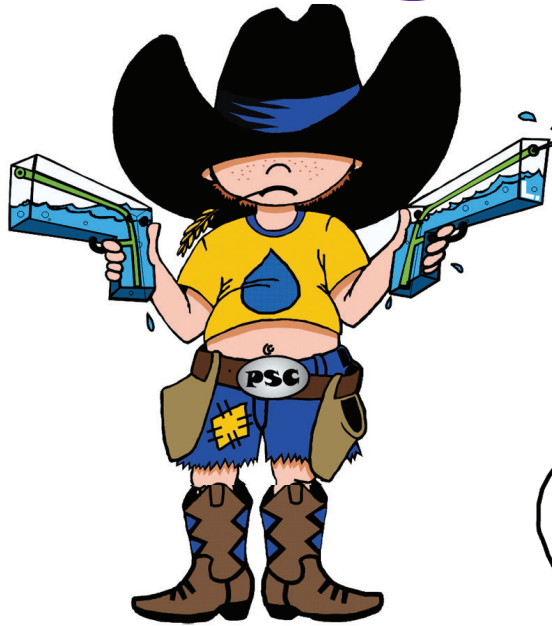




# Get Wise and Conserve Florida



# Get Wise and Conserve Florida!

## A Student Resource Book

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# Electric & Natural Gas

## Electra

Hi, I'm Electra! I am an expert on electric and natural gas. My friends, Deputy Drip and Tammy Talkalot, and I are here to help you understand the importance of conservation. Tammy Talkalot is the telecommunications expert, and Deputy Drip is the expert in water. We help the Florida Public Service Commission (PSC) by reaching out to you, our leaders or "movers and shakers" for the future.

My friends and I have developed this student resource book specifically for you.

**We hope that  
you will enjoy it!**

The information, activities, and conservation tips and ideas included in this publication can help you and your family save money on energy bills and at the same time help protect the environment. We also have information on area codes and the history of telephone service.

# It's A Family Affair

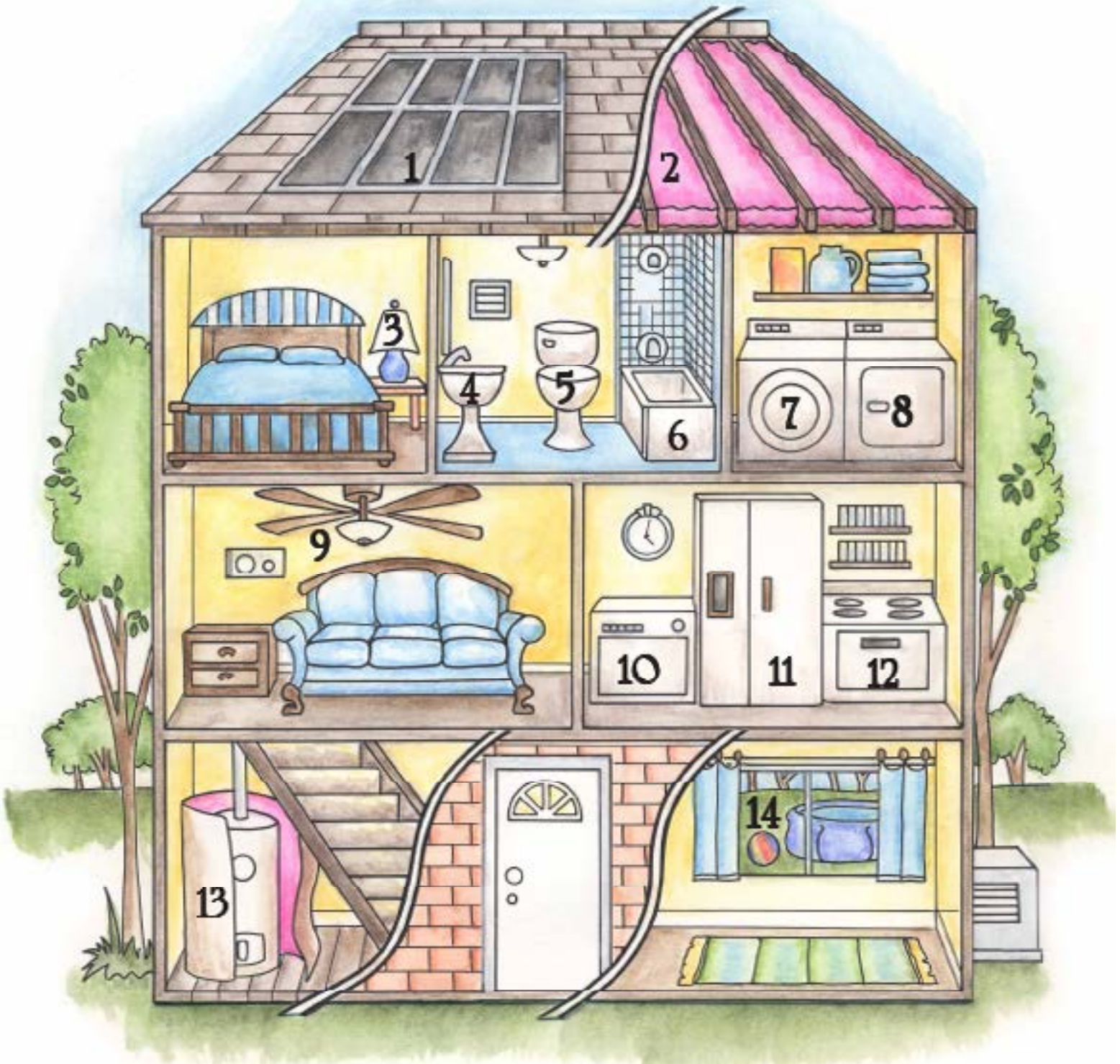


*Cultivating habits that lower utility bills is a family affair. From the youngest to the eldest member of the home, everyone can learn to be energy efficient.*

Lowering the utility bill can be fun! Make a game of it. Post an Energy Efficiency Chart on the refrigerator and keep track of the families' energy savings activities. The family member who accomplishes the most to conserve each week receives a treat. Use the money saved from lowering a utility bill each month to sponsor "Family Night" and rent a movie, buy a special dessert, or any other activity the family might enjoy doing together. You can also foster a closer relationship with loved ones when you make energy conservation a family affair. Look on the next page for energy conservation tips.

# Conservation House





FLORIDA PUBLIC SERVICE COMMISSION




1. Solar Panel - Use solar energy.
2. Attic/Insulation - Make sure you have sufficient insulation.
3. Lamp - Use fluorescent light bulbs.
4. Faucet - Don't leave water running.
5. Toilet - Replace older toilets with low-flow toilets.
6. Shower - Showers use less water than baths.
7. Washer - Wash full loads
8. Dryer - Clean the lint from the filter after every load.
9. Ceiling Fan - Fans improve airflow.
10. Dishwasher - Be sure the dishwasher is full.
11. Refrigerator - Don't keep your refrigerator too cold.
12. Stove - Use tight-fitting covers on pots and pans.
13. Water Heater - Insulate your water heater.
14. Window - Weatherstrip your windows.



# Can you guess the answers to these Energy Riddles?

- 
- 
- 
- 
1. Why did the foolish gardener plant a light bulb?
  2. How do energy conscious people feel about wind power?
  3. How do we know that wind power is so popular?
  4. How did Benjamin Franklin feel when he discovered electricity?
  5. What does the nