SAMPLE

Proposal Narrative
Physics House Project

Project Description
Students are required to work as a member of a team to design, build, wire and electrify a model house to meet provided specifications. Teams are created based on differing student strengths to create a well-rounded and efficient team. Students take a panel of judges on a "tour" of their house and demonstrate that it works. In addition, students put together a presentation to explain the physics of the electricity. The panel of judges is comprised of members of the community and school administration.

Goal(s) of the Project
The goal of the project is to show the application of physics in everyday life. May students see physics as just a subject in school and don't make the connection to the physics of their world. This project brings that connection to them in a fun an interactive way.

Physics provides students with a challenging course that stretches their abilities and their perseverance. This project makes that challenge fun and rewarding. It comes at the end of the year, which is often a difficult time to keep students engaged. Students will be motivated to be in class and to learn the required material.

Objectives
TAKS Objective 5
- The student will demonstrate an understanding of motion, forces, and energy.

TEKS Objective 6E and 6F
- The student is expected to design and analyze electric circuits.
- The student is expected to identify examples of electrical and magnetic forces in everyday life.

Project Objectives
- Observe how voltage, current and resistance affect each other in a circuit
- Recognize the purpose of fuses, transformers, switches, voltmeters, ammeters, ohmmeter, resistors, and other electrical devices in a circuit.
- Setup series and parallel circuits and analyze the advantages and disadvantages of each
- Use a voltmeter, ammeter and ohmmeter to measure voltage, current, and resistance of a circuit
- Apply Ohm's Law to the circuits of the house to calculate voltage, current and resistance.

Timetable
The project will be a yearly project requiring six weeks to complete and includes the following phases: Design (1 week), Build (2 weeks), Wire (2 weeks), and Troubleshooting/decorating (1 week).

Students are given class time during the week to work on their project. It is a requirement that certain subjects are covered during this time as well; therefore, they are motivated to be in class on time and pay attention so that they may have time to work on their house. In addition, if a student is absent for any reason, they are required to make

up the time either before school, during my conference period, or after school. This ensures that all students have spent an equal amount of time on the project.

Most of the materials will be recycled and reused. This enables the project to be repeated year after year.

Evaluation

I will measure the project success in three ways. First is a formal evaluation of the project by me, the teacher. I have a grading process to determine what was learned and how well every member of the group is able to explain the physics behind their project. Second, I have the panel of judges with electrical experience critique the projects and student presentations. Finally, we have an open house for the parents to come in and view their student's project. In addition, each member of the team grades his or her teammates.

Budget

Items needed for Class Use

Item	*Quantity*	*Cost/item*	*Total*
Toolbox (utility knife, glue gun, soldering iron, pliers, needlenose pliers, wire strippers, screwdriver)	6	50.00	300.00
Consumables (hot glue, solder, knife blades, wire)	1	60.00	60.00
Variable power supply	2	100.00	200.00

Items Needed for Each Group

Item	*Quantity*	*Cost/Item*	*Total/Item*		
Foam Core Board	2	3.08	6.16	x 6	36.96
Switches	7	5.50	38.50	x 6	231.00
Lights	7	0.25	1.75	x 6	10.50
Outlets	7	2.00	14.00	x 6	84.00
Motor	1	3.50	3.50	x 6	21.00
Buzzer	1	3.30	3.30	x 6	19.80
Terminal Strips	1	2.50	2.50	x 6	15.00

Total Funding Requested: 978.26