

# Land: A vital resource

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**Number of lessons:** One

**Year level(s):** Year 7/8

**Australian Curriculum content descriptions:**

Science: Processing and analysing data and information. Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate ([ACSI129](#)).

Summarise data, from students' own investigations and secondary sources, and use

scientific understanding to identify relationships and draw conclusions based on evidence ([ACSI130](#)).

Earth and Space Sciences: Some of Earth's resources are renewable, including water which cycles through the environment, but others are non-renewable ([ACSSU116](#))

[http://docs.acara.edu.au/resources/Content\\_for\\_Year\\_7\\_-\\_Learning\\_area\\_content\\_descriptions.pdf](http://docs.acara.edu.au/resources/Content_for_Year_7_-_Learning_area_content_descriptions.pdf)

**Achievement standard:**

## Context

Natural vegetation has been removed to make way for a variety of land uses including agriculture, forestry, mining and urban development. Some natural ecosystems have been more heavily impacted than others.

This will have implications for biodiversity. Through this lesson, students will develop an understanding of changed in land usage in south-west Western Australia. This activity could be altered to suit other regions of Australia.

## Materials and equipment

**Maps from following sources:**

[https://researchlibrary.agric.wa.gov.au/gis\\_maps/10/](https://researchlibrary.agric.wa.gov.au/gis_maps/10/) [https://www.dpaw.wa.gov.au/images/documents/about/science/cswa/articles/PreEuropeanVegMap\\_Jun\\_14.pdf](https://www.dpaw.wa.gov.au/images/documents/about/science/cswa/articles/PreEuropeanVegMap_Jun_14.pdf)  
[https://researchlibrary.agric.wa.gov.au/gis\\_maps/18/](https://researchlibrary.agric.wa.gov.au/gis_maps/18/)  
<https://soe.environment.gov.au/theme/land/topic/2016/vegetation-0>

- Worksheets
- Hard copies of maps per group/class
- Digital projector

### Safety Advice

Classroom activity. No safety issues.

## Lesson outline

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### Objectives

#### Lesson Content:

- Land usage of south western corner of Western Australia
- Transcribing information from one map to another

#### Learning Objectives:

- Show land uses on map of the south western corner of Western Australia.
- Watch two videos, take notes and answer questions
- Consider why biodiversity is important.
- Understand the relationship between land usage by humans and the impact this has on biodiversity.

### Introduction (10 min)

Show google maps image of south west corner of Western Australia.

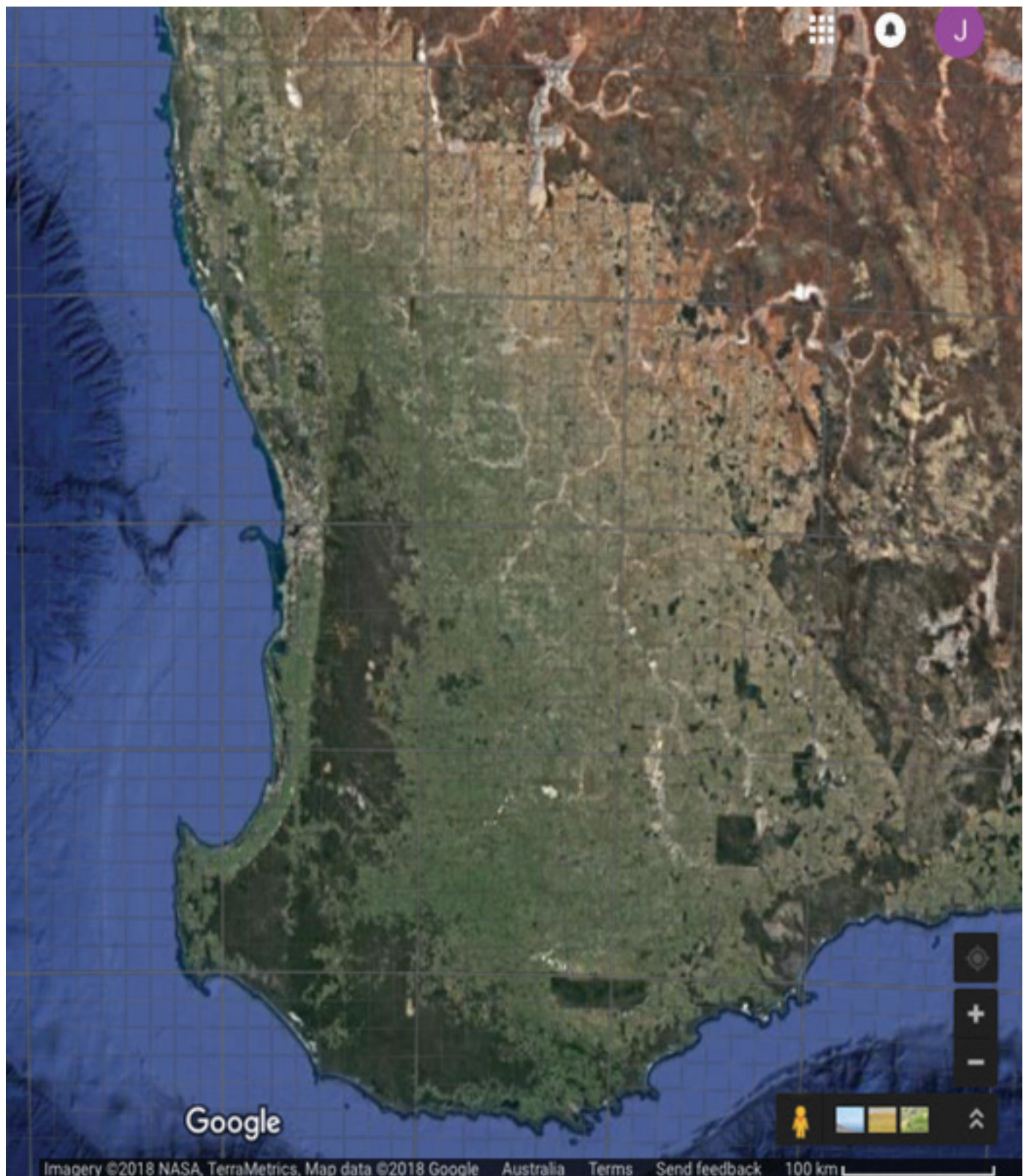
- Discuss with students why some areas are dark green, some are pale green, some are white and some are brown.

