



AN INTERACTIVE DOCUMENTARY:

# MERAPI

STORIES FROM THE VOLCANO

A study guide by Josephine Lie

[www.merapistories.com](http://www.merapistories.com)



## OVERVIEW

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*Merapi: Stories from the Volcano* is an online interactive documentary exploring the 2010 eruption of Indonesia's Mount Merapi. Shot over 15 days, this project travels to locations around the volcano to hear the personal experiences of local individuals and depict the reality of living near one of the world's most active volcanoes.

*Merapi: Stories from the Volcano* is available to view at [www.merapistories.com](http://www.merapistories.com)

The phenomena of volcanic eruptions are not rare in a country like Indonesia, which lies precariously in an area referred to as the 'Ring of Fire'. The many active volcanoes in the country has characterised Indonesia's unique geography and has allowed for a relationship of reverence and unease to develop between the volcanoes themselves and the people residing near them. Mount Merapi, located in Central Java, is one such example of this intriguing relationship in action as the volcano remains seismically volatile yet hugely significant to the region's cultural and spiritual profile.

In October 2010, Indonesia's Mount Merapi erupted in a spectacular fury of ash and lava. The thousands of village residents forced to evacuate from its slopes were not the only ones affected, with disruptions impacting airports, local businesses, and the wider community alike. The large scale and impact of this eruption captured through a variety of new media and social networking allows this particular seismic occurrence to be examined more broadly and diversely than ever before.

*Merapi: Stories from the Volcano* serves as an educational instrument through its user-driven interactive platform of 21 diverse portrait documentaries that endeavour to illustrate a realistic representation of the eruption for students who may not be familiar with such an event. A broad examination of the 2010 eruption is further provided with the site's theme-driven interface allowing for customisable user-navigation and a unique classroom resource.

# CURRICULUM APPLICABILITY

## CONTENT CONSIDERATIONS

Some videos featured in this resource contain references to human death and depict the act of smoking – and may not be appropriate for some students.

Care should be taken when assigning related research to students, as graphic imagery pertaining to past eruptions is readily available to view online.

## TECHNICAL CONSIDERATIONS

Check that students have access to Adobe Flash Player before beginning activities.

Due to the digital nature of this resource, teachers should be aware that [www.merapistories.com](http://www.merapistories.com) operates with Adobe Flash Player accessed via desktop computer or laptop. Adobe Flash Player is easily downloadable from the site.

A moderate to high speed internet connection is also strongly encouraged for optimum site operation.

## Indonesian Studies

*Merapi: Stories from the Volcano* is a relevant resource for Indonesian Language and Culture students. The resource not only addresses the distinct geography of Indonesia, but goes beyond the surface of the natural disaster to explore the effects on the local Central Javanese community. It raises issues of the advantages and disadvantages of living so close to an active volcano through the eyes of local village residents whose livelihoods are dictated by the volcano's activity.

As a secondary use, the resource provides Indonesian language opportunities through its interviewees with local Indonesians. While subtitles have been supplied in accordance to the open publication of the website, such videos can be used to for listening and comprehension exercises.

## Geography

The website's focus on the Mount Merapi volcano presents an in-depth case study of the geographic phenomena from an environmental science perspective. Students can learn about the unpredictable nature of a volcanic eruption as a springboard into the basic natural causes and activity of a volcano. Students will also be able to gauge the realistic impact an eruption of this magnitude could have on its surrounding area.

## Society and Culture

*Merapi: Stories from the Volcano* could also be used in Society & Culture topics through its diverse depiction of contemporary Indonesia and its people. The 21 Indonesian individuals featured in the resource represent different demographics of age, gender, and religion, as well as the differing roles each played during & after the eruption.

## SYLLABUS LINKS\*

<b>NSW</b>	Stages 1-5 Indonesian HSC Stage 6 Indonesian Beginners HSC Stage 6 Indonesian Continuers Geography (Elective) – Content for Years 7–10 HSC Stage 6 Earth and Environmental Science
<b>VIC</b>	VCE Indonesian First Language
<b>QLD</b>	QSA Senior Syllabus Indonesian QSA Senior Syllabus Geography QSA Senior Earth Science
<b>SA</b>	SACE Indonesian Beginners (stage 1 and 2) SACE Indonesian Continuers SACE Geography (Stage 1 and 2)
<b>WA</b>	WACE Indonesian Background Speakers WACE Indonesian Second Language WACE Geography

<b>TAS</b>	LOTE Indonesian K-10 TQA Indonesian TQA Geography
<b>NT</b>	NTCET Indonesian Beginners NTCET Indonesian Continuers
<b>ACT</b>	Year 12 Certificate Indonesian Beginning Year 12 Certificate Indonesian Continuing Year 12 Certificate Earth Science Year 12 Certificate Cultural Studies
<b>OTHER</b>	The Australian Curriculum (to be implemented in 2013) Science F-10 (Year 6, Year 9)

\*NOTE: Subject to change. Syllabus links are suggestions only and have been determined to be applicable at the time of Study Guide publication.

