

FAMILY GUIDE

Brought to you by

Efficiency Works™

Estes Park | Fort Collins | Longmont | Loveland

Dear Family,

Energy is a big part of our everyday lives. Have you ever thought about where it comes from or how it gets to where you need it? You are about to find out!

You will receive a *Take Action Kit* containing energy-efficient products for your home. As you install these items, share with your family what you have learned about energy at school. Then use this guide to discover other ways to conserve energy and water together.

Thank you for making a difference!



Earn a student prize by completing the *Home Energy Worksheet* (HEW) in one of two ways:

- Visit **thinkenergy.org/EfficiencyWorks** to fill out an online worksheet. You will need to enter the teacher ID which can be found using the teacher lookup tool on the website.

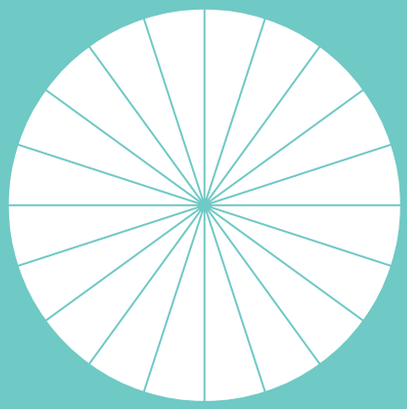
- Fill out the paper worksheet and return it to your teacher.

Activity
1

Your home's electricity use

Most families in the U.S. use about 38% of their electricity for lighting and to power appliances and electronics, 50% to heat and cool their homes and 12% of their energy to heat water.

Choose three colors and color in a pie chart with the percentages above. You may need to round each number. Each segment on the chart shows 5%.



Lighting, Appliances and Electronics

Heating and Cooling

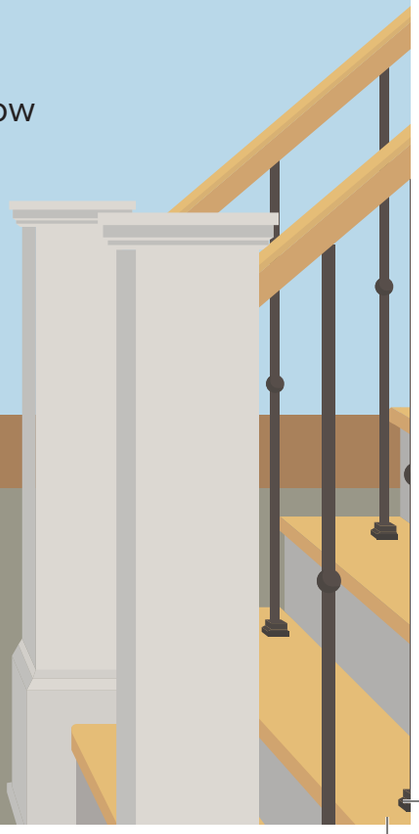
Heating Water

(Source: **eia.gov/energyexplained/use-of-energy/homes.php**, accessed February 2025)

Energy is the ability to do work. Your body uses energy to walk, talk and run. We also use energy in our homes to heat and cool the air, heat water and power refrigerators and video games. The two main types of energy are kinetic energy and potential energy. Kinetic energy is energy of motion, like the motion of riding a bike. Potential energy is energy waiting to be released, like the energy in natural gas.

Did you know your energy comes from both renewable (sun, wind, water) and nonrenewable (coal, natural gas) sources? As a public power provider for Estes Park, Fort Collins, Longmont and Loveland. Platte River Power Authority is working toward a 100% noncarbon energy mix by 2030 while continuing to provide the reliable, environmentally responsible, and financially sustainable energy and services that its owner communities rely on.

When we are efficient with energy, we use less energy to accomplish the same amount of work. To be more energy efficient, Think! about how energy is used, Talk! to your family about ways to use energy wisely and Take Action! by installing the items in your *Take Action Kit*.* The *Installation Activity* in your kit or installation videos at **thinkenergy.org/EfficiencyWorks** can help!



