

<b>Unit name:</b> Volcanoes	<b>EAL level:</b> C2	<b>Year level:</b> 7 or 8	<b>Duration:</b> Approximately 10-15 lessons
<b>Topic focus</b> <ul style="list-style-type: none"> <li>• how volcanoes are formed</li> <li>• what happens when a volcano erupts</li> <li>• different types of volcanoes</li> </ul>	<b>Victorian Curriculum F-10 EAL</b> By the end of the unit, students will be able to: <ul style="list-style-type: none"> <li>• interact with peers in pair or group work activities (<u>VCEALC614</u>)</li> <li>• locate specific information in factual texts (<u>VCEALC634</u>)</li> <li>• write information texts (explanations) based on modelled language and structure (<u>VCEALC654</u>)</li> </ul>	<b>Victorian Curriculum Capabilities</b> By the end of the unit, students will be able to: <ul style="list-style-type: none"> <li>• work effectively in a team (<u>VCPCSO041</u>)</li> <li>• synthesise information from multiple sources (<u>VCPCSO041</u>)</li> <li>• revise work based on feedback (<u>VCEALA658</u>)</li> </ul>	
<b>Topic-specific vocabulary</b> <ul style="list-style-type: none"> <li>• nouns (volcanoes, shield volcanoes, composite volcanoes, cinder cone volcanoes, magma, magma chamber, lava, ash, gas, pyroclastic flow, eruption, vent, crater, crust, mantle, tectonic plate)</li> <li>• verbs (build up, emerge, erupt, melt, flood, cool, form, force, settle, release)</li> <li>• adjectives (molten, active, dormant, extinct)</li> </ul>	<b>Linguistic structures and features</b> <ul style="list-style-type: none"> <li>• simple present tense (The rock <b>liquifies</b> and <b>becomes</b> magma)</li> <li>• noun groups with relative clauses (Runny lava that covers a large area)</li> <li>• coordinating and subordinating conjunctions: (<b>As</b> the pressure builds up,...)</li> <li>• simple passive (Volcanoes <b>are formed</b> when...)</li> <li>• pronunciation of difficult sounds as needed ([v] and [ei] in volcano)</li> <li>• word stress (vol<b>cano</b>, <b>erupt</b>)</li> <li>• sentence stress (<u>Magma escapes</u> through the <u>vent</u>)</li> </ul>	<b>Summative assessment</b> A written explanation about how one type of volcano is formed	

## Teaching and learning activities

*The amount of time taken to address each learning intention will vary. One learning intention does not necessarily correspond to one lesson.*

**Learning intention:** We are learning important vocabulary for talking about volcanoes.

**Success criteria:** I can write sentences about volcanoes using correct vocabulary.

1. Show students some pictures of volcanoes and/or short videos of eruptions. Use a [KWL chart](#) to brainstorm what students know and want to know about volcanoes. Students brainstorm in pairs before contributing to whole-class discussion.
2. Introduce the unit learning objectives (see first page). Keep these in a conspicuous place in the classroom and refer to them throughout the unit.
3. Distribute the [Introduction to Volcanoes text](#) (Version 1 or 2, or another version you have adapted for your class). If there are multiple levels in the same class, ask students to sit with others reading the same text. Read the text together and have students match the vocabulary to the correct definition. Encourage them to guess and discuss with their friends before looking up a translation. Encourage same-language peers to discuss the definitions of the new vocabulary in their home language.
4. Discuss the vocabulary as a whole class, encouraging all students to contribute to the discussion, and checking that all students understand. Explicitly teach correct pronunciation of the words, including correct word stress (**volcano**). Provide students with opportunities to practise saying the words and test each other's knowledge.
5. Play the [Volcanoes 101 video](#), letting students know that they will view it at least twice. Pause to elicit from students the technical vocabulary they learned through the text.
6. Distribute the [Introduction to Volcanoes questions worksheet](#). Students discuss in pairs and/or small groups whether they can already answer any of the questions. Check that students understand the questions and discuss how to listen for the answers. For example, you need to listen out for a number to answer the question "How many...".
7. Play the video again. Then, give students time to work in pairs and write answers in full sentences to each question, using their newly learned vocabulary. Discuss answers as a whole class.
8. Finish with an [exit slip](#) to help evaluate if the success criteria have been met. Students should complete the exit slip individually.

