

“Energy Mouse”

Due:

Objectives:

1. To develop and expand your use of a problem solving model.
2. To develop your critical thinking skills.
3. To show how potential energy can be transferred into other forms of energy.

Description:

The objective of this activity is to design and build a device that uses the energy of a standard mousetrap to put out the flame of a standard birthday candle from a distance of **at least one meter**. You can't smash the candle or make a mess in the classroom. No batteries, electricity, or other energy sources are allowed. Your creativity score will be based on the complexity of your design.

Materials:

A standard birthday candle, a mousetrap, and a wood base (if needed) for your contraption. You are not restricted to any other materials. Use old toys, games, and anything you can find lying around at home.

Rules:

1. Your device must be activated by the energy stored in **one** standard mouse trap.
NO RAT TRAPS!!
2. **No part of your mouse trap can closer than one meter from the candle;** you have no other restrictions.
3. Your total cost for materials may not exceed the cost of the mousetrap by more than one dollar.
4. You will have 5 attempts to put out the candle.
5. You or you and a partner must design and build your own device.
6. You must turn in a neatly labeled drawing along with a detailed explanation of the operation of your device. **MAKE SURE YOU HAVE DESCRIBED THE ENERGY CHANGES OF YOUR DEVICE**

Project Evaluation: 50 points possible

Drawing/Explanation:		0 - 15 points
Originality/Creativity:		0 - 5 points
Lab report: Summary of energy changes		0 - 15 points
Success rate:	1 st attempt	10 points
	2 nd attempt	9 points
	3 rd attempt	8 points
	4 th attempt	7 points
	5 th attempt	6 points
	Did not work but you tried	5 points