

Design your own submarine!



Lesson Sequence:

Provocation: Browse through books about submarines. Read a snippet from *20,000 Leagues Under The Sea*. Complete a quickwrite task - students write for 5-10 mins about what they are seeing, feeling and doing in a submarine.

Tuning In: Together, read the article, *The Science of Submarines*.

Finding Out: Watch the video, *How Submarines Work*. In groups, students draw a basic outline of a submarine and label the key features and parts.

Activity: Design it! Students design their own submarine, considering both current submarines and influences from nature such as the shape of sharks and stingrays.

Digging Deeper: Create your own submarines which submerge and rise with the help of air pressure.

TIPS TO SUPERCHARGE YOUR LESSON

Vocabulary

sleek body, pressure hull, propellor, bow, stern, ballast tanks, vertical, horizontal, glide, rubber, sail, angle.

Flotation

Experiment further by exploring flotation and test different materials in water to observe their buoyancy levels.

History

Read about the use of submarines in wars, in particular, the use by the Japanese during World War 2.

Techology

Learn about the way submarines have been used recently for deep sea exploration, combining with robotic technology. Film maker, James Cameron, completed a solo submarine dive into the Mariana trench in 2012, and remotely operated vehicles (ROV) are continuing the quest to explore the unknowns of our vast oceans.