# Contents



SIMPLE MACHINES

# To the Teacher

With the activities in **Simple Machines**, we invite young children to discover the **real** world of science. Children will confront questions about the world around them in much the same way a professional scientist does, using some of the same process skills, such as observing, hypothesising, recording data and interpreting the results of investigations. In this way, children acquire an organised method for their thinking that will help them in their everyday living as well as in future science study. The scientific method used in this book is further explained on page 31.

Basic vocabulary and science concepts are presented in activities designed to engage the child's imagination. These experiment-oriented activities will help children learn to **think** like scientists.

## Teacher's Guide to Experiments

The experiments are explained on pages 33 and 34. Read these explanations **prior** to doing the experiments. These explanations will help the teacher set up procedures and discuss results and conclusions in the classroom. Additionally, teachers may choose to 'block out' the **Procedure** sections before photocopying. The blank **Procedure** area would encourage the students to develop their own problem-solving skills. This omission would be based on the teacher's assessment of student ability and interest levels.

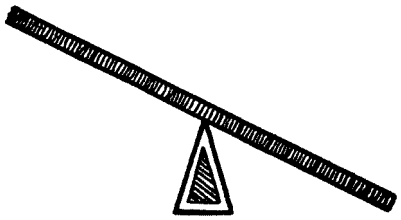
SIMPLE MACHINES

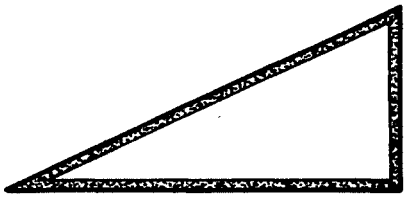
# What Is A Machine?

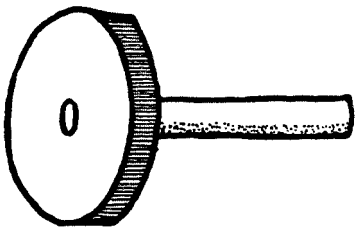
**** Basic Concept Page***

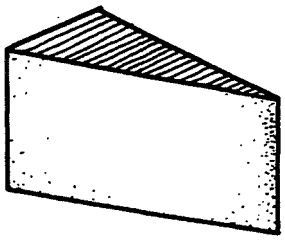
**MACHINES** help us do work faster and more easily. Machines are made up of one or more simple machines. There are six simple machines. These machines are the **lever**, the **pulley**, the **wheel and axle**, the **inclined plane**, the **wedge** and the **screw**.

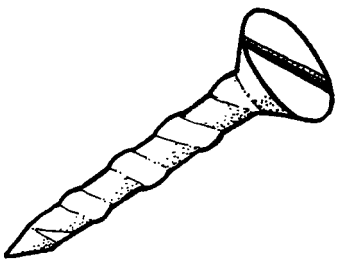
Print each machine name under the pictures. Say each word. Then colour the machines.











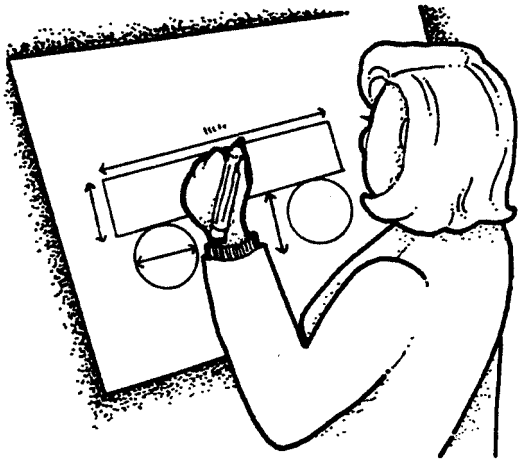
SIMPLE MACHINES

# Careers With Machines

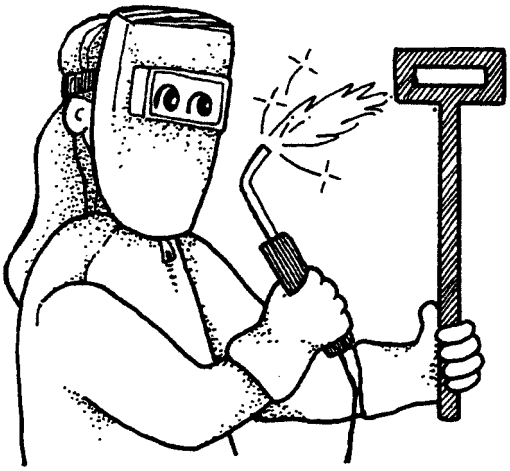
Do you think machines are interesting? Would you like to work with machines for a job? Some people do. Here are four jobs for people who like machines.

An INVENTOR thinks of an idea for a machine.

