

# Create a glowing aquarium

Bioluminescence is light created by a living creature, such as glow worms. In the deep ocean, where there is no sunlight at all, many fish make their own illumination. You might have seen pictures of the menacing-looking angler fish, who uses a dangling light to lure their prey straight to their teeth. We can replicate bioluminescence at home by exploring fluorescence, using some things you probably have around the house!

Bioluminescence is the emission of light by living creatures, fluorescence is the emission of light by manmade materials.



## You will need:

- A phone with a camera light
- Clear sticky tape
- A blue and a purple permanent marker (like a Sharpie)
- A fluorescent highlighter (yellow or green works best)
- A hammer
- A clear glass jar or bowl
- Leaves or flowers
- Small stones or seashells
- Little plastic fish or creatures



## Instructions

### 1. Make your blacklight

Place a piece of tape over the camera light on the phone. Make sure you place the tape over the LIGHT, not the camera! With the blue marker, colour over the light, so when you turn it on, it shines blue.

Place one more piece of tape on top of the other. This time, colour it purple.

### 2. Make the glowing water

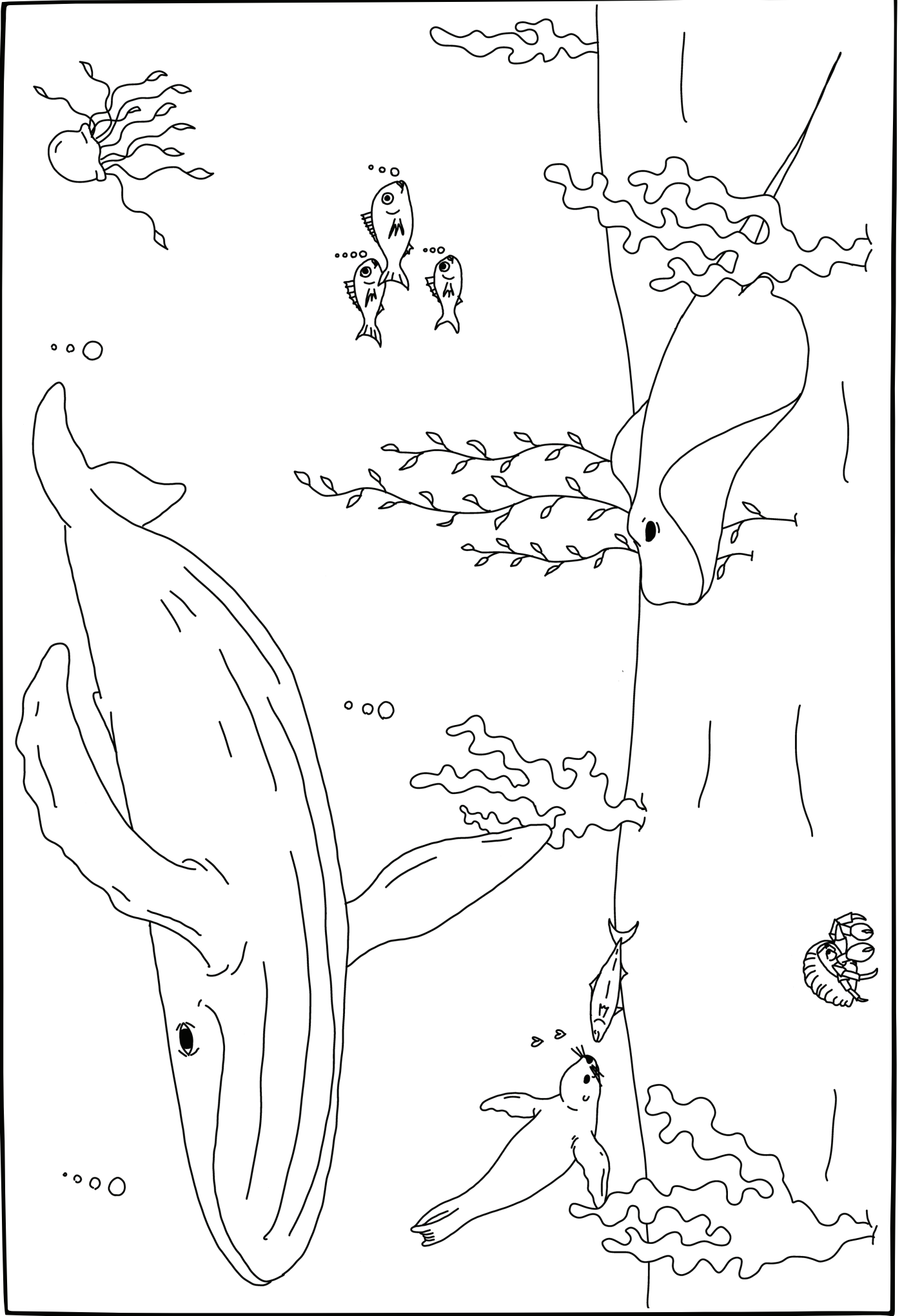
Use a hammer to smash the end off your highlighter. You might need an adult to help with this. Pull open the ink cartridge and drop it into a container of water. Choose a steel or glass container so it doesn't stain. Let it soak for a few minutes. Highlighter ink is mildly toxic, so wear gloves or wash your hands directly after. Don't drink it!

### 3. Make the glowing aquarium

Pop some shells and plants in your jar. Add some plastic fish or maybe even some small bath toys.

Pour the highlighter water carefully into your aquarium. Turn off the lights, turn on the phone light and shine the light into your aquarium. Behold! The water will glow and create a spooky, atmospheric, underwater world.

We want to see your experiments! Send them to us at [info@maritimemuseum.co.nz](mailto:info@maritimemuseum.co.nz) or tag us on Insta or Facebook: [@nzmaritimemuseum](https://www.instagram.com/nzmaritimemuseum).



Auckland's Hauraki Gulf/Tīkapa Moana is home to a wide variety of precious marine life, including the magnificent Bryde's Whale. Come and see how many you can spot in our current *I am Island and Sea* exhibition. Artwork by our Whale Tales artist, Valerie Auersperg [valerism.com](http://valerism.com)