

LIFESAVING VOLUNTEERS TO THE RESCUE

Level: 5 & 6

Activity: 1

Overview

In order to get to the rescue site and assist the person in trouble, the pilot uses a GPS navigation unit to fly the helicopter to the location. If the exact coordinates are known, the pilot will enter these into the GPS. During this activity, students will be introduced to the concept of latitude and longitude. They will then use these coordinates to find locations, including aquatic environments, within their local community via Google Maps.

Resources

- Computer access for students
- Appendix A: *Photo of Global Positioning System (GPS) (From Panorama 2 - Inside the Chopper!)*

Activity

ENGAGE

Ask students to find a partner. Choosing a location in the schoolyard, students need to give their partner directions to find their secret location. As a group discuss what strategies were used, what worked and what didn't work. Make a list of the directional language used on the board. Next, look at the *Photo of Global Positioning System (GPS) (Appendix A)* and ask students what information they can see on the screen, focusing on the GPS coordinates shown. Explain that these coordinates are known as 'latitude' and 'longitude'.

EXPLORE

Ask students to locate their town using Google Maps. By clicking and holding, ask them to find the latitude and longitude of this location. Encourage them to find the location of aquatic environments in their town eg. beach, lake, channel, pool etc. They might also like to find their home, school or sports club. Ask them to make a note of the latitude and longitude of each.

EXPLAIN

Watch the '[Latitude and Longitude](#)' video. Clarify students' understanding by asking:

- What do you notice about the latitudes and longitudes for the locations you have found? What changes/what doesn't change? (i.e. if they are close together the degrees may be the same, but minutes and seconds may change)
- How are the values for latitude and longitude labelled? (eg. degrees, minutes, seconds and compass direction)
- If we started at our school and went directly north, which value would change?
- What would change if we went east?

ELABORATE

Using Google Maps, students now need to choose three points of interest in the local community (one of these MUST be an aquatic environment) and find their latitude and longitude (to the nearest second). Swapping coordinates with a partner, they then need to find each other's chosen locations.

EVALUATE

Asks students to discuss the following questions with their partners and then share their thoughts with the whole group:

- What are the benefits of using latitude and longitude in giving directions? Are there any drawbacks?
- When would/wouldn't it be useful in giving directions?
- Why would the rescue team use GPS to navigate the helicopter to the rescue site?

Curriculum Links



Victorian Curriculum

Foundation–10

Level 5		
MATHEMATICS	<u>Measurement and Geometry:</u> Location and transformation	Use a grid reference system to describe locations. Describe routes using landmarks and directional language (VCMMG199)
GEOGRAPHY	<u>Geographical Concepts and Skills:</u> Data and information	Interpret 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 (VCGGC090)
Level 6		
GEOGRAPHY	<u>Geographical Concepts and Skills:</u> Data and information	Interpret 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 (VCGGC090)

Sample Report Comments

{Name} understands how latitude and longitude can be used to pinpoint any location on Earth.

{Name} can describe a location using a grid reference system and can use coordinates to find a given location.

{Name} can describe the location of some aquatic environments in the local community.

References

Andy Jensen, 2010. *Latitude and Longitude*. [online video] Available at: <https://www.youtube.com/watch?v=swKBi6hHHMA> [Accessed 27 March 2018].

Appendix A

Photo of Global Positioning System (GPS)



LIFESAVING VOLUNTEERS TO THE RESCUE

Level: 5 & 6

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. In this lesson students will explore the role volunteers play in their school community, investigate opportunities to become volunteers themselves and hopefully choose to get involved!

Resources

- Smartboard
- Copies of the *Let's Volunteer!* chart (Appendix A) for small groups

Activity

ENGAGE

Watch the [Volunteer Week](#) video. Draw an outline of a person on the board. Ask students what personal qualities they think it takes to be a volunteer. Write these inside the shape. Now ask students what the benefits of being a volunteer are (encourage them to reflect on the video) and write these around the shape.

EXPLORE

In small groups, students need to choose another classroom in the school to visit. Their task is to interview the students to find out:

- Who are the important volunteers in this class?
- What role do they play?
- What are the benefits to this particular class and to the wider school community?

EXPLAIN

Students report back to their own class with their findings. Ask them to write the name of each volunteer, together with their role on a separate piece of cardboard or paper. Ask students to try sorting the cards.

- Can they be grouped in any way?
- Are there any patterns?
- Can we draw any conclusions from this? (For example, perhaps there are more volunteers in the Year 1 class than in Year 5, maybe there are more volunteers to help with reading than with maths etc.)

ELABORATE

In small groups, students brainstorm a list of things they could volunteer their time for within the school community. Encourage them to consider their findings from the previous task. Together they need to fill in the *Let's Volunteer!* chart (Appendix A). Come back together as a whole class and ask each group to share their top three ideas. Ask students:

- Which of these volunteer opportunities appeals to you the most? Why?
- Which do you think would have the most positive impact within the school?
- Which would help the most people?
- Would you be interested in volunteering?

Encourage (but do not force) students to choose one of the suggestions and spend some time volunteering over the next week.

