LEARNING
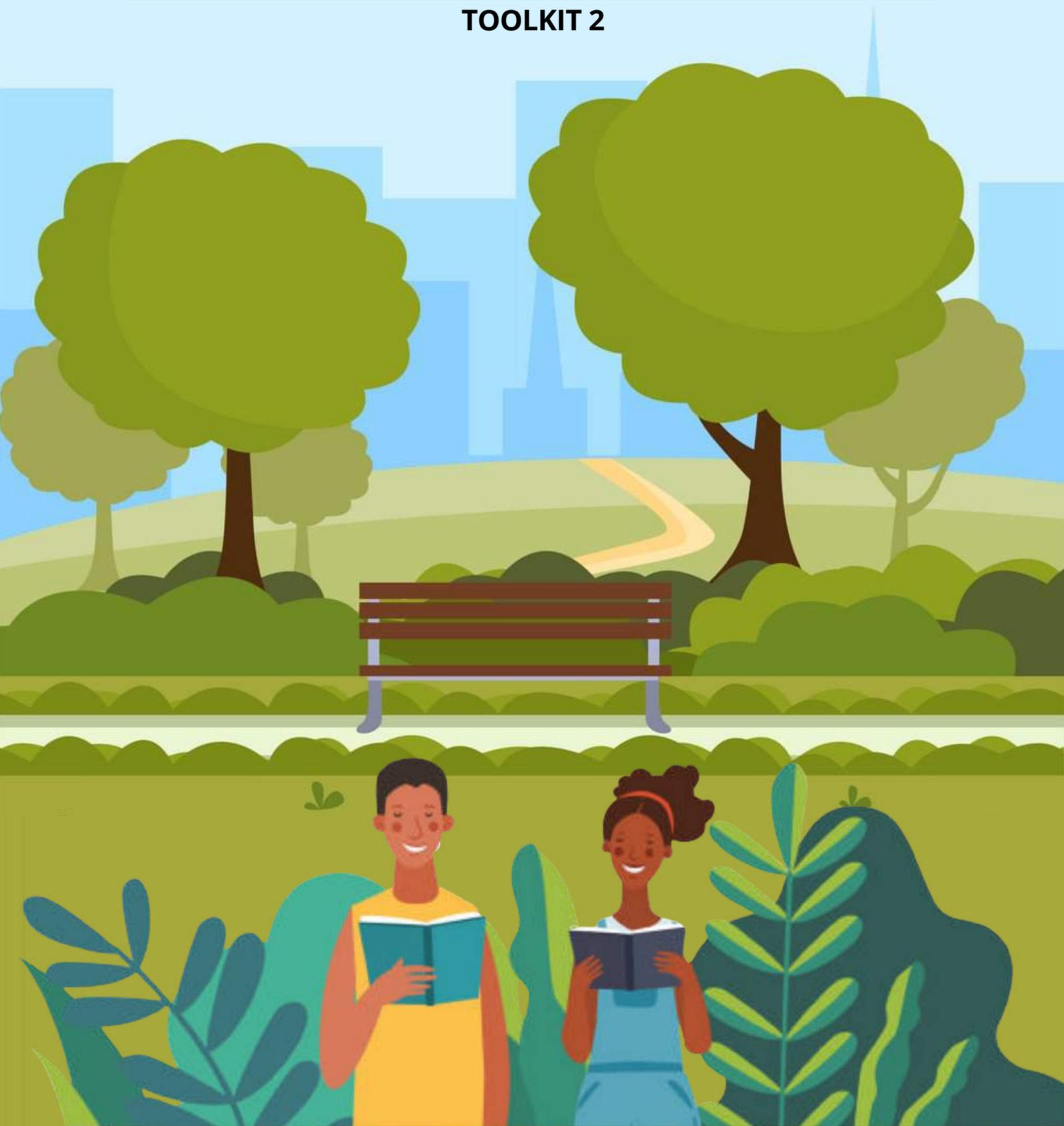## in the OUTDOORS

GEOGRAPHY

TOOLKIT 2

TEACHER TOOLKIT SCHEDULE

Outdoors Victoria, in partnership with the Australian Council for Health, Physical Education and Recreation (ACHPER Victoria), Geography Teachers Association (GTAV) and Parks Victoria (Parks Vic) will be creating the 2nd series of Outdoor Learning teacher toolkits. These toolkits will build upon the 1st series of Outdoor Learning toolkits which was targeted towards primary school teachers between 2018 and 2021. The 2nd series will focus on Outdoor Learning in secondary schools which are scheduled to be released within three stages between 2021 and 2023