**Learning intentions:** We are learning how a volcano works. We are learning to join our ideas with conjunctions and sequencing words.

**Success criteria:** I can label a volcano. I can explain how a volcano works using conjunctions and sequencing words.

1. Begin with a [vocabulary revision game](#) to revise the vocabulary from the previous lesson.
2. Print and distribute the [diagram 'Inside a Volcano'](#). Project the diagram on the board and work with the students to label the diagram, adding new vocabulary where necessary. Monitor students' pronunciation of vocabulary and provide regular feedback.
3. Complete the [Sentence jumble](#). Give students the sentences on slips of paper; they work in pairs to put them in the correct order.
4. Explain that when you read or listen to someone speak, it is very boring to listen to a list of things! You need to add words that give your text some shape. Introduce the conjunctions *and*, *as*, *when*, *after*, and *while*, and the sequencing words *First*, *then*, *after that*, and *finally*. Demonstrate that the first group of words joins two events in the same sentence, while the second group of words joins ideas between different sentences. Give students plenty of practice through activities such as this worksheet about [sequence words](#).
5. Return to the sentence jumble activity. Students re-write the sentences they unjumbled using conjunctions and sequencing words. They compare results with a partner before sharing with the whole class.
6. Using the vocabulary, conjunctions, and sequencing words they've learned, students practise explaining the 'Inside a Volcano' diagram to a partner. Rotate the pairs so that students practise explaining the diagram to at least 3-4 different classmates. Circulate and give feedback on pronunciation, projection, word stress, etc. The students listening take notes and/or give feedback using a simple checklist.

**Learning intentions:** We are learning about the different kinds of volcanoes. We are learning to build more descriptive noun groups.

**Success criteria:** I can describe four kinds of volcanoes using descriptive noun groups.

1. Distribute [types of volcanoes](#) worksheet. Encourage students to try and guess the answers before discussing as a class. For a more advanced class, try the [jigsaw activity](#).
2. Project a picture of one type of volcano on the board and ask questions ("Where is it?" "What does it look like?"), to elicit descriptions from the students ("tall", "shaped like a cone", "in the Ring of Fire", "above the city of Pompeii", "covered in layers of ash and lava").
3. Explain that we are going to learn to make our writing more descriptive so that we can give more information to our readers. We are going to do that by building richer noun groups. Distribute the [noun group chart](#), adapted as necessary for the class, and take students through the different parts of a noun group (Note: a common misconception is that these are sentences. Help students to understand that these are not sentences as they do not have a main verb).

4. Build one or two noun groups together, pointing out that you do not have to use every column: for example, “A wide shield volcano in Hawaii” or “some hot, runny lava flowing out of the crater”. Then, students work in pairs to come up with more noun groups about volcanoes and put them in their chart. Circulate and provide feedback.
5. Choose one of the four kinds of volcanoes and construct a paragraph about it on the board, eliciting help from the students. Use the conjunctions and sequencing words from last lesson as well as the noun groups from this lesson. Verbalise your thinking process as you write (“Hmm, I think that sentence should go first, because it connects better with the previous sentence”) to help give students insight into the process of writing and revising.
6. Students choose one of the three remaining volcanoes and write their own paragraph. If students finish early, they should swap with a partner and give each other feedback using a simple checklist. Collect the paragraphs and use them to check for understanding of the vocabulary, concepts, and grammar.