# NAVIGATING THE SITE

The characterising feature of this interactive documentary is its user-driven interface which can be used to navigate through different themes, categories and individuals. Customise student navigation of the site by targeting particular issues or activities - some suggestions are available on page 10 of this study guide.



PURDIWIYONO > THEMES:  
EVACUATION, SHELTERS,  
ASSISTANCE



## OPENING VIDEO

The website opens immediately with a brief video that contextualises Indonesia and Mount Merapi while using real footage from the 2010 eruption.

## VIDEOS

Hover over circle profiles to reveal a brief synopsis, audio greeting, and suggested thematic links to other videos. When selected, the video will open separately over the interface.

## CATEGORIES

Each video belongs to a particular group represented on different 'tiers'.

- Village Residents
- Volunteers & Coordinators
- Wider Community

## THEMES

Each video contains themes & colours that have been allocated according to the video's content. They include:

- SOUNDS
- EVACUATION
- SHELTERS
- ASSISTANCE
- COMMUNICATION
- ASH
- SPIRITUALISM
- MOVING ON

## FILTER

Hover over a theme to reveal all related video links. Select a theme, and only those videos containing that theme will remain on the interface.

## OTHER PAGES

Background information and gallery containing all videos and photographs.

# MOUNT MERAPI: A BACKGROUND

## INTRODUCTION & LOCATION

Mount Merapi (also referred to as Gunung Merapi) is located in Central Java, Indonesia. It is classified as 'stratovolcano' due to the layers of volcanic material that comprise its structure of 2968 metres in height.

Mount Merapi is situated in what is referred to as a 'subduction zone' – where the Indo-Australian Plate is being pushed under the Eurasian Plate causing significant seismic activity and forming its reputation as Indonesia's most active volcano. In more recent times, it has maintained its active status through its regular eruptions which have had varying impacts upon the community.

Many local residents call the slopes of Merapi home, with its fertile soil allowing many to engage in traditional farming methods. The cultivation of rice paddies, the growing of particular vegetables, and the keeping of live stock provide livelihoods.

Residing south of the volcano is the province of Jogjakarta – an area famous for its Javanese art and culture.



Rice cultivation in Kaliurang - near Mount Merapi (top)  
Street scene in nearby Jogjakarta (bottom)

## BELIEFS

The volcano also bears notable spiritual significance to this local Javanese community. Merapi forms what is referred to as the scared north-south axis line; when viewed from above, this axis joins Mount Merapi's peak, Tugu monument, Sultan's palace, southern alun-alun, and the Southern Ocean – where it is believed that the Nyi Roro Kidul (Queen of the South Seas) resides. This axis links together the ancient spirits of the volcano, the Sultan – leader of the Javanese kingdom, and the ocean deity.

Traditional beliefs speak of a spirit residing inside each Indonesian volcano including that of Mount Merapi. The Merapi volcano therefore has a Spiritual Gatekeeper (juru kunci) who has been appointed by the Sultan of Jogjakarta to appease the volcano spirit through regular offerings. The Gatekeeper at the time of the 2010 eruption was Mbah Maridjan. Such beliefs add a complex dimension to the Merapi eruption as conflicting information between spiritual beliefs and official warnings from government authorities have been a point of contention.

It is important to note that these beliefs vary greatly, and while they are common knowledge, the degree to which they instruct the actions of local individuals differ hugely.



## THE 2010 ERUPTION

1. Cangkringan area after the eruption - featured in videos *Tjipto & Agung*
2. Damage to trees
3. Remains of house in Cangkringan area
4. Volcanic ash from the eruption in Selo - featured in *Woyo* video
5. Extreme heat from the eruption and ash

