1.  What are qualities of a good flashlight?

   Possible answers: Reliable (turns on and off without breaking), lasts a long time, easy to carry, easy to turn on, good light beam, small size, etc.

2.  Describe a flashlight. What are the parts of a flashlight and what do they do?

   Case: Holds all the parts together
   Spring: Pushes the batteries into electrical contact with the bulb.
   Bulb: Provides light when electric current is present.
   Switch: Closes the series circuit of the batteries and light bulb.
   Protective plastic or glass: Keeps the light bulb from breaking.
   Reflector: Focuses light from the bulb into a beam.
   Batteries: Provides electric current for the bulb.

3.  What materials are you going to use to make each part of the flashlight?

   Numerous correct answers; check individually.

4.  Draw a circuit diagram for your flashlight in the space below. Label the flashlight parts.

   Numerous correct answers; check individually.
5. What steps will you follow to make your flashlight?

Numerous correct answers; check individually.

6. Describe any design changes you need to make to your flashlight to make it work.

Possible answers:
Flashlight connections are loose.
Wires need to be contained in the paper towel tube.
Construct switch inside the paper towel tube.
Neater construction of the flashlight.
Changes to the circuit design, so it works.

7. Draw a picture of your completed flashlight in the space below. Label the flashlight parts.

Multiple answers are correct; check individually to make sure the answer includes the circuit components and parts shown below.