LIFESAVING VOLUNTEERS TO THE RESCUE

Level: 7 & 8
Activity: 1

Overview
While we were in the Rescue Briefing Room we saw that the rescue team carefully monitor conditions, such as the weather and surf conditions. During this activity, students will be asked to collect, analyse and graphically represent data about the forecasted conditions for the coming week. They will reflect on how these conditions might affect an individual's safety when undertaking water-based activities (such as swimming, boating, kayaking etc.) as well as how they would affect a rescue operation.

Resources
- Graph paper
- Computer access (to find a detailed weather report for the coming week at a Victorian coastal location)

Activity
ENGAGE
Discuss weather forecasts and the information that can be gathered from them:
- What conditions would constitute the 'Perfect Beach Day'?
- Which weather conditions might not be great for surfing? What about boating?
- What measurements are normally found in a weather forecast? (eg. wind, temperature etc)
- What special language and symbols are used?
- Which of these measurements would be most important for the rescue team to consider before conducting a rescue? Why?
- Are there any measurements that the rescue team could disregard?

EXPLORE
Students choose a Victorian coastal location and find a detailed weather forecast for the coming week. They will need to collect data for two different measurements that they think would affect a rescue operation. Students create a graph, carefully choosing the most appropriate type of graph to clearly display the collected data.

EXPLAIN
Clarify students' understanding by asking:
- Which type of graph did you choose?
- What are the features of this type of graph?
- Was this the most appropriate type of graph for your given sets of data? Why/why not?
- Was it possible to graph more than one set of data on a graph? If so, what did you need to consider?

ELABORATE
By analysing the data, students now suggest which would be the best day in the coming week to conduct a rescue. They will need to support their decision with evidence from the data they have collected.

EVALUATE

Students pair up and present their findings to a partner, including the optimal day for conducting a rescue, giving the reasons for their choice. Their partner should give feedback and then any final changes or corrections can be made before presenting to the whole class.

Finally, discuss:

- What are the conditions most likely to be on a day when a rescue operation is needed?
- Why is it important to check the weather conditions before undertaking a water-based activity?

Victorian Curriculum
Foundation–10

Level 7		
MATHEMATICS	Number and Algebra: Linear and non-linear relationships	Investigate, interpret and analyse graphs from real life data, including consideration of domain and range (VCMNA257)
GEOGRAPHY	Geographical Concepts and Skills: Data and information	Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)
Level 8		
MATHEMATICS	Number and Algebra: Linear and non-linear relationships	Plot graphs of non-linear real life data with and without the use of digital technologies, and interpret and analyse these graphs (VCMNA285)
GEOGRAPHY	Geographical Concepts and Skills: Data and information	Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)

Sample Report Comments
{Name} has a good understanding of the features of different types of graphs and is able to select the most appropriate type of graph to display a given set of data.

{Name} plotted non-linear, real-life data about the forecasted weather for the coming week. {He/She} analysed this data to make an informed and reasonable recommendation about the safest day to perform a rescue operation.

LIFESAVING VOLUNTEERS TO THE RESCUE

Level: **7 & 8**
Activity: **2**

Overview

While studying to become a doctor, Hayden spends up to 15 hours a week volunteering in different ways in his community. As well as being a rescue swimmer, Hayden also volunteers as a dispatcher, a lifesaver and patrol captain at his life saving club and once a month he participates in a meal sharing program for asylum seekers who are experiencing homelessness. During this lesson, students will find out about the role volunteers play in their community. They will develop a persuasive text, arguing for or against the statement 'All Australians have the responsibility to give back to the community'.

As students will be sharing their personal opinions during this lesson, it may be useful to have a conversation about valuing the opinions of others prior to completing the lesson.

Resources

- Computer access for each student
- A large space with a long line on the floor - you could use chalk or tape or a line on a basketball court (the line should be long enough for all students to stand along it)
- A copy of the planning template *All Australians have the responsibility to give back to the community* (Appendix A) for each student.