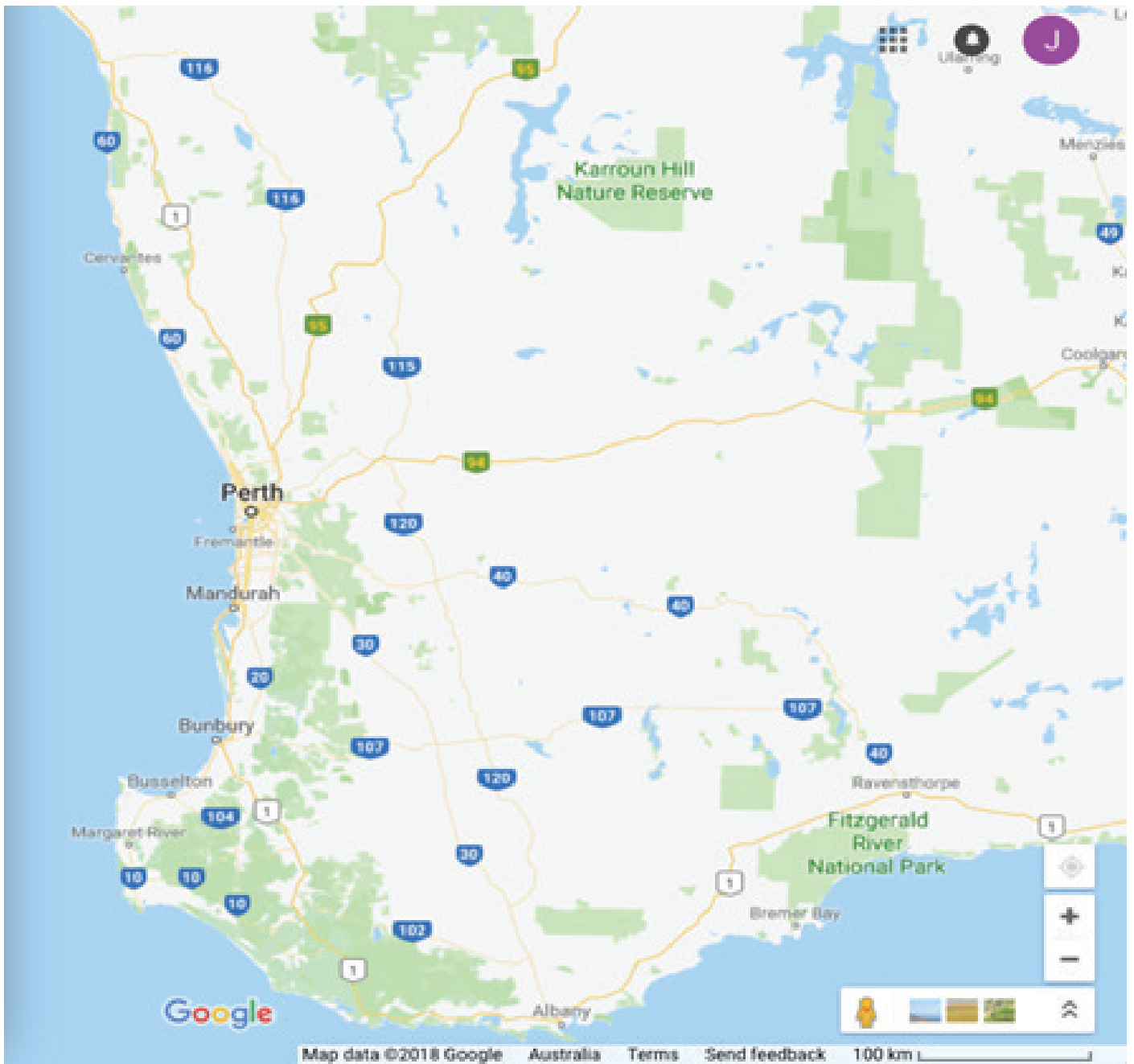
### Core

#### Activity 1 - Land usage (25 minutes)

Below are two images, one a satellite image and the second a google map image of the south western corner of Western Australia.

Your first task is to understand the land-uses of the various regions of the south western corner and to mark these on one of the two maps. (Your teacher will provide you with some large maps – One of these will be particularly helpful. [https://researchlibrary.agric.wa.gov.au/gis\\_maps/10/%20](https://researchlibrary.agric.wa.gov.au/gis_maps/10/%20)

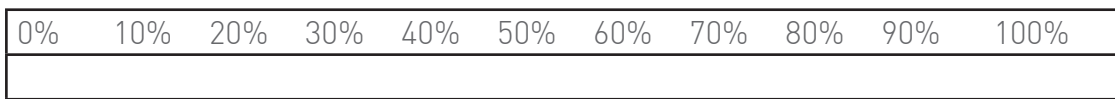




Are any areas of Western Australia solely reserved for native plants and animals?

Which best describes the size of the area NOT utilized by humans. Research the information, then shade the bar below.

(Use [https://www.bibbulmuntrack.org.au/media/files/jewel\\_of\\_the\\_australian\\_continent\\_1.pdf](https://www.bibbulmuntrack.org.au/media/files/jewel_of_the_australian_continent_1.pdf) page 17 "Clearing and fragmentation" to assist.)



Are the areas that are unutilized by humans evenly dispersed across the different vegetation types? Explain how this may impact the species that have been heavily impacted by humans.

### Activity 2 - What is Biodiversity? (20 minutes)

**Watch the two videos:**

<https://www.twig-world.com/film/glossary/biodiversity-291/>