**Learning intention:** We are learning the structures and features of an explanation.

**Success criteria:** I can use a rubric to assess an explanation.

1. Hand back the paragraphs with feedback. Students use the feedback to write 1-2 goals that they want to work on (“I want to use more conjunctions”, “I want to use a greater range of verbs”). Depending on how students went with that activity, they may need more explicit teaching or practice of some of the vocabulary, concepts, and grammar taught so far.
2. Explain to the students that they are going to research a type of volcano and write an explanation of how they form. Their explanation must include:
  - an introductory paragraph explaining what volcanoes are (this will be jointly constructed by the whole class)
  - an explanation of what causes volcanoes to form
  - an explanation of their volcano of choice (cinder cone, composite, shield, or lava dome)
  - a description of what happens when that type of volcano erupts.Adapt the task to suit the students. If you have students working at a C1 level, a shorter description of a volcano may be more appropriate. Advanced students could extend themselves by writing a historical report about a significant volcanic event.
3. Distribute a model text such as this [model information report](#) . The model text should be on a different but related topic, ideally one that students have studied before so they have some familiarity with the vocabulary. The language of the text should constitute an appropriate ‘stretch goal’ for students: beyond their current level, but accessible enough to be understood with support.
4. Read the model text as a whole class and/or in small groups, discussing the key language and structural features. Alternatively, students receive parts of the text jumbled up and arrange them in the right order.

5. Depending on the needs of your class, more explicit grammar teaching will be required at this point. Some students may need explicit teaching of the simple present tense, while more advanced students could learn the simple passive (“Volcanoes **are formed** when...”). Students require explicit teaching about how to form the grammatical structure and when to use it; deliberate practice in using the structure in a range of contexts; and opportunities to apply the structure meaningfully to the topic of study. See [sample lesson plan for teaching the passive](#) for an illustration of how this might work in practice.
6. Introduce students to the [rubric](#) and use questioning to ensure students understand what is expected of them.
7. Students work in pairs to assess the model text using the rubric. Discuss the answers.

**Learning intention:** We are learning research and note-taking skills.

**Success criteria:** I can take notes from at least 3 different sources (*can adjust number to differentiate success criteria*).

1. Distribute the [note-taking template](#). Demonstrate how to use it by reading a short text together and modelling how to take notes from it (key words only: no copying slabs of text). Discuss why note-taking is an important skill and ask students where they might use this skill in other subjects or units of work.
2. Provide students with access to a range of teacher-selected and/or adapted texts they can use to research their information reports. Students take notes in their note-taking template. While students are working, circulate and give feedback on the content of their research as well as their note-taking strategies (for example, are they selecting the most relevant information? Are they using key words or copying full sentences?).

**Learning intention:** We are learning how to write an explanation.

**Success criteria:** I can work with my classmates to write one paragraph of an explanation.

1. Explain that the class is going to write the first paragraph of our explanation together.
2. Working in pairs, students try writing an introductory paragraph with the heading “What is a volcano?” They refer to the goals they set themselves when they received feedback on their last paragraph. Provide sentence starters where students require more scaffolding (“Volcanos are formed when...”, “Lava comes from...”).
3. Work with the whole class to construct the paragraph on the board. Call on students for contributions and verbalise your thinking process (“I really like that sentence, but I think we should connect it to *this* sentence using a conjunction like “while”.) Students can use the jointly constructed paragraph as the first paragraph of their explanation, although some students may prefer to attempt their own.

**Learning intentions:** We are learning how to draft, edit, and self-assess our work.

**Success criteria:** I can improve my draft three times using feedback from myself, a friend, and the teacher.

1. Students complete their first draft, then self-assess using the rubric and make improvements as necessary.
2. They then swap with a partner and give each other feedback using the same rubric. They use this feedback to improve their draft a second time. On the board, brainstorm useful phrases for peer feedback, for example:
  - *I like...*
  - *You included... many noun groups in this paragraph.*
  - *You used... several different conjunctions to join your ideas.*
  - *I think you should...*
  - *Your report would be even better if...*
3. Students submit this third draft to the teacher for feedback.
4. Students use teacher feedback to produce the final copy of their explanation.
5. Students share their work with one another using a gallery walk (the articles are stuck up around the room, students rotate around the room, reading the explanations and providing feedback on post-it notes).
6. Return to the KWL chart. In pairs or small groups, students brainstorm the key things they learned during the unit.
7. Elicit feedback from the students about the unit, for example, by asking questions such as:
  - a. What are the most important things I learned?
  - b. What parts of the unit did I enjoy the most, and why?
  - c. What parts of the unit did I not enjoy, and why?
  - d. Which activities helped me learn the most?

