

# LEARNING in the OUTDOORS

## GEOGRAPHY

### TOOLKIT 6



# TEACHER TOOLKIT SCHEDULE

Outdoors Victoria, in partnership with the Australian Council for Health, Physical Education and Recreation (ACHPER Victoria), Environment Education Victoria (EEV), Geography Teachers Association (GTAV) and Parks Victoria (Parks Vic) will produce 15 Teacher Toolkits between 2018 and 2020. These toolkits will be delivered to the following order:

## 2018

- 1 Introduction to Outdoor Learning
- 2 Outdoor Learning in the Play Ground
- 3 Outdoor Learning in Water-Based Environments

## 2019

- 4 Outdoor Learning in Physical Education\*
- 5 Outdoor Learning in Art\*
- 6 Outdoor Learning in Geography\*
- 7 Outdoor Learning in Science\*
- 8 Outdoor Learning in Mathematics\*
- 9 Outdoor Learning in Urban Environments\*

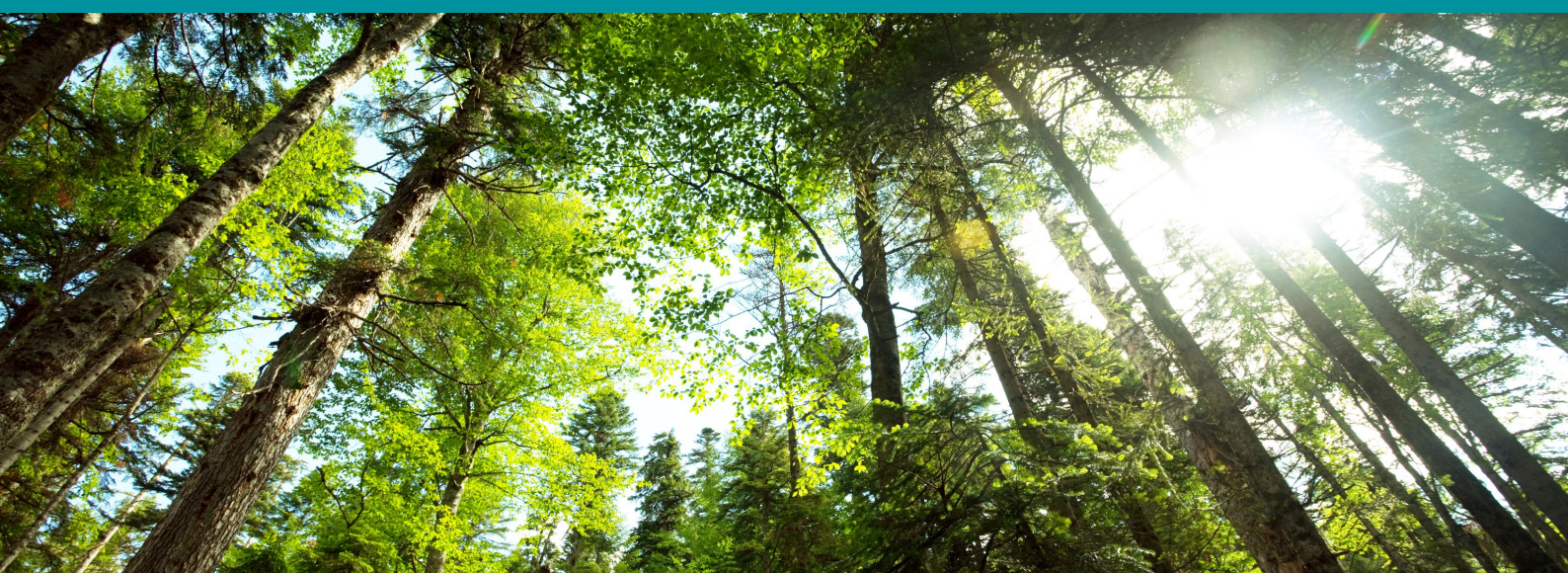
In 2020 a further six teacher toolkits will be created upon further consultation, if you would like to be involved in this process please use the contact details located on the last page of the document.

Please note the teacher toolkits will be constantly updated as emerging trends, activities and projects are created over the coming years. Videos and 360VR experiences are expected to be placed throughout the teacher toolkits above. These updates will occur within the FUSE Website.

Outdoors Victoria, in partnership with ACHPER (Victoria), EEV, GTAV and Parks Victoria, is always interested in finding out what is occurring in the outdoors in your school.

If you are proud of a new program you have implemented or would like to be involved in /contribute to any of the Teacher Toolkits, contact any of the above organisations (Contact details are provided on the final page of this document)

Outdoors Victoria, in partnership with ACHPER (Victoria), GTAV, EEV 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

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This Teacher Toolkit is offered as a framework for developing your own curriculum specific ideas and activities for Outdoor Learning. It is quite flexible and should be adapted to suit your needs. Remember to note the benefits of Outdoor Learning in your teaching area, and to provide tips wherever you can for embedding Outdoor Learning into the curriculum. Include relevant research, case studies and examples that might assist teachers. Teacher Toolkit 1 Benefits of Outdoor Learning presents research that will help you argue the case for taking students out of the classroom.



# Benefits of Outdoor Learning in Geography

The outdoor area is a vital learning environment for young children. Outdoor / fieldwork opportunities provide opportunities to stimulate all the senses and become powerful memories for students. In the field, students can engage with real issues that are relevant to their lives, using an inquiry approach and encouraging curiosity and exploration. In particular, outdoor learning in Geography can enable sensory and exploratory play and learning.

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, encourage participation in sustainable practices, encourage and empower their voice and involvement.