2021

1 Introduction to Outdoor Learning (Secondary)
2 Outdoor Learning In Geography*
3 Outdoor Learning in Physical Education

2022

4 Outdoor Learning in Arts*
5 Outdoor Learning in English
6 Outdoor Learning in Health*
7 Outdoor Learning in History*
8 Outdoor Learning in Languages (LOTE)*

2023

9 Outdoor Learning in Mathematics*
10 Outdoor Learning in Science*
11 Outdoor Learning in Technologies*
12 Outdoor Learning in Cross-Curriculum Priorities*
13 Outdoor Learning in Indigenous Education*
14 Outdoor Learning in Secondary Education (Book)*

Outdoors Victoria, in partnership with ACHPER (Victoria), GTAV, and Parks Victoria, are always interested in finding out what is occurring outdoors in your school. If you are proud of a new program you have implemented or would like to be involved in, or contribute to any of the Teacher Toolkits, contact any of the above organisations.

Outdoors Victoria, in partnership with ACHPER (Victoria), GTAV, and Parks Victoria, respectfully acknowledges the Traditional Custodians of the land and their Elders past and present, for the important and enduring role that Aboriginal and Torres Strait Islander peoples play in Australia regarding the land, water and sky used for learning in the Outdoors.

LEARNING IN THE OUTDOORS
GEOGRAPHY

INDEX

Throughout the construction of this teacher toolkit, careful attempts have been made to ensure the included activities and explanations do not contain offensive materials, the materials contained in this document will be periodically reviewed. As a result of this review, some activities may be tweaked and an updated version may be uploaded to the relevant website in which this document was downloaded. Before implementing activities or content included in this document please review to ensure the appropriateness for your class and or school.

This Secondary Teacher Toolkit is offered as a framework for developing your own tailored curriculum specific ideas and activities for Outdoor Learning. The activities included within this document are quite flexible and before implementing you should consider your own needs and tailor each activity to this need. As highlighted in Toolkit 1 : Introduction to Outdoor Learning, there are a range of benefits to embedding Outdoor Learning within your teaching area, please navigate back to this document to find benefits, tips, relevant research , case studies and other exemplars that may help in building an Outdoor Learning program at your school.

Benefits of Outdoor Learning in Geography

The outdoor area is a vital learning environment for students. Outdoor and fieldwork learning provides students with opportunities to engage with peers, apply theoretical knowledge and practice key geographical skills. In the field, students can engage with real issues that are relevant to their lives, using an inquiry approach to encourage curiosity and exploration. Given geography is the study of the world and its processes and interconnections, it is difficult to gain a full understanding of key skills and knowledge without spending time outside. Visiting environments further away from the school can foster in students an awareness of their own community, build a local sense of belonging and identity, encourage concern and respect for their local area and encourage participation in sustainable practices.

Case studies to support Outdoor Learning in Geography

As the COVID-19 pandemic has taught us, it is more important than ever to be adaptable in our teaching environment. As the new recommendations are released for school return in Term 4, 2021, outdoor learning is at the forefront of student and teacher wellbeing not only for its known existing benefits, but also to reduce the risk of disease spread.

> " *Learning outdoors is a natural environment for my students as it encourages them to form deeper connections with their geographical understanding and practise skills in a more realistic environment. (Danielle O'Leary, Senior Geography Teacher)* "

> " *At my school, we are lucky enough to have access to several outdoor learning environments including a wetlands and urban forest that can be booked as classrooms. Here we have practiced sketching, water quality testing, heard from guest speakers and much more. Even if you don't have facilities such as these, there are many rewarding opportunities for enriched learning experiences in the outdoors. I have had Year 7s roaming the school taking photographs of geographical concepts, Year 8s practicing direction and distance, Year 9s on the oval filming a news program from a "grasslands" biome and Year 10s surveying students and teachers around the campus grounds. Being in the outdoors instantly lifts the mood and engagement of a class (the teacher too!), making learning much more memorable. (Taylor Pearson, Senior Geography Teacher)* "

Benefits of Outdoor Learning in Geography cont.