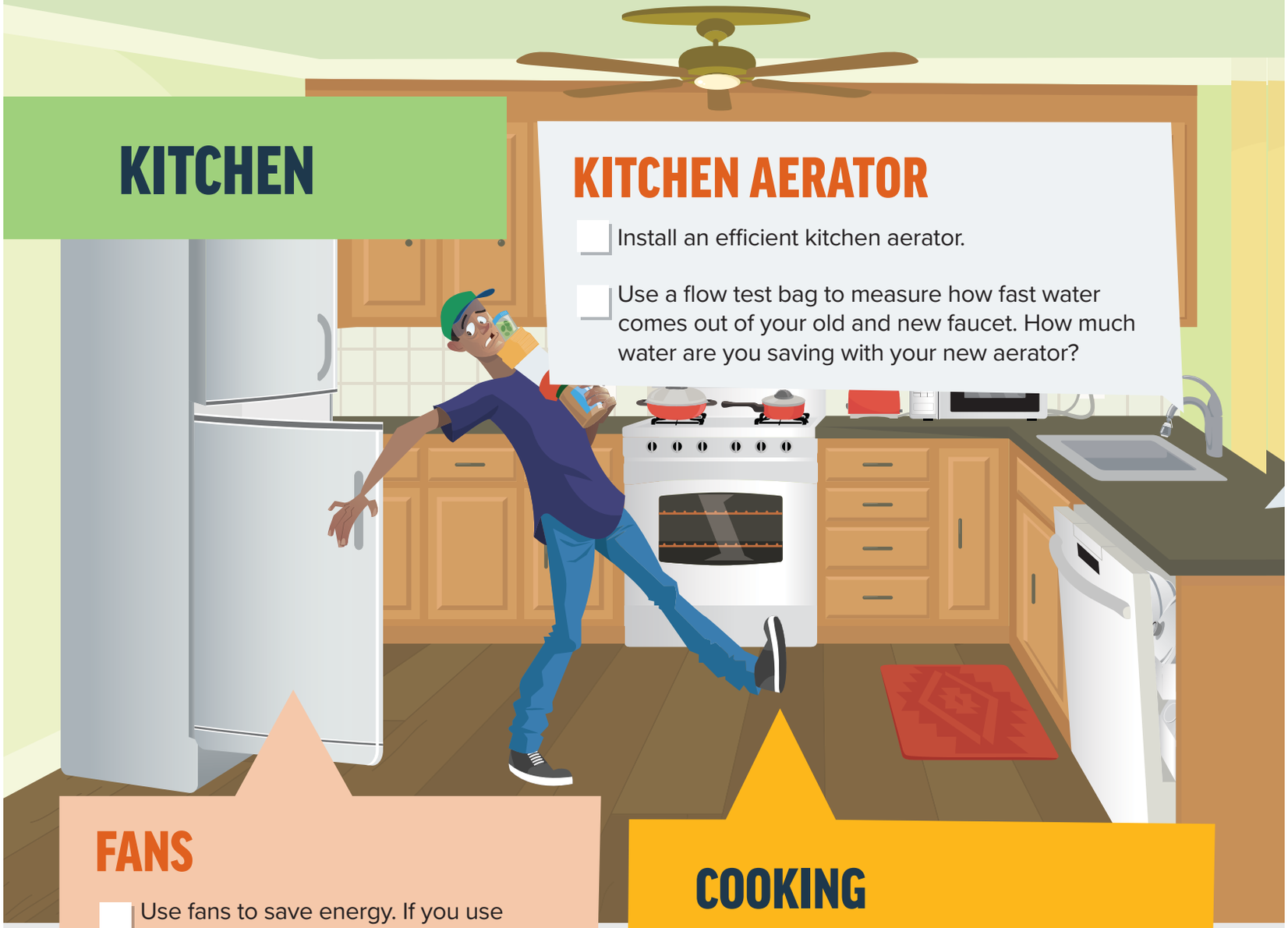
Let's get started. Take a tour of this energy-efficient house. Check the boxes next to the tips you have used to see how efficiently you are living. Enjoy the journey!

*Not every energy-efficient item in this booklet will be in your *Take Action Kit*.

KITCHEN

KITCHEN AERATOR

- [ ] Install an efficient kitchen aerator.
- [ ] Use a flow test bag to measure how fast water comes out of your old and new faucet. How much water are you saving with your new aerator?

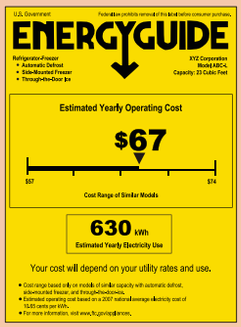


FANS

- [ ] Use fans to save energy. If you use air-conditioning, a ceiling fan will allow you to raise the thermostat and still feel cool.

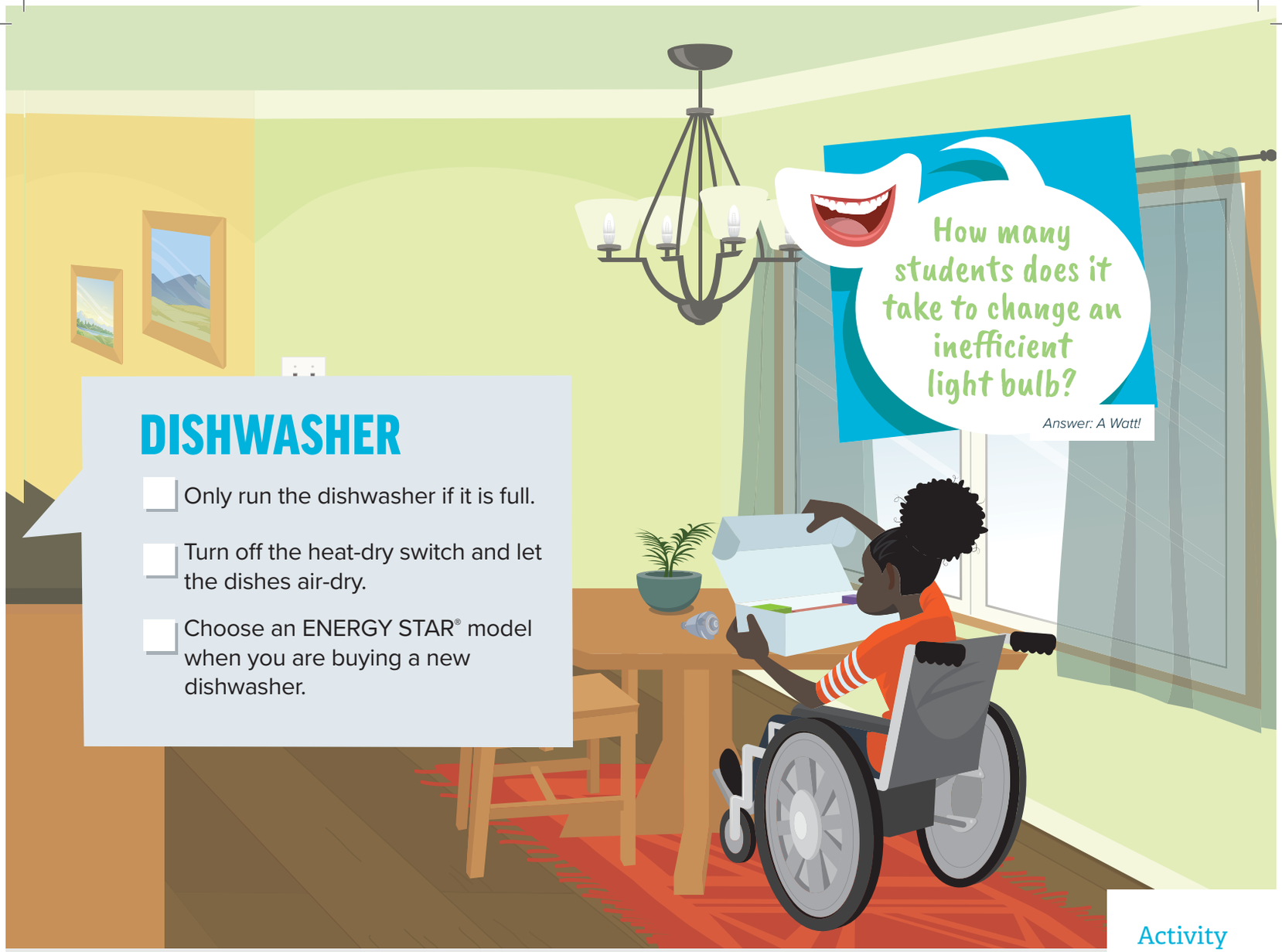
REFRIGERATOR

- [ ] Recycle old, working, inefficient models for free. Learn more at ewrecycle.com.
- [ ] Decide what you want before you open the door.
- [ ] Watch for Yellow EnergyGuide labels. They show the efficiency of an appliance and the cost to run it.



COOKING

- [ ] For cooking or reheating small portions, use the microwave or toaster oven.
- [ ] Always match the pot to the size of the burner and use lids to shorten the cooking time.
- [ ] Keep the oven door closed as much as possible when baking.

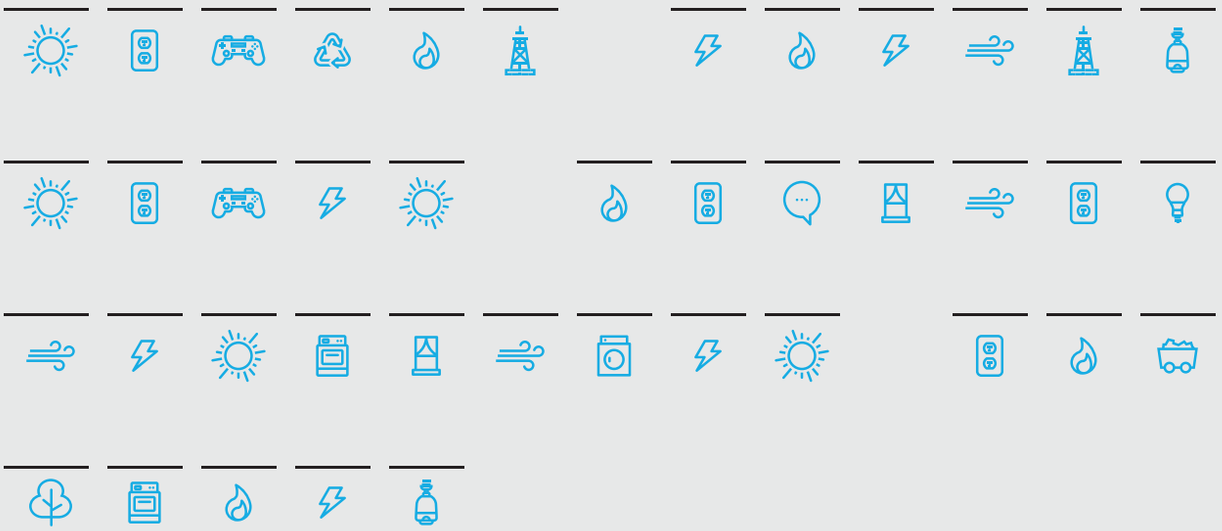


DISHWASHER

- [ ] Only run the dishwasher if it is full.
- [ ] Turn off the heat-dry switch and let the dishes air-dry.
- [ ] Choose an ENERGY STAR® model when you are buying a new dishwasher.

Activity
2

Break the energy efficiency code!



KEY



FAMILY ROOM

- [ ] Install LEDs. They use up to 90% less energy and last up to 25 times longer than incandescent lighting.

What do turning off the lights and a baseball team have in common?

Answer: They both need a "switch hitter."

FIREPLACE

- [ ] Always keep the fireplace flue closed when not in use. Glass fireplace doors also keep the cold air out.

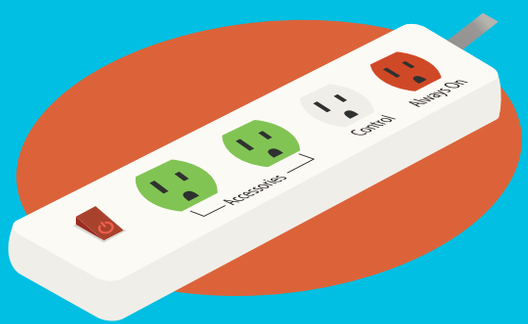
THERMOSTAT

- [ ] Install a programmable or smart thermostat to regulate the temperature of your home according to your schedule. This item is easy to install and will save both energy and money.
- [ ] Set your thermostat around 68 F in the winter and as high as you are comfortable in the summer.



ADVANCED POWER STRIPS

- [ ] Use advanced power strips. There are several types that you can use to save electricity. They all have the same job of shutting off power to items that are not in use. When the television is plugged into the control outlet of this power strip, television accessories turn off when the television is off.

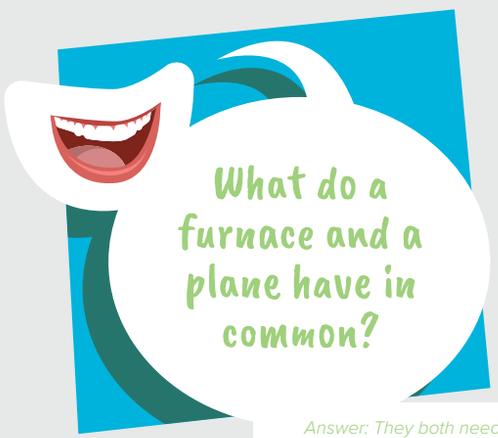


- [ ] Seal small holes around windows and doors with caulk, foam spray or weather-stripping.

WINDOWS

- [ ] Keep windows closed when the furnace or air conditioner is on.
- [ ] Close drapes and blinds when you want to keep out sunlight and heat.

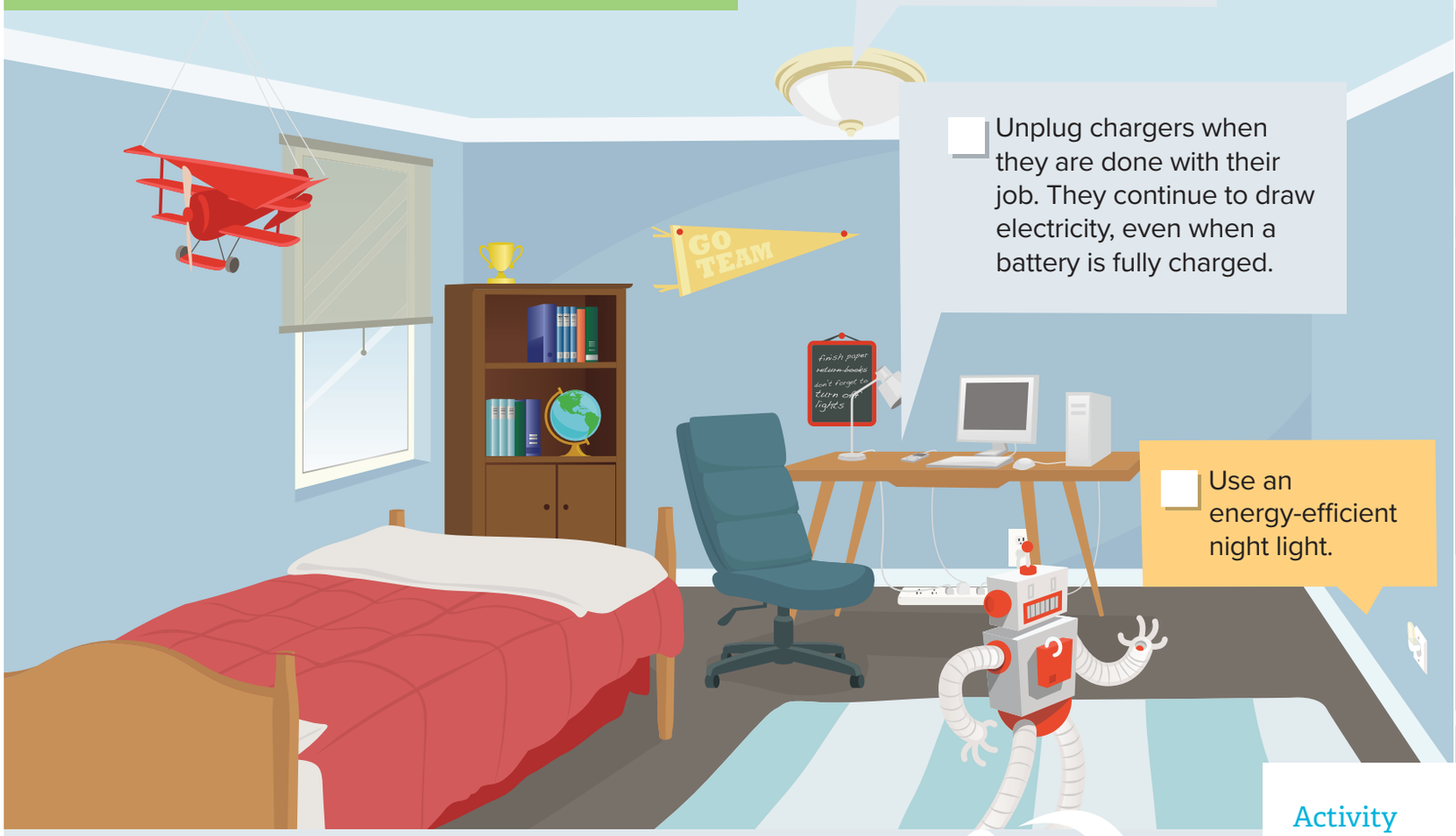




Answer: They both need a pilot.

BEDROOM

- [ ] Turn off the lights when you leave the room.
- [ ] Unplug chargers when they are done with their job. They continue to draw electricity, even when a battery is fully charged.
- [ ] Use an energy-efficient night light.



Activity 3

Let's go on an energy scavenger hunt!
Search for each item in your home.

	I FOUND IT HERE.
