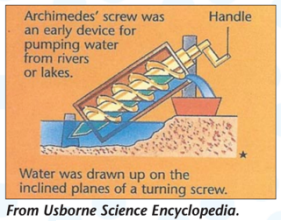
Activity tittle: Archimedes Screw, by Margarida Barbieri



From Usborne Science Encyclopedia.

In STEPS Engineers Ireland

Theme: Water **Month**: January

Aim: Design and make an Archimedes Screw

Resources/materials needed:

- PVC pipe
- Clear vinyl tubing
- Duct tape
- Containers for water
- Food coloring
- Scissors

Introdution: Who was Archimedes? Discussion with children about his inventions!
Water normally falls downwards due to gravity. If you want water to go in another direction you have to apply pressure to it.
Water from rivers and lakes is pumped under pressure to our homes. An Archimedes' screw is a simple machine (a type of pump) which lifts water up when it is turned. It has been used since ancient times. It is used mainly for lifting water from a lower to higher level, such as rivers or lakes, to irrigate fields, and also for draining water out of mines. Its name is from the person who is said to have invented it, Archimedes (287-212 BC). Archimedes was a scientist/engineer/mathematician from Sicily, who studied in Alexandria, Egypt. He is famous for many inventions and discoveries (including Archimedes' Principle – well-known in second level science classes!).

Additional information is available:
https://www.youtube.com/watch?v=3h5oBb9O-dw

https://www.youtube.com/watch?v=PszGCm1PqSo

How to do it:

1. Tape one end of the tube to the pipe
2. Tightly wrap the tube in a spiral

3. Cut off the extra tubing
4. Fill the lower container with colored water
5. Rotate the screw and watch the water travels up the tube
6. Measure the water in the upper container