EVALUATE

After students have had some time to complete one of the volunteer activities (if they choose!) come back together as a group and discuss:

- Which activity did you choose?
- Do you think it was worthwhile? Why/why not?
- How do you feel?
- Did you learn any new skills?
- Would you volunteer again?
- Do we need volunteers? Why/why not?
- Many of the lifeguards at our beaches are volunteers, what would happen if no one volunteered?

Curriculum Links



Level 5		
CIVICS AND CITIZENSHIP	<u>Citizenship, Diversity & Identity</u>	Identify who can be an Australian citizen and describe the rights, responsibilities and shared values of Australian citizenship and explore ways citizens can participate in society (VCCCC014)
		Investigate how people with shared beliefs and values work together to achieve their goals and plan for action(VCCCC016)
Level 6		
CIVICS AND CITIZENSHIP	<u>Citizenship, Diversity & Identity</u>	Identify who can be an Australian citizen and describe the rights, responsibilities and shared values of Australian citizenship and explore ways citizens can participate in society (VCCCC014)
		Investigate how people with shared beliefs and values work together to achieve their goals and plan for action(VCCCC016)

Sample Report Comments

{Name} understands and can describe the important role that volunteers play in the school community.

{Name} developed a range of ideas for volunteer opportunities within the school community. {He/She} chose to volunteer {his/her} own time to contribute to the community in a positive way.

References

Behind the News, 2011. *Volunteer Week*. [online video] Available at: <http://www.abc.net.au/btn/story/s3208633.htm> [Accessed 16 April 2018].

Appendix A

Let's Volunteer!

Think about where help is most needed in your school. Fill in the table below with your ideas.

Idea	Who would it help?	Where/When would it happen?	What resources/materials would be needed?	What are the potential benefits?

LIFESAVING VOLUNTEERS TO THE RESCUE

Level: 5 & 6

Activity: 3

Overview

A successful rescue operation involves a number of different emergency management agencies that all work together to complete a common goal – to save lives. People involved in rescue operations could include; the Westpac Lifesaver Rescue Helicopter team, lifesavers, paramedics, firefighters and police. In this lesson, students will need to use problem solving skills to work out who would get to their local beach (or another aquatic environment, i.e. public pool, river or lake) fastest in an emergency situation.

Resources

- Computer access for each group
- A copy of the *Map of Victoria* (Appendix A) for each small group

Activity

ENGAGE

Ask students to name the beaches, lakes, swimming pools (public / home) and other aquatic environments they visit most often. List these on the board, grouping them according to type; inland, coastal, pool.

EXPLORE

Group students into small, mixed ability groups, of three or four students. Give each group a copy of the *Map of Victoria* (Appendix A). Give them 10 minutes to add as many aquatic environment locations from the list on the board as they can to the map. The challenge is to get them as close as possible to their actual location.

EXPLAIN

Give groups access to a computer so they can check their map. Ask them to use a different colour to make any changes that are needed. Discuss:

- How close were you?
- How many of these locations have you been to?
- Who has been to one of these in the past month?
- How many times a week/month/year do you visit an aquatic environment such as these?
- Have you ever witnessed an emergency while you were there? If so, who was involved?

ELABORATE

Each group needs to choose one of these aquatic locations. Ask them to imagine that there is an emergency at that location. Their challenge is to work out who will arrive to help first. In order to do this, they will need to:

- Calculate distances to the Westpac Lifesaver Rescue Helicopter headquarters, the nearest police station, ambulance depot and lifeguard patrol area if applicable.
- Think about the mode of transport each of these services is likely to use and find out its average speed.

EVALUATE

Ask groups to report back to the class with their findings. Discuss:

- What was the fastest predicted response time?
- Which locations had the slowest predicted response times?
- How might this affect your planning if you were to visit one of these locations?
- Which locations would be the safest to visit?
- What recommendations would you make to someone visiting an aquatic location in Victoria?

Curriculum Links



Level 5		
MATHEMATICS	<u>Number and Algebra:</u> Place value	Use efficient mental and written strategies and apply appropriate digital technologies to solve problems (<u>VCMNA185</u>)
		Use estimation and rounding to check the reasonableness of answers to calculations(<u>VCMNA182</u>)
Level 6		
MATHEMATICS	<u>Number and Algebra:</u> Place value	Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers and make estimates for these computations (<u>VCMNA209</u>)
	<u>Measurement and Geometry:</u> Using units of measurement	Solve problems involving the comparison of lengths and areas using appropriate units (<u>VCMMG224</u>)

Sample Report Comments

{Name} works well within a small group, contributing ideas articulately and carefully considering the suggestions of others.

{Name} calculates the time taken for a vehicle, moving at a constant speed, to travel a given distance. {He/She} applied this understanding to solve real-world problems involving response times of emergency services.

References

University of Melbourne, 2001. *Basic Outline Maps*. Available at: https://library.unimelb.edu.au/collections/map_collection/map_collection_outline_maps [Accessed 17 April 2018].

Appendix A

Map of Victoria, Australia