## Case Study to support Outdoor Learning in Geography

In 2019, the Geography Teachers' Association of Victoria worked with Development Victoria and Keysborough Primary School in a pilot program to engage students in community consultation for land development in Springvale. Fieldwork and collection of primary data was mandatory – fieldwork on the development site and surrounding area included students using spatial technologies and AR / VR.

This student group had never experienced learning in the outdoors before. The feedback from the process included an appreciation that Geography was not just about maps but learning was about the real world and students could be creative. Students were able to view the world through a geographic lens and could view other sites and consider the process of design. It was a great example of developing divergent thinking – an open-ended learning experience to develop cognitive processes and think of unlimited possibilities.



## Underpinning Research

Dr Niranjana Casinader outlines that the educational value of Geography fieldwork needs to be emphasised by making it central to both the learning and the assessment of the particular geographical unit. Further, the fieldwork needs to be exciting and active for the students concerned.

*Casinader, Dr N. (2016). Geography and fieldwork: intelligence in the wild. Interaction, Vol 44, No 1, 6–7.*  
*P. Owens points out that taking part in fieldwork provides the opportunity to be active out of doors, to safely explore surroundings, make connections between care for the environment and care for oneself, learn about hazards in the environment and how to avoid them and investigate the use of local places and routes.*  
*Owens, P. (2007). Why fieldwork matters to every child. Primary Geographer, 63, Summer, 12–14.*



# Embedding Outdoor Learning in Geography

By enabling primary students to engage in Geography learning in the outdoors, children can become comfortable and confident in their everyday geographies. The school grounds provide perfect environments for children 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 broadly be included in the Geography curriculum include the:

- nature of places
- character of places
- sense of places
- management and improvement of places
- changing places
- place locations and connections
- comparing places.



## Google Earth:

<https://www.google.com/earth/>

## Google Maps:

<https://www.youtube.com/watch?v=TftFnot5uXw>

## How to print maps from Google Maps (and Google Earth):

<https://www.wikihow.com/Print-Google-Maps>

## Understanding and making a Map

Many maps are not easy for young children to read, use or understand. The activities in this toolkit provide opportunities to introduce children to map work to help develop some basic concepts and skills such as location, direction, place and scale.

A school and / or a local place map (local to the environment you plan to visit) are used in many of the activities in this section. It is therefore recommended that you obtain an electronic map of your school and surrounding suburbs from Google Earth or Google maps. An A3-size map is ideal. Alternatively, your school may have a map already that can be used. All maps must have a border, scale and north sign.

When visiting a site or environment further afield, you can also produce a relevant map for students to read and use.

## ACTIVITY 1

# In which direction, and how far is it?

Learning about distance and direction helps students to understand where they are in relation to other features around them. It is also an important process in learning about maps and mapping.

The direction and distance that something is from you depends on where you are in the first place.

e.g. a tree does not move, but you can move and the distance and direction changes as you move.



**Step 1** - Use a compass to show students where north is. Students face north. Practice giving four cardinal points. Develop an appropriate mnemonic to help students remember the four basic compass directions for North, East, South, West. E.g.

☑ **Never Eat Soggy Waffles**

☑ **Nobody Enjoys Stinging Wasps**

☑ **Never Eat Slimy Worms**

☑ **Naughty Elephants Spray Water**

**Step 2** - Use a compass to show where north is. Students face north. Practice giving four cardinal points and students turn towards each one OR they can move their arms to point to each cardinal point.

**Step 3** – Students work in pairs. Use chalk or sticks to draw the four cardinal points on the ground. Ask one student to stand half way between each cardinal point and establish the following directions between the cardinal points: Northeast; Southeast, Southwest and Northwest.

**Step 4** – List a set of objects in the outdoor space you are visiting. Ask students to face north and then point at the object – the partner gives direction of each object. E.g. Tree, door, bench, pond, classroom, carpark, office. The students may not be able to see all these objects but can make a guess by orienting themselves.

**Step 5** – The pair uses a tape measure or counts steps to measure how far each object is. They record both the directions and distance in their notebooks or journals. They can also use simple drawings to record where things are and how far.

*F-2: for younger children use terms such as 'in front of', 'behind me', 'beside me' as an alternative to compass points.*

### EXTENSION SUGGESTION

Set up a competition where student teams start in a particular place and they use number of steps and direction to find objects in the school ground. They can photograph or collect the objects. This activity is a little like an orienteering course.

### Curriculum Outcomes

- F-2**
- Collect and record geographical data and information from the field and other sources (VCGGC060)
  - Natural, managed and constructed features of places, their location and how they change (VCGGK068)

- 3-4**
- Identify and describe the characteristics of places in different locations at a range of scales (VCGGC071)
  - Identify and describe locations and spatial distributions and patterns (VCGGC072)
  - Collect and record relevant geographical data and information from the field and other sources (VCGGC074)

### Additional Resources:

*How to use a Compass:* <https://www.youtube.com/watch?v=cZlKFQk9ToU>  
*Compass Printable Collection:* <http://clipart-library.com/compass-printable.html>  
*Step to Distance Converter:* <https://exrx.net/Calculators/StepDistance>

### Equipment & Materials

- Measuring tape
- Compass
- Notebooks/journals

## ACTIVITY 2

# Find the shape: A bird's eye view

This activity gives students the opportunity to see their world from another perspective. It also helps them to develop a visual memory and develop their understanding of maps.

Before going outdoors, show students what different objects look like from above. For example, if you have a Lego village, look at it from side on and then from directly above – ask students notice the differences. You can also use digital photographs or screen shots from Google Earth or Google Maps.

Show students the view from above and then street view. These images could be displayed. Alternatively, use an overhead projector and place different objects on it to see their plan view. E.g. cutlery, balls, blocks.