Underpinning Research

Given its focus, geographical studies provides the perfect platform for students to work within their surrounding outdoor environments. Brookfield, 2021 suggested that "a growing body of evidence identifies a positive relationship between learning [outdoors] and related outcomes, such as academic performance and cognitive function (Lovell, 2016)." Even adding greenery to indoor spaces or allowing for more natural classroom settings (wooden furniture and other items) can result in advantages. "There is some evidence to suggest that students of geography and aligned subjects might be particularly advantaged by frequent interactions with nature and childhoods spent in 'greener' home environments." (Brookfield, 2021). Ruli As'ari et.al 2021 found that learning in open outdoor spaces can help develop "critical thinking skills [such as] analytical skills, synthetical skills, identifying and problem-solving skills, concluding skills, and evaluating or assessing skills."

References:
https://www.turcomat.org/index.php/turkbilmat/article/view/1287
https://www.tandfonline.com/doi/full/10.1080/03098265.2021.1926938

Tips for embedding Outdoor Learning in Geography

By enabling secondary students to engage in geography learning in the outdoors, learners can become comfortable and confident in their everyday geographies. The school grounds provide perfect environments for students to explore outside often – they are accessible and can stimulate student interest and motivation. By exploring further students begin to develop understandings of places at different scales. Both provide excellent opportunities to embed curriculum outcomes in geographical ideas, concepts, content, geographical skills and geographical topics.

The topics that can be included in the geography curriculum include the:

- Characteristics of places
- Spatial distribution of phenomena
- Interconnection between phenomena
- Recording and representing data
- Creating and analysing maps
- Understanding change over time
- Sustainability of environment, economy and society

Characteristics of your place

Place is a key concept in geography. 'Characteristics of place' not only describes the physical characteristics of a location but also its uses, importance and connection with events and people over time. Understanding how to identify and describe characteristics of a place is fundamental in geography. It allows students to describe change over time, human impacts to place and then later allows for inferences to be made around management of that location.

Step 1 – Students obtain a map of their local area or school (print or digital)

Step 2 – Students explore the school grounds and take photos of key human and natural characteristics of their place.

Step 3 – Students annotate their map with the images from Step 2 and provide a brief description of each characteristic (this could be completed using digital software or print outs depending on availability)

Step 4 - While outside, students note how the construction of the school has impacted the characteristics of the place (e.g. removal of vegetation, change in land use (from farming to urban) or impacts of materials used for school construction).

Step 5 - Using their maps, students analyze the distribution of natural and human characteristics within their school boundary. They may consider why buildings are 'clustered', how amenities are distributed around the grounds, how vegetation has a linear distribution along paths etc.

Step 6 - Students could have a discussion around how the construction of the school has influenced the natural and human characteristics over time.

✎ Equipment & Materials

- Map of school
- Digital device and camera
- App or notebooks to annotate and record observations

☼ EXTENSION SUGGESTION

Using the correct geographical techniques, choose one specific area of interest and sketch the natural and human characteristics identified.

📖 Curriculum Outcomes

7-8
- Explain processes that influence the characteristics of places (VCGGC099)

9-10
- Identify, analyse and explain significant spatial distributions and patterns and identify and evaluate their implications, over time and at different scales (VCGGC128)
- Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)(VCGGC130)
- Select and represent data and information in different forms, including by constructing appropriate maps at different scales that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC103) (VCGGC131)

🔍 Additional Resources:

What are human and natural features: https://www.bbc.co.uk/bitesize/topics/zqj3n9q/articles/zr8q7nb
Field sketches: http://www.geogspace.net.au/files/Core/Inquiry%20and%20Skills/Years%20F-4/Illustration2/3.2.1%20Field%20Sketching.pdf
What is meant by 'distribution'?: https://www.nationalgeographic.org/encyclopedia/distribution/

Peak Hour

This activity provides students with an opportunity to practise a range of skills that span from Geography through to Mathematics. It can be adjusted in complexity depending on the year level by using different geospatial technologies or data collecting software. Students will need to be close to road networks and so active supervision is required.

