


Silent Simon Says Decoder

 = short flash

 = long flash

Silent Simon Says



Touch Toes



Arms Out



Kick



Reach



Morse Code - Decoding

Decode each word. How many are in your *Be Prepared* Backpack?

— — —
... .. —

— — — — —
.- — —

— — — — —
... .. .- ...- ...-

— — — — — — —
.- —

— — — — — — —
-... ..- ..- ...- .- ..- ...

— — — — — — — — — — —
... ..- ..- ...- -...- .- ...- -...-- .- ...-

Build a Morse Code Signaler

(first through third graders)

Materials:

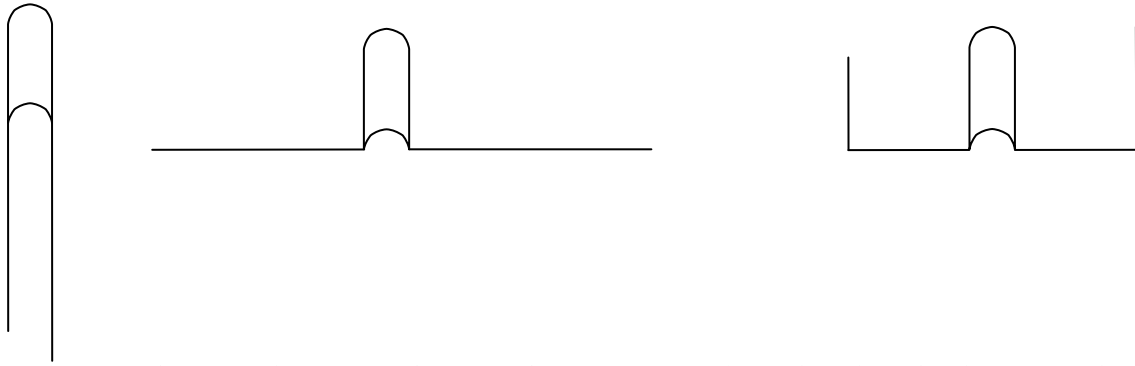
- 1 3-volt LED light bulb
- Small cardboard square, 2"x2", with hole
- 2 AA batteries
- 1 battery holder

Tools:

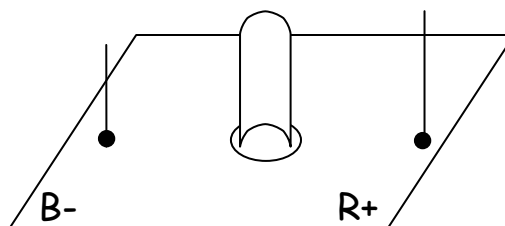
- Needle or pin
- Small pliers
- Black, red pens

Build Procedure:

1. Prepare the LED bulb.



2. Mount the bulb in the cardboard square. (Push the light up through the punched hole. Use pins to poke holes where the wires need to come up.) Write B (for black) near the short wire and R (for red) near the long wire.



3. Place the batteries inside the battery holder.

Test Procedure:

Touch the black wire from the battery to the short wire of the LED. At the same time, touch the red wire from the battery to the long wire of the LED. What happens?

Build a Morse Code Signaler

(fourth and fifth graders)

Materials:

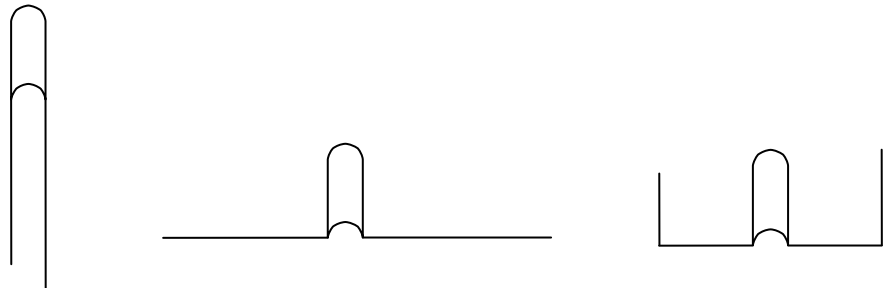
- 1 3-volt LED light bulb
- Medium cardboard square, 6"x6", with a hole
- 2 AA batteries
- 1 battery holder
- 1 paper clip
- 1 6-inch piece of 22 gauge solid wire, stripped on both ends
- Electrical tape