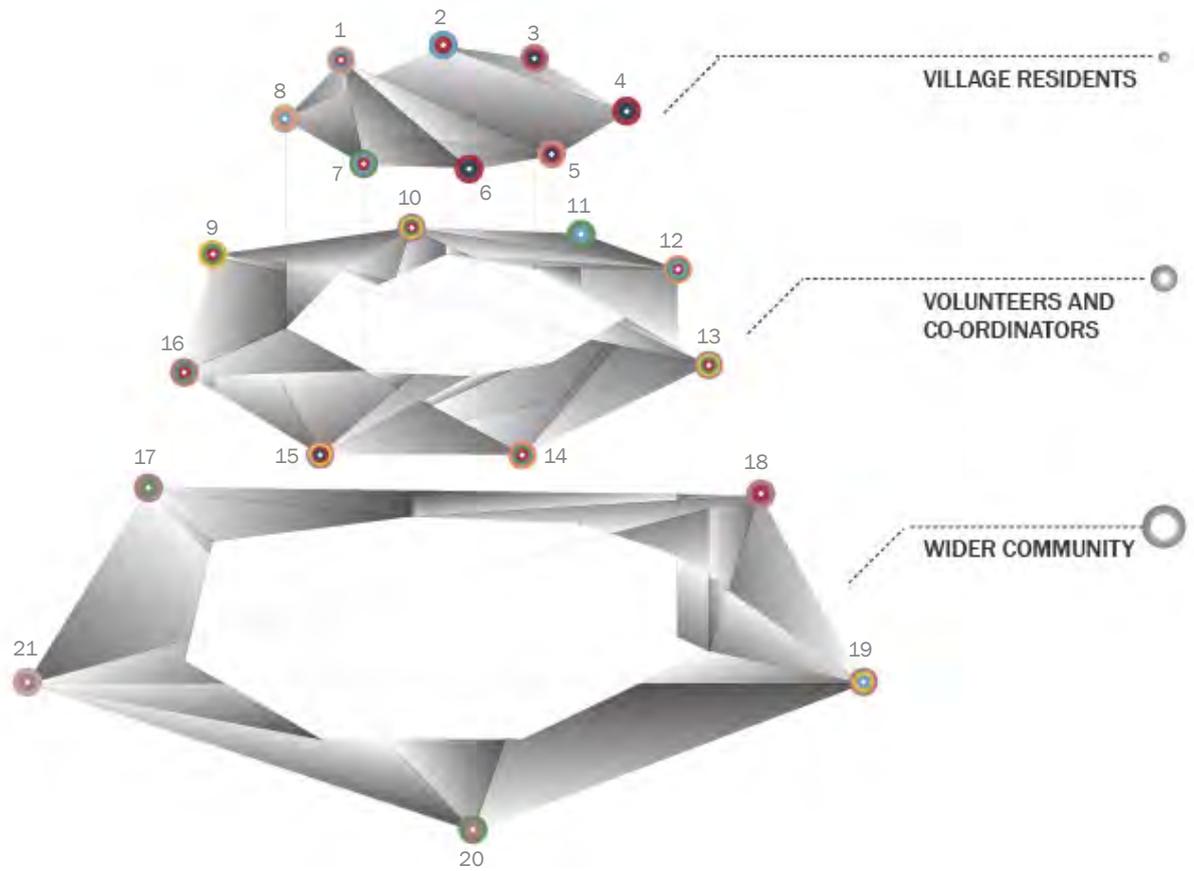
The 2010 eruption of Mount Merapi was just one of many recent eruptions by the active volcano. Beginning in late October and continuing through to early December, the eruption caused thousands of locals residing near the volcano to flee and claimed over 300 lives in the process. Exact figures of the toll taken by the eruption differ according to various sources as it proved difficult to keep account of the many rural residents.

Not all surrounding residents were affected equally by the eruption. In the case of Cangkringan in Slemen area, entire village areas were wiped out with many residents still living in temporary home shelters months later. In such areas, property, livestock and crops were lost due to pyroclastic flows (hot toxic gas that surge from an eruption), and surviving residents were forced to contend with a lack of clean drinking water as well as general sanitation concerns.

Of the many others forced to stay temporarily in evacuation camps located in various areas in the surrounding area, similar issues of lacking clean water and sanitation emerged.

The eruption caused major disruptions in the area including in nearby Jogjakarta city with temporary airport closures and persistent ash fall affecting businesses and the wider community alike. Lahar deposits (volcanic mudflow) also proved an ongoing issue with the deposits causing blockages in the multiple river systems that descend from the volcano. Mount Merapi continues to be closely monitored.

# FEATURED VIDEOS



The 21 Indonesian individuals featured in the documentary represent different demographics of age, gender, and religion, as well as the differing roles each played during & after the eruption.



## HARDI

*The best fertiliser*

Hardi, a farmer from the Umbulharjo village, explains why he continues to return to his village despite the impending danger of the next eruption. Proudly displaying his crops of new corn and peanuts, Hardi is convinced of the volcano's role in providing such fertile soil.

VILLAGE RESIDENT | ● ● ● ●



## WANTI

*Five people. One motorbike.*

Wanti narrates her story of evacuation which had her giving birth to a baby girl a mere two days after the first eruption. From her current residence in a temporary home, Wanti describes how she escaped on a single motorbike with her grandmother, husband, son and new born child.

VILLAGE RESIDENT | ● ●



## YOGA

*Separated by ash*

Secondary school student Yoga describes being separated from his parents during the havoc of having to evacuate from his home in Muntilan (east of Mt. Merapi).