**Step 1** - Prepare a set of cards or a worksheet with plan view shapes that will match objects in your school grounds or another outdoors space you are visiting. Examples of the shapes could include:

- A rectangle (for picnic table, car, bench, shed, school building, garden beds)
- A circle (for trees, a pond, an umbrella, a pond, a bird bath)
- A square (a table, pavers, house, farm crops, forests).

**Step 2** - Take the students outside to your selected outdoors space. Provide them with the plan view shapes and ask them to match them with objects they find and how they would look from above or a bird's eye view.

**Step 3** – Students can record their findings by filling out a worksheet or sticking the shapes onto a larger card and drawing the object they have matched.

### Curriculum Outcomes

- F-2**
- Identify and describe the features of places at a local scale and how they change, recognising that people describe the features of places differently (VCGGC057)
  - Collect and record geographical data and information from the field and other sources (VCGGC060)
  - Represent data and the location of places and their features by constructing tables, plans and labelled maps (VCGGC061)
- 3-4**
- Identify and describe the characteristics of places in different locations at a range of scales (VCGGC071)
  - Identify and describe locations and spatial distributions and patterns (VCGGC072)
  - Collect and record relevant geographical data and information from the field and other sources (VCGGC074)

### Additional Resources:

*Unusual Places with Google Earth:* <https://www.youtube.com/watch?v=NC02N1sFk98>

*NASA Satellite Images:* [http://teacherlink.ed.usu.edu/tlresources/units/Byrnes-S2000/Nelson/Laura\\_Nelson.html](http://teacherlink.ed.usu.edu/tlresources/units/Byrnes-S2000/Nelson/Laura_Nelson.html)

*Drawing a Bird's Eye View Map:* <https://exrx.net/Calculators/StepDistance>



### EXTENSION SUGGESTION

Older students can take digital photos and download them onto a worksheet provided later in the classroom. If you have a plan map of the school on an A3-size sheet, students can glue their shapes to the appropriate location of the objects, thereby creating their own map. Ensure students include BOLTSS:

**B**order  
**O**rientation sign (north point)  
**L**egend  
**T**itle  
**S**cale  
**S**ource

### Equipment & Materials

- Cards
- Pencils
- Digital Camera (optional)



## ACTIVITY 3

# Finding Places on a Grid



Grids are important tools for locating places.

This activity gives students an opportunity to learn about and practice coordinates. Using letters and numbers to pinpoint locations is called an alpha-numeric coordinates.

**Step 1** - Use chalk to draw a large 12 X 12 grid on an outdoor bitumen area.

**Step 2** - Label the grids on the left side with the letters A–L. On the bottom (on top) of the grid, label the grids with the numbers 1–12.

**Step 3** - Call out combinations of letters and numbers and students can take turns to stand on the correct square. The student repeats their alpha-numeric location e.g. Sam is located at C5. Alternatively use other objects to place in the squares as markers e.g. objects from nature such as leaves, stones or feathers.

**F-2:** Instead of using letters and numbers, use soft toys and coloured disks. Call out 'elephant – green' and choose children to stand in the correct square.

### Curriculum Outcomes

- F-2**
- Represent data and the location of places and their features by constructing tables, plans and labelled maps (VCGGC061)
  - Representation of the location of places and their features on maps and models, including a globe, and the location of the major geographical divisions of the world in relation to Australia (VCGGK063)

- 3-4**
- Represent data and the location of places and their characteristics by constructing tables and simple graphs and maps of appropriate scale that conform to cartographic conventions of border, scale, legend, title and north point (VCGGC075)



### Equipment & Materials

- Chalk
- Soft Toys
- Coloured Discs

### Additional Resources:

*Alphanumeric Grid (Battleship Activity):*

<https://ferongeography2012.weebly.com/uploads/1/2/6/5/12652801/15.alphanumericgridhandout.pdf>

*Grid Co-ordinates:* <https://www.youtube.com/watch?v=6mm77KbD2hc>

*Following Directions Grid Game:* <https://kidsactivitiesblog.com/27772/map-game/>

# Special Sensory Places

It is aimed that this activity takes place in a forest, coastal, river, wetland or other environment. It involves students creating a path that stimulates all the senses – sight, smell, hearing, touch and taste (include warnings about what is safe to taste and not to taste in the natural environment).

**Step 1** - Obtain a map of the site being visited (use Google Maps or Google Earth).

**Step 2** - Students work in pairs to locate places in the environment that stimulate their senses and make the environment special to them. It may be the sounds of birds or waves/water moving; the sight of tall trees etc.

**Step 3** – The students label these places on their map. They can use symbols and colour, making sure they add this information to their legend.

**Step 4** – Students label on the map using coloured footstep symbols, the route they took to find the five senses places on their journey.

### Alternative:

This activity can also be undertaken in the school grounds or in an urban area – students can be encouraged to find special places wherever they are.