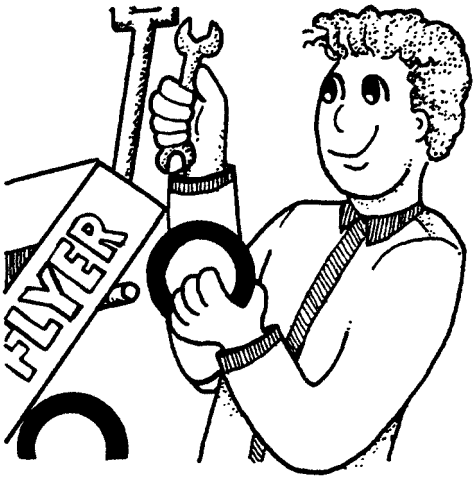

An ENGINEER draws the plans for a machine.



A MACHINIST helps to build the parts of a machine.



A MECHANIC fixes a machine if it doesn't work.

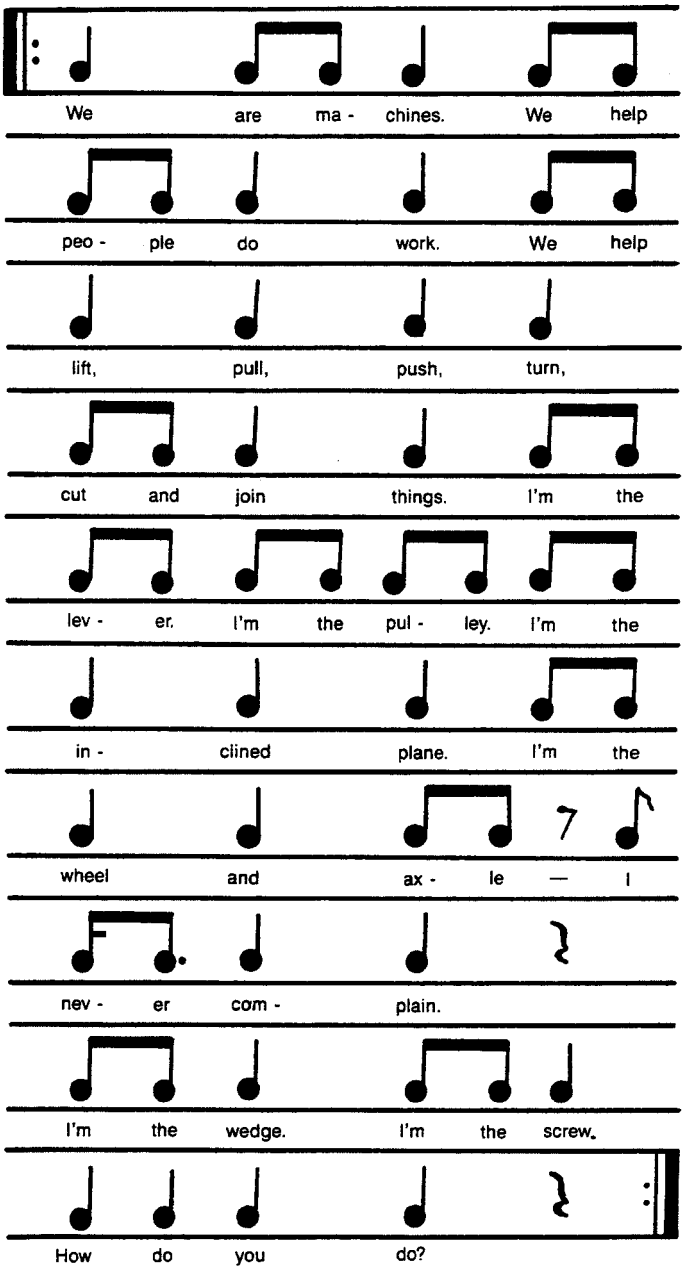



Fill in these blanks with the correct job. Then, colour the pictures.

1. A(n) _____ fixes a machine if it doesn't work.
2. A(n) _____ thinks of an idea for a machine.
3. A(n) _____ draws the plans for a machine.
4. A(n) _____ helps to build the parts of a machine.

# Song: 'Machines At Work'

**Text**




## Physical Movement

Students all stand in a line facing the audience with expressionless faces, looking straight ahead, with their arms at their sides. They may wear 'sandwich signs' with their machine drawn on them.

As the machine actions are said, each corresponding person says the action and does it. LIFT – the lever makes a lifting motion with their arms. PULL – the pulley makes a pulling motion. PUSH – the inclined plane makes a pushing motion. TURN – the wheel and axle stands in place and makes a 360° turn. CUT – the wedge makes a karate-type movement towards the audience with hand and foot. JOIN – the screw shakes hands with itself.

Finally, everyone together says 'How do you do?' and then repeats the entire song for as many times as desired.

These are very basic directions. Feel free to be creative with extra stage movements or more elaborate costumes.