Step 1 – With suitable supervision and permissions, students to sit near the closest road access or entry point to the school.

Step 2 – Students tally the number of vehicles and pedestrians that pass at a particular time.

Step 3 – Students note the direction of the movement using a compass.

Step 4 - Students create a graph using digital software or paper (depending of availability)

Step 5 - While outside observing, students discuss and make inferences about movement external to the school and how it could be better managed at peak times (e.g. use of infrastructure, 'kiss and go' station etc.)

Step 6 - Students create an ESRI Story Map which highlights key findings and conclusions.

📖 Curriculum Outcomes

7-8
- Identify, analyse and explain spatial distributions and patterns and identify and explain their implications (VCGGC100)
- Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)
- Select and represent data and information in different forms, including by constructing appropriate maps at different scales that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC103)
- Influence of accessibility to services and facilities; and environmental quality, on the liveability of places (VCGGK112)

🔍 Additional Resources:

ESRI Story Maps: https://storymaps.arcgis.com/
How to do a tally: https://www.mathsisfun.com/data/tally-marks.html
Different surveying techniques: https://www.geography-fieldwork.org/gcse/rural/rural-issues/fieldwork/

✏️ Equipment & Materials

- Compass
- Note paper
- Device
- ESRI Story Maps log in

💡 EXTENSION SUGGESTION

Students could also look at foot traffic at particular times within the school grounds, including the direction of movement to 'hot spots' such as locker bays, staff rooms, canteen etc. Students could draw comparisons between foot traffic external to the school and within the school across particular times of the day. For example, school, drop off /pick up and break times.
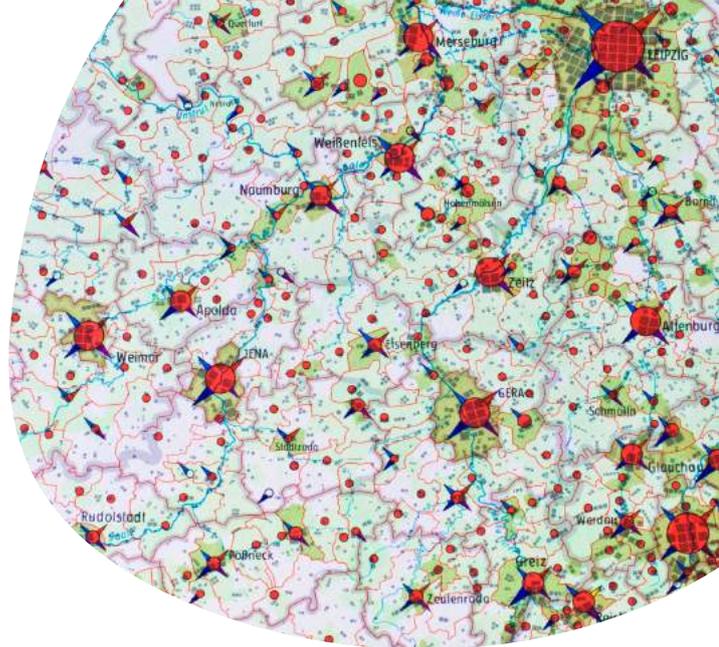
A Water Audit

The aim of this activity is to use the students understanding of water as context for practising mapping skills. Students will also develop the ability to group like characteristics of places. This activity could be a simple addition to a 'Water in the World' Level 7 focus class. Students can practise collecting, recording and displaying geographical data.

Step 1 – Students brainstorm all the different water sources and uses with the school.

Step 2 – Using a map of the school and an appropriate key, students explore the grounds and highlight the locations of key water sources discussed in Step 1 (e.g. taps, toilets, pipes, sprinklers, tanks, bubblers, kitchens etc.).

