# Longitude and latitude

## Year 6 Geography - Finding Australia and its neighbours

### Australian Curriculum learning objectives

* [ACHGK031](http://www.australiancurriculum.edu.au/Elements/ACHGK031)[[1]](#footnote-1): The location of the major countries of the Asia region in relation to Australia and the geographical diversity within the region

## Resources required

* [*Longitude and Latitude*](https://www.youtube.com/watch?v=cKT16DjHo_8)[[2]](#footnote-2) captioned online video
* [Map skills presentation](http://olc.spsd.sk.ca/DE/k9mod/Mapskill/mod3fl5.swf)[[3]](#footnote-3)

Lesson outcome: To learn the terms latitude and longitude and to explore their understanding of the terms through the location of various places within the region of Asia.

## Lesson outline

1. **Introduction:** Introduce the lesson by stating that students will be learning about latitude and longitude. Whilst creating a KWL chart[[4]](#footnote-4) on the board, ask the following stimulus questions to establish prior knowledge and create connections with knowledge to be acquired:
2. What is latitude and longitude?
3. Where would you find them?
4. Who would use them?
5. Why would you use them?
6. **Activity 1:** Introduce the necessary vocabulary for the lesson. The following terms will be written on the board and definitions will be created by the students or teacher depending on prior knowledge: *Circumference, navigate/navigation, map projection, Mercator, hemisphere (northern, southern, eastern, western), equator, meridian(s), prime meridian, latitude, longitude, degree, midpoint, intersect, absolute location.* Assist students to connect these new terms to their KWL chart on the board.
7. **Activity 2:** Present the Map skills presentation (requires [Adobe Flash Player](http://get.adobe.com/flashplayer/)[[5]](#footnote-5)). The presentation covers the basic concepts in learning how to read a map in terms of longitude and latitude; the pre-skills needed, including hemispheres, the equator and meridians, and multiple quizzes to ensure student mastery of skills. After viewing, students add to the KWL chart to re-establish what they know.
8. **Activity 3:** Introduce the video, *Latitude and Longitude.* **The video should be played with closed caption function for greater comprehension**. Frequently pause video to ascertain comprehension, accomplished through the asking of literal questions. Write keywords from the video on the whiteboard, using student suggestions. Play video again in entirety to reinforce comprehension and to add any additional words/terms. These terms are to be defined by the teacher and/or students where possible. Use the video to review the skills they have learnt in the presentation (Activity 2). This video is not designed to teach the skills of map reading in isolation.
9. **Activity 4:** Teacher/students locate their school or local area on a hard copy or [digital map](http://www.mapsofworld.com/world-maps/world-map-with-latitude-and-longitude.html)[[6]](#footnote-6). Students predict what their coordinates might be in terms of North, South, East or West and with approximate degrees of latitude and longitude. Bring up digital map of Australia showing latitude and longitude. The following sites can be used: [Latlong](http://www.latlong.net/Show-Latitude-Longitude.html)[[7]](#footnote-7), [itouch Map](http://itouchmap.com/latlong.html)[[8]](#footnote-8) and [MapMaker](http://education.nationalgeographic.com/education/mapping/interactive-map/?ar_a=1)[[9]](#footnote-9).
10. **Activity 5:** Introduce the concept of Absolute Location, that is, the exact site of a place. Provide students with [Worksheet 1](http://www.k12reader.com/reading-comprehension/Gr5_Wk12_Absolute_Location.pdf)[[10]](#footnote-10). This worksheet is a reading comprehension activity. On this worksheet, students will use the information written on the page to complete the questions based on longitude and latitude. Students should be able to answer some of the questions based on the previous activities. Teacher goes through answers at the end with the entire class.