LED	
Ceiling Fan	
Caulk, Foam Spray, or Weather-stripping	
Advanced Power Strip	
Dishes or Clothes Air-drying	

Why did the silly gardener plant a light bulb?

Answer: He wanted to grow a power plant.

BATHROOM



- [ ] Turn off the water when brushing your teeth.
- [ ] Always repair leaky faucets.
- [ ] Save water by installing WaterSense® toilets.

  For more information visit **epa.gov/watersense**.

SHOWERHEAD

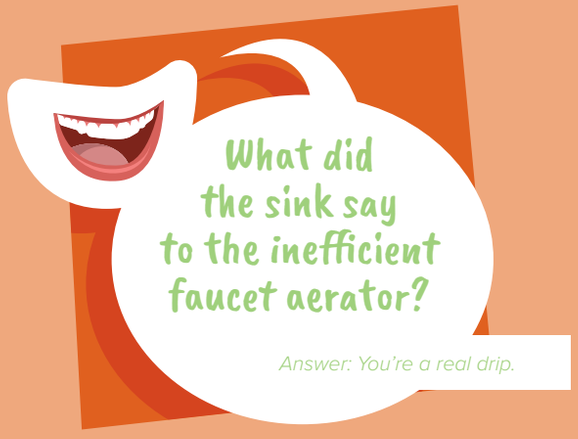
- [ ] Use a flow test bag to measure how fast water comes out of your existing showerhead.
- [ ] Install an efficient showerhead.
- [ ] Use a flow test bag again to see how much water you can save every minute the shower is on.

SHOWER TIMER

- [ ] Use a shower timer to remind your family to take the 5 minute shower challenge.

BATHROOM AERATOR

- [ ] Install efficient aerator(s) designed for bathroom faucets to cut your water use by 30% or more.



LAUNDRY ROOM

WASHER AND DRYER

- [ ] Wash with cold water.
- [ ] Always wash a full load.
- [ ] Air-dry laundry when possible.

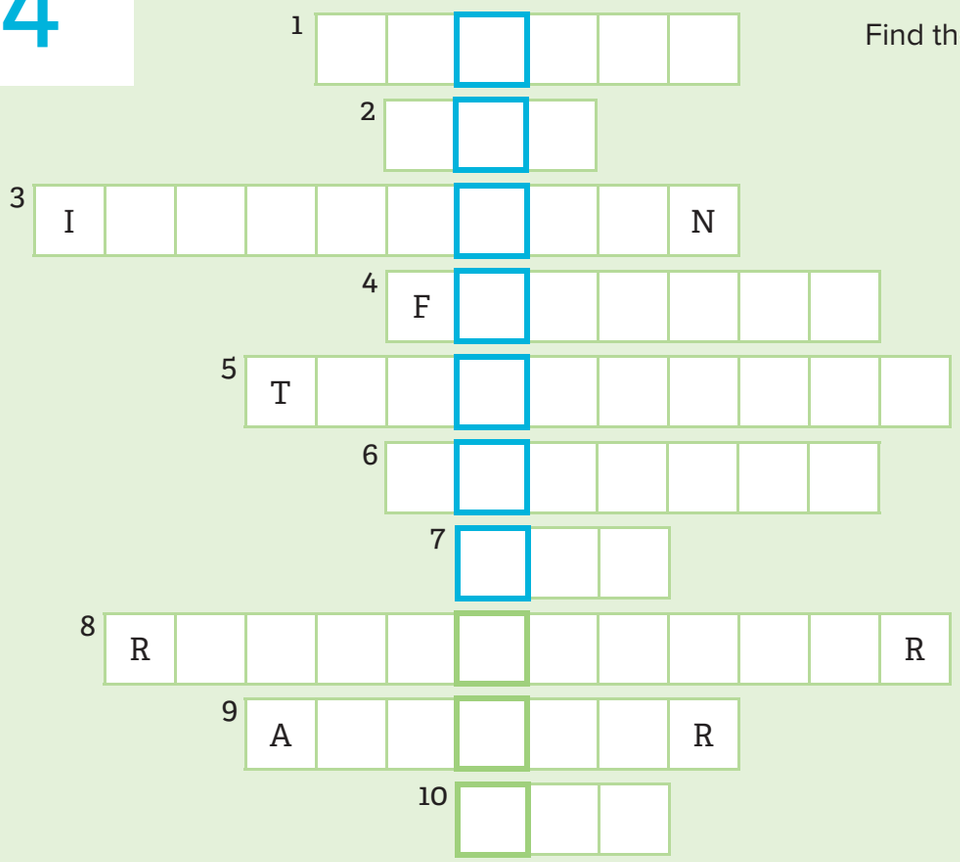
What renewable energy source do students use?

Answer: Brain power

Activity **4**

Find the mystery words by filling in the puzzle.





UTILITY ROOM

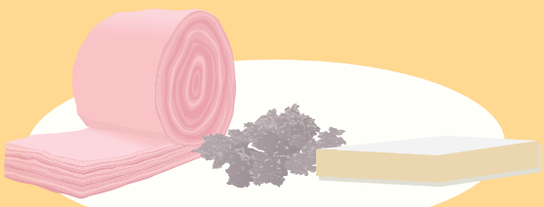
Since natural gas is odorless, a rotten egg smell called mercaptan is added as a safety measure. Be aware of its smell if you have a gas stove, water heater or furnace.

WATER HEATER

- [ ] Typically the water heater should be set to 120 F. Try another fun science experiment. Use a thermometer to measure the temperature of hot water coming out of a faucet. Is the water heater set correctly? If not, have an adult adjust it.
- [ ] Add pipe wrap to your conventional water heater.