Activity

ENGAGE

Gather students near the line and explain to them that you will read out some statements. If they completely agree they move to one end, if they completely disagree they move to the other. They may also place themselves anywhere along the line according to how they feel about the statement. Read the following statements, allowing enough time for students to think about their response and move into position:

- There are lots of volunteers in our community.
- Volunteers do important work.
- We are lucky to live in Australia.
- You need to have special training to be a volunteer.
- Anyone can be a volunteer.
- I'd like to be a volunteer.

EXPLORE

Watch the 'Fred's Van' video. Ask students if they have ever volunteered or if someone they know volunteers. Brainstorm on the board 'Volunteers in our community'.

EXPLAIN

Ask students to move back to the line on the floor and repeat the same questions. Ask whether any of their answers changed the second time. Read the statement 'All Australians have the responsibility to give back to the community' and ask students to stand on the line again. Invite some students to share their response and explain their reasoning.

ELABORATE

Students now need to create a persuasive text in the form of an oral presentation, podcast or video in response to this statement. They may argue for or against, but may not sit on the fence. Encourage students to use the planning template *All Australians have the responsibility to give back to the community* (Appendix A) to organise their arguments. Allow time for them to research some evidence to support their arguments.

EVALUATE

In small groups (preferably with a mixture of 'for' and 'against' arguments), students present their completed videos, podcasts and presentations. Complete the line activity one final time, asking students to reflect on if and how their thinking has changed.

Curriculum Links

Victorian Curriculum
Foundation–10

Level 7			
ENGLISH	Writing: Creating Texts		Plan, draft and publish imaginative, informative and persuasive texts, selecting aspects of subject matter and particular language, visual, and audio features to convey information and ideas to a specific audience(VCELY387)
			Use a range of software, including word processing programs, to create, edit and publish written and multimodal texts (VCELY390)
	Speaking and Listening: Interacting with others		Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements to promote a point of view or enable a new way of seeing, using body language, voice qualities and other elements to add interest and meaning(VCELY396)
Level 8			
ENGLISH	Writing Creating Texts		Create imaginative, informative and persuasive texts that raise issues, report events and advance opinions, using deliberate language and textual choices, and including digital elements as appropriate (VCELY420)
			Use a range of software, including word processing programs, to create, edit and publish texts imaginatively (VCELY422)
	Speaking and Listening: Interacting with others		Plan, rehearse and deliver presentations, selecting and sequencing appropriate content, including multimodal elements, to reflect a diversity of viewpoints, using voice and language conventions to suit different situations, modulating voice and incorporating elements for specific effects(VCELY427)

Sample Report Comments

{Name} has a good understanding of the structure, language and features appropriate to a persuasive text.

{Name} uses persuasive language and other literary devices to capture the interest of {his/her} audience.

When responding to the statement 'All Australians have the responsibility to give back to the community', {Name} spoke articulately, using strong arguments and emotive language to convince the audience.

References

Behind the News, 2010. *Fred's Van*. [online video] Available at: http://www.abc.net.au/btn/story/s3038374.htm [Accessed 14 April 2018].

Appendix A

Use this template to organise your ideas, collect evidence to support your arguments and gather some powerful bits to add extra punch to your persuasive text.

All Australians have the responsibility to give back to the community
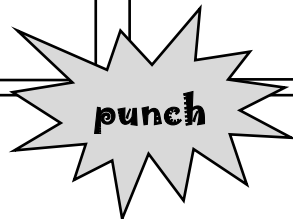
I am arguing ☐ FOR ☐ AGAINST

Reason 1:

Supporting facts:

Reason 1:

Supporting facts:

Reason 1:

Supporting facts:

Powerful bits for added **punch**

LIFESAVING VOLUNTEERS TO THE RESCUE

Level: 7 & 8
Activity: 3

Overview

The Westpac Lifesaver Rescue Helicopter and its crew perform rescue operations all along Victoria's coastline. A successful rescue often also involves people from different emergency services, such as paramedics and police as well as lifesavers at patrolled beaches. Victoria's coastline ranges from sandy beaches and wetlands to forests, rocky shores and cliffs. The different types of terrain can be challenging when conducting a rescue operation. During this lesson, students will begin to learn about topographic maps and use their understanding of contour lines and other features of maps to identify the best path to the ocean for a land based rescue operation.