VILLAGE RESIDENT | ● ● ●



### **TJIPTO**

*What can happen in a minute*

Ibu Tjiptop recounts the sounds and panic of evacuating during the eruption. Upon her return, she is devastated to discover the extent to which the eruption has destroyed her village.

VILLAGE RESIDENT | ● ●



### **WOYO**

*Gift or curse?  
In the shadow of 3 volcanoes.*

Farmer Woyo explains how his crops were affected by the volcanic ash from his picturesque village of Selo, north of Merapi. He provides insights into particular local beliefs that may explain why his village was spared from most of Merapi's impact.

VILLAGE RESIDENT | ● ● ● ●



### **PONIRAN**

*Rumbling and rattling by the Gendol River*

From his location at the Gendol River, farmer Poniran describes hearing the eruption and the daily reality as a displaced evacuee.

VILLAGE RESIDENT | ● ●



### **PURDIWIYONO**

*Where his house once stood.  
Stories by the campfire.*

Speaking by a campfire near the remains of his destroyed house, Purdiwiyono speaks of government assistance, the onset boredom as an evacuee, and his stubborn refusal to live anywhere else.

VILLAGE RESIDENT | ● ● ●



### **WIGNYO**

*The Gatekeeper and life in the shelter*

Wignyo details the role his older brother, the late Mbah Maridjan, played as Mount Merapi's Spiritual Gatekeeper. Speaking from a temporary shelter, Wignyo describes his day to day existence in his situation as a displaced village resident.

VILLAGE RESIDENT | ● ● ●



### **BUDHI**

*Talking tweets: the role of social media in the emergency*

As a contributing founder of an online Merapi forum, Budhi describes how Facebook and Twitter were used to quickly inform volunteers about the ever-changing emergency situation.

COORDINATOR | ● ● ●



### **INNA**

*A pair of swimming goggles and a little faith*

Volunteer coordinator, Inna, recounts her dramatic tale of assisting evacuees armed with little more than a helmet, mask, and a pair of swimming goggles. Utilising the tools of social media and a sense of humour, Inna tells a story of community spirit and generosity.

COORDINATOR | ● ● ● ●



### **UKI**

*Volcanoes, eruptions, and ...drag shows?*

Uki describes an unconventional method of fundraising used by members of the gay & lesbian community to help the affected residents near Mount Merapi.

VOLUNTEER | ● ●



### **YANI**

*The birth of the extraordinary*

With her church transformed into a makeshift evacuation camp, Yani describes the serious situation facing the new evacuees. With resources already stretched, a recently evacuated pregnant woman goes labour.

COORDINATOR | ● ● ● ●



### AYU

*Should I stay or should I go?*

Volunteer Ayu explains her dilemma of leaving Jogjakarta or remaining to assist in the emergency effort. She recounts about her excitement of being a volunteer, until of course, things become very real.

VOLUNTEER | ● ● ● ●



### AGUNG

*What could have been*

Volunteer Agung must decide whether to assist in another emergency evacuation or return back to the city to work his regular shift. That decision forever shapes the course of his life.

VOLUNTEER | ● ● ●



### HERU

*Reading the signs: views from the observation post*

Manning the observation post from nearby Kaliurang, Heru describes his role in noting the unusual seismic activity of Merapi and warning the local residents.

OBSERVATION POST | ● ● ● ●



### RIYANTO

*A model for evacuation*

Mangelang resident Riyanto introduces a novel new method for teaching residents where to evacuate in the case of another eruption – a large scale model of villages with each and every house mapped out and accounted for using beads, paint, and plaster.

VOLUNTEER | ● ● ●



### WAHYU

*Food that sustains and a city that never stops*

Owner of a vegan restaurant in Jogjakarta city, Wahyu explains the importance of providing certain foods to the evacuation camps. He goes on to illustrate why volcanic ash and a busy city is a bad combination.

WIDER COMMUNITY | ● ●



### ENDAH

*Keep masked and carry on*

Ash ash everywhere! Eatery owner Endah, describes the nature of trying to maintain a food business when it keeps raining down volcanic ash.

WIDER COMMUNITY | ● ●



### SINTA

*School's out*

Working to facilitate an international exchange program for students is challenging enough, let alone during a volcanic eruption. Speaking from the ACICIS office in Jogjakarta, Sinta explains what needed to be done.

WIDER COMMUNITY | ● ● ●



### MOKI

*The music scene and more*

Local artist and musician Moki describes how Jogjakarta city's vibrant art and music scene reacted to the 2010 Merapi eruption.

WIDER COMMUNITY | ● ●



### DEWI

*The business of batik and the new tourist*

Manager of a busy business producing Javanese batik fabric, Dewi recounts what effect the eruption had on her immediate operations. She goes on to describe a curiously new kind of tourist that the 2010 eruption seems to have attracted.

