

Lesson Plan

Victorian Curriculum: Level 5 - 6

Science understanding – Biological sciences (VCSSU074/75)

Science Inquiry Skills – Communicating (VCSIS08)

Topic: Survival	Learning outcomes
	<p>Students will be able to:</p> <ul style="list-style-type: none"><li data-bbox="708 762 1414 867">• Understand that all living things have adapted structural features and functions that help them to survive in their environment<li data-bbox="708 919 1357 1024">• Recognise the complexity of life cycles and the threats that all species face, including that of introduced species.

Time required: 60 minutes

Classroom set up: Students can complete online or in classroom setting. Students to work individually or in pairs to read through and complete materials attached.

Extension: Students to research the Hammerhead shark (viviparous) and complete the life cycle chart for this species.

Tasks:

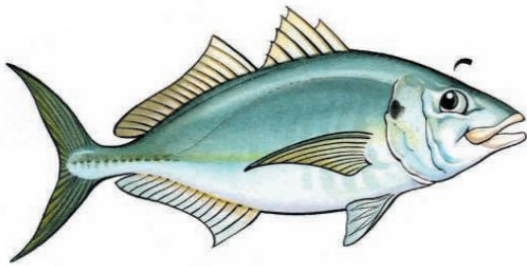
- Fish Puzzle
- Create your own fish
- Life Cycles



What are fish?

Fish are vertebrates like humans, which means they have a backbone, but unlike us they are cold blooded and must regulate their own body temperature. Fish have very specific adaptations that help them survive and live underwater, including fins to move, scales to protect them and gills which extract oxygen from the water and expel carbon dioxide.

There are approximately 33,000 species of fish species in the world, for example The Silver Trevally, each with a unique, size, shape and colour. Multiple species of fish can live together in one ecosystem with their own ecological niche and purpose.

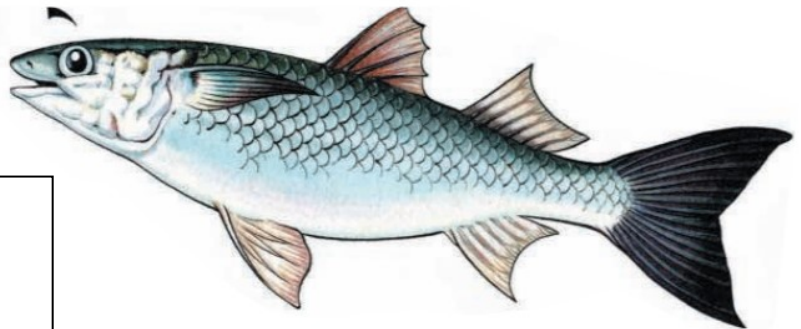


Species: Silver Trevally

Size: 35-60cm

Habitat: Coastal ocean

Food: Crustaceans, worms and molluscs



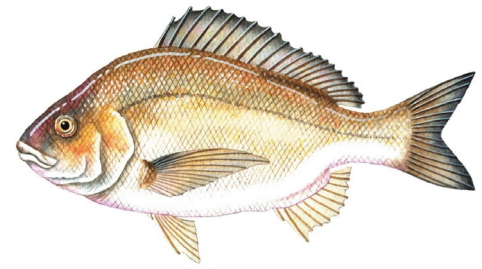
Species: Yellow eye Mullet

Size: 30-40cm

Habitat: Bays and estuaries

Food: Crustaceans, molluscs,
fish and plants.

Fish puzzle



Step 1:

Visit: [Fishcare Puzzle](#)

and complete the online puzzle!

Step 2: Use the puzzle to help complete the activity below.

Using the following words;

