

TRANSFERRING ENERGY

KEY IDEAS

- Machines transfer energy from a source to where it is needed
- Gears, belts, chains and cogs can all transfer energy and change the direction of movement

EXAMPLE QUESTIONS

- Where do different forms of energy to make machines work come from?
- How do different machines get their energy?
- What different ways can energy to be transferred in machines?

RAMPS AND PULLEYS MAKE JOBS EASIER

- A ramp provides a way of moving a load upwards that requires less effort than lifting.
- The ramp was one of the earliest means of making jobs easier and as the main method of moving stones in the building of Egyptian pyramids.
- Many machines have systems designed to transfer energy from one part to another via pulleys and gears.
- Both pulleys and gears can reduce the effort needed to move a large load.
- Everyday examples include bicycles and mechanical clocks.

LEVERS MAKE TASKS EASIER

- We make great use of levers in our everyday lives.
- In fact, levers represent one of the earliest form of tools and are still widely used today in one form or another.
- A see-saw, a row boat and a nutcracker all incorporate levers.

GEARS AND COGWHEELS CAN CHANGE THE SPEED AND DIRECTION OF MOTION

- Windmills work because of the ability of gears and cogwheels to transfer motion from one part of the apparatus to another.
- Gears and cogwheels convert the movement of the vertical sails to the horizontal movement of the grinding stones.
- Gears can also change the speed of motion.
- A small cogwheel, linked to a cogwheel with twice as many teeth, will result in the larger cogwheel taking twice as long to complete one revolution.
- Bicycles and motorcar gears are familiar modern day examples of this.

For more like this and for supporting videos, please visit our website: www.mist-lessons.com

MIST © 2015. All Rights Reserved.