INSULATION

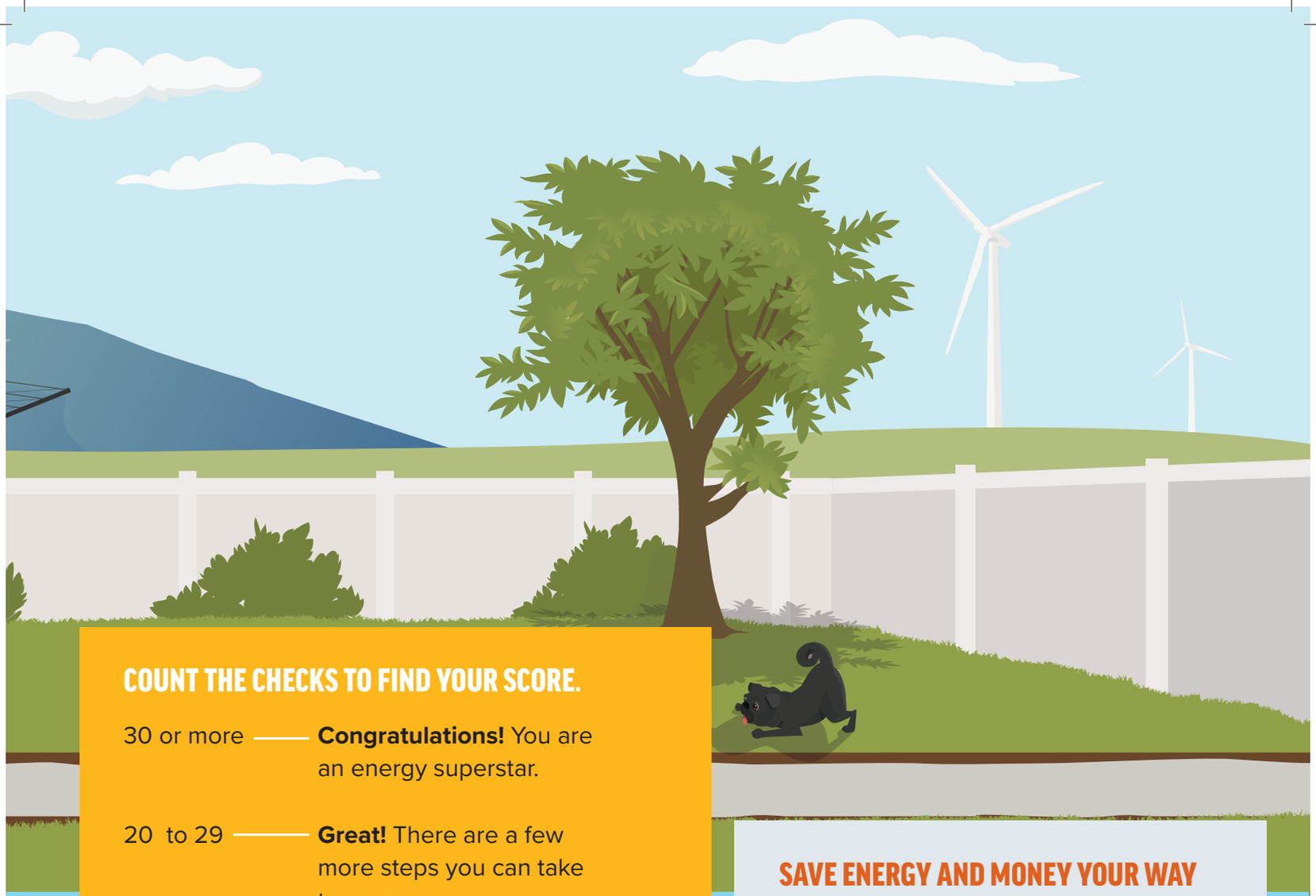
- [ ] Add insulation. Your house will be more comfortable year-round when you use insulation in its attic, exterior walls, and basement to stop the transfer of heat.



Fiberglass Roll Loose Fill Rigid Foam

HEATING AND COOLING

- [ ] Install a furnace filter alarm. It will remind you when the filter needs to be changed. A clean furnace filter saves energy by helping your furnace to operate more efficiently.
- [ ] Clean and service your heating and air-conditioning units once a year.
- [ ] If your equipment is older than 10 years, consider replacing it with an ENERGY STAR® qualified model.
- [ ] Living in an apartment? Ask your landlord if the furnace or boiler is regularly serviced.



COUNT THE CHECKS TO FIND YOUR SCORE.

30 or more —— **Congratulations!** You are an energy superstar.

20 to 29 —— **Great!** There are a few more steps you can take to save energy.

Less than 20 —— **Keep trying!**

Earn your reward by completing the HEW in one of two ways:

- Visit **thinkenergy.org/EfficiencyWorks** to fill out an online worksheet. Use the teacher lookup tool to find the teacher ID.
- Fill out the paper worksheet and return it to your teacher.

It's easy! Scan this QR code.

*If you cannot use an item from the kit, please give the device to a neighbor, friend or relative who lives nearby. The HEW should reflect use of all items in the kit, even if used in someone else's home.

SAVE ENERGY AND MONEY YOUR WAY

If you are making home improvements, shopping for new appliances or looking for ways to be kind to the planet, you probably know that energy-efficient products and improvements can help lower your energy costs and carbon emissions. Efficiency Works offers a number of energy efficiency programs and rebates to give you more choices, flexibility and control over your energy.

Visit **EfficiencyWorks.org** to learn more.

National Energy Foundation

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