## Curriculum Outcomes

- F-2**
- Identify and describe the features of places at a local scale and how they change, recognising that people describe the features of places differently (VCGGC057)
  - Collect and record geographical data and information from the field and other sources (VCGGC060)
  - Represent data and the location of places and their features by constructing tables, plans and labelled maps (VCGGC061)
  - Natural, managed and constructed features of places, their location and how they change (VCGGC068)
- 3-4**
- Identify and describe the characteristics of places in different locations at a range of scales (VCGGC071)
  - Collect and record relevant geographical data and information from the field and other sources (VCGGC074)
  - Represent data and the location of places and their characteristics by constructing tables and simple graphs and maps of appropriate scale that conform to cartographic conventions of border, scale, legend, title and north point (VCGGC075)
  - Similarities and differences in individuals' and groups' feelings and perceptions about places, and how they influence views about the protection of these places (VCGGC083)
- 5-6**
- Describe and explain the diverse characteristics of places in different locations from local to global scales (VCGGC085)
  - Collect and record relevant geographical data and information from the field and secondary sources, using ethical protocols (VCGGC088)
  - Represent the location of places and other types of geographical data and information in different forms including diagrams, field sketches and large-scale and small-scale maps that conform to cartographic conventions of border, scale, legend, title, north point and source; using digital and spatial technologies as appropriate (VCGGC089)

## Additional Resources:

*Five Senses Activity:* <https://carrotsareorange.com/five-senses-activities/>

*The 5 Senses Garden:* <https://www.fantasticfunandlearning.com/five-senses-garden.html>



## EXTENSION SUGGESTION

Older students can take digital photos and download them onto a worksheet provided later in the plan. If you have a plan

## Equipment & Materials

- A3 size map of the site
- Pencils
- Digital Camera (optional)

# Measuring Microclimates

This activity can take place in the school grounds or at any other site visited such as a park or shopping centre.

Different sites will experience different conditions throughout a day and a year, depending on the weather and the climate. A microclimate is the climate of a very small or restricted area, that is influenced by its surrounding area.

**Step 1** - Choose several locations with different microclimates – get the students to help you. Some suggested sites include: shaded grass; sunny grass; shaded concrete or asphalt; sunny concrete or asphalt; site on the north side of a tree or building; site near the south side of a tree or building; site that is very moist, or very dry; sites with a lot of vegetation; sites under shelter e.g. a verandah.

**Step 2** - Prepare record collection sheets for each group – to record temperature; cloud cover; wind speed; and wind direction (see the resources links)

**Step 3** – Students can work in groups of 4. Each student is responsible for collecting the one of the measurements in each microclimate visited. You can swap tasks from site to site if you wish.

## Curriculum Outcomes

- F-2**
- Identify and describe the features of places at a local scale and how they change, recognising that people describe the features of places differently (VCGGC057)
  - Collect and record geographical data and information from the field and other sources (VCGGC060)
  - Represent data and the location of places and their features by constructing tables, plans and labelled maps (VCGGC061)
  - Weather and seasons and the ways in which different cultural groups, including Aboriginal and Torres Strait Islander peoples, describe them (VCGGC067)
  - Natural, managed and constructed features of places, their location and how they change (VCGGC068)
- 3-4**
- Identify and explain the interconnections within places and between places (VCGGC073)
  - Identify and describe the characteristics of places in different locations at a range of scales (VCGGC071)
  - Collect and record relevant geographical data and information from the field and other sources (VCGGC074)
  - Represent data and the location of places and their characteristics by constructing tables and simple graphs and maps of appropriate scale that conform to cartographic conventions of border, scale, legend, title and north point (VCGGC075) Similarities and differences in individuals' and groups' feelings and perceptions about places, and how they influence views about the protection of these places (VCGGC083)
- 5-6**
- Describe and explain the diverse characteristics of places in different locations from local to global scales (VCGGC085)
  - Collect and record relevant geographical data and information from the field and secondary sources, using ethical protocols (VCGGC088)
  - Describe and explain interconnections within places and between places, and the effects of these interconnections (VCGGC087)
  - Represent the location of places and other types of geographical data and information in different forms including diagrams, field sketches and large-scale and small-scale maps that conform to cartographic conventions of border, scale, legend, title, north point and source; using digital and spatial technologies as appropriate (VCGGC089)

## Additional Resources:

*Make an Anemometer to Measure Wind Speed:* <https://www.youtube.com/watch?v=Af0LB3abBsk>

*Beaufort Wind Scale:* <https://www.spc.noaa.gov/faq/tornado/beaufort.html>

*Light & Heavy Rain:* <https://hjelp.yr.no/hc/en-us/articles/115003696813-What-does-light-and-heavy-rain-mean>



## EXTENSION SUGGESTION

For older students, provide a base map of the school grounds (use Google Maps) and ask them to record their findings on the map.

- Discuss where are the warmest/coolest places
- Where are the strongest /lightest winds experienced?
- How does cloud cover affect temperature?

## Equipment & Materials

- Thermometer
- Compass
- Cloud cover sheet (see resource links)
- Wind speed (Beaufort scale) sheet (see resource links)



# Going with the Flow

In this activity students will observe and map the flow of water in an environment. Use the school grounds (or another site such as a local park, forest or wetland). Alternatively, compare two very different environments.

Water will behave differently depending on slope (water always flows downhill), surfaces (water will flow over hard surfaces and soak into other surfaces). Introduce students to the water cycle and the interconnections. It is easy to observe the interconnections in the water cycle when it is raining or snowing.



**Step 1** - Provide the students with a map of the school grounds or the site being visited (see Resources).

**Step 2** - During (preferable) or immediately after rain students walk around the school grounds noting the location of the following:

- Where puddles develop and on what type of surface
- Where water is flowing
- Where water flows join together to form channels
- Where water soaks into the ground
- Where gutters, downpipes and drains are.

**Step 3** - On another occasion (preferably when it is NOT raining) conduct an activity that measures how quickly water soaks into the soil in different locations around the school (see the resources list). Number each site and students record their findings.

Discuss the following:

- How do changes to the environment affect the flow of water in the school grounds?
- What soil characteristics allow water to infiltrate (soak) the best?
- Which site in the school would you choose to:
  - a. plant a new garden?
  - b. build a pond?
  - c. build a playground?
  - d. site a football ground?