Step 3 – Students categorise the water sources highlighted on the map according to use (E.g. tank and sprinklers for garden maintenance).

Step 4 - Students use Google Earth to locate their closed water catchment management zone and reservoir and using the scale, calculate the approximate distance between the reservoir and school.

📖 Curriculum Outcomes

7-8
- Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)
- Select and represent data and information in different forms, including by constructing appropriate maps at different scales that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC103)
- 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)
- Classification of environmental resources and the forms that water takes as a resource (VCGGK105)
- Ways that flows of water connect places as they move through the environment and the ways this affects places (VCGGK106)

✏️ Equipment & Materials

Equipment and materials should be readily available in schools
- Map of the school
- Mapping resources- paper, pencils and a ruler
- Digital device for Google Earth

💡 EXTENSION SUGGESTION

Students take notes on water use at times of the day at a selected area in the school. Students make inferences about the sustainability of water use within the school and suggestions for management and improvement. E.g. Collecting the excess water from the drinking bubblers/taps and using it to water gardens.

🔍 Additional Resources:

Google Earth: https://earth.google.com/web/
BOLTSS: https://www.gtav.asn.au/resources/resources-all-levels/mapping---basic-map-drawing-skills
Water sources (Interactive): https://www.educationsoutheastwater.com.au/resources/water-sources-interactive

Put Your Shades On

In this activity students explore perceived and actual temperatures in different areas and the school. Students practice surveying techniques and analysis of qualitative and quantitative data. Links could be made to Year 7 liveability knowledge or broader connections could be made to biomes, climate and albedo.

Step 1 – Students design a survey for peers and staff investigating the perceived temperatures of 4 selected outdoor areas within of the school. Questions may include:
- Rank the 4 selected areas from hottest to coolest
- How does the hottest area change in temperature over the course of the school day?
-

Step 2 – Students measure the temperature of the 4 selected areas at 3 times during the day- morning, mid-day and afternoon.

Step 3 – Students compare the changing temperatures of the 4 selected areas over the day against the perceived temperatures identified in the survey. Students discuss any similarities or inconsistencies in the data.

Step 4 - Students explain why different areas are cooler or warmer at different parts of the day and form links between sun location, vegetation location, wind direction, shade, building materials, area use etc.

✏️ Equipment & Materials

- Paper and pencil for surveying;
- Other students (to participate in the survey- potentially done during a break time);
- Thermometer

💡 EXTENSION SUGGESTION

Students could explore the materials used to make the buildings and identify the impacts of shade and albedo on temperature of spaces.

📖 Curriculum Outcomes

7-8
- Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)
- Select and represent data and information in different forms, including by constructing appropriate maps at different scales that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC103)
- 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)

9-10
- Predict changes in the characteristics of places over time and identify the possible implications of change for the future (VCGGC127)
- Collect and record relevant geographical data and information, using ethical protocols, from reliable and useful primary and secondary sources (VCGGC130)
- Select, organise and represent data and information in different forms, including by constructing special purpose maps that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC131)
- 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)
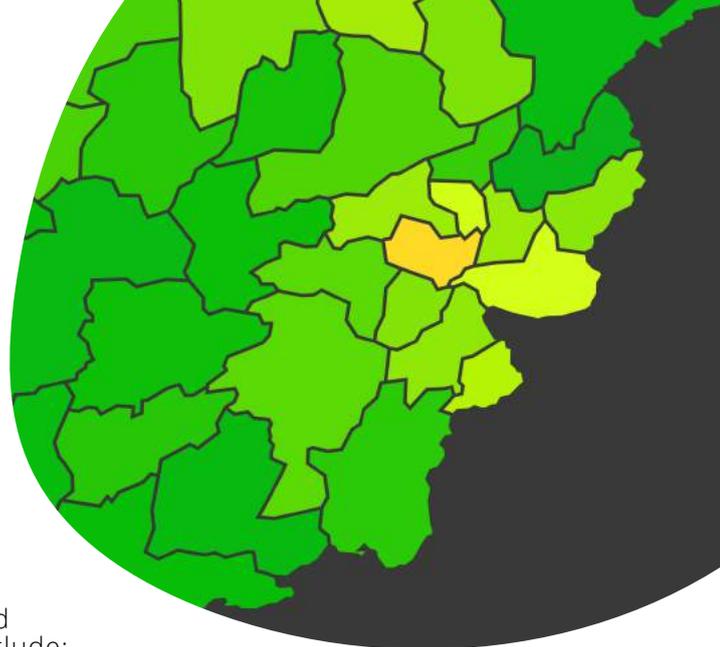
🔍 Additional Resources:

Measuring air temperature with a thermometer:
https://www.americangeosciences.org/education/k5geosource/content/weather/how-do-we-measure-air-temperature
Trees and the impacts of shade: https://theconversation.com/can-trees-really-cool-our-cities-down-44099
Quantitative and qualitative data:
https://www.abs.gov.au/websitedbs/D3310114.nsf/Home/Statistical+Language+-+quantitative+and+qualitative+data#:~:text=Quantitative%20data%20are%20measures%20of,symbol%2C%20or%20a%20number%20code.

QR Query

This activity could be a good introductory team building activity for new Year 7 students learning their way around the high school environment. This activity introduces students to basic use of GPS and the difference between absolute and relative location through a treasure hunt.

Step 1 – Students are placed into groups. The groups identify 5 areas of interest around the school and record the absolute and relative location of these places using a GPS or similar application (such as Google My Maps).

Step 2 – Students create QR codes which are linked with these places and input the clues created in Step 1

Step 3 – The QR codes are placed around the school as a treasure hunt and student groups work together to solve the puzzles.

Curriculum Outcomes

7-8 • Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)

9-10 • Collect and record relevant geographical data and information, using ethical protocols, from reliable and useful primary and secondary sources (VCGGC130)

Equipment & Materials

- QR code generator
- Digital device for reading QR codes
- GPS or GPS application
- Printer

EXTENSION SUGGESTION

Students could use natural or human characteristics as clues or annotate their journey using a school map.

Additional Resources:

QR code generator: https://www.qr-code-generator.com/
Absolute and relative location: https://www.geographyrealm.com/absolute-relative-location/
Finding or entering coordinates using Google Maps: https://support.google.com/maps/answer/18539?hl=en&co=GENIE.Platform%3DDesktop

A Waste of Time

In two different groups, students investigate and map litter in their school environment. Students use geospatial technology to plot locations and infer management techniques for improving the liveability of the school grounds.

Step 1 – Students are divided into 2 key groups.

Group one: Using software such as Survey123, students survey and plot the locations of waste disposal outlets (bin, dumpsters etc.) around the school grounds.
Group two: Using software such as Survey123, students survey and plot the location of littler around the school.

Step 2 – Group one: Students categorise the types of waste disposal units such as recycling, rubbish, compost, green bins etc.
Group two: Students categorise the types of litter found around the school and measure the distance of the litter to the closest refuge.

Step 3 – Students compare their data and make inferences about management and implications for liveability of the school.

📖 Curriculum Outcomes

7-8
- Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)
- Select and represent data and information in different forms, including by constructing appropriate maps at different scales that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC103)
- 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)
- Environmental, economic and social measures used to evaluate places for their liveability, comparing two different places (VCGGK113)
- Strategies used to enhance the liveability of places, especially for young people, including examples from Australia and Europe (VCGGK115)

9-10
- Predict changes in the characteristics of places over time and identify the possible implications of change for the future (VCGGC127)
- Collect and record relevant geographical data and information, using ethical protocols, from reliable and useful primary and secondary sources (VCGGC130)
- Select, organise and represent data and information in different forms, including by constructing special purpose maps that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC131)
- 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)
- Environmental, economic and technological factors that influence environmental change and human responses to its management (VCGGK145)

🔍 Additional Resources:

Survey123: https://survey123.arcgis.com/
Random group generator: https://wheel-decide.com/randomteamgenerator.html
Victorian Schools Litter Audit Tool: https://assets.sustainability.vic.gov.au/susvic/Tool-RSS-Litter-Audit-Tool-Dec-2020.pdf.