Resources

- Smartboard
- Clay or play dough
- Fishing line
- A copy of the *Topographic Map of Wilson's Promontory* (Appendix A) for each pair.

Activity

ENGAGE

Ask students to reflect on the Volunteers to the Rescue expedition:

- Who was involved in the rescue operation?
- Where did it take place?
- Describe the location of the rescue.
- This rescue took place at a patrolled beach. Not all of Victoria's coastline is sandy beaches, what other types of terrain are there?
- What if someone got themselves into trouble near wetlands or rocky cliffs? What different challenges might that pose to the rescue team?

Introduce students to topographic maps using the Reading a Map online activity.

EXPLORE

Give each student a small amount of clay or play dough and ask them to mould a 'hill'. Encourage them to use slightly irregular shapes. Students should then swap with a partner and attempt to draw the contour lines for the shape they have been given. They can check their work by using fishing line to slice their hill horizontally into segments of equal thickness. They should then trace each of the pieces in turn on a single piece of paper to create contour lines, starting with the largest.

EXPLAIN

Invite some students up to draw contour lines on the board for:

- A tall, narrow hill
- A short, wide hill
- A hill that is steep on one side and has a gentle slope on the other
- A hill with two peaks

As this is happening, ask students to explain how the width of the contour lines relates to elevation.

ELABORATE

Give pairs a copy of the Topographic Map of Wilson's Promontory (Appendix A). They need to find the best route for a rescue team to reach location A, B and C (note: the public road ends at Tidal River). Encourage them to consider other landmarks and features, for example rivers and walking tracks, not just the contour lines.

EVALUATE

Display the Topographic Map of Wilson's Promontory (Appendix A) on the smartboard. Ask pairs to show the class the route they would take for one of the locations, explaining why they think this would be the fastest route. Finally, discuss:

- In what types of terrain might a land-based rescue be challenging?
- What geographical features might hinder a land-based rescue?
- Thinking about the geography of Victoria's coastline, what sorts of areas would be safest for undertaking water-based activities (eg. Kayaking, swimming, fishing etc)?
- What safety advice would you give to someone thinking of undertaking water-based activities?

Victorian Curriculum
Foundation–10

Level 7		
GEOGRAPHY	Geographical Concepts and Skills: Data and information	Analyse maps and other geographical data and information using digital and spatial technologies as appropriate, to develop identifications, descriptions, explanations and conclusions that use geographical terminology (VCGGC104)
	Geographical Knowledge: Landforms and Landscapes	Different types of landscapes and their distinctive landform features (VCGGK116)
Level 8		
GEOGRAPHY	Geographical Concepts and Skills: Data and information	Analyse and evaluate data, maps and other geographical information using digital and spatial technologies and Geographical Information Systems as appropriate, to develop identifications, descriptions, explanations and conclusions that use geographical terminology (VCGGC132)

Sample Report Comments

{Name} understands how contour lines can be used to show elevation above sea level. {He/She} can draw a reasonable topographical representation when given a 3D model of a hill.

{Name} used {his/her} knowledge of contour lines and other common map features to plan the best route from one location to another.