**KWL Chart**

What do we <b>know</b> about volcanoes?	What do we <b>want to know</b> ?	What have we <b>learned</b> ?

# Introduction to Volcanoes 1



Read the text and then match the words with the definitions.

Volcanoes **form** when rock beneath the earth's **crust** becomes so hot that it turns to **liquid**. This **molten** rock is called **magma**. The magma **erupts** through an opening, or **vent**, in the crust. Once magma escapes from the earth, it is called **lava**.

Not all lava is the same. Some lava is **runny** and **flows** very quickly. Runny lava **forms** the **gentle slopes** of **shield volcanoes**. Thick lava flows slowly and forms the **steep slopes** of **composite volcanoes**.

Most of the earth's volcanoes are in the **Ring of Fire**, which is a path around the edge of the Pacific Ocean. Living near a volcano can be dangerous. In the year AD89 Mount Vesuvius erupted, destroying the city of Pompeii. But volcanoes also bring **benefits**. Volcanoes created 80% of the earth's surface as well as much of the air we breathe today.

*Text adapted from National Geographic 'Volcanoes 101': [Volcano 101 | National Geographic - YouTube](#)*

Match the words with the definitions and/or pictures.

vent	shield volcano	Ring of Fire	form
gentle slope	benefit	composite volcano	crust
liquid	molten	magma	erupt
steep slope	lava	runny	flow

1. An opening in the earth's surface: \_\_\_\_\_ **vent** \_\_\_\_\_
2. Liquid that is thin and runs easily: \_\_\_\_\_
3. A path around the edge of the Pacific Ocean, where many of the world's volcanoes are located: \_\_\_\_\_

4. A volcano with steep sides in the shape of a cone: \_\_\_\_\_



5. A substance like water that is not solid or gas: \_\_\_\_\_

6. A wide volcano with gentle slopes: \_\_\_\_\_



7. An advantage (good thing): \_\_\_\_\_

8. When something that is normally hard, like rock, is so hot it becomes liquid: \_\_\_\_\_

9. Molten rock in or below the earth's surface: \_\_\_\_\_



10. Start ejecting lava and other substances:

\_\_\_\_\_

11. What magma is called when it is above the earth's surface:

\_\_\_\_\_



12. The top layer of the earth: \_\_\_\_\_

13. When the side of a mountain goes up slowly:

\_\_\_\_\_



14. When the side of a mountain goes up quickly:

\_\_\_\_\_



15. The way liquid or gas moves: \_\_\_\_\_

16. Make/create: \_\_\_\_\_

## Introduction to Volcanoes 2



Read the text and then match the words with the definitions.

Scientists used to think that volcanoes were mountains of fire. Today, we know they are openings, or **vents**, in the **surface** of the earth. About 1,500 volcanoes around the world are **active**, and most of these are in the **Ring of Fire**.

Volcanoes often **form** at the edges of **tectonic plates**. Tectonic plates are big pieces of rock that fit together like puzzle pieces. They cover the earth's surface and are moving very slowly. When tectonic plates meet, the rock beneath the **crust** becomes so hot that it **liquifies**. This **molten** rock, or **magma**, becomes a volcano when it **erupts** through an opening in the earth's surface. Once magma escapes from the earth, it is called **lava**.


Not all lava is the same. Some lava is **runny** and **flows** very quickly. Runny lava forms the **gentle slopes** of **shield volcanoes**. Thick lava does not flow as far and forms the **steep slopes** of **composite volcanoes**.

Living near a volcano can be **hazardous**. In the year AD89 Mount Vesuvius erupted, **releasing** a cloud of **ash, gas**, and rock called a **pyroclastic flow**, which destroyed the city of Pompeii. However, while volcanoes can be very dangerous, they also bring **benefits**. Volcanoes created 80% of the earth's surface as well as much of the air we breathe today.

*Text adapted from National Geographic 'Volcanoes 101': [Volcano 101 | National Geographic - YouTube](#)*

Match the words with the definitions and/or pictures.

vent	Ring of Fire	tectonic plates	liquify
molten	magma	erupt	lava
shield volcano	composite volcano	benefit	pyroclastic flow
runny	flow	gentle slope	form
steep slope	gas	surface	release
active	crust	hazardous	ash

1. An opening in the earth's surface: \_\_\_\_\_ **vent** \_\_\_\_\_
2. Liquid that is thin and runs easily: \_\_\_\_\_
3. A path around the edge of the Pacific Ocean, where many of the world's volcanoes are located: \_\_\_\_\_
4. Dangerous: \_\_\_\_\_
5. A volcano with steep sides in the shape of a cone: \_\_\_\_\_  

6. Make something liquid: \_\_\_\_\_

7. Slabs of rock that make up the surface of the earth:

\_\_\_\_\_



8. The grey or black substance that remains after something is burnt:

\_\_\_\_\_

9. A wide volcano with gentle slopes:

\_\_\_\_\_



10. An advantage (good thing): \_\_\_\_\_

11. A hot and fast-moving combination of ash, rock, and gas that comes out of a volcano:

\_\_\_\_\_

12. When something that is normally hard, like rock, becomes liquified by very high heat:

\_\_\_\_\_

13. A substance that is not solid or liquid, and which has no fixed shape or volume:

\_\_\_\_\_

14. Molten rock in or below the earth's surface:

\_\_\_\_\_

15. Start ejecting lava and other substances:

\_\_\_\_\_

16. What magma is called when it is above the earth's surface:

\_\_\_\_\_

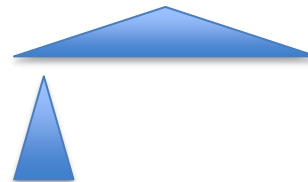


17. When the side of a mountain goes up quickly:

\_\_\_\_\_

18. When the side of a mountain goes up slowly:

\_\_\_\_\_



19. Let out: \_\_\_\_\_

20. The way liquid or gas moves: \_\_\_\_\_

21. Make/create: \_\_\_\_\_

22. The top of something: \_\_\_\_\_

23. A volcano that still erupts: \_\_\_\_\_

24. The top layer of the earth: \_\_\_\_\_

## Introduction to Volcanoes – Questions

1. What is a volcano?
2. How many volcanoes around the world are classified as active?
3. The earth's crust does not move. **True / False**
4. Where do volcanoes often form?
5. What is the difference between magma and lava?
6. Describe two different kinds of lava.
7. What happened in the year 79 AD?
8. Name three benefits that volcanoes bring to humans.
9. Join the type of volcano to the definition (this information is not in the video).

Active	Dormant	Extinct
--------	---------	---------

1. A volcano that has erupted recently or is currently erupting:  
\_\_\_\_\_
2. A volcano that has not erupted for a long time, and will probably never erupt again: \_\_\_\_\_
3. A volcano that has not erupted recently, but which may erupt again in the future: \_\_\_\_\_

## **Exit slips**

Exit slips are a good way to quickly check for understanding at the end of a lesson. They do not replace ongoing checks for understanding that happen throughout a lesson.

In the last few minutes of the lesson, write 2 or 3 questions on the board that summarise the main take-aways from the class. Give each student a post-it note and ask them to answer the questions before leaving. For example:

1. What is a volcano?
2. What is the difference between active, dormant, and extinct volcanoes?

You can also use exit slips to help students reflect on their effort and/or learning:

1. What is the most interesting thing you learned this lesson?
2. What did you find difficult to understand?
3. What questions do you have about volcanoes?

## Vocabulary revision games

These games work well in the early surface-learning stages of vocabulary acquisition. They are particularly good to use with a class that is a little tired or during a lesson that has finished a bit earlier than expected. Be mindful that these games may be more challenging for EAL students: ensure that they are adequately supported (for example, by being paired with a trusted peer) and are not put on the spot.

These games do not suffice to bring about long-term retention of new vocabulary: this requires students to encounter and use the vocabulary repeatedly in meaningful ways.

