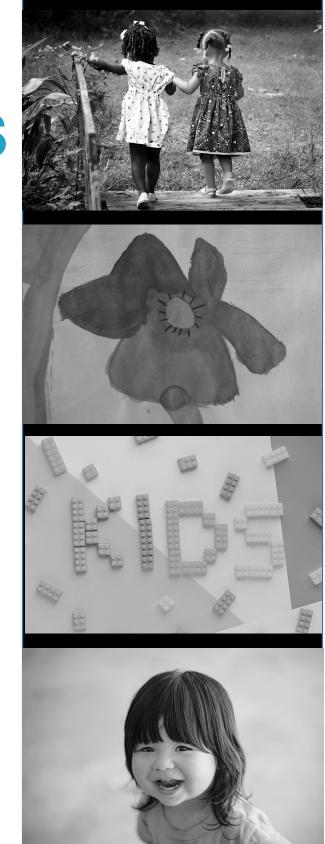
#### **Build an Imaginary Ecosystem**

An ecosystem is an area of land and/or water and the species that populate it. An ecosystem includes all of the living things (plants, animals and organisms) in a given area, interacting with each other, and also with their non-living environments (such as weather, earth, sun, soil, climate, atmosphere).

An ecosystem can be a river or a river basin, a mountain, a marine area like a coral reef, a desert or a forest. The plants and animals that are found in a particular location are also referred to as an ecosystem. These plants and animals depend on each other to survive. In a delicate balance, these life forms help to sustain one another in regular patterns. Disruptions to an ecosystem can be disastrous to all organisms living in the ecosystem.

Throughout the history of the Earth, the delicate balance found within ecosystems has often been disrupted by natural disasters such as fires, floods, storms, volcano eruptions, and so forth. In recent years, however, humans have increasingly been affecting the many ecosystems around the world.



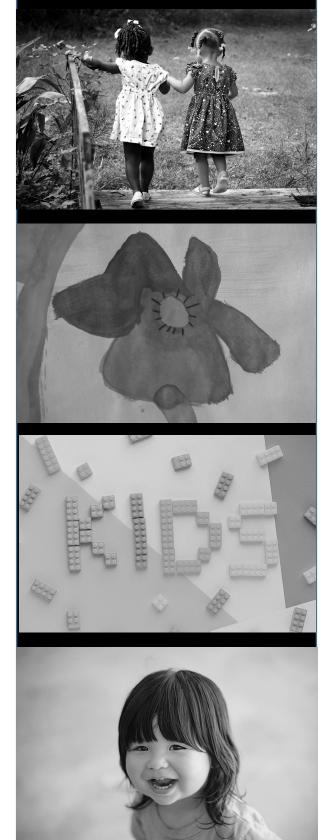


#### **Build an Imaginary Ecosystem**

This activity aims to expand on students' understanding of ecosystems by designing and developing an imaginary ecosystem.

Divide students into groups and let them select an ecosystem that they would like to work on. For example, they could select an 'island ecosystem', a 'forest ecosystem' a 'desert ecosystem', or an 'arctic ecosystem', etc.

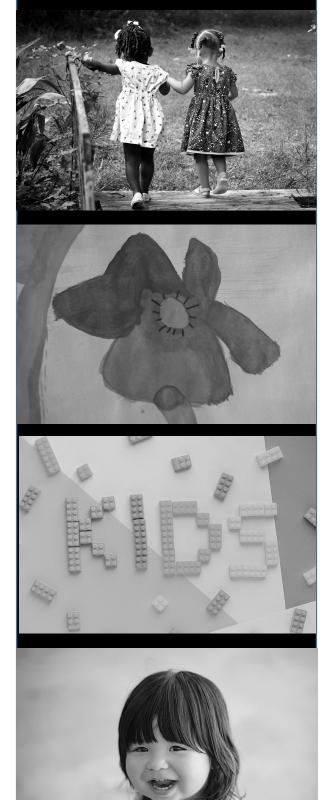
This project can be theoretical, with students creating a workbook of their results, or can be a practical exercise using recycled materials such as shoe boxes, posters, bottle tops etc.



### **Build an Imaginary Ecosystem**

Each group must build a model of an ecosystem that contains the following components and considerations:

- Several animal and plant species (including primary producers, secondary producers, and tertiary consumers and decomposers)
- At least one example of species interaction and symbiosis (how the species interact with each other and the environment, through mutualism, parasitism, commensalism etc.)
- Habitat descriptions (climate)
- Consideration for geographic region
- Behaviour and reproductive patterns of species (eg. Breeding and mating and how it impacts the ecosystem)
- Consideration for invasive and/or non-native species
- IUCN Status of the species



#### **Build an Imaginary Ecosystem**

#### Australian Curriculum Mapping

GRADE 5 SCIENCE (ACSHE083) - Scientific knowledge is used to solve problems and inform personal and community decisions.

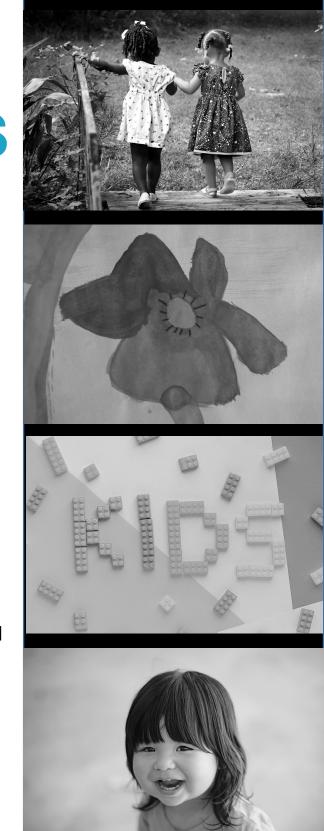
GRADE 5 HUMANITIES AND SOCIAL SCIENCES (ACHASSK113): The environmental and human influences on the location and characteristics of a place and the management of spaces within them.

GRADE 6 SCIENCE (ACSSU094): The growth and survival of living things are affected by the physical conditions of their environment.

YEAR 7 SCIENCE (ACSSU112): Interactions between organisms, including the effects of human activities can be represented by food chains and food webs.

YEAR 9 SCIENCE (ACSSU176): Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems.

SUSTAINABILITY (01.1): The biosphere is a dynamic system providing conditions that sustain life on Earth.



### **Build an Imaginary Ecosystem**

For assistance with this topic, please refer to the following booklets:

- Interactions & Organisms
- Biodiversity
- Ecosystems
- Food Webs and Chains

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