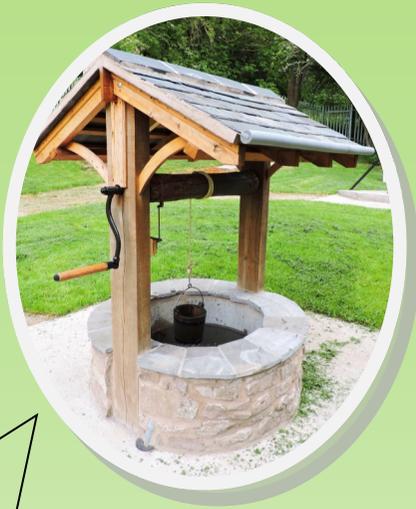


Well and windlass



Why is it easier to turn the windlass to lift the bucket of water, rather than to haul the bucket straight up by hand with the rope?

Reciprocating pump



How does the turning of the wheel become reciprocating (back-and-forth) motion to move the piston? What is the mechanism called? Is there one in a car engine?

Waterwheel



Starting with you pushing and pulling the semi-rotary pump, what is it exactly that makes the waterwheel go round to produce the electricity?

What else puzzles you in the Water Park?

The Heritage Water Park has been supported by



The Southall Trust

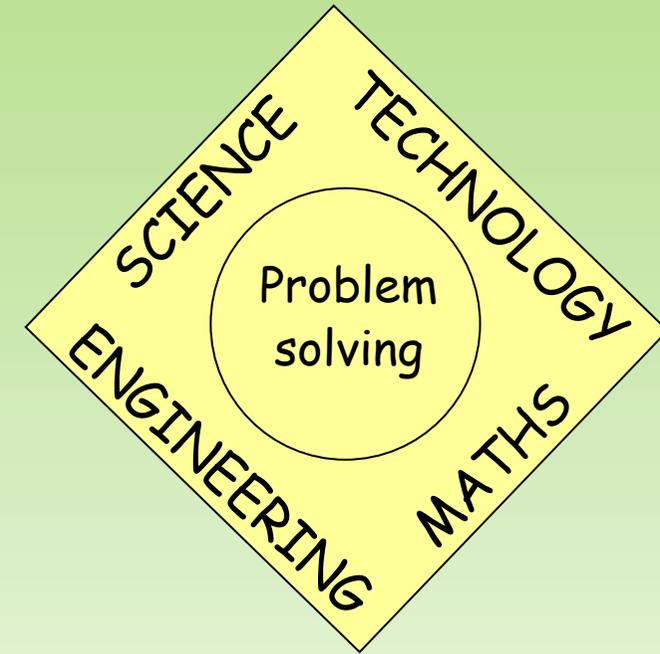
The Waterworks Museum - Hereford

Broomy Hill, Hereford HR4 0LJ
Enquiries: 01432 357 236 or 01432 275 198
W: www.waterworksmuseum.org.uk
E: info@waterworksmuseum.org.uk

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Home of the Heritage Water Park



If you are curious you will want to know how things work.

Be a science sleuth in the Water Park and work things out for yourself (there is always a little help when you need it).

The answers to these questions lie in your imagination.

Capstan pump



Use your knowledge and imagination to explain how turning the capstan makes the water flow from the spout. What is going on underground?

Beam and bucket



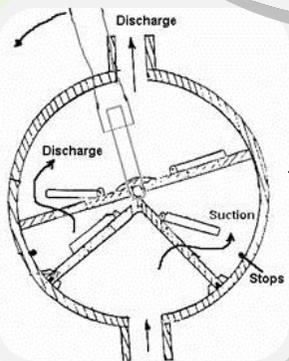
What would happen if the counter-weight slid forwards? Slid backwards? Slid off altogether? Why?

Village pump



The limit for raising the water from below is theoretically 10 metres. In reality it is about 7 metres. Why is there this limit? Think: why does the water rise from below at all?

Semi-rotary pumps



Look at the diagram and think how the semi-rotary pump works. Can you see what the handle does?

Sand filter



It is the fine sand which filters the water. So what are the pebbles, small stones and large stones underneath the sand for?

Buckets



These buckets are made from wood. Make a list of all the materials you can think of for making buckets.