### 1. Bingo

Give students a list of vocabulary to choose from. Individually or in pairs, students draw a table with nine cells and write one word in each cell. Read out the definitions of words, for example, “Hot, molten rock under the earth’s crust.” If a student has the correct word on their sheet (“Magma”), they should put a cross through it. When a student gets three crosses in a row, they shout “Bingo!”

### 2. Quizlet

An excellent website for practising vocabulary is Quizlet.com. Teachers can create vocabulary sets for students to revise, or students can create their own, in which they can include translations into a different language. Once students have had adequate time to practise their vocabulary individually, you can play a whole-class game of Quizlet Live, where students have to work in randomly generated teams to answer the questions correctly.

### 3. Run-to-the-whiteboard

This game is quite rowdy and can be useful for injecting some energy into a lesson. Divide students into two teams and have each team line up perpendicular to the whiteboard. Read out the definition of a word and give each team time to discuss it. Then, when you say “Go!”, the first student in each team must run to the whiteboard and write the correct word as quickly as possible. Allowing students to go up to the whiteboard in pairs may make some students feel more comfortable. Don’t be too strict with scoring: if both teams write the word correctly, give them both a point!

### 4. Heads up

Students hold a word on a card up to their forehead. They ask their partner or groupmates questions to determine which word they have. To make it into more of a game, give students one minute to guess as many words as they can.

### 5. Revision cards

This activity also works well for general knowledge revision and is a good speaking and listening activity. Give students some cue cards or have them make their own by cutting out squares from firm paper. They write a vocabulary item on one side and a definition or translation on the other. Students walk around the room, using the cards to quiz each other on the vocabulary.

Sentence jumble

Rock beneath the crust melts and becomes magma.

Magma gathers under the volcano in the magma chamber.

Pressure forces the magma up and out of the main vent.

Lava flows out of the crater.

Rock, dust, and ash shoot out of the crater.

Ash settles in layers over the volcano.

Lava covers the ash and solidifies, forming layers of ash and lava.

*Adapted from Jacaranda Science Quest 9 by Graeme Lofts*

## Types of Volcanoes

Match the type of volcano to the definition.

Cinder cone	Composite volcano	Shield volcano	Lava dome
-------------	-------------------	----------------	-----------

1. These are the simplest type of volcano. They are formed from lava ejected from a single vent. As the lava is blown into the air, it breaks into small fragments that solidify and fall as cinders around the vent to form a circular or oval cone.



Answer: \_\_\_\_\_

2. These are wide volcanoes with gentle slopes that are built almost entirely of lava flows.



Answer: \_\_\_\_\_

3. They are formed by small amounts of thick lava that do not flow very far. The lava piles up over the vent.



Answer: \_\_\_\_\_

4. These are tall, steep-sided volcanoes. They are formed from layers of lava and ash.



Answer: \_\_\_\_\_

Adapted from [Volcanoes: Principal Types of Volcanoes \(usgs.gov\)](https://www.usgs.gov/volcanoes/types)



### Jigsaw Activity

1. Divide students into groups of four. Give each student a different section from the [article about different kinds of volcanoes](#) (adapt the article to suit your students' language levels).
2. Ask students to sit with others who are studying the same type of volcano. Working in groups, students read the article and take notes. (If students have not done a similar activity before, model the process first).
3. Students return to their original groups and take turns to teach the others about their type of volcano. While listening, students need to take notes in their Volcanoes chart:

Cinder cones	Composite volcanoes
Shield volcanoes	Lava domes

4. Check to ensure that all students have a good understanding of the key features of the four types of volcanoes: for example, through a short quiz, an exit slip, or through informal questioning. If required, follow up the jigsaw activity with a whole-class discussion.

*Adapted from [Volcanoes: Principal Types of Volcanoes \(usgs.gov\)](#)*

## Model Information Report

Adapted from [an article by Lisa Wald](#).

Adapt as needed to suit the language levels of your students, and/or select a more appropriate text based on a topic they have studied before.

### Earthquakes

#### What is an earthquake?

An earthquake is what happens when two blocks of the earth suddenly slip past one another. **The surface where they slip** is called the fault or fault plane. The location below the earth's surface where the earthquake starts is called the hypocenter, and **the location directly above it on the surface of the earth** is called the epicenter.

Sometimes an earthquake has foreshocks. **These** are smaller earthquakes that happen in the same place as the larger earthquake that follows. The largest, main earthquake **is called** the mainshock. Mainshocks always **have** aftershocks that follow. These **are** smaller earthquakes that occur afterwards in the same place as the mainshock. Aftershocks can continue for weeks, months, and even years after the mainshock.

#### What causes earthquakes and where do they happen?

The earth has four major layers: **the inner core, outer core, mantle and crust**. The crust and the top of the mantle make up a thin skin on the surface of our planet. **This** skin is not all in one piece – it **makes up** many pieces like a puzzle covering the surface of the earth. Not only that, but these puzzle pieces keep slowly moving around, sliding past one another and bumping into each other. These puzzle pieces **are called** **tectonic plates**, and the edges of the plates are called the plate boundaries. The **plate boundaries** are made up of many faults, and most of the earthquakes around the world occur on these faults. Since the edges of the plates are rough, they get stuck while the rest of the plate keeps moving. **Finally**, when the plate has moved far enough, the edges unstick on one of the faults and there is an earthquake.

#### Why does the earth shake when there is an earthquake?

**While** the edges of **faults** are stuck together, and the rest of the block is moving, the energy that would normally cause the blocks to slide past one another is being stored up. **When** the force of the moving blocks finally overcomes the **friction** of the jagged edges of the fault and it unsticks, all that stored up energy is released. The energy **radiates** outward from the fault in all directions in the form of **seismic waves** like ripples on a pond. The **seismic waves** **shake** the earth **as** they move through it, and when the waves reach the earth's surface, they shake the ground and anything on it.

Heading  
Sub-headings

Noun groups with relative clauses and/or prepositional phrases

Explanation of key terms

Demonstratives

Simple present tense

Technical vocabulary

Passive

Third-person (it/they etc.):  
no "I"

Sequencing words

Conjunctions

### Volcanoes information report rubric

Something you could improve...	<b>Standards</b>	I liked...
	The information report... ... was written in third person and simple present tense.	
	... contains all of the required information.	
	... uses the technical vocabulary accurately.	
	... uses conjunctions and sequencing words effectively.	
	... includes a range of descriptive noun groups.	

*This is a single-point rubric. Refer to <https://www.teachthought.com/pedagogy/how-single-point-rubrics-can-improve-quality-student-work/>*

### Note-Taking Template

Name:

Topic:

	Source 1	Source 2	Source 3	Source 4
<b>Title</b>				
<b>Author/s</b>				
<b>Date</b>				
<b>URL</b>				
<b>Notes</b> (key words only: don't use full sentences)				



<p>2. Check for understanding before moving on. For example, put two sentences on the board and see if students can identify the correct one. Give students time to think individually and discuss in pairs before you call on them.</p>	<p>Questioning</p>
<p><b>Guided practice</b></p>	
<p>1. Give students plenty of opportunity to practise the skill of using the passive voice through exercises such as those in Raymond Murphy's <i>English Grammar in Use</i>. Students should do the exercises individually but should be encouraged to discuss their answers in pairs or small groups. Students who have already learned the simple passive can work together on more advanced structures, such as the continuous passive ("The house is still being built") or perfect passive ("Have the bins been emptied?").</p>	<p>Multiple exposures Collaborative learning Differentiated teaching</p>
<p>2. Correct exercises as a whole class, identifying and addressing any common misconceptions. If students make a mistake when sharing an answer, frame this in a positive light ("I'm glad you shared that answer, because we can all learn from it.").</p>	<p>Feedback</p>
<p>3. Develop students' fluency and automaticity with using the passive through speaking activities. For example, project on the board a picture of a very messy room where many things have been broken, turned upside-down etc. Students work in pairs to brainstorm passive sentences to describe the room: for example, <i>The window was broken. The table was tipped over. Rubbish was left on the floor.</i></p>	<p>Multiple exposures Collaborative learning</p>
<p>4. Bring students back to the topic by looking at a text on volcanoes that you have read together. Students work in pairs to highlight examples of the passive voice in the text. Circulate and discuss with students why the author may have chosen to use the passive there. Point out that there are certain verbs that are commonly used in the passive (e.g. <i>is formed, is called</i>).</p>	<p>Multiple exposures</p>
<p><b>Independent practice</b></p>	
<p>1. Students write a paragraph explaining why volcanoes explode, using the passive voice where appropriate. Collect these paragraphs at the end of class to evaluate how well students can use the passive voice and provide feedback.</p>	<p>Feedback</p>
<p><b>Conclusion</b></p>	
<p>1. Students submit their paragraphs and complete an exit slip reflecting on what they have learned. Write three sentence starters on the board:</p> <ol style="list-style-type: none"> <li>1. Today I learned...</li> <li>2. I don't understand...</li> <li>3. I want to know...</li> </ol> <p>Students complete these sentences on a post-it note. Use these exit slips and paragraphs to plan for the following lessons.</p>	<p>Metacognitive strategies</p>

## References

Custance, B. (no date). Resources.

[https://bronwyncustance.com/index.php?option=com\\_content&view=article&id=20&Itemid=118](https://bronwyncustance.com/index.php?option=com_content&view=article&id=20&Itemid=118)

Lofts, G., & Evergreen, M.J. (2017). *Jacaranda Science Quest 9* (3<sup>rd</sup> ed.). Australia: John Wiley and Sons.

Murphy, R. (2019). *English Grammar in Use* (5th ed.). Cambridge: Cambridge University Press.

National Geographic (2008). Volcanoes 101. Viewed 30<sup>th</sup> March 2021,

<https://www.youtube.com/watch?app=desktop&v=uZp1dNybfgc>

United States Geological Survey (2011). Principle types of volcanoes.

<https://pubs.usgs.gov/gip/volc/types.html#:~:text=Geologists%20generally%20group%20volcanoes%20into,shield%20volcanoes%2C%20and%20lava%20domes.>

Wald, L. (no date). The Science of earthquakes. [https://www.usgs.gov/natural-hazards/earthquake-hazards/science/science-earthquakes?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/natural-hazards/earthquake-hazards/science/science-earthquakes?qt-science_center_objects=0#qt-science_center_objects).

Perkins, D. (2019). How single-point rubrics can improve the quality of student work. [How Single-Point Rubrics Can Improve The Quality Of Student Work \(teachthought.com\)](https://www.teachthought.com/assessment/single-point-rubrics/)

## Images

"Alaska's Pavlof Volcano: NASA's View from Space" by [NASA Goddard Photo and Video](https://www.nasa.gov/photo/10/100010main_pavlof_080902.jpg) is licensed under [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/)

"Cinder Cone volcano" by [LassenNPS](https://www.nps.gov/lassen/learn/activities/visiting/visiting-lassen-national-forest.htm) is licensed under [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/)

"Erta Ale Volcano Magma lake" by [pierre c. 38](https://www.pierre.c.38.com/) is licensed under [CC BY-NC-SA 2.0](https://creativecommons.org/licenses/by-nc-sa/2.0/)

"File:Mt. Fuji is a dormant composite volcano that is the highest mountain in Japan..jpg" by [Tkngano802](https://commons.wikimedia.org/wiki/File:Mt._Fuji_is_a_dormant_composite_volcano_that_is_the_highest_mountain_in_Japan..jpg) is licensed under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/)

"Map Of Major Tectonic Plates In The World" by [BlatantWorld.com](https://www.blatantworld.com/) is licensed under [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/)

"Mt. Cleveland Lava Dome" by [U.S. Geological Survey](https://www.usgs.gov/) is marked with [CC PDM 1.0](https://creativecommons.org/licenses/pdm/1.0/)

"Sierra Grande Shield Volcano (Raton-Clayton Volcanic Field, northeastern New Mexico, USA)" by [James St. John](https://www.jamesstjohn.com/) is licensed under [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/)