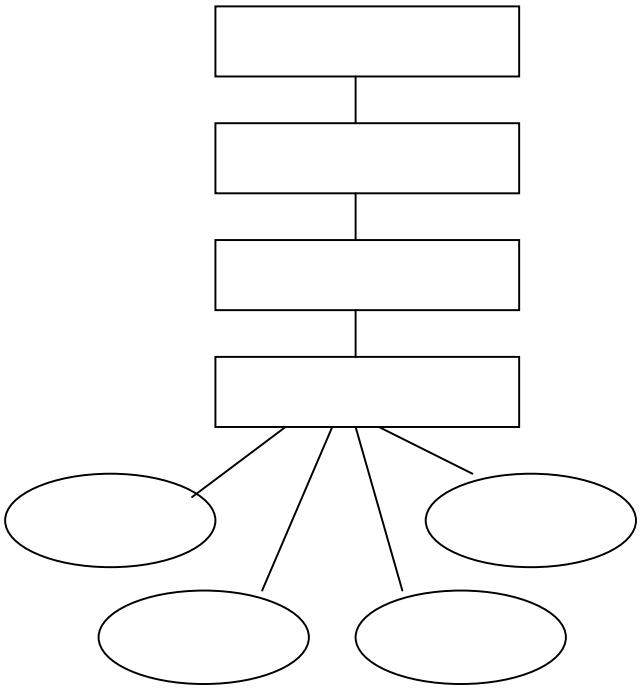
3.13 The Safe Use of Electricity

Your home is part of _____ _____ _____.

Fill in the diagram to the right to show the flow of electricity from the power lines to your home and to see some of the safety devices that are used.



Electricity flows to your neighborhood through ____ _____ _____. Transformers change this to _____ per wire. _____ live or ____ wires carry power to your house and _____ neutral wire carries power back to the pole to _____ the circuit.

The _____ _____ measure the total amount of _____ _____ used. The three wires then continue to the _____ _____ _____.

The _____ _____ _____ is the only way to shut off the electricity to all circuits in your home.

The _____ _____ is the place where all circuit _____ or _____ connect to each circuit. The _____ _____ helps protect against shock from a _____ circuit. This wire is connected to the panel and a _____ _____ _____ or a _____ _____ that goes deep into the ground.

A circuit breaker or fuse is used to _____ the flow of electricity. These shut off automatically if there is a _____ _____. As long as the current is _____ than the maximum the circuit breaker will not _____ and _____ the current flow. Fuses _____ to open the circuit if the current is too _____. If you replace a fuse with one with a higher rating it could start a _____ because the wires in the circuit might _____.

_____ _____ deliver electricity safely to all rooms in a building. Summarize the three safety features of wall outlets below.

1. _____
_____
_____

2. _____
_____
_____

3. _____
_____
_____
_____

Many fatal accidents with electricity occur near _____. A _____ _____ _____ _____ (_____) responds to very small changes in _____ and will _____ the flow of electricity. If the GFCI detects a _____ in the current of the two wires its built-in _____ _____ opens the circuit. GFCI outlets should be in _____, _____, _____, _____, _____ or any other area where _____ is found.

Homework: Complete a GFCI survey of your home. Indicate where GFCIs are installed and record where GFCIs should be installed if they are not already there.

Why would having too many outlets on one circuit cause problems?