WOODBRIDGE TIDE MILL MUSEUM®

Learn With Us

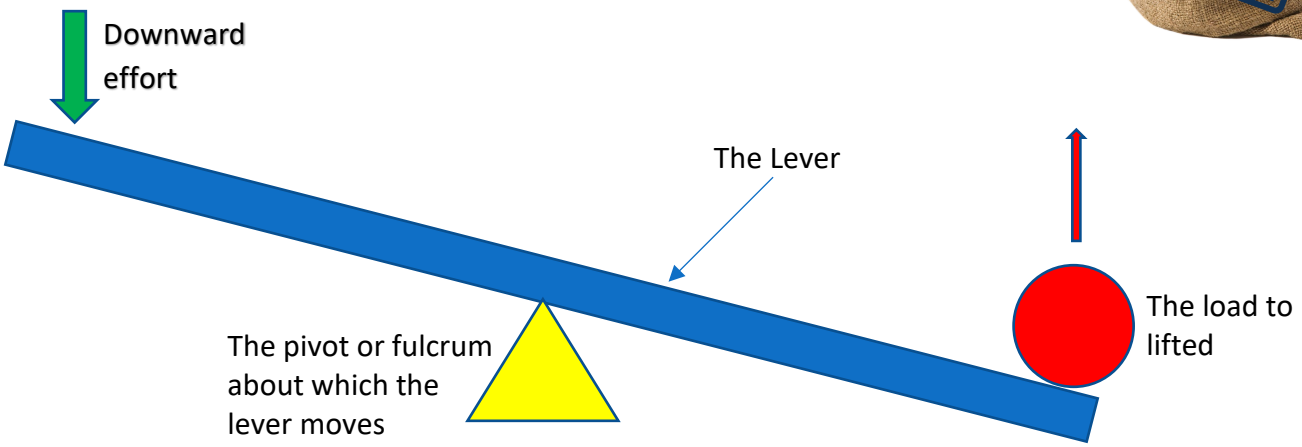
Levers

Recommended for KS1

Curriculum links: Science,Technology, Science, Art

Related material in 'Levers, Pulleys & Gears' video from 00:00 - 01:58

A lever is a simple mechanism that makes it easier to lift things. When you apply effort at one end of the lever the other end also moves, lifting the load.



There are a couple of really important levers inside the Tide Mill. One is part of our huge pair of balance scales. There is a pivot point on the beam at the top, the load is a sack of grain or flour and the effort or downward force is applied by the weights placed on the other side of the beam. We balance the grain or flour with the weights to know how much we have!

The other lever is even more important. It's called the sack barrow. This makes lifting and moving the great heavy sacks of grain and flour so much easier than trying to do it by hand. The load is a sack of grain. the fulcrum is where the wheels are and the miller applies force by pushing down on the handle.

''Hello, I'm Sid. I was one of the last millers at the Tide Mill before the old waterwheel broke in 1957. On the next few pages are some activities that will help you discover more about how levers work. To get you started, I've made a short video for you to watch...You can find it here"
https://

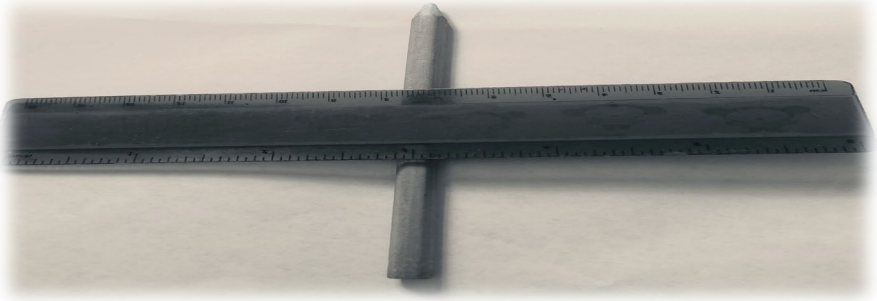
Activities

'I use a sack barrow to help me lift heavy bags of flour. The barrow works as a lever. Can you see how?'

'How's about you have a go at making your own lever and then testing it out? Follow my instructions to see how…

You will need:

- A ruler
- A pencil
- Coins
- A small pompom (or something



How to make:

1 Place your ruler on top of the pencil as shown. The ruler acts as the lever and the pencil is the pivot or fulcrum.

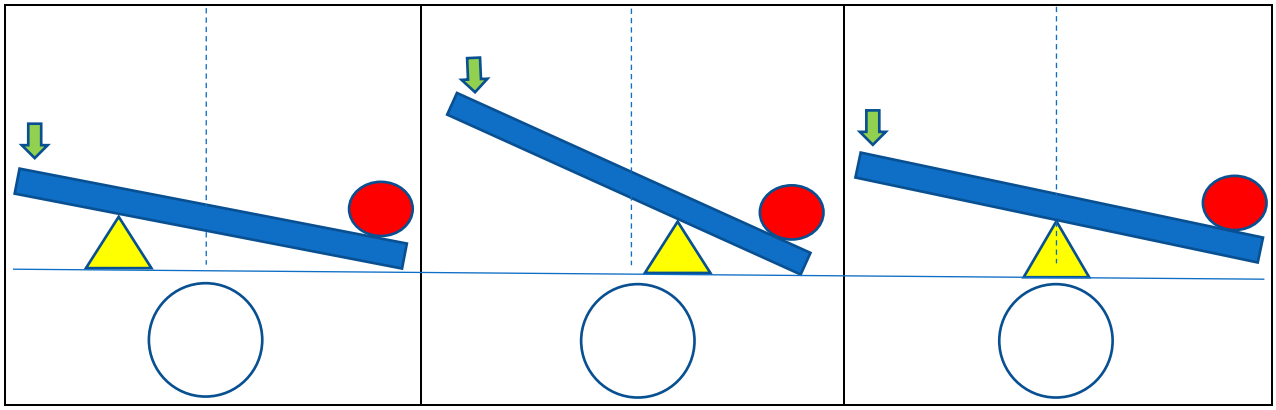
2 Place a load of coins at one end of the ruler.

3 Lift the load by pressing down at the opposite end of the ruler using one finger (the force). How hard do you have to press to lift the load?

4 Change the position of the pencil and lift the load again. Try several different positions. Notice each time how hard you press in order to lift the load! Does it change?

5. Now exchange your coins for a small pompom or something else soft. Strike the end and watch as you catapult It into the air. How high can you get it?

'Now you know a bit about how levers work let's try an experiment. Using your own lever, set it up in the following three ways. Which one makes lifting easiest? Tick the correct box! Why do you think that might be?'



'Decorate the picture on the next page of the Miller using his sack barrow lever. What would you call your Miller?

My miller's name is.....