{Name} is beginning to identify and describe some safe locations along Victoria's coastline to undertake water-based activities.
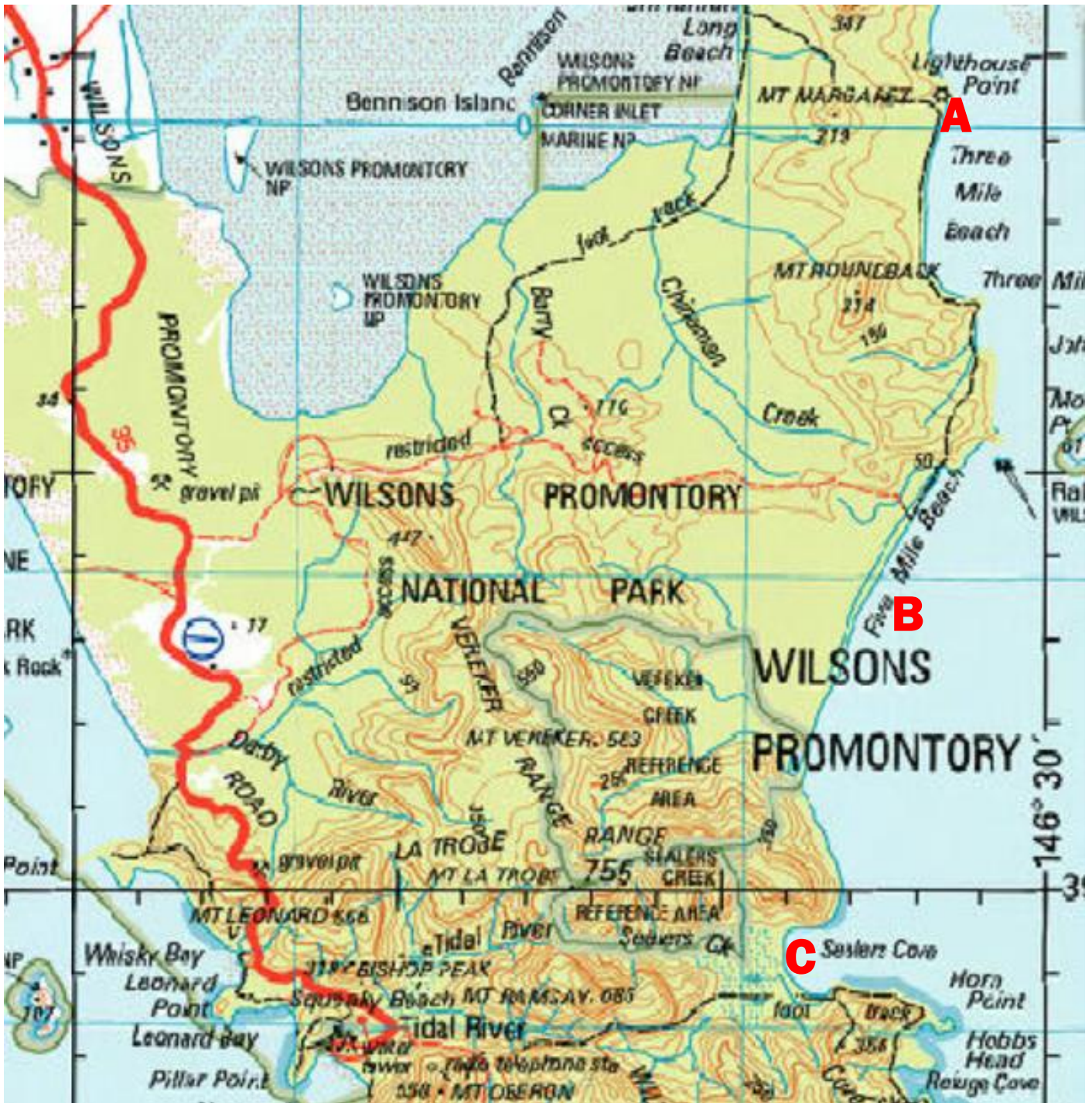
References

National Park Service, WebRangers. *Reading a Map*, https://www.nps.gov/webrangers/activities/readingmap/ [viewed 15 March 2018].

Victorian Department of Education and Training, 2017. *Understanding Contour Lines: Level 7,* http://www.education.vic.gov.au/school/teachers/teachingresources/discipline/maths/continuum/Pages/contourline50.aspx#a1 [viewed 15 March 2018].

Geoscience Australia and Natural Earth, 2009-2018. *Australian Topography* http://www.ga.gov.au/interactive-maps/#/theme/national-location-information/map/australiantopography [viewed 15 March 2018].

Appendix A

Topographic Map of Wilson's Promontory, Victoria, Australia