## Equipment & Materials

- Map of the school grounds
- (see resources)
- Pens and pencils
- Hand trowel (to dig a soil soak test hole)
- A tin can or plastic water bottle
- can with the top and bottom removed
- A ruler
- Stopwatch
- Water in a measuring jug

## Curriculum Outcomes

- 5-6**
- Describe and explain the diverse characteristics of places in different locations from local to global scales (VCGGC085)
  - Describe and explain interconnections within places and between places, and the effects of these interconnections (VCGGC087)
  - Collect and record relevant geographical data and information from the field and secondary sources, using ethical protocols (VCGGC088)
  - Represent the location of places and other types of geographical data and information in different forms including diagrams, field sketches and large-scale and small-scale maps that conform to cartographic conventions of border, scale, legend, title, north point and source; using digital and spatial technologies as appropriate (VCGGC089)

## Additional Resources:

(Go to page 40 for the soil percolation test instructions): <http://www.maroochycatchmentcentre.org.au/catchment/wp-content/uploads/2013/10/Soils-Aint-Dirt.pdf>

*The Water Cycle (Video)*: <https://www.youtube.com/watch?v=al-do-HGulk>

*The Water Cycle (Text)*: <https://www.noaa.gov/education/resource-collections/freshwater-education-resources/water-cycle>

# Sketching in the Field

This activity can take place in a variety of environments and at any year level. The aim is for students to learn how to draw a landscape and label the different features in it.

The purpose of the drawing is made clear to students and will reflect the Geography topic / study being undertaken.



**Step 1** - To help students to focus on the area they are asked to sketch, use a cutout cardboard frame.

**Step 2** - They can divide the area on the paper into three horizontal lines – signifying the foreground, middle ground and background.

**Step 3** – Add labels to the field sketch naming the features drawn.

**Step 4** – Add a scale – this should be measured in one of the foreground, middle ground and background.

**Step 5** – Finally, add a title to the completed sketch and a date that it was drawn.

## Equipment & Materials

- Paper
- Pencils
- Cardboard frames

## Curriculum Outcomes

- F-2**
- Identify and describe the features of places at a local scale and how they change recognising that people describe the features of places differently (VCGGC057)
  - Represent data and the location of places and their features by constructing tables, plans and labelled maps (VCGGC061)
- 3-4**
- Identify and explain the interconnections within places and between places (VCGGC073)
  - Identify and describe the characteristics of places in different locations at a range of scales (VCGGC071)
  - Collect and record relevant geographical data and information from the field and other sources (VCGGC074)
- 5-6**
- Collect and record relevant geographical data and information from the field and secondary sources, using ethical protocols (VCGGC088)
  - Represent the location of places and other types of geographical data and information in different forms including diagrams, field sketches and large-scale and small-scale maps that conform to cartographic conventions of border, scale, legend, title, north point and source; using digital and spatial technologies as appropriate (VCGGC089)

## Additional Resources:

*Field Sketching:* [https://www.geogspace.edu.au/verve/resources/2.1.2.3.1\\_field\\_sketching.pdf](https://www.geogspace.edu.au/verve/resources/2.1.2.3.1_field_sketching.pdf)

*Field Sketching in the School ground:* <https://www.youtube.com/watch?v=UhFUjkBw3kk>

*Field Sketching with Photographs:* <https://sites.google.com/a/moe.edu.sg/sec-1-geog/geographical-skills/7-field-sketch>

# Winter Wonderland

These activities provide students with an understanding of weather and the seasons. There are many observations that announce that winter has arrived.

**Step 1** - Take students outside and ask them about what is happening to the temperature and the sun at this time of year. Some observations might include:

- the temperatures become colder and colder
- you might be able to see your breath when breathing or speaking
- the days become shorter and shorter
- the angle of the sun in the sky is very low; it is at its lowest at the winter solstice (the shortest day) around 21 June
- morning frost begins to appear
- if you live where it snows, the amount snow on the ground grows thicker
- rain, hail and/or snow fall to the ground
- some trees have lost all their leaves
- grass doesn't grow as fast
- winter flowers such as wattle and Hellebores are flowering
- pets and other animals shed less hair and some grow a thicker winter coat
- animals such as butterflies, ladybugs and moths have disappeared until the spring.

**Step 2** - Some winter season activities can include:

- taking photos of the winter observations
- take the air temperature each day and record it in a class weather book
- make your own rain gauge and measure the rain (see Resources) – record this in your class weather book
- read winter books (see Resources) outdoors under shelter with coats, gloves and hats on
- draw winter pictures
- keep a winter nature diary (see Resources)
- compare your season with the interactive Indigenous calendars (see resources).

## Curriculum Outcomes

- F-2**
- Identify and describe the features of places at a local scale and how they change, recognising that people describe the features of places differently (VCGGC057)
  - Collect and record geographical data and information from the field and other sources (VCGGC060)
  - Represent data and the location of places and their features by constructing tables, plans and labelled maps (VCGGC061)
  - Weather and seasons and the ways in which different cultural groups, including Aboriginal and Torres Strait Islander peoples, describe them (VCGGK067)

## Additional Resources:

*Make Your own Rain Gauge:* <https://www.youtube.com/watch?v=QOzdcM-YZ2v>  
*Gulumoerrgin Seasons Calendar:* [https://www.csiro.au/en/Research/Environment/Land management/Indigenous/Indigenous-calendars/Gulumoerrgin](https://www.csiro.au/en/Research/Environment/Land%20management/Indigenous/Indigenous-calendars/Gulumoerrgin)  
*Indigenous Weather Knowledge:* <http://www.bom.gov.au/iwk/>  
*Winter Picture Books:* <https://www.weareteachers.com/winter-picture-books/>  
*Make your own Nature Diary:* <https://www.youtube.com/watch?v=3e4wb-R0kNk>  
*Printable Nature Journal:* <https://www.adventure-in-a-box.com/free-printable-nature-journal-for-kids-with-creative-drawing-and-writing-prompts/>



## Equipment & Materials

- Temperature sheets to record data
- Rainfall sheets to record data
- Pencils
- Camera

To make a nature diary (see Resources):

- A3-size paper sheets
- Coloured paper
- Scissors
- String
- Needle
- Sticky tape
- Coloured pencils

To make a rain gauge (see Resources):

- Plastic drink bottle
- Ruler
- Paper clips
- Scissors
- Sticky tape
- Jelly crystals



# Spring Sensation

These activities provide students with an understanding of weather and the seasons. There are many observations that announce that spring has sprung.