✏️ Equipment & Materials

- Survey 123 or other data collecting application
- Paper and pencil
- Digital device

💡 EXTENSION SUGGESTION

Students could create a podcast or short film educating students about the litter issue and highlighting potential management strategies.

What's My Best Angle?

In this activity students identify the pros and cons of using different angles for analysing geographical characteristics. Students take photos from different vantage points and lead discussions. This activity is adaptable for any year level or topic and can be done in the field where appropriate.

Step 1 – Students take photos of one part of the school from different vantage points. For example, ground level, aerial (using a drone or standing on a balcony), oblique etc.)

Step 2 – Students analyse the positives and negatives of each photo angle and what each angle would be mist useful for in understanding about the place.

📖 Curriculum Outcomes

7-8
- Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)
- Select and represent data and information in different forms, including by constructing appropriate maps at different scales that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC103)

9-10
- Collect and record relevant geographical data and information, using ethical protocols, from reliable and useful primary and secondary sources (VCGGC130)
- Select, organise and represent data and information in different forms, including by constructing special purpose maps that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC131)

🔎 Additional Resources:

Aerial photographs: https://www.bbc.co.uk/bitesize/guides/z923hv4/revision/4
Satellite images: http://www.bom.gov.au/australia/satellite/
Vertical and oblique photograph: https://ncap.org.uk/feature/vertical-and-oblique-aerial-photography#:~:text=Aerial%20photographs%20are%20generally%20classified,an%20inclination%20to%20the%20ground

✏️ Equipment & Materials

- Camera

💡 EXTENSION SUGGESTION

Students use Google Earth to view the school from a satellite perspective and discuss the implications of geospatial technology in gathering more information about a place.

Crossing a Line

In this activity students use transects to investigate localised biodiversity. This may provide good practise for fieldwork activities or understanding human impact on place.

Step 1 – Students measure out a 1m straight line along a grassed or vegetated surface.

Step 2 – Students tally the number of different species along this transect.

Step 3 – Students use software or apps such as "PlantSnap" to identify some of the species noted.

Step 4 - Students discuss the biodiversity within the school and the importance of biodiversity in a range of different biomes

✏️ Equipment & Materials

- 1m ruler
- Smartphone with application capabilities

📖 Curriculum Outcomes

7-8
- Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)
- 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)
- Different types of landscapes and their distinctive landform features (VCGGK116)

💡 EXTENSION SUGGESTION

Students repeat the transect several times and discuss the value of larger sample sizes in gaining accurate data. Students critically reflect on the limitations of the method used.

9-10
- Collect and record relevant geographical data and information, using ethical protocols, from reliable and useful primary and secondary sources (VCGGC130)
- 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)
- Distribution and characteristics of biomes as regions with distinctive climates, soils, vegetation and productivity (VCGGK133)
- Different types and distribution of environmental changes and the forms it takes in different places (VCGGK144)
- Environmental, economic and technological factors that influence environmental change and human responses to its management (VCGGK145)

🔍 Additional Resources:

DIY Self Filling waterbowl: https://www.youtube.com/watch?v=GG8saybSsF8
Plantsnap: https://www.plantsnap.com/
Importance of biodiversity: https://www.unicef.org/globalinsight/stories/why-biodiversity-important-children
Biodiversity: https://australian.museum/learn/science/biodiversity/what-is-biodiversity/#:~:text=Biodiversity%20is%20the%20variety%20of,and%20the%20ecosystems%20they%20form.

Fire, Fire!

In this activity, students explore the school grounds and analyse its geographical characteristics to predict bushfire vulnerability. Students can extend their analysis by exploring First Nations land management techniques and compare these ideas to modern fire preparation.

Step 1 – Students discuss the fire triangle and risks, hazards and safety practices associated with bushfires.

Step 2 – Students identify audit the school, evaluating the risk level for bushfires, noting vegetation, wind direction and topography.

Step 3 – Students measure the time it takes to move from different points of the school to evacuation points and identify any risks on these routes such as bottlenecks or built hazards.

Step 4 - Students create a bushfire management plan for their school, considering the impacts of changing land use, climate change and population growth.

