

# STEAM POWER

Steam power was one of the most important new technologies in the 1800s. It was much stronger than water power and made machines in factories move faster.

**1** Find a powerful river and build a **dam**. The dam will slow the water down and turn that part of the river into a pond. This is called a **mill pond**.

**MILL POND**

**6** The gas from the engine cools down. It condenses back into water. A pipe takes the water back **out** into the mill pond.

**OUT**

**2** Build an **intake pipe** to bring water from the pond to the factory. The water goes into the **boiler**. The fire in the boiler, powered by wood or coal, boils the water.

**DAM**

**INTAKE PIPE**

**4** Gears on each floor connect the main shaft to each floor's **power train**. The power train turns the **pulley**, which is made of a wheel and a leather belt.

**MAIN SHAFT**

**ENGINE**

**BOILER**

**3** When the water boils, it turns to gas. The gas is pushed into the **engine**. The gas pressure makes the engine move. A metal bar turns a wheel attached to some **gears**. Turning the gears spins a thick pole called the **main shaft**. The main shaft goes up through all the floors of the building.

**5** Each pulley is attached to a machine. As the pulley turns, it moves the parts of the machine. The machine now has power to make it run!

**GEARS**

**PULLEY**

**POWER TRAIN**

1. What scientific processes are used in a steam engine?
2. Compare steam power with water power created by a water wheel. How are they different? How are they the same?
3. Do you think a steam engine or a water wheel is a more efficient way of creating power? Why?
4. Do you think steam power technology could be used even if there wasn't a mill pond? How?