SUBMARINES



Submarines – What are they? Who invented them? How have they been developed and improved?



CORNELIUS DREBBEL

Born in Holland in 1532. He was an inventor who had an amazing mind.

He was invited to the English Court. Here he invented the submarine- a submersible boat that has discovered countless new animals and life underwater.

HTTPS://WWW.YOUTUBE.COM/WATCH?V=BIKIK4AY8OC



Oxygen was presumably obtained through the heating of nitre.

1620, Drebbel demonstrates a submarine in the Thames.



One of Drebbel's most famous exhibitions is the one where he showcased his first ever underwater submarine.

Driving the submarine from Westminster to Greenwich along the River Thames, the people of London in 1620 got to see one of history's greatest moments.

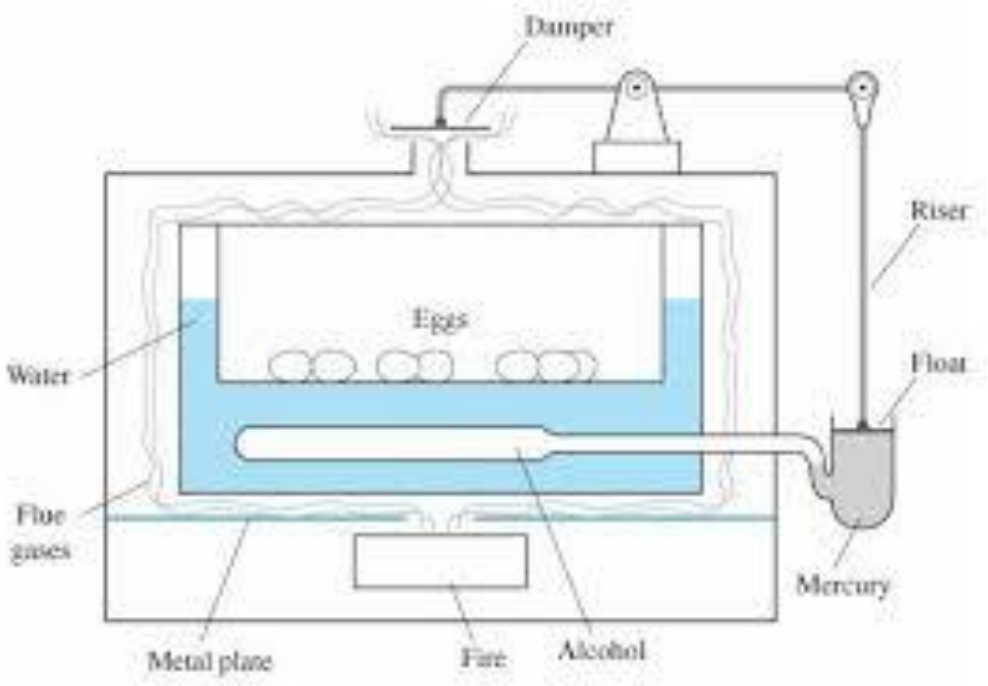
WHAT DID THE SUBMARINE LOOK LIKE?



- Cornelius's submarines were made of wood and leather. They were powered by oars, rowed by men. The whole submarine was covered in greased leather, with a watertight hatch in the middle, a rudder and four oars. Under the rowers' seats were large pigskin bladders, connected by pipes to the outside. Rope was used to tie off the empty bladders; in order to dive, the rope was untied and the bladders filled. To surface the crew squashed the bladders flat, squeezing out the water.

SCARLET DYE AND INCUBATORS

- Drebbel invented more than just submarines.
- Scarlet dye is hair dye allowing people to dye their hair a different colour.
- Drebbel also invented the chicken incubator, this automatically keeps eggs at a constant temperature for hours on end.
- He also developed and demonstrated a working air conditioning system.

