Year 3: Science

Lesson Plan: Human impacts on life cycle of Tasmanian eels

Introductory activities (engage)

(5 minutes)

Ask your students:

- How far do eels migrate as juveniles (young)?
- How far do eels migrate as adults?
- What could impact the elver's journey from the Coral Sea to Tasmania?

Create your answers on a poster or flip chart

How far to eels migrate?	What could impact this?
From the Coral Sea (as juveniles) - To the Coral Sea (as adults)	Dams Drainage Fishing Hydro development Irrigation schemes River diversion Water pollution

Lesson (explore)

(20 minutes)

Materials
Youtube Video: Trevallyn Eel Bypass educational video, **https://www.youtube.com/watch?v=sf4a19kzFmM**
Smart board (or projector)
The Elver Story (display and/or print)
Activity – Cloze – Helping fish migration in Tasmania
Ruler
1 litre milk cartoon

1. Display page one of *The Elver Story* to your class (found in unit).
2. As a class read through the problem and describe it

   Discuss and explore:

   - **Look at your ruler, how big is 100mm in centimetres?**
     - What things in your classroom might measure 10 centimetres?
   - **How long is 29 metres**
     - Take your students outside and measure out 29 metres
   - **How big is a milk carton**
     - Choose a classroom item (that you have multiple of, the same size i.e. pens) and investigate how many you can you fit in a milk carton
   - **What do you think the solution might be?**
     - How can we come up with a reasonable estimate? What methods could we use?
     - Collate the methods on a poster or flip chart
3. Provide each student (or suitable for pairs or small groups) with a copy of *The Elver Story* to read through. As they read have students consider:

   - **What human actions impacted the natural system?**
     - Building the dam, changing the natural water course
   - **How did we use science to understand these actions?**
     - Study of natural behaviour (instinctively swim upstream, elvers are good climbers)
     - Talking to other scientists and incorporating the bio-textile material
4. Now watch the Trevallyn Eel bypass educational video to learn how adult eels migrate back to their spawning waters. How do they get back over the dam wall to the ocean? Video: https://www.youtube.com/watch?v=sf4a19kzFmM
5. Discuss the solutions in the video as a class.

Have students complete the cloze activity *Helping fish migrate in Tasmania* (found in unit).

Options for assessment and extension

	Activity
Science – **Science Understanding** **Individual Activity**	Have students write a short piece describing: • Why is the elver ladder and the eel bypass so important? – protecting a vulnerable species – assisting eels complete their life cycle – minimising human impact on the environment – supporting biodiversity • How many different people in different roles had to work together to make the eel bypass a success?
Science – **Science Understanding / Science as a Human Endeavour** **Class / Group Activity**	Students explore/research their local community. • They identify a local species and consider what human activities may have impacted or influenced its habitat. **Consider:** – Housing developments – Infrastructure developments (e.g. roads, bridges, footpaths) – Felling of trees **Ask students exploratory questions such as:** • What should occur before developing housing/infrastructure/other disruptions? • How can science be used to monitor impacts? **Invite students to research** • Local council policies or approvals procedures • Interested community groups

Elaborate and review

As a class group review:

What have you learnt?

– How did human activity impact on the eel's life cycle?
– How did we use science to find a solution to these impacts?