

Contents:

- Wood Base - 12" long
- Mounting Wood for Propeller (Tail)
- Propeller Assembly
- 4 Wheels
- 2 Metal Axles
- 4 Washers
- Drinking Straw (axle holder)
- 1 Screw Eye
- 2 Rubber Bands
- Instructions

Tools Needed:

- Coping Saw
 - Hammer
 - Hot Glue Gun
 - Screwdriver
 - Ruler
 - Decoration material
- (Tools are available from Kelvin see catalog or Kelvin.com)

This Kelvin activity is an educational one. Teachers are encouraged to modify this activity as they see fit to enhance the students' education. As with any project the teacher should assemble a sample before engaging students in the activity.

Safety First:

Be careful and avoid injury when working with knives, hammer, or any other hand or power tools.

The Objectives of this Kit:

- Working with tools
- Designing a product
- Assembling a product
- Introduction to basic science principles
- Problem solving
- Utilizing math and measurement

Basic Assembly Information:

- Draw your car to scale.
 - Identify each part to be used and their purpose.
 - Cut the flat wood base (A) to the appropriate body design.
 - Saw a slot in the back-center of the wood base (A) with your coping saw.
 - Saw a matching slot in the center of the mounting wood (B).
 - Shape mounting wood (B) to accept the propeller head.
 - Screw the screw eye in the front of the wood base (A).
 - Cut the straw to the appropriate size to fit each of the axles (leave space on each side for wheels and washers to clear the wood base)
 - Insert the axle into the straw and put a washer on each side. Then, hammer both wheels on the axle. (You end up with 2 axle assemblies)
 - Glue the 2 axle assemblies to the bottom of the wood base (A) using a hot glue gun.
 - Attach the mounting wood (B) to the wood base (A). Then, connect the propeller (C) to the mounting wood (B).
 - Attach the rubber band to the screw eye and to the propeller hook. Turn the propeller several times, place the car on the floor, and when you release the propeller, the car will run.
- * Note: You can try different propeller sizes, different rubber bands, and you can try to make the car lighter or heavier to achieve the best possible results. Also, you may decorate your car to your liking.

Research:

Write a paper that describes your design. Report the speed and distance that you have achieved. Try to improve on your results. Describe some science principles and mechanical principles of this activity. For further research, investigate different innovative transportation alternatives.