WIDER COMMUNITY | ● ●

# EXPLORING IDEAS & ISSUES

## VOLCANOES – AN INTRODUCTION



Volcanoes are fascinating phenomena that are found all over the world. Students are encouraged to learn about the inner workings and wide variety of these volcanoes.



What are volcanoes?  
How do they work?  
What kinds of volcanoes are there?



**Classic Model volcano**  
Students construct a volcano to demonstrate their inner workings/  
Students label a cross-section diagram

WORKSHEET PROVIDED

## INDONESIA: LIVING NEAR A VOLCANO



There are more active volcanoes in Indonesia than other any other country. Along with thousands of islands, the Indonesian landscape is shaped by its unique location and landmass.



What are Indonesia's main islands?  
What advantages/disadvantages could there be living near a volcano?



**Map of Indonesia**  
Students label the main Indonesian islands and locations of some volcanoes.

WORKSHEET PROVIDED

## WHO IS LIVING NEAR THE MERAPI VOLCANO?



Thousands of people live on Merapi's slopes. Some engage in traditional methods of farming assisted by the fertile volcanic soil. The areas further surrounding Merapi are also populated by more urban communities.



Who lives around Merapi?  
What do they do?  
Why do people live near a volcano?  
Is there a connection between how close they are to the volcano and how they were affected?



**Map around Merapi:**  
Students look at the locations of the videos (using the worksheet), and discuss how the proximity/location of locals to the volcano affected their experience during the eruption.

WORKSHEET PROVIDED



Mount Merapi in 2012



Pak Hardi with his corn crops near Merapi (featured video)

**Research & present**  
Local climates and lifestyles

**Pro and Cons**  
Brainstorming and list-making within small groups, then contributing to larger class list.

**LOCAL RESIDENT tier**  
**Role Play Exercise (before watching videos)**  
Have one student embody the role of a Merapi resident; this can be done using a large-scale class labelling exercise, or more an unusual theatre games approach. What is their job? What do they eat? What do they believe? How would they react to an eruption? Have the class contribute ideas to build profile of individual.

**Role playing Profiles (after watching videos)**  
Is there anything the class missed out on? Or maybe had mistaken? Change and add to the created profile, then discuss.

**Role playing Profiles – extended**  
Students create their own Merapi 'profiles' based upon videos on the site. The effects of an eruption continue long past the eruption itself. Imagine where those profiles are now, and how their circumstances have or haven't changed.

## UNDERSTANDING THE ERUPTION



The 2010 eruption of Mount Merapi started in late October and finished in early December. People living and helping around the volcano played various roles in their community. Students are encouraged to understand the common themes and diversity of the stories told.



What happened during the 2010 eruption?  
Who was affected by the eruption?  
How were they affected?



**Interpreting the videos**  
Students are to summarise the different roles of people in the videos by filling in 'speech bubble' comic-style worksheets focusing on certain characters. Eg. Yoga lives in Muntilan. This exercise may also be completed in Bahasa Indonesia to target language skills. Eg. Yoga tinggal di Muntilan. **WORKSHEET PROVIDED**

### Linking up roles

The interface of the site suggests that certain videos link thematically to other videos via coloured lines. Using the Merapi interface map, students form a route around the volcano using the themes on the website. They select 3 people from different groups and explain what things they have in common. **WORKSHEET PROVIDED**

### Raising Issues

Students consider the role of the government during the eruption. Students also focus on how the beliefs of certain local individuals may determine their behaviour during the eruption.

### Theme focus

Divide the class into groups and assign each group with a theme. Are some themes more prevalent than others? Are some themes linked to other themes and why? Students present back to the class their findings.

## BAHASA INDONESIA: LANGUAGE



The videos are in Bahasa Indonesia with the exception of 3 in Javanese. These videos provide excellent opportunities to exercise listening and written skills.



What other dialects are there in Indonesia?  
Why doesn't everyone use the same language?  
Many of the interviewees speak informal Indonesian. What differences can I hear?



**Comprehension exercise**  
Students fill in sheets of basic questions in Indonesian. Eg. Apakah dampak dari meletusnya Gunung Merapi terhadap para petani?

### Information hunt:

Students hunt through videos looking for answers for questions such as 'Which video contains ducks? Who wore a shirt with a cartoon on it?' using the Indonesian language. Students may also create their own information hunts for each other.

### Regional dialects

Three of the 21 videos are in Javanese – a popular regional dialect used commonly in Central Java. Research the use of Javanese and how it has changed. Who uses it? Students learn some basic Javanese greetings and terms to use in sentences. What other dialects are there in Indonesia?

## TECHNOLOGY – SOCIAL MEDIA AND THE INTERNET



From the 2010 eruption we can see how some people used social media to help others. Students are asked to examine their use of the internet and how they receive and send information.

