Section 10-3

Using Electric Power

Electricity Transmission and Storage

SCIENCE EXPLORER

Work with your group.

A household light bulb has approximately 0.5 amps of current flowing through it. Since the standard household voltage is 120 volts, what is the power rating for this bulb?

60 watts

A flashlight bulb uses two 1.5 volt batteries in series to create a current of 0.5 amps. What is the power rating of the bulb?

1.5 watts

A hair dryer has a power rating of 1200 watts and uses a standard voltage of 120 volts. What is the current through the hair dryer?

10 amps

$$Energy = Power \times Time$$

- Power is measured in kilowatts
- Time is measured in hours
- So, energy is measured in kilowatt-hours

Electricity Transmission and Storage

SCIENCE EXPLORER

2 kinds of transformers:

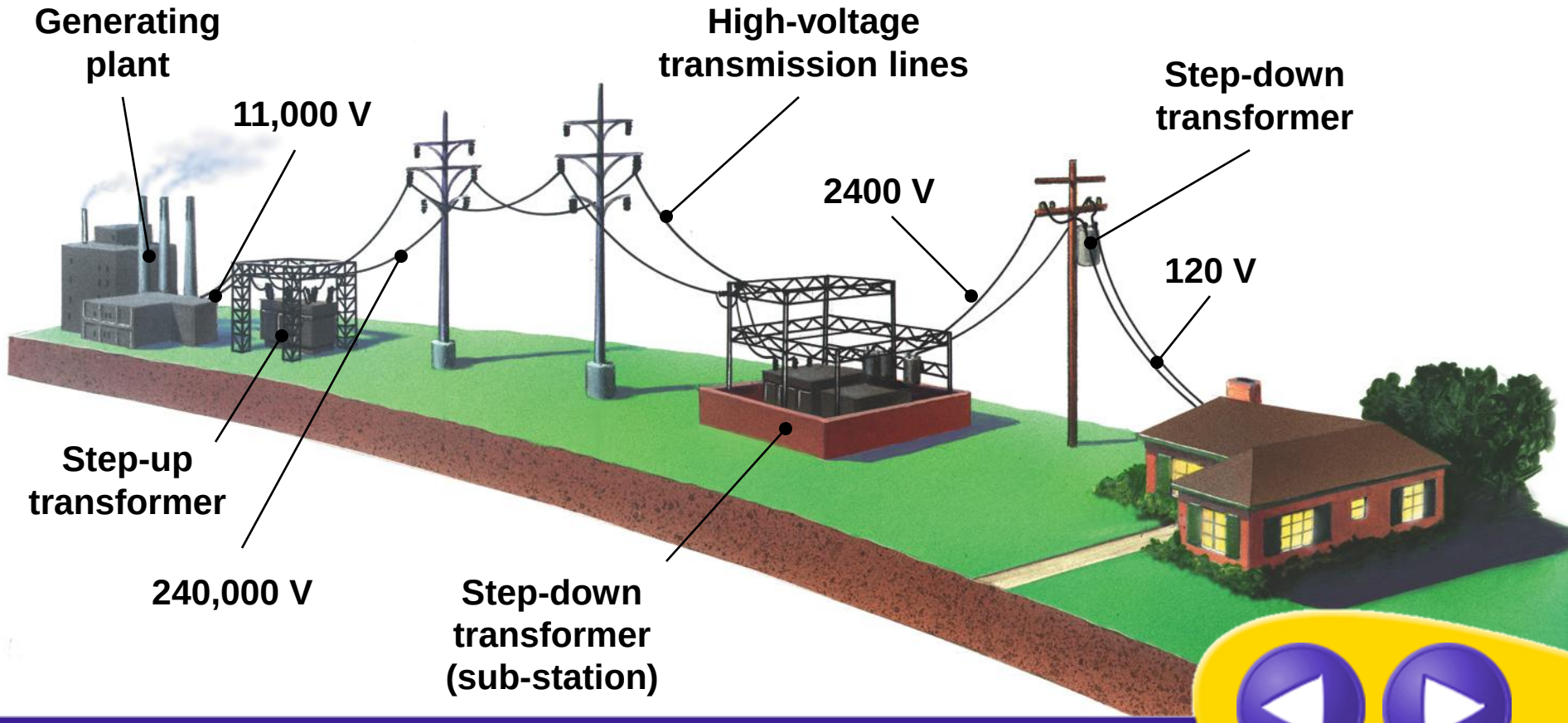
- **Step-up – increases voltage**
- **Step-down – decreases voltage**

Parts of a transformer:

