Knowledge Web: Levers and Sliders

Quick summary

EXAMPLES OF SLIDERS

You might find a slider mechanism as a latch on a gate, in a set of drawers in the kitchen or in a moving picturebook.

Vocabulary

- investigating
- planning
- design
- make
- evaluate
- user
- purpose
- ideas
- design criteria
- product
- function
- mechanism

What is a lever?

A lever is a simple mechanism that can help make hard work easier to do.
It has three important parts:

- load
- fulcrum
- effort

Levers can help to lift heavy loads, as well as make things go up and down.
https://www.bbc.co.uk/bitesize/topics/zdt7nk7/articles/z7xjtcw

What is a slider?

A slider is a kind of mechanism that has a bar or rod that moves forwards and backwards, or side to side, within a guide.
https://www.bbc.co.uk/bitesize/articles/zj2dxg8&:~:text=A%20slider%20is%20a%20kind,or%20in%20a%20moving%20picturebook.

How does a lever work?

A lever has three important parts:

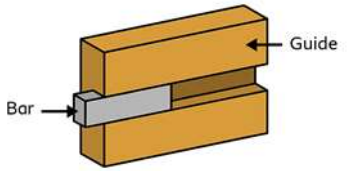
1. Load - The load is the thing to be moved.

2. Fulcrum - This is the spot where the lever sits. It allows the lever to ide, in a curve or round and round.

3. Effort - This is the power we use to make the lever work. When we push or pull to move things we use our muscles to make the lever do its job.

How do slider mechanisms work?

A slider mechanism is made up of a strong bar or rod supported by a guide.



Practical knowledge

The guide allows motion (movement) along a straight line.

Design inspiration

Designing and planning your product is really important. When building the Sky Gate Bridge in Osaka the engineers followed these steps before any construction even began!

First and foremost, engineers must understand the problem completely. To do this, they ask a lot of questions.
Next, engineers must determine what types of loads or forces they expect the bridge to carry.
Then, engineers use mathematical equations to calculate the amount of material required for that design.
After that, engineers brainstorm different design ideas and a team decides which is best.