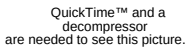
Name: _____

Answer the following questions to the best of your ability. You will not be graded on correctness, but you will be graded on effort and thoroughness.

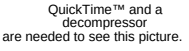
Device:_____

Capacitors are nonconductors that are used to store electrical power. They are used in circuits that are tuned to a particular frequency.



- Does your device have a capacitor?
- How are capacitors used in electrical circuits?
- List observations about capacitor location, size, number of capacitors, etc…

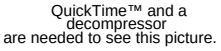
Diodes are semiconducting crystals that allow electrical current to flow only in one direction. One use for them is to convert AC (alternating current) into DC (direct current).



- Does your device have a diode?
- How are diodes used in electrical circuits?

- List observations about diode location, size, number of diodes. etc…

Integrated Circuits are electrical circuits so tiny that metallic etching on silicon wafers replaces traditional wiring. Each IC is made for a specific task and many are used in combination.



- Does your device have an integrated circuit?

- How are integrated circuits used in electrical circuits?

- List observations about capacitor location, size, etc

LED's, or light-emitting diodes, produce light from electrical current, giving the kind of electronic display found on older calculators and digital watches. Since they use so much power, they have largely been replaced with liquid crystal displays in newer equipment.

- Is there an LED in your appliance?

- If so, why do you think there is an LED in the device?

Resistors conduct poorly, so they are used to control the amount

of electrical current, thus protecting circuits from too much.

- Does your device contain resistors?
- How are resistors used in electrical circuits?
- List observations about capacitor location, size, number of resistors, etc…

Transistors are used to amplify and control electrical current. By replacing large vacuum-tube diodes, they allowed the miniaturization of electronic equipment.

QuickTime™ and a decompressor are needed to see this picture.

- Does your device have a transistor?
- How are transistors used in electrical circuits?
- List observations about capacitor location, size, etc…

Transformers are used to convert the high voltage and current from a wall outlet into the smaller voltage and current that electronic equipment uses.

QuickTime™ and a decompressor are needed to see this picture.

- Does your device have a transformer?

- How are transformers used in electrical circuits?

- List observations about capacitor location, size, etc…