Tools:

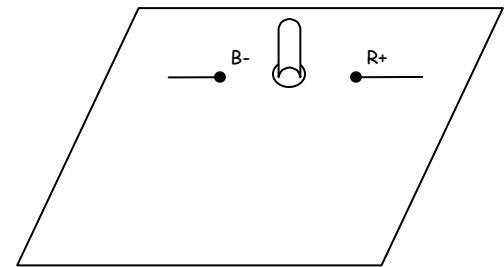
- Needle or pin
- Small pliers
- Wire stripper
- Hole punch
- Scissors
- Black, red pens
- Perm. marker

Build Procedure:

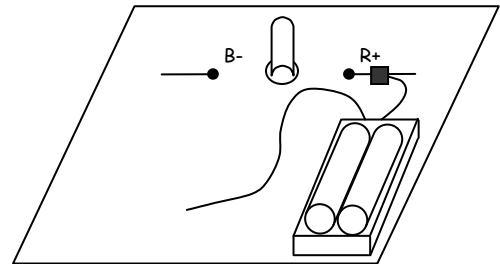
1. Prepare the LED bulb.



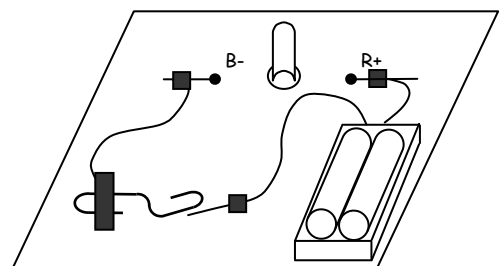
2. Mount the bulb in the cardboard square. (Push the light up through the punched hole. Use pins to poke holes where the wires need to come up.) Write B (for black) near the short wire and R (for red) near the long wire. Bend the wires to lie flat.



3. Place the batteries inside the battery holder, and tape the battery holder onto the cardboard. Attach the red lead wire to the long wire of the LED by twisting and tape down.



4. Unfold the paper clip at its middle. Wrap one end of the solid wire around the large loop of the paper clip, and tape this down to the cardboard. Attach the other end of the solid wire to the short wire of the LED by twisting and tape down.



5. Place the exposed end of the black lead wire underneath the short loop of the paper clip, and tape down, leaving the end exposed.

Test Procedure:

Press down on the end of the paperclip until it touches the black lead wire. What happens?

Send a Secret Message Using Morse Code

- Answer the question.
- Send your answer to a friend through your electric circuit.

Question: What color do you like?

Answer in English:

I like _____

Answer in Morse:

— — — — —
I L I K E

Which way of sending Morse Code will work better over long distances?

Flashlight Electric Circuit

Morse Code - Decoder

Singles	Triples	Quadruples
· E	··· S	···· H
- T	··- U	··-- V
	··· R	···· F
Doubles	··- D	···· L
·· I	··- W	···· B
··- A	··- K	···· P
·· N	··· G	···· X
··- M	··- O	···· C
		···· Z
		···· J
· = dit		···· Y
- = dah		···· Q

Morse Code - Encoder

A	· -	L	· - - -	W	· - -
B	- - - ·	M	- -	X	- - - -
C	- - - ·	N	- ·	Y	- - - -
D	- · -	O	- - -	Z	- - - -
E	·	P	· - - -		
F	· - - ·	Q	- - - -	· = dit	
G	- - -	R	- · -	- = dah	
H	· - - -	S	· - -		
I	· ·	T	- -		
J	· - - -	U	· - -		
K	- · -	V	· - -		