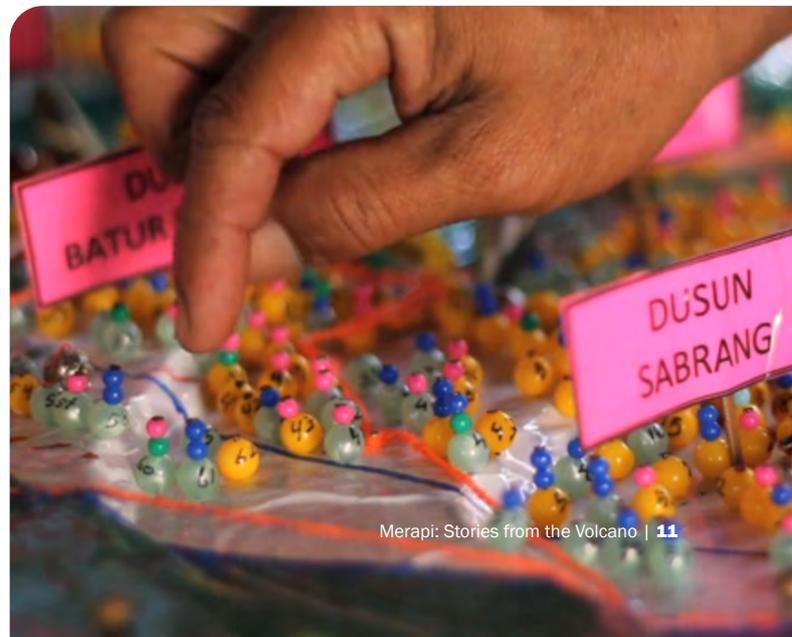


How did locals communicate during the eruption?  
What are the advantages or potential consequences of using social media?



**Challenge**  
Not too long ago we lived without the internet or mobile devices. Could your students? What has this challenge taught your students about how we communicate?

Model for evacuation (featured video 'Riyanto')



## FURTHER INFORMATION

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American Scientist - Volcano Myths and Rituals

<http://www.americanscientist.org/issues/pub/volcano-myths-and-rituals>

BBC News - Mourning Mount Merapi's 'spiritual keeper'

<http://www.bbc.co.uk/news/world-asia-pacific-11646879>

BBC News - Dozens die in new Mount Merapi eruption in Indonesia

<http://www.bbc.co.uk/news/world-asia-pacific-11699945>

COMBINE Resource Institution - Jalin Merapi

*Online forum referred to by Budhi (featured video)*

<http://merapi.combine.or.id/>

Jakarta Post - Documentary Tells Stories of Mt Merapi's Impact

<http://www.thejakartaglobe.com/lifeandtimes/documentary-tells-stories-of-mt-merapis-impact/484008>

Smithsonian Institution - Global Volcanism Program

<http://www.volcano.si.edu/world/volcano.cfm?vnum=0603-25=>

Smithsonian Institution - Bulletin

<http://www.volcano.si.edu/reports/bulletin/pdf/3602bull.pdf>

<http://www.volcano.si.edu/reports/bulletin/pdf/3605bull.pdf>

## CREDITS

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This study guide was produced by Josephine Lie. (©Josephine Lie 2012)

Design and images by Josephine Lie.

Please note that *Merapi: Stories from the Volcano* and all associated work (website, video, photography etc.) are copyright unless otherwise noted.

