

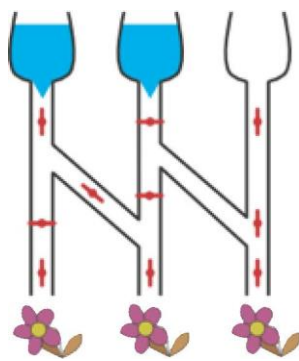
ACTIVITY TITLE:

It's Computational Thinking!



BOOT UP:

The diagram shows how a watering system is connected. The system consists of tubes and valves. Open and closed valves are shown in the diagram by the direction of the switch. Water only flows through open valves.



Open valve



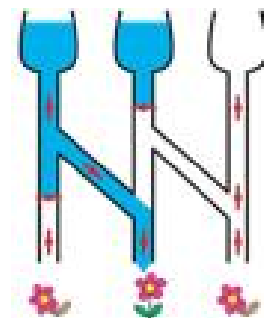
Closed valve

Which flowers (if any) will receive water when the valves are in the positions shown above? _____

LOADING...

The answer:

Only the second flower will receive water.



It's Computational Thinking:

Computers are composed of various chips which are made of even smaller parts: electronic circuits. Electronic circuits are made up of logic gates.

Logic gates act like valves, except that instead of water they conduct electricity and instead of pipes they have wires. This means that our modern electronic devices (including complex ones like computers and smartphones) are built up from simple logical operations.

ACTIVITY HOSTS

Objective: Use computational thinking techniques to solve real-world challenges.

Bebras (www.bebbras.org/) is an international online motivational challenge aimed at introducing students of all ages to computational thinking and computer science. The challenge consists of fun and engaging short questions called Bebras tasks. These tasks can be answered without prior knowledge of informatics concepts. Bebras teaches schoolchildren that computational thinking is an integral part of solving problems in daily life. This taster-challenge is an example of a typical Bebras task for secondary school students.



NEXT STEPS:

The ICS Foundation ran a national Bebras challenge during November 2018. The top 200 students from the November 2018 challenge have been invited to attend the National finals, taking place in Maynooth University during tech week on May 11th. To find out more, take a mini challenge please visit: <http://bebras.techweek.ie/>

FINAL STEP!

Activity Hosts - Don't forget to register your activities on www.techweek.ie.