**Step 1** - Take students outside and ask them to observe the signs of spring. What is happening to the temperature and the sun at this time of year? Some observations might include:

- the temperatures slowly begin to warm
- the air begins to feel warmer even at night and in the early morning hours
- the angle of the sun in the sky changes and begins to get higher
- the light of day begins changes and gets brighter
- the days get longer as the nights get shorter
- if there is snow where you live, it begins to melts
- rainbows may appear when there are light showers
- flower bulbs spring up from the earth – daffodil, iris, crocus, tulips etc.
- leaf and flower buds begin to appear on bare branches
- other plants begin to flower – blossoms on fruit trees; azaleas etc.
- the lawn grows more quickly and needs to be mown more often
- birds return and/or are more active and singing
- insects such as butterflies, moths and bees return.

**Step 2** - Some spring season activities can include:

- taking photos of the spring observations
- take the air temperature each day and record it in a class weather book
- make your own rain gauge and measure the rain (see Resources) – record this in your class weather book
- read spring books outdoors (see Resources) draw spring pictures
- keep a spring nature diary (see Resources)
- it's time to plant spring and summer vegetables
- compare your season with the interactive Indigenous calendars (see resources).

## Curriculum Outcomes

- F-2**
- Identify and describe the features of places at a local scale and how they change, recognising that people describe the features of places differently (VCGGC057)
  - Collect and record geographical data and information from the field and other sources (VCGGC060)
  - Represent data and the location of places and their features by constructing tables, plans and labelled maps (VCGGC061)
  - Weather and seasons and the ways in which different cultural groups, including Aboriginal and Torres Strait Islander peoples, describe them (VCGGC067)

## Additional Resources:

*Make Your own Rain Gauge:* <https://www.youtube.com/watch?v=QOzdcM-YZ2U>

*Gulumoerrgin Seasons Calendar:* <https://www.csiro.au/en/Research/Environment/Land-management/Indigenous/Indigenous-calendars/Gulumoerrgin>

*Indigenous Weather Knowledge:* <http://www.bom.gov.au/iwk/>

*Spring Children's Books:* <https://medium.com/thrive-global/19-childrens-books-to-read-this-spring-623dadf604c9>

*Make your own Nature Diary:* <https://www.youtube.com/watch?v=3e4wb-R0kNk>

*Printable Nature Journal:* <https://www.adventure-in-a-box.com/free-printable-nature-journal-for-kids-with-creative-drawing-and-writing-prompts/>



## Equipment & Materials

- Temperature sheets to record data
- Rainfall sheets to record data
- Pencils
- Camera

To make a nature diary (see Resources):

- A3-size paper sheets
- Coloured paper
- Scissors
- String
- Needle
- Sticky tape
- Coloured pencils

To make a rain gauge (see Resources):

- Plastic drink bottle
- Ruler
- Paper clips
- Scissors
- Sticky tape
- Jelly crystals

# Sizzling Summer

These activities provide students with an understanding of weather and the seasons. There are many observations that announce that summer has arrived.

**Step 1** - Take students outside and ask them to observe the signs of summer. What is happening to the temperature and the sun at this time of year? Some observations might include:

- the temperatures are getting very warm and students may be seeking shade in which to play
- air temperatures in the morning and at night are very warm now and the nights shorter
- the sun is very high in the sky – the summer solstice (around December 21) is when it is at its highest; this is also the longest day of the year
- flowers that are out now include roses, banksias, eucalypts
- leaves should be completely covering the trees that were deciduous in winter
- the lawn may dry out if it is not watered and if it has not rained much
- vegetables in the garden will be growing well and fruit trees will have fruit.

**Step 2** - Some summer season activities can include:

- taking photos of the summer observations
- take the air temperature each day and record it in a class weather book
- make your own rain gauge and measure the rain (see Resources) – record this in your class weather book
- read summer books outdoors (see Resources)
- draw summer pictures
- keep a summer nature diary (see Resources)
- it's time to plant summer vegetables
- make a human or other sundial (see Resources)
- compare your season with the interactive Indigenous calendars (see Resources).

## Curriculum Outcomes

- F-2**
- Identify and describe the features of places at a local scale and how they change, recognising that people describe the features of places differently (VCGGC057)
  - Collect and record geographical data and information from the field and other sources (VCGGC060)
  - Represent data and the location of places and their features by constructing tables, plans and labelled maps (VCGGC061)
  - Weather and seasons and the ways in which different cultural groups, including Aboriginal and Torres Strait Islander peoples, describe them (VCGGK067)