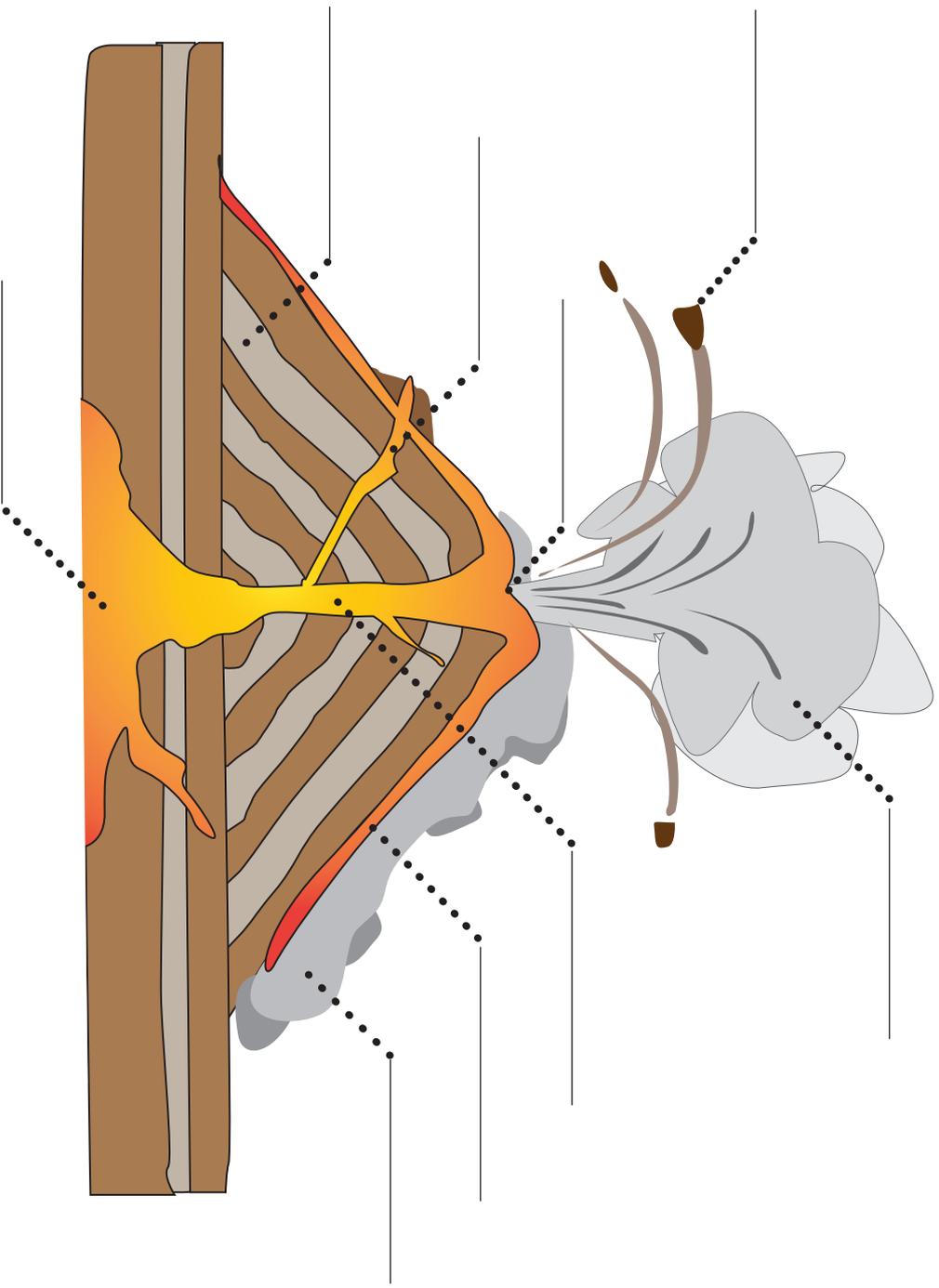
For complete credits of online documentary, please visit the 'About' page of the website [www.merapistories.com](http://www.merapistories.com)

Enquiries should be addressed to [hello@merapistories.com](mailto:hello@merapistories.com)

# VOLCANOES

## Volcano Diagram

- ash cloud
- crater
- lava
- layers of ash & lava
- magma chamber
- main vent
- pyroclastic flow
- side vent
- volcanic bomb