📖 Curriculum Outcomes

7-8
- Collect and record relevant geographical data and information from useful primary and secondary sources, using ethical protocols (VCGGC102)

9-10
- Collect and record relevant geographical data and information, using ethical protocols, from reliable and useful primary and secondary sources (VCGGC130)
- Human alteration of biomes to produce food, industrial materials and fibres, and the environmental effects of these alterations (VCGGK136)
- Land and resource management strategies used by Aboriginal or Torres Strait Islander peoples to achieve food security over time (VCGGK137)
- Causes and consequences of an environmental change, comparing examples from Australia and at least one other country (VCGGK147)
- Aboriginal and Torres Strait Islander peoples' approaches to custodial responsibility and environmental management in different regions of Australia (VCGGK148)

✏️ Equipment & Materials

- Paper and pen

💡 EXTENSION SUGGESTION

Students research the local fire overlay to help inform create a management plan for the school. Students could then compare their ideas with the published school fire management plan.

Students could investigate modern techniques to reduce bushfire risk in their local region and compare these to First Nations land management approaches. What are the pros and cons of each?

🔍 Additional Resources:

Bushfire resource: https://www.gtav.asn.au/documents/item/153
CFA lesson plans and information: https://www.cfa.vic.gov.au/schools/secondary-schools
Bushfire management overlay: https://www.cfa.vic.gov.au/plan-prepare/building-planning-regulations/planning-controls/planning-and-bushfire-management-overlay

Re-naturalising your place

In this activity, students use their geographical knowledge of place to design a revegetation project within their school boundary. Students research suitable native plants and animal species to be re-introduced and consider how their design would be self-sustaining.

Step 1 – Students envisage a part of the school is knocked down and rubble/ waste is removed.

Step 2 – Students consider the climate and native vegetation within the local area and using a sketch, design a plan to re-vegetate the area.

Step 3 – Students use appropriate symbols or drawings to complete the sketch and annotate key aspects or features such as plants, water sources, animal reintroduction.

Step 4 - Students write a reflection explaining their design and identifying how the new environment would be self-sustaining.

✏️ Equipment & Materials

- Paper and pen

💡 EXTENSION SUGGESTION

Students could identify how this new environment could be used as a natural resource for humans such as natural food production, agroforestry or sustainable living.

📖 Curriculum Outcomes

7-8
- Different types of landscapes and their distinctive landform features (VCGGK116)

9-10
- Distribution and characteristics of biomes as regions with distinctive climates, soils, vegetation and productivity (VCGGK133)
- Causes and consequences of an environmental change, comparing examples from Australia and at least one other country (VCGGK147)

🔍 Additional Resources:

Atlas of Living Australia: https://www.ala.org.au/
Field sketches: http://www.geogspace.net.au/files/Core/Inquiry%20and%20Skills/Years%20F-4/Illustration2/3.2.1%20Field%20Sketching.pdf
Revegetation case study: https://www.nillumbik.vic.gov.au/files/assets/public/environment/natural-environment/revegetation-fact-sheet.pdf

Conclusion

There are countless possibilities to learn Geography in the outdoors and help students to become geoliterate. These activities are a starting place and you are encouraged to develop more of your own fieldwork lessons. Most importantly, take as many opportunities as you can to take your students outside to learn.

As an emerging area (outdoor learning) we are always seeking further feedback, suggestions or sharing of your experiences please **outdoorlearning@outdoorsvictoria.org.au** and we will review it and get back to you as soon as possible.

Acknowledgments

This teacher toolkit could not have been created without the work and dedication of educators throughout Australia. Educators often need to look at their local environment and create activities that suit their needs for that day, we thank you for sharing your activities and hope others reading this document can utilise your creative thinking and implement these activities.

Furthermore, the following organisations and staff have assisted in the creation of this document including;

- Outdoors Victoria
- ACHPER (Victoria)
- Geography Teachers Association of Victoria (GTAV)
- Parks Victoria

Get in contact:

Outdoorlearning@outdoorsvictoria.org.au
www.outdoorsvictoria.org.au/contact