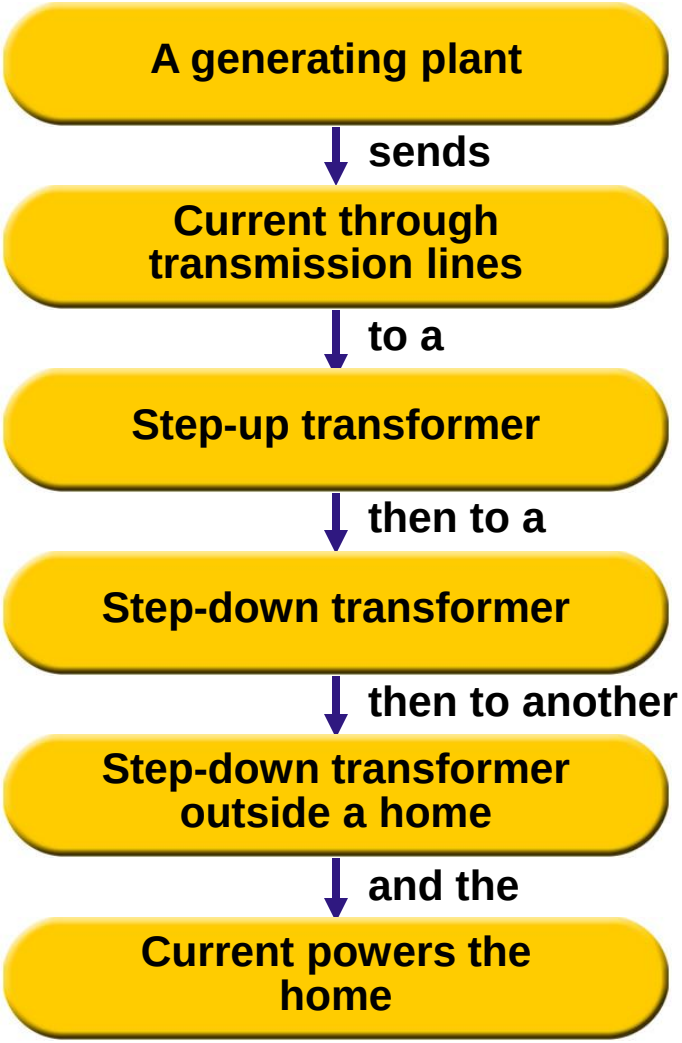
- **Primary coil**
- **Secondary coil**
- **Soft iron core**

Electricity Transmission and Storage

SCIENCE EXPLORER



Electricity Transmission and Storage



Section 10-4

Batteries

Electricity Transmission and Storage

SCIENCE EXPLORER

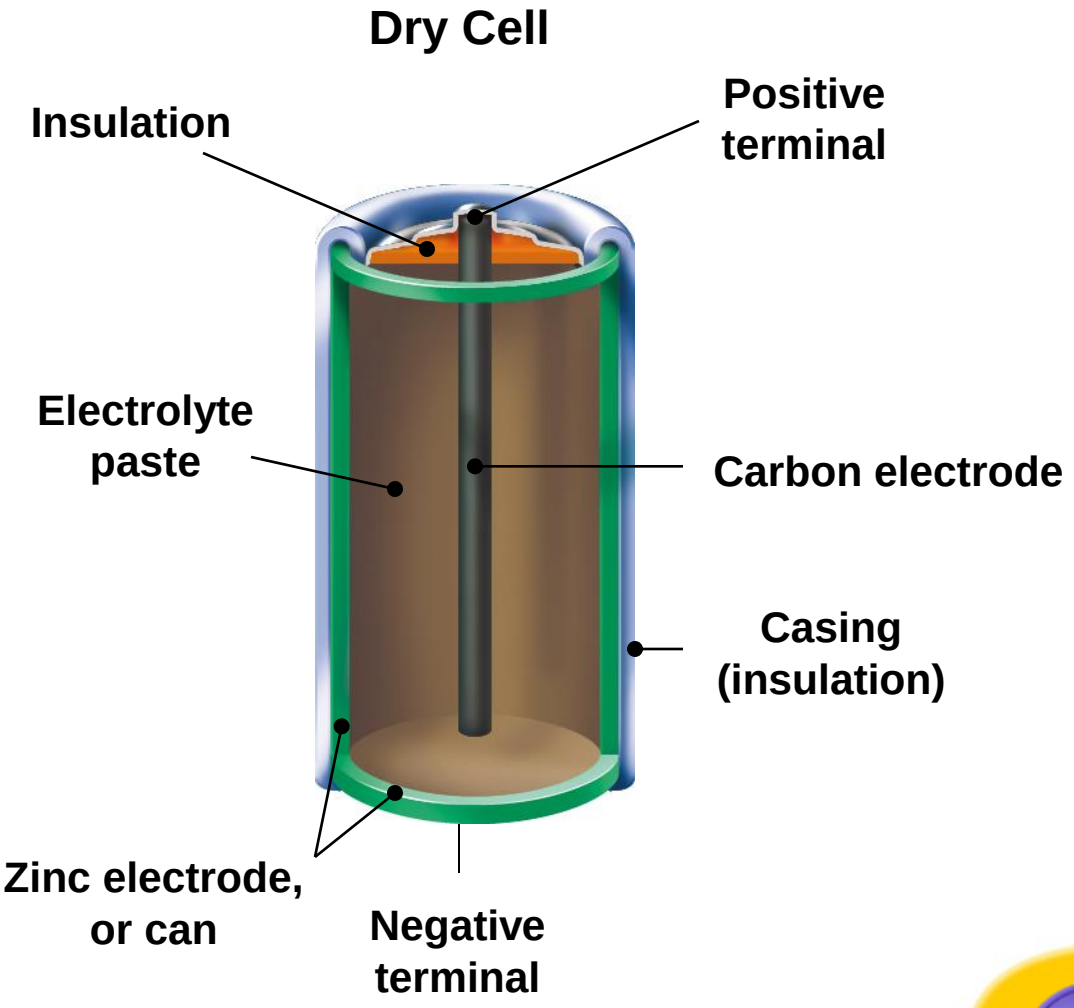
Work with your group. Make a list of items you use that require batteries.

Next to each item, write the size of battery it would require.
(Hint: A walkman uses AA batteries.)

Look at your list. What do you think the size indicates?

Electricity Transmission and Storage

SCIENCE EXPLORER



Car Battery