

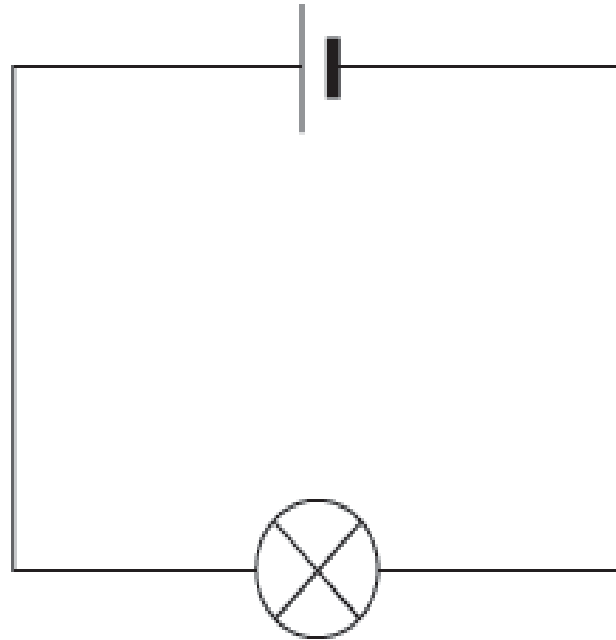
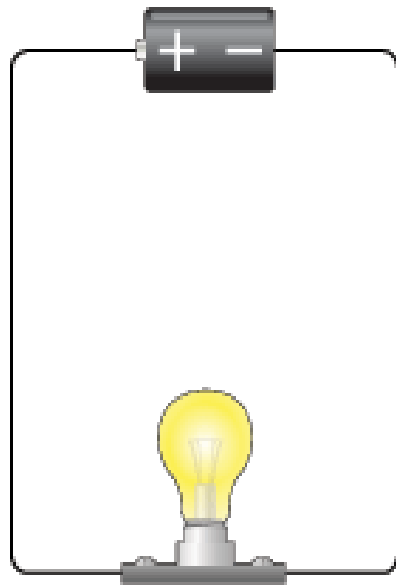
Designing a Door Alarm

Erin Doherty, David Eichinger, Bradley
Harriger, Venkatesh Merwade

- What is electricity?
- What is electric current?
- What is electricity used for?
- Where does electricity come from?
- Do you know of any source or sources of electricity?
- What is an electric circuit?
- How is electricity stored?
- What else do you know or want to know about electricity?




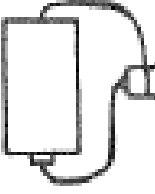
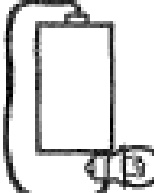
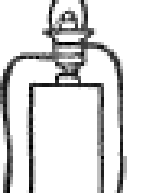
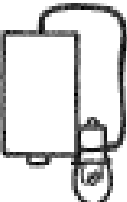
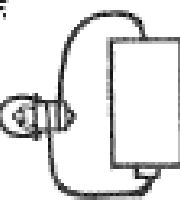
Circuit Diagram




Lesson Plan 2

- Test multiple ways of lighting a electric bulb by using the material available to you.
- Draw two examples of the ways that would create a working circuit
- Draw two examples of the ways that would create a non-working circuit

Predict, report and test which of the following circuits will work or will not work

2					
HOOK-UP	PREDICTION <i>Will it light?</i>	RESULT <i>Did it light?</i>	HOOK-UP	PREDICTION <i>Will it light?</i>	RESULT <i>Did it light?</i>
A. 			D. 		
B. 			E. 		
C. 			F. 		

IF YOU CAN'T HOLD ALL THE WIRES DOWN, ASK A FRIEND TO HELP!



Discussion on Lesson 2

- Why did your circuit worked?
- What are the key elements of a working circuit?
- What is an open circuit?
- What is a closed Circuit

Lesson Plan 3 - Challenge

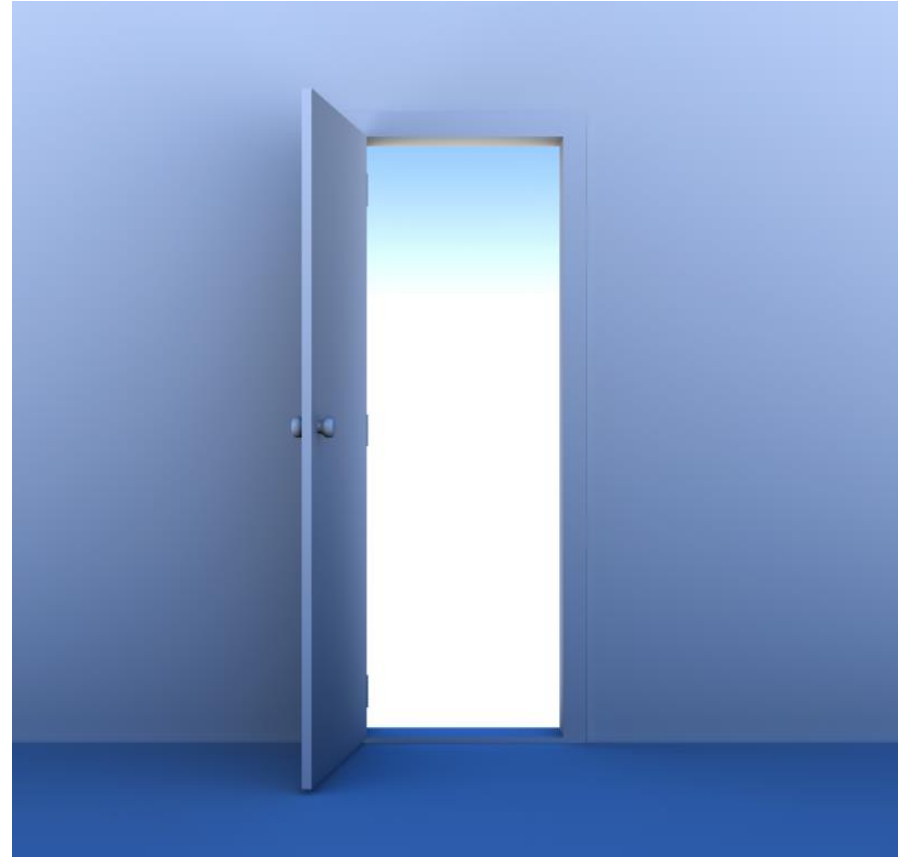
Someone has been sneaking into your classroom when the class has been at art. Your teacher needs help in designing an electric door alarm prototype with an open and closed circuit. This alarm should make noise when the door is opened and will turn off when the door is closed.



Challenge: Someone has been sneaking into your classroom when the class has been at art. Your teacher needs help in designing an electric door alarm prototype with an open and closed circuit. This alarm should make noise when the door is opened and will turn off when the door is closed.

- What is the goal?
- Who is the client?
- What is the design?
- What are the criteria?
- What are the constraints?

How doors work?



Circuit closes when the door is opened and vice versa.

Discussion on Lesson 3

- What have you learned from this lesson about circuits that you did not know before?
- What parts did you use as conductors? Why?
- How can your design be improved?
- Can this circuit be used for another application besides a door alarm? How would you modify the circuit for another application?