Pectoral Fin

Mouth

Caudal Fin

Gills

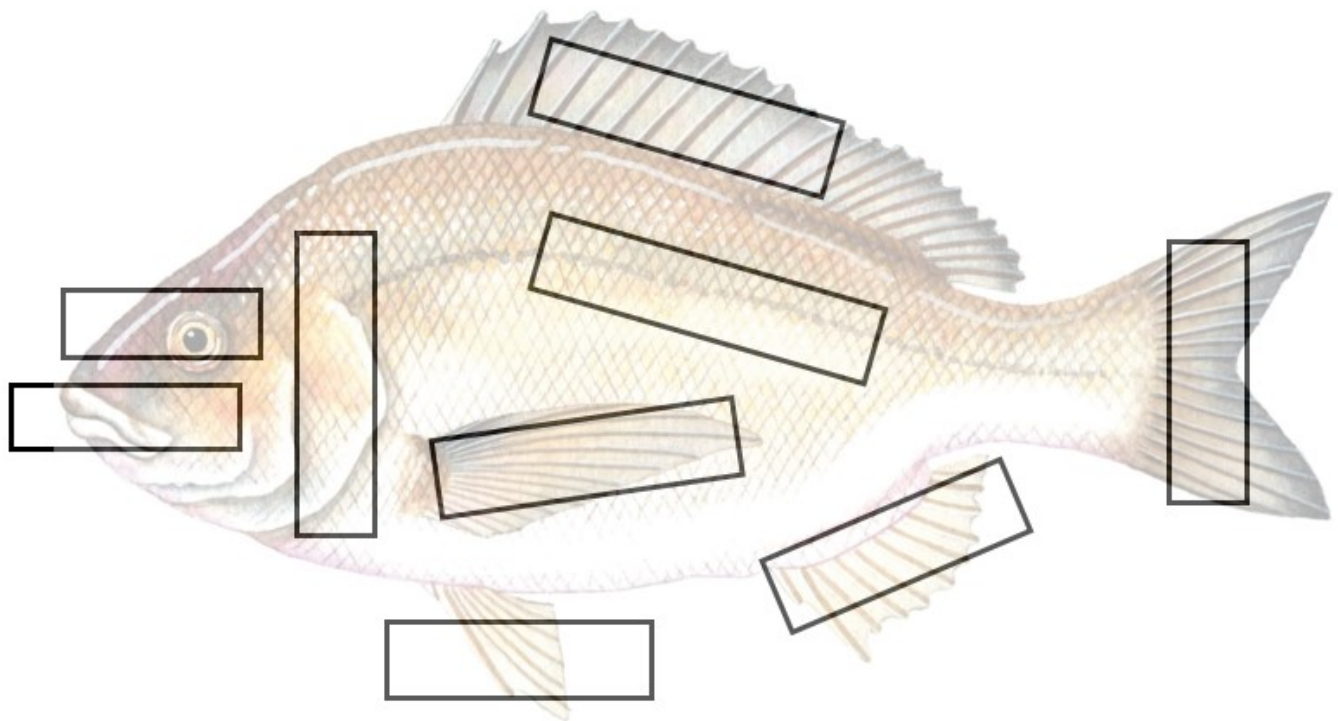
Eye

Dorsal Fin

Lateral Line

Anal Fin

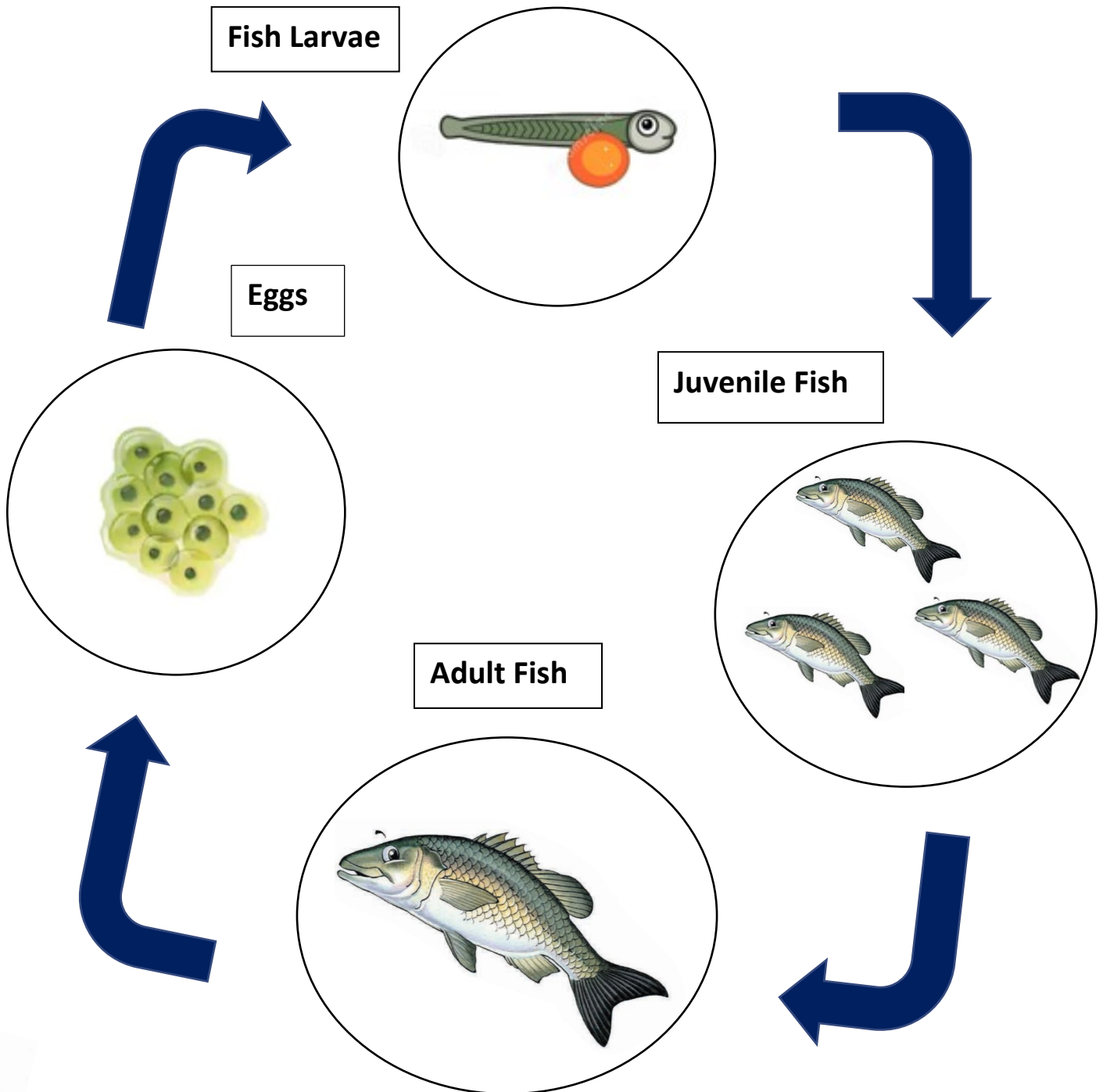
Pelvic Fin



Why have fish adapted gills and how do they help them survive in their environment?

Life cycles

All living things have a life cycle which shows the different stages that a plant or animal goes through as they grow and each stage is completely different to the next. Most fish species lay eggs (oviparous), however, some give birth to live young (viviparous) in the case of the Hammerhead Shark.



Oviparous (egg laying) fish will aggregate at certain times of the year to spawn, often on submerged rocks and beds of aquatic plants which will form a nursery for the larvae. Generally, fish will lay around 100 to 1000 eggs depending on its size and the species, which are left to develop and grow.