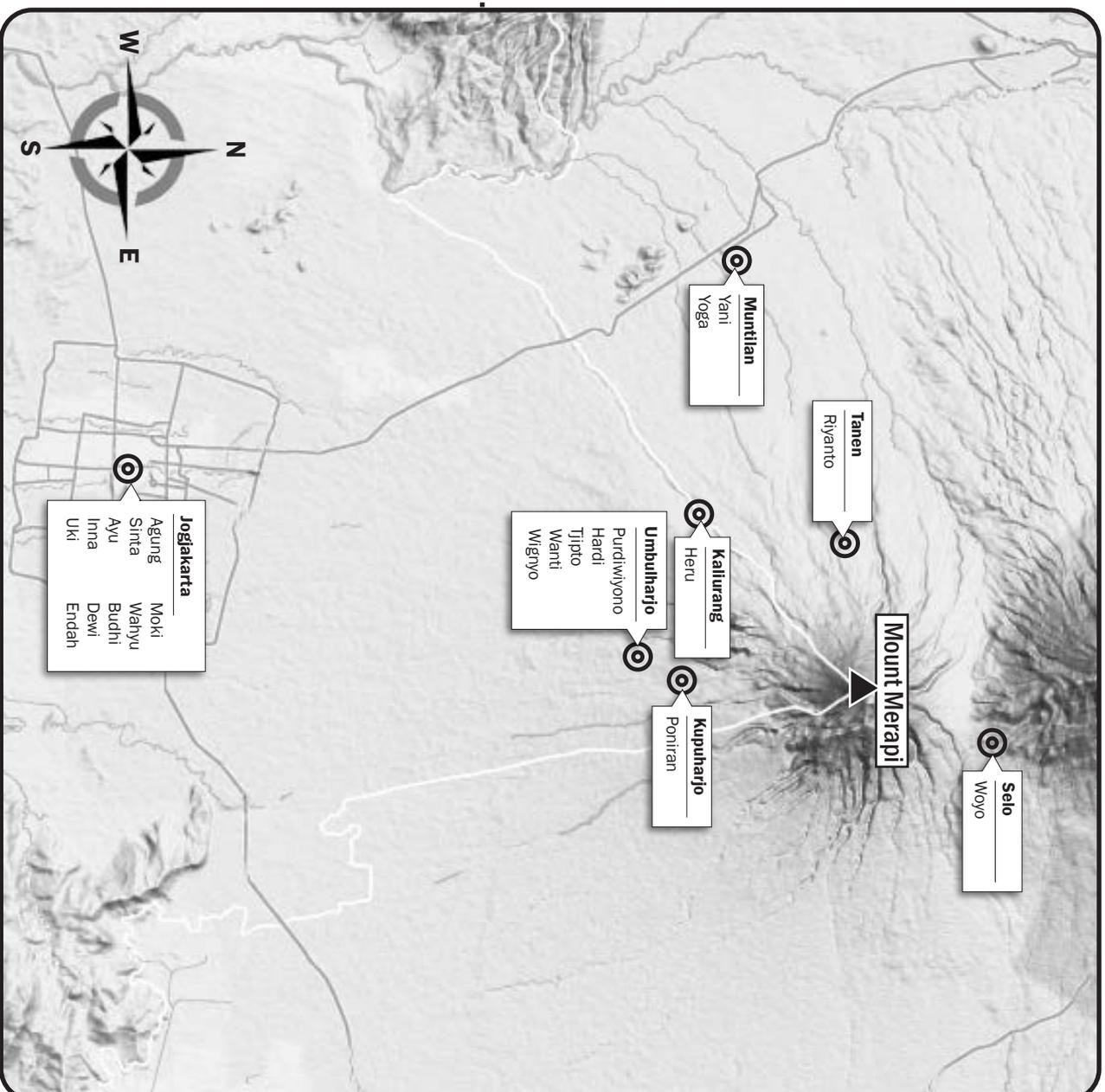
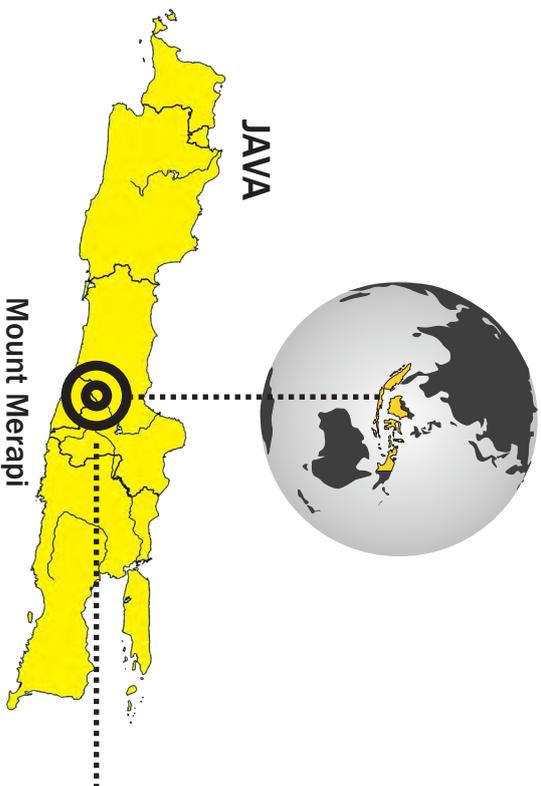
# INDONESIA: LIVING NEAR A VOLCANO

## Map of Indonesia



# WHO IS LIVING NEAR THE MERAPI VOLCANO

## Map around Merapi



# UNDERSTANDING THE ERUPTION: Interpreting the videos



**HARDI**

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**WANTI**

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**YOGA**

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**TJIPTO**

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**WOYO**

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**PONIRAN**

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**PURDIWIYONO**

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**WIGNYO**

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**BUDHI**

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**INNA**

Four horizontal lines for writing notes.



**UKI**

Four horizontal lines for writing notes.



**YANI**

Four horizontal lines for writing notes.



**AYU**

Four horizontal lines for writing notes.



**AGUNG**

Four horizontal lines for writing notes.



**HERU**

Four horizontal lines for writing notes.



**RIYANTO**

Four horizontal lines for writing notes.



**WAHYU**

Four horizontal lines for writing notes.



**ENDAH**

Four horizontal lines for writing notes.



**SINTA**

Four horizontal lines for writing notes.



**MOKI**

Four horizontal lines for writing notes.



**DEWI**

Four horizontal lines for writing notes.

# UNDERSTANDING THE ERUPTION: Linking up roles

