

Investigating

Communicating

Knowledge and understanding

## Meeting Current and Future Energy Needs

### Learning outcomes in focus

#### Students should be able to:

**ES6 research** different energy sources; **formulate** and **communicate** an informed view of ways that current and future energy needs on Earth can be met

**NS6 conduct research** relevant to a scientific issue, **evaluate different sources of information** including secondary data, understanding that a source may lack detail or show bias

### Learning intentions

#### We are learning to:

- conduct independent research
- synthesise information from a variety of sources
- present findings in manner appropriate for the chosen audience
- evaluate different energy sources in terms of suitability, sustainability and reliability
- understand that a reliance on non-renewable resources is unsustainable into the future

### Teaching and Learning Context

This task was undertaken by two mixed-ability classes of First Year students. Prior to the task, students had been introduced to energy types and energy conversion. They had also worked collaboratively in small groups to complete and present for peer review a STEM activity called Moja Island.

<http://practicalaction.org/moja-island-1>

Students all have Ipads and were given a single class and the weekend to complete the task.

### Task

Project title - *How to meet current and future energy needs.*

Students were given the following instructions:

1. Research the topic using your Ipad and/or other sources. Present your findings either as a poster, pamphlet, keynote/powerpoint/Prezi, video, drama, song or any other means.
2. Discuss your choice(s) of energy source and explain how it meets the project title: *How to meet current and future energy needs.*

### Success criteria:

#### I can:

- **SC1:** search for and find relevant information about the topic
- **SC2:** arrange and report my findings
- **SC3:** use data in an informed manner to argue my position
- **SC4:** acknowledge sources

**SC2:**  
Clearly arranged  
descriptions of findings.

**SC3:**  
Offers an informed position  
based on location.

**SC4:**  
No sources  
acknowledged

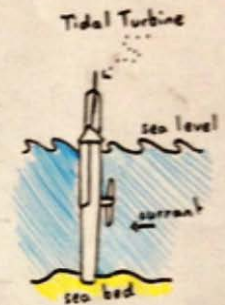
## Other Sources of Energy

### Tidal Energy :

Tidal energy uses the force of the tides to make kinetic energy.

It can produce large amounts of energy even in low speed tides.

Only for coastal areas.



### Solar Energy :

Solar power turns sunlight into electricity using solar panels.

It is a free energy source, but it's best for countries that get lots of sun.



**Overall judgement:**  In line with expectations