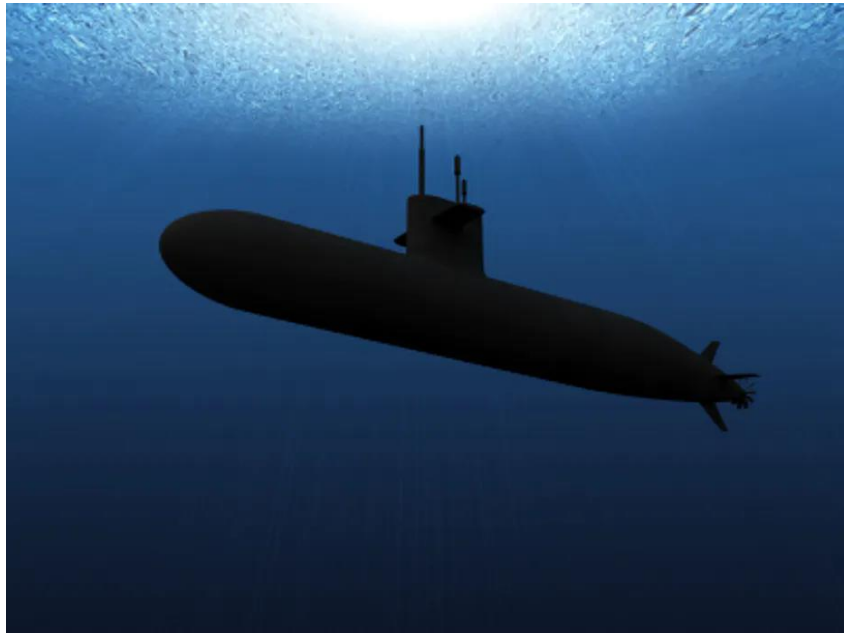


16TH CENTURY AND THE 21ST CENTURY- DIFFERENT BUT THE SAME.

The first submarine was made by Cornelius Drebbel in the 1600's.

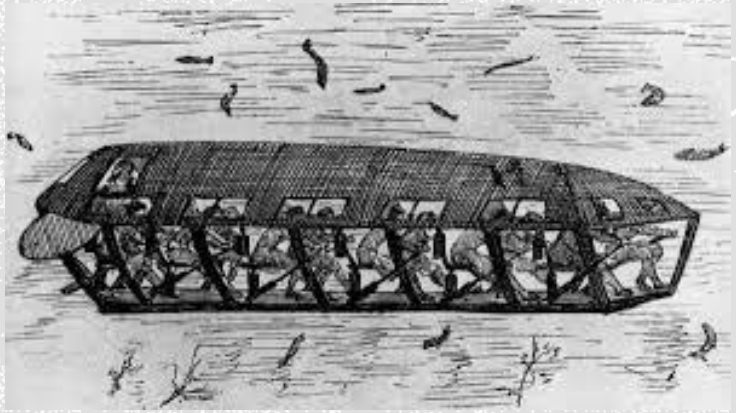


One of the millions of modern submarines we use everyday in the 21st century.



FUN FACTS

- The first military submarine was invented by an American named David Bushnell in 1775. It was called the Turtle and could hold one person.
- The first submarines could only hold one or two people. Today, some submarines can carry more than 100 people.
- A famous book about a submarine adventure was written in 1870 by the French author Jules Verne. It was titled 20,000 *Leagues under the Sea*. This science fiction book increased the interest in submarines and their design.
- Submarines use a variety of power sources including batteries, nuclear power, and engines. Early submarines used gas, steam, and even human power.





TASK TIME

For your task, imagine that you are one of the thousands of people watching Drebbel's famous adventure in his submarine in the river Thames.

Create a poster advertising the showcase and explaining what a submarine is.

RECAP



- Cornelius Drebbel invented the submarine in the 17th century.
- He was a member of the English court and was invited by King James the First.
- He built 6 submarines - each one bigger than the last.
- He invented lots of things like an incubator, scarlet dye and air conditioning.
- He was known around the world and has featured in several scientist documentaries.

SUBMARINES TODAY

- https://www.youtube.com/watch?v=uP0alCgUzlI
- https://www.bbc.co.uk/iplayer/episode/b09g5ks6/blue-planet-ii-series-1-4-big-blue