## Additional Resources:

*Make Your own Rain Gauge:* <https://www.youtube.com/watch?v=QOzdcM-YZ2U>

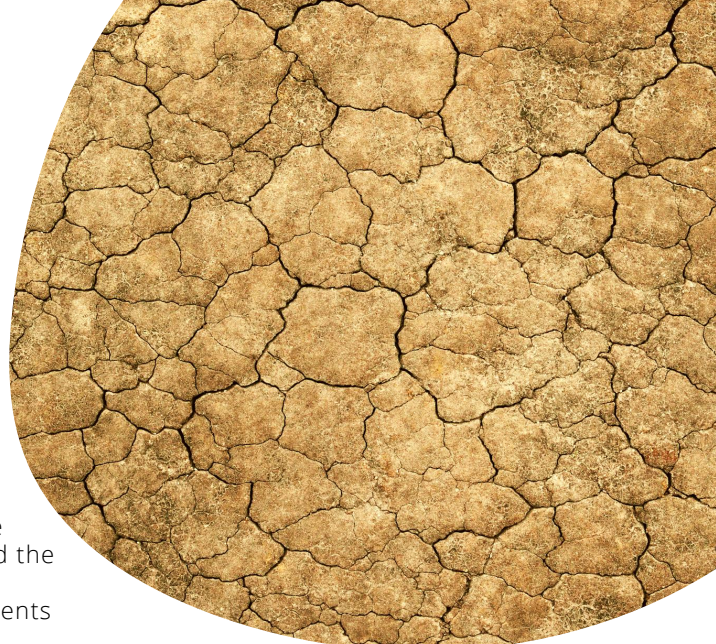
*Gulumoerrgin Seasons Calendar:* <https://www.csiro.au/en/Research/Environment/Land-management/Indigenous/Indigenous-calendars/Gulumoerrgin>

*Indigenous Weather Knowledge:* <http://www.bom.gov.au/iwk/>

*Summer Children's Books:* [https://www.betterreading.com.au/book\\_list/picture-books-for-summer-reading-24-recommendations-from-parents/](https://www.betterreading.com.au/book_list/picture-books-for-summer-reading-24-recommendations-from-parents/)

*Make your own Nature Diary:* <https://www.youtube.com/watch?v=3e4wb-R0kNk>

*Printable Nature Journal:* <https://www.adventure-in-a-box.com/free-printable-nature-journal-for-kids-with-creative-drawing-and-writing-prompts/>



## Equipment & Materials

- Temperature sheets to record data
- Rainfall sheets to record data
- Pencils
- Camera

To make a nature diary (see Resources):

- A3-size paper sheets
- Coloured paper
- Scissors
- String
- Needle
- Sticky tape
- Coloured pencils

To make a rain gauge (see Resources):

- Plastic drink bottle
- Ruler
- Paper clips
- Scissors
- Sticky tape
- Jelly crystals



# Awesome Autumn

These activities provide students with an understanding of weather and the seasons. There are many observations that announce that autumn has arrived.

**Step 1** - Take students outside and ask them to observe the signs of autumn. What is happening to the temperature and the sun at this time of year? Some observations might include:

- the temperatures in the morning and evening are starting to get cooler; days can still be warm but they are not hot
- the sun is beginning to drop in the sky the days are getting shorter – the sun is rising later and setting earlier
- leaves are beginning to change colour and fall from the trees
- gardens don't need as much water as the sun doesn't dry them out as much
- many vegetables such as pumpkins are ripening; other are finishing their life cycle.

**Step 2** - Some autumn season activities can include:

- taking photos of the autumn observations
- take the air temperature each day and record it in a class weather book
- make your own rain gauge and measure the rain (see Resources) – record this in your class weather book
- find the tree that matches the leaf – provide students with a variety of fallen leaves from the school grounds or a local park. Students walk around and match the leaves to the trees.
- create colour cards using different colour leaves – write the colour using the correct colour pencil
- count and catch falling leaves read autumn books outdoors (see Resources)
- draw autumn pictures
- keep an autumn nature diary (see Resources)
- compare your season with the interactive Indigenous calendars (see Resources).

## Curriculum Outcomes

- F-2**
- Identify and describe the features of places at a local scale and how they change, recognising that people describe the features of places differently (VCGGC057)
  - Collect and record geographical data and information from the field and other sources (VCGGC060)
  - Represent data and the location of places and their features by constructing tables, plans and labelled maps (VCGGC061)
  - Weather and seasons and the ways in which different cultural groups, including Aboriginal and Torres Strait Islander peoples, describe them (VCGGK067)

## Additional Resources:

*Make Your own Rain Gauge:* <https://www.youtube.com/watch?v=QOzdcM-YZ2U>

*Gulmoerrgin Seasons Calendar:* <https://www.csiro.au/en/Research/Environment/Land-management/Indigenous/Indigenous-calendars/Gulmoerrgin>

*Indigenous Weather Knowledge:* <http://www.bom.gov.au/iwk/>

*Autumn Children's Books:* <http://somethewiser.danoah.com/2015/09/50-autumn-picture-books.html>

*Make your own Nature Diary:* <https://www.youtube.com/watch?v=3e4wb-R0kNk>

*Printable Nature Journal:* <https://www.adventure-in-a-box.com/free-printable-nature-journal-for-kids-with-creative-drawing-and-writing-prompts/>



## Equipment & Materials

- Temperature sheets to record data
- Rainfall sheets to record data
- Pencils
- Camera

To make a nature diary (see Resources):

- A3-size paper sheets
- Coloured paper
- Scissors
- String
- Needle
- Sticky tape
- Coloured pencils

To make a rain gauge (see Resources):

- Plastic drink bottle
- Ruler
- Paper clips
- Scissors
- Sticky tape
- Jelly crystals



# Environmental Connections

In Year 3 Geography, students investigate the interconnections between environments (plants and animals) and people. This web of life activity brings these relationships to life and could be completed in the outdoors in an appropriate ecosystem environment.

**Step 1** - Choose the ecosystem environment you wish to focus on: wetland, coastal or river. Create plants and animal name tags for the species in that environment, preferably with a name and a photo (see Resources). Include sun, soil, water, air, algae and grass. Include some feral animals – cats, dogs, rabbits, foxes. *Laminate the cards if you wish.*

**Step 2** - Everyone sits in a circle to represent the ecosystem. Each person picks a name tag and becomes that component. Begin with a few simple food chains. For example, the sun person holds the end of a ball of string. Students are asked who needs the sun to grow. The grass – so the ball is thrown/rolled to the student with the grass name tag. Who eats grass? Kangaroo – so the ball gets passed to the student with the kangaroo name tag. Continue until the chain is complete. Complete a few different chains.

**Step 3** - Now form a web. Starting with any one component of your chosen ecosystem, use the ball of string (or several if it is easier, always beginning with the sun) to connect the component to another related component. The relationship may be that the second component eats the first (e.g., plant connected to fish.) Or, the relationship may be that the first component needs the second to survive (e.g. plant connected to soil). Connect the second component to a third (e.g., fish eaten by heron; heron eaten by eagle, or fish needs water). Continue in this way until everyone is connected to several people in several ways. As you go along, discuss what each connection or relationship is. Also, discuss the concept of interconnection.

**Step 4** - Once everyone is connected, remove one component of the web (e.g. there is no water because it was drained). The water person drops the string connections. All members who are connected also drop their string. This continues until you can see all the components that are affected. Discuss how the various components are affected when one component of the web is removed.

**Step 5** - Now pick up the strings again and reconnect everyone. Complete some scenarios and show the effect on the environment in each case e.g.

- an oil spill at the coast or in a river or wetland
- land is cleared for housing
- water became badly polluted
- people let their dogs and cats escape and they become feral.

## Curriculum Outcomes

- 3-4**
- Identify and describe the characteristics of places in different locations at a range of scales (VCGGC071)
  - Identify and describe locations and spatial distributions and patterns (VCGGC072)
  - Identify and explain the interconnections within places and between places (VCGGC073)
  - Types of natural vegetation and the significance of vegetation to the environment, the importance of environments to animals and people, and different views on how they can be protected; the use and management of natural resources and waste, and different views on how to do this sustainably (VCGGK082)

## Additional Resources:

*Wetland Ecosystem Factsheet:* <https://www.cen.org.au/wetlands/images/factSheets/wetlandAnimals.pdf>

*Wetland Ecosystem Plants & Animals:* <https://www.environment.nsw.gov.au/topics/water/wetlands/plants-and-animals-in-wetlands/plants>

*Coastal Ecosystem:* <http://coastalcare.org/educate/flora-and-fauna/>

*Coastal Ecosystem - Marine Habitats:* [https://www.qld.gov.au/environment/coasts-waterways/marine-habitats/rocky-shore#rocky\\_shore\\_dwellers](https://www.qld.gov.au/environment/coasts-waterways/marine-habitats/rocky-shore#rocky_shore_dwellers)

*River Ecosystem - Animals:* <https://www.mdba.gov.au/discover-basin/environment/animalsriver>

*River Ecosystem - Plants:* <https://www.mdba.gov.au/discover-basin/environment/plantsriver>



## Equipment & Materials

- Cards/name tags
- Balls of string

# School Traffic Flow

This activity focuses on movement of traffic around the school property and how the space is managed to accommodate the traffic at different times of the day.

**Step 1** - Prepare a large plan of the school including all the buildings, outdoor / playground areas, roads and streets leading to the school.

**Step 2** - Students hypothesise about where and when they think the busiest traffic will occur, including weather conditions. They write statements about what they expect to find.

**Step 3** - Prepare a standard data recording sheet which includes times of day for the observations (before and after school, recess and lunch times, class times) and the locations from which students will collect data (playgrounds, sports areas, gardens, car parks, road observations etc.) You may wish to rotate pairs of students to complete the observations and data collection.

**Step 4** - When all the data is collected, decide on the best method of presentation. The map can be used to record the raw data and students can then use that raw data to draw graphs of movements for each observation site. Use ICT to create the graphs and these can then be incorporated onto a final map.

**Step 5** - Analysis – students describe their findings. What are the activities taking place in the school surrounds? Are there very busy areas that require better management? What management solutions can be developed? Can these be presented at a school assembly?



## Equipment & Materials

- Map of the school grounds from Google Maps or Google Earth (see resources)
- Pens & pencils

## Curriculum Outcomes

- 5-6**
- Describe and explain the diverse characteristics of places in different locations from local to global scales (VCGGC085)
  - Describe and explain interconnections within places and between places, and the effects of these interconnections (VCGGC087)
  - Collect and record relevant geographical data and information from the field and secondary sources, using ethical protocols (VCGGC088)
  - Represent the location of places and other types of geographical data and information in different forms including diagrams, field sketches and large-scale and small-scale maps that conform to cartographic conventions of border, scale, legend, title, north point and source; using digital and spatial technologies as appropriate (VCGGC089)

## Additional Resources:

*Environmental Fieldwork Methods:* <https://www.geography-fieldwork.org/gcse/rural/rural-issues/fieldwork/>  
*Fieldwork Data Presentation:* <https://www.slideshare.net/geographyalltheway/igcse-geography-fieldwork-data-presentation>  
*How to print Google Maps:* <https://www.wikihow.com/Print-Google-Maps>



# 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 educators we are continually seeking development. If you have feedback or would like to share your experiences or activities please add a comment on the FUSE Webpage or email [outdoorlearning@outdoorsvictoria.org.au](mailto: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)
- Environment Education Victoria
- Geography Teachers' Association of Victoria (GTAV)
- Parks Victoria

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[www.outdoorsvictoria.org.au/contact](http://www.outdoorsvictoria.org.au/contact)