## Homework

The following online games may assist in practising students’ latitude and longitude skills:

1. [Latitude and longitude map match game](http://www.kidsgeo.com/geography-games/latitude-longitude-map-game.php)
2. [Latitude and longitude map skills](http://www.abcya.com/latitude_and_longitude_practice.htm)
3. [Latitude and longitude](http://www.softschools.com/social_studies/geography/map_games/latitude_and_longitude_games/) (N.B. this is a game showing a USA map)
4. [Disney 6th Grade vocabulary skills](http://disney6thgrade.weebly.com/vocabulary--skills.html)

## Extension

Introduce the history of latitude and longitude in the [Mr Dowling reading lesson](https://www.youtube.com/watch?v=4TxvvdYYGiQ)[[11]](#footnote-11) video. Students complete a half page [explanation on latitude and longitude](https://www.det.nsw.edu.au/eppcontent/glossary/app/resource/factsheet/4108.pdf)[[12]](#footnote-12). The following [comprehension activity](http://www.k12reader.com/reading-comprehension/Gr4_Wk1_Where_On_Earth_Are_You.pdf)[[13]](#footnote-13) can also be given as an extension activity.

## Opportunity for further activity

Students are to find three places with a given latitude and longitude using Google Maps. The following [video by Dean Deters](http://www.youtube.com/watch?v=wBrCT_tcuNc)[[14]](#footnote-14) can help students and teachers to navigate Google Maps. (Please note that when entering latitude and longitude, leave off the direction, e.g. S, E). If the students are able to perform this activity competently, then they can reverse it and find three places in Australasia and quote their latitude and longitude for their classmates to find. These three places should hold some significance for the students.

Examples for teachers can be:

-33º 51', 151º 12' Sydney

-25º 20', 131º 3' Uluru

-42º 15', 146º 30' Tasmania

The [Gazetteer of Australian place names](http://www.ga.gov.au/place-names/)[[15]](#footnote-15) can assist in finding the coordinates for significant places.

N.B. YouTube’s [Introduction to using Google Maps in class](http://www.youtube.com/watch?v=Mh8FFIBYRsU)[[16]](#footnote-16) video may assist you in learning how to use Google Maps in the classroom. Please be advised that the video is 67 minutes in length.

1. <http://www.australiancurriculum.edu.au/Elements/ACHGK031> [↑](#footnote-ref-1)
2. <https://www.youtube.com/watch?v=cKT16DjHo_8> [↑](#footnote-ref-2)
3. <http://olc.spsd.sk.ca/DE/k9mod/Mapskill/mod3fl5.swf> [↑](#footnote-ref-3)
4. <http://www.readwritethink.org/classroom-resources/printouts/chart-a-30226.html> [↑](#footnote-ref-4)
5. <http://get.adobe.com/flashplayer/> [↑](#footnote-ref-5)
6. <http://www.mapsofworld.com/world-maps/world-map-with-latitude-and-longitude.html> [↑](#footnote-ref-6)
7. <http://www.latlong.net/Show-Latitude-Longitude.html> [↑](#footnote-ref-7)
8. <http://itouchmap.com/latlong.html> [↑](#footnote-ref-8)
9. <http://education.nationalgeographic.com/education/mapping/interactive-map/?ar_a=1> [↑](#footnote-ref-9)
10. <http://www.k12reader.com/reading-comprehension/Gr5_Wk12_Absolute_Location.pdf> [↑](#footnote-ref-10)
11. <http://www.youtube.com/watch?v=4TxvvdYYGiQ> [↑](#footnote-ref-11)
12. <https://www.det.nsw.edu.au/eppcontent/glossary/app/resource/factsheet/4108.pdf> [↑](#footnote-ref-12)
13. <http://www.k12reader.com/reading-comprehension/Gr4_Wk1_Where_On_Earth_Are_You.pdf> [↑](#footnote-ref-13)
14. <http://www.youtube.com/watch?v=wBrCT_tcuNc> [↑](#footnote-ref-14)
15. <http://www.ga.gov.au/place-names/> [↑](#footnote-ref-15)
16. <http://www.youtube.com/watch?v=Mh8FFIBYRsU> [↑](#footnote-ref-16)