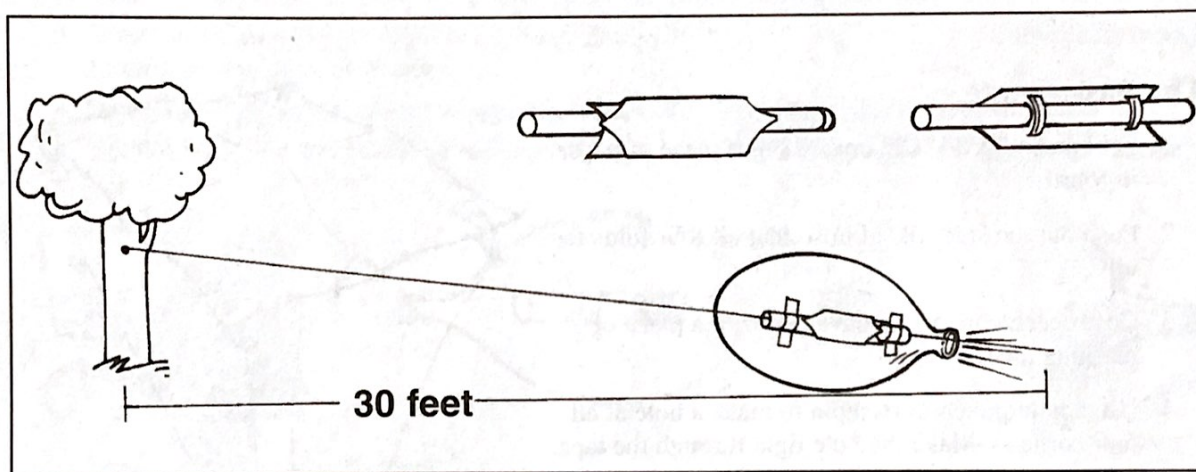


Blast Off! (cont.)

Guided Rockets

You can often get greater distance by guiding the launch.

1. Cut a 30-foot (9-meter) piece of fishline. Tie one end to the shaft of a pushpin and pin that end into a bulletin board about four feet (122 cm) off the floor or to a tree or pole outdoors.
2. Extend the string across the room or playground to the farthest distance possible. Keep the fishline out of the path of students and tape it against a wall until you are ready to launch.
3. Copy the design shown below onto an index card, manila folder, or similar thick paper. Color it with markers or crayons.



4. Tape the rocket design onto a straw in two places.
5. Thread the end of the fishline through the straw and hold it in place while a partner blows up a balloon and tapes it onto the rocket model.
6. Hold the string and model so that the straw sits easily on the fishline and the fishline is aimed slightly higher than where it is pinned.
7. Release the balloon and observe how well the rocket travels. Did it get to the end of the fishline?
 - Did the straw catch or run freely along the fishline? Did the balloon seem to run out of air before the rocket reached the end of the line?
 - Do several trials of your rocket. Use balloons of different styles and sizes. Hold the fishline at different angles to get the maximum amount of speed.
 - Create a model rocket of your own. Use a different style or type of rocket. Make your rocket longer or shorter, wider or narrower.
 - Try several different versions. Use different balloons and test each of your models.
 - Try mounting your rocket onto a double-length straw that you have hooked together.
 - Try making a cylinder to go around the straw.