Invent a Better Mousetrap and the World Will Beat a Path to Your Door

Description

The above saying refers to the fact that if you improve upon an already existing product, you will become successful. Technology must always change to meet the needs of people. Could you imagine if we had never changed the original computer which was so large it took up an entire room? We are going to revisit a classic design of a product and try to improve upon it.

You will create a new mousetrap, one that captures the mouse without doing it harm unlike the original model. You will design the mousetrap first and then build a working model that will capture a stuffed mouse. Your design must include steps by step how to create it, measurements, materials, and be detailed enough that if someone were to build the mousetrap using the design, they would be able to do so. You will also need to compare and contrast your mousetrap with the original one and evaluate which is better and why.

Standard

Science 4-2 – Revise an existing design used to solve a problem

Suggested Materials

Graph paper/drawing paper
Materials to build mousetrap

Timeline of Project

- Introduction to Project/Review of old design
- Design of trap
- Construction of model
- Presentation/Demonstration

Products

- Design of your mousetrap
- Model of your mousetrap and demonstration of it

Invent a Better Mousetrap

Student: _____

Overall 4-2	Design	Model	Comparison
Excellent (E)	• Design clearly takes you step by step how to make it. • Design is clearly labeled with measurements and parts. • Design looks neat and professional.	• Model looks exactly like the design. • Model is durable and built sturdy so it can last. • Model works, trapping the rat without harming it.	• You clearly compare your design with the design of the original mousetrap. • You present both advantages and disadvantages of both traps. • You give good detail and examples why one trap is better than the other.
Good (M-P)	• Design shows you how to make it but skips steps, making it hard to reproduce. • Design is labeled with measurements and parts but missing some in places. • Design looks neat and professional for most part but sloppy in places.	• Model looks pretty much like the design with only a couple of minor changes. • Model is durable and built sturdy but wouldn't last for very long. • Model works for the most part, trapping the rat without harming it but having a couple of errors.	• You compare your design with the design of the original mousetrap but not always able to understand. • You present advantages or disadvantages of the traps but not both. • You explain why one trap is better than the other but do not include much detail or give examples.
Needs Improvement (L)	• Design doesn't really show how someone could make it, leaves many steps out. • Design is not labeled with either measurements and/or parts. • Design does not look neat and professional, sloppy and hard to see.	• Model looks nothing like the design. • Model is not durable and built sturdy, wouldn't last for more than a couple of uses. • Model does not work or falls apart while trying to trap, or it harms the rat.	• You do not compare your design with the design of the original mousetrap. • You do not present either advantages and disadvantages of both traps. • You do not explain why one trap is better than the other.