover book title to draw the reader's attention to the subject of the book?
- Why do you think the photograph on the book's front cover has been chosen?
- Look at the photographs in the book — what do they tell you about volcanoes?



Letter writing

- Class activity: Using standard letter format, write a class letter to students at Meizan Primary School in Kashogima City asking them some questions about living so close to an active volcano — Sakurajima (see p. 5) Also, briefly tell them about yourselves and what town/city you come from. Remember to keep the letter simple as it will no doubt have to be translated when it reaches its destination.
- Include a class photograph, if you have one, and ask your teacher if you can write the letter on paper with the school letterhead.
- Before beginning your letter, do an internet search for Sakurajima and Kashogima City. Look at the photos and see how the city is situated at the base of the volcano.
- For students in W.A. — Kashagima City is a sister city of Perth.

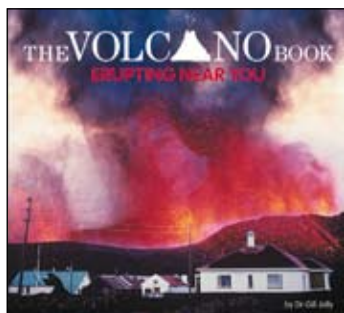
Address: Meizan Primary School,
6 – 43 Yamashita-cho,
Kagashima City,
Kagashima Prefecture,
Kyushu,
Japan 224-7126

Story writing — a survivor's tale

Scenario: Imagine ...you are holidaying with your family at a ski resort at Ruapehu in New Zealand and have been snowboarding all morning. Suddenly...

- What happens?
- What do you do?
- How do you survive?

(Don't forget to reread p. 20 about Ruapehu before beginning your story)



Science

Comparative exercise (using the book)

Working in pairs or small groups, have each pair/group do one comparison each and report findings back to class.

Compare the following volcanoes — the type of volcano, the type of eruption and consequences of the eruption, and then answer the questions below:

Questions:

- What are the similarities (if any) between the two volcanoes?
- How are they different?

Compare

1. Stromboli and Hawaii
2. Vesuvius and Montserrat
3. Oldoinyo Lengai and Taupo
4. Ruapehu and Nevado Del Ruiz
5. Mt St Helens and The Galapagos Islands
6. Erebus and Laki

Individual Research assignment

Part One:

1. Where is the only active volcano on Australian territory?
2. Describe where on a map it is located?
3. What is the volcano called?
4. When did it last erupt?
5. What does the volcano consist of?
6. What wildlife live in the area ?
7. Add any other interesting information. Include pictures.



(Answers: Mawson's Peak on Big Ben Mountain on Heard Island in the Southern Indian Ocean, 4100 km from Perth. Last erupted in 2001. Volcano consists of crater containing molten lava. Dense wildlife populations of penguins, seals and birdlife. Other information: Unique because no introduced predators such as cats and rats; Big Ben is a permanently glaciated mountain; Heard Island is World Heritage listed; sub-antarctic weather — freezing, wild, stormy, windswept.)

Part Two

Select one other area in Australia that has experienced recent volcanic activity (in geological terms, recent is defined as less than 40 million years ago)

Identify:

- The location (provide a map)
- The type of volcanic activity
- When the volcanic activity took place
- Current landforms resulting from the volcanic activity (include drawings or photographs)

Reference:

Assignment questions for Part 2 sourced from Recent volcanic activity in Australia @ <http://science.uniserve.edu.au/school/quests/ozvolcanoes.html>

This is also an excellent site for students to begin their research.

Art

Make a model of a volcano. Refer to p. 6 and choose one of the four types.

Planning is important. You may need to bring materials from home.



Integrated studies

Ancient History: Pompeii

- Describe some of the “snapshots of Roman life” which were revealed when Pompeii was uncovered.

(There are virtual tours of Pompeii available on the internet)

Endangered Species: the Galapagos tortoise

- In what ocean are the Galapagos Islands located? (Pacific)
- What South American country are they part of? (Ecuador)
- What is unique about the Galapagos tortoise? (largest tortoise in world, over 1.2 metres, can weigh over 250 kg and can live more than 150 years)
- What threatens its existence to-day? (introduced animals – cats, dogs, rats as predators, and cattle and goats compete for food causing food shortages and also destroy nests)
- What is being done to overcome these dangers? (National Park created, breeding program, eradication of introduced animals)

Iceland: Land of fire and ice

- Find Iceland on a map of the world
- In which ocean is Iceland located? (north Atlantic)
- What is the country's capital? (Reykjavik)
- Why do you think Iceland is called the Land of fire and ice? (Iceland is volcanically active. Glaciers are also a feature of the landscape)

Olduvai Gorge, Tanzania: The cradle of mankind

- Locate Tanzania on a map of Africa
- What is Tanzania's capital? (Dar es Salaam)
- What is the name of the valley in north Tanzania where the gorge is located? (The Great Rift Valley)
- Reread p. 27. Why do you think the gorge is called the Cradle of Mankind? (Oldest fossils of origins of man, hominids, have been found here. One of the most important prehistoric sites in the world).



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15 Gertrude Street Fitzroy Victoria 3065
03 9419 9406 dog@bdb.com.au

Teacher Notes

www.bdb.com.au/teachers



About the author

Dr Gill Jolly is a research scientist and volcanologist who likes getting up close and personal with her subject matter — she lives on top of a volcano! She has studied volcanoes and photographed them all her working life. She is the Volcanology Section Manager with GNS Science in Taupo, New Zealand.