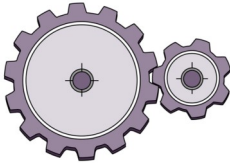




Y6 Thinking like a designer

Gears

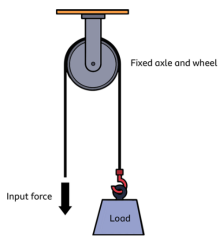
A **gear** is a wheel that has parts called teeth around its edge. These **teeth interlock** with the teeth of another gear, belt or chain. When two or more gears are connected, they **transfer motion and power** from one gear to another.



Gears can be found in **machinery** including bicycles, cars and clocks.

When a smaller gear turns a larger gear, the larger gear turns at a slower rate than the smaller gear but it is more **powerful**.

Pulleys



A **pulley** is a type of wheel which enables objects to be **moved** and lifted with far less effort. Pulleys are found in lifts, cranes, car engines and garage doors. Fixed pulleys are attached to something like a ceiling or a tower.

When someone pulls the rope down, the load moves up, making it easier to lift heavy objects.

Design word bank

Prototype: An initial model of a product built to test ideas.

Modification: Changes made to improve a design.

Evaluation: Assessing a product's effectiveness against specific criteria.

Innovation: A new method, idea or product.

Learning Questions

Why do we use gears and pulleys?

What machinery are they used in?

What steps did I take to design a system using gears and pulleys?

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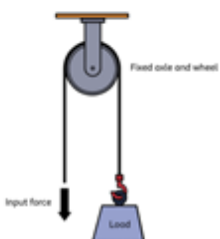
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