

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?

Curriculum Links



Level 7		
MATHEMATICS	<u>Number and Algebra:</u> Linear and non-linear relationships	Investigate, interpret and analyse graphs from real life data, including consideration of domain and range (VCMNA257)
GEOGRAPHY	<u>Geographical Concepts and Skills:</u> Data and information	Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)
Level 8		
MATHEMATICS	<u>Number and Algebra:</u> 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	<u>Geographical Concepts and Skills:</u> 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.