## Lesson concepts

| A | Water is an important resource (Unit 2) |
| N | Predictions are made based on scientific evidence |
| N | Representations can be constructed and used to represent relationships |
| A | Ideas are communicated using scientific language and representations |

### View unit mapping of concepts

### View year level mapping of concepts

### Learning area specific language (metalanguage):
- clean, pure, fresh, salty

### Lesson objectives

**Students will:**
- identify different sources of water
- understand water’s importance to their daily lives.

### Evidence of learning

**Can the student:**
- categorise different sources of water?
- relate the importance of water to their lives?

### Ideas for monitoring

**Monitor students’ ability to:**
- identify water as an important resource.
- Implement the use of water saving techniques while living in a cabin

### Example learning sequence

#### Discuss water
- Engage with a demonstration about the differing amounts of water on North Keppel Island. Fresh (dam and tea tree swamp) /Salt/Bore
- Discuss the importance of water and why we need to be sustainable.
- Introduce water monitoring while at NKIEEC for student cabins

#### Identify types of water (Water Cycle at NKIEEC walk)
- Define the terms ‘clean’, ‘fresh’ and ‘salty’.
- Examine water samples and identify types of water.
- Discuss the different uses of water.
- Relate water use to everyday activities at North Keppel Island. Refer to the Dowmus toilets, rain tanks, interceptors, water saving mechanisms.

#### Explore the water cycle
- Identify and discuss prior knowledge of the water cycle.
- Illustrate the water cycle and relate to types of water (e.g. salty, fresh).
- Create a water cycle representation.
- Play the Water Cycle Role Play Game

#### Explore the importance of water (night activity)
- Water debate

#### Explore the importance of water
- Record all water use for cabins for the week. At the end of the week all data will be collated and a winning water saving cabin announced.
- Back at school have students record water usage at home before and after implementing water saving measures

### Example resources

- Water Cycle Game - G:\Coredata\Common\Andrews Stuff\C2C yr7\Resources\Water Cycle Role play script.doc
- Website — The Water Cycle
- (Department of Environment and Resource Management)
- Supporting learning resource — Differing amounts of water on Earth demonstration
- Teacher Tube – Bill Nye Teacher Tube/You Tube http://www.youtube.com/watch?v=nehXEYkDq_Y
at NKIEEC

**Learning alerts**
Be aware of:

students stating that clear water is clean water.

**Suggested next steps for learning**
Inform students that clear water may contain contaminants that are invisible to the human eye.

**Ideas for differentiation**

**Support**
Use concrete or pictorial representations of water sources.

**Extension**
Identify and categorise local water sources.

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**Helpful information**

Website — [The Water Cycle](http://www.epa.gov/safewater/kids/flash/flash_watercycle.html)

**Safety**

Teachers need to:
- identify safety issues relevant to collected water samples during the practical activities and conduct risk assessments
- refer to Workplace health and safety (WHS) policy pertaining to schools.

**Australian Curriculum references for this lesson**

**Year 7 Science — Content descriptions**

**Science Understanding**

**Earth and space sciences**

Water is an important resource that cycles through the environment.

**Science Inquiry Skills**

**Questioning and predicting**
Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge.

**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, including using digital technologies as appropriate.

**Communicating**

Communicate ideas, findings and solutions to problems using scientific language and representations using digital technologies as appropriate.

**General capabilities**

**Literacy**
- Comprehending texts through listening, viewing and reading
- Composing texts through speaking, writing and creating
- Text knowledge
- Word knowledge
- Visual knowledge

**Numeracy**
- Using fractions, decimals, percentages, ratios and rates
- Interpreting and drawing conclusions from statistical information

**ICT capability**

*Queensland Student ICT Expectations:*
- Operating with ICT

**Student ICT Expectations — by the end of Year of 7**
[accessed on 31 July 2012]

**Australian Curriculum ICT learning continuum:**
- Managing and operating ICT

**Critical and creative thinking**
- Inquiring — identifying, exploring and clarifying information
- Generating innovative ideas and possibilities
- Reflecting on thinking, actions and processes

View a mapping of the General capabilities learning continua for this unit