The environmental conditions will determine the survival rate and development of the eggs, including temperature, oxygen, salinity, and predation from other fish! The larval and juvenile stages are the most vulnerable and any will not survive.

Why do fish produce such a large volume of eggs?

List some of the predators (freshwater or saltwater) that could threaten the survival of fish eggs, larvae, or juveniles?

Introduced species like mosquito fish and Redfin Perch are non-natives and do not belong in our water. They pose a significant threat to our native fish species ongoing survival due to their vicious natures and predation on eggs and larvae.



Create your own fish!

On an A4 piece of paper follow the steps below to create your own fish and draw it in living in it's habitat

1.



2.



3.



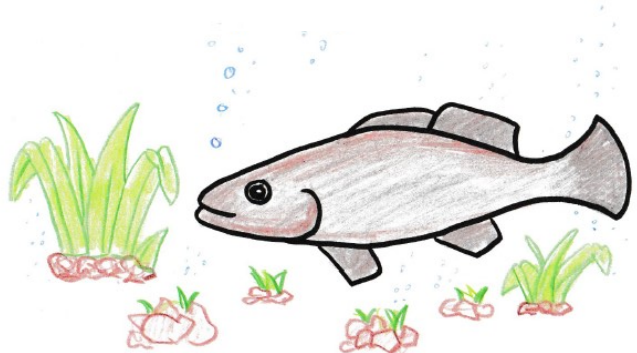
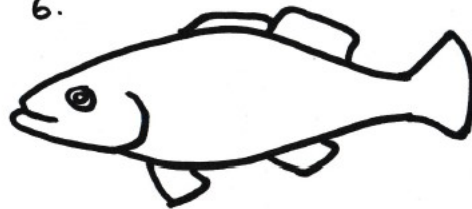
4.



5.

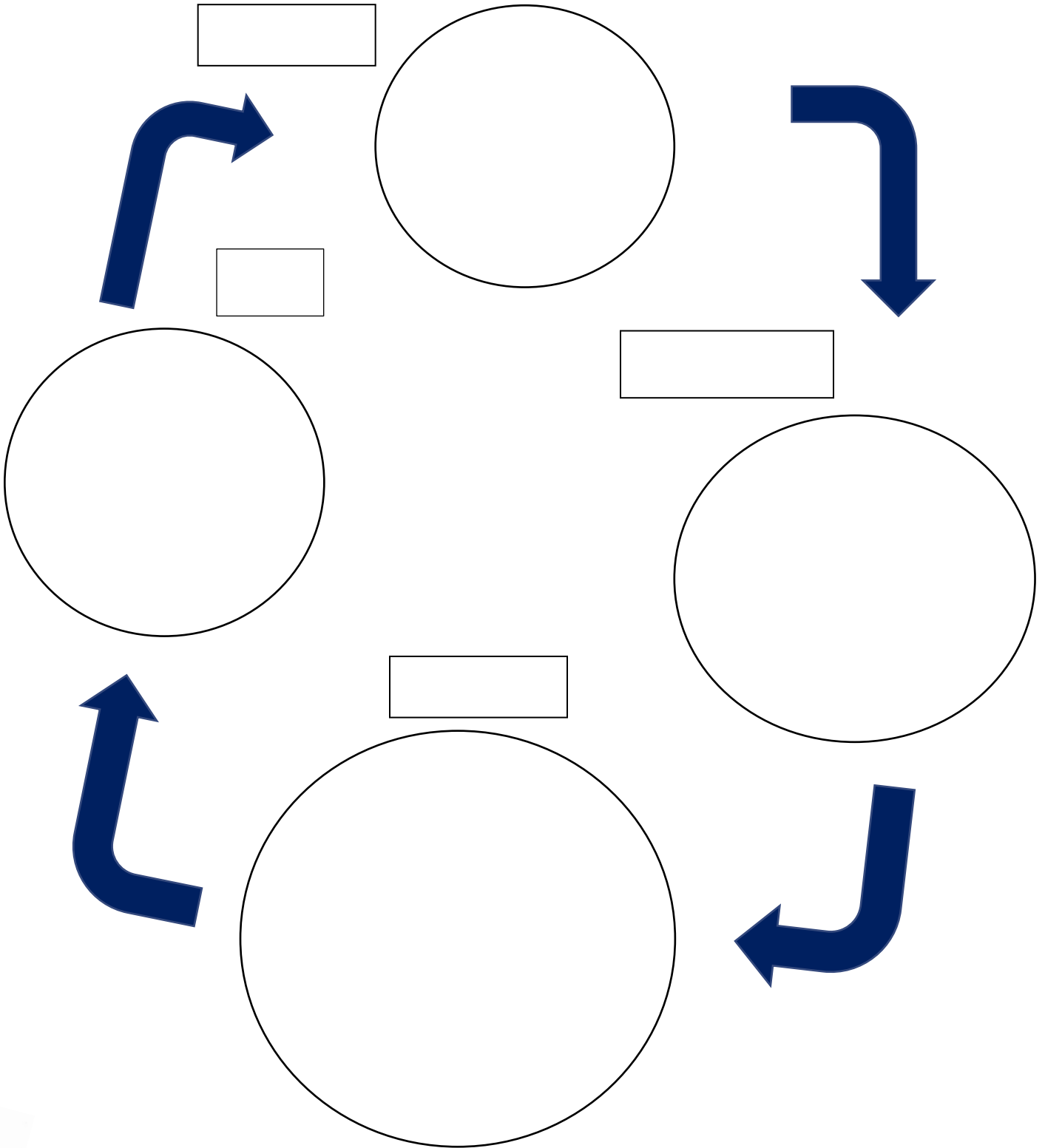


6.



Does your fish live in salt water or freshwater? Describe its habitat

Fill in the life cycle below with your fish!



Extension

Research the Hammerhead Shark (Viviporous) and fill in it's life cycle below