<https://www.youtube.com/watch?v=V1VYmpTikgw>

**Answer the following questions:**

What is biodiversity?

How many species are there on the planet? Have we discovered all species?

Why is biodiversity important? List the reasons.

Why is biodiversity shrinking? List the reasons.

What is a biodiversity service? List examples.

What is unusual about the current rates of extinction?

How can land usage, as investigated in part 1 of the lesson, seriously impact biodiversity?

**Conclusion (5 min)**

Review content of lesson. Discuss what has been learnt from mapping activity and about biodiversity. Ask if changing land use may impact biodiversity

**Resources****Useful links:**

Part 1

[https://researchlibrary.agric.wa.gov.au/gis\\_maps/10/](https://researchlibrary.agric.wa.gov.au/gis_maps/10/)

[https://www.dpaw.wa.gov.au/images/documents/about/science/cswa/articles/PreEuropeanVeg-Map\\_Jun\\_14.pdf](https://www.dpaw.wa.gov.au/images/documents/about/science/cswa/articles/PreEuropeanVeg-Map_Jun_14.pdf)

[https://researchlibrary.agric.wa.gov.au/gis\\_maps/18/](https://researchlibrary.agric.wa.gov.au/gis_maps/18/)

<https://soe.environment.gov.au/theme/land/topic/2016/vegetation-0>

Part 2

<https://www.twig-world.com/film/glossary/biodiversity-291/>

<https://www.youtube.com/watch?v=V1VYmpTikgw>