The basic car is provided as a starting point for students to build if they have no other ideas. There are dozens of variations on the mouse trap car. They have been made from coat hangers, heavier wood, plastic with CD wheels, and other materials.

In this version, the masonite body is just a little larger than a standard mouse trap. The trap can be glued on the flat area. The small 1/8” dowel can be taped with masking tape to one side of the mouse trap. Length of the 1/8” dowel is something that the students can experiment with. The longer it is, the more pull it will have on the rear axle. There will be a point where the short, quick snap will outdistance the long, slow lever.

This is where students can use their imaginations to modify the car or come up with a completely different design. Some kids may put graphite on the axle to cut the friction. Some may want to use a metal axle.

Answers...

A. This will be based upon observation. If everything is aligned, the car will go.

B. This problem usually happens when the wheels are not aligned in parallel. Students must straighten the wheels.

C. Draw a diagram of how you would make a three wheel design. Should the single wheel go on the front or the back?
Basic Car

Mouse Trap

Small Dowel (1/8”)

String

F. What is the difference between using the dowel to attach the string rather than putting the
_____________________________________________________________________________
_____________________________________________________________________________

G. What could be another way to bring power to the wheels of the car? Sketch it in.

_____________________________________________________________________________

H. The wheels may spin a little before taking off. What could be done to provide the wheels
with more traction? __________________________________________________________
_____________________________________________________________________________

I. Large wheels take more energy to start and more energy to stop. Small wheels take less en-
ergy to start and less energy to stop. This is true for all wheels. What would be your idea for
Why? ______________________________________________________________________

J. If you could change the material of the axle, what would you use? Why? ________________
_____________________________________________________________________________

K. What change in the wheels would be more benefical? _______________________________
_____________________________________________________________________________

L. What would be a better way to make the holes that hold the axles and line them up?
_____________________________________________________________________________

M. What changes could be made in the type of string used on the dowel? __________________
_____________________________________________________________________________

N. Will the car work better on the classroom linoleum floor or on the rough pavement outside?
Explain why. __________________________________________________________________
Several web sites show plans and examples for mouse trap cars. Use a search engine, and all of these will come up.

It’s thrilling for kids to come up with their own ideas and designs and to watch them work after enough tinkering.

Be sure to use standard size mouse traps. Rat traps could be dangerous for fingers.
O. From the pictures above, select one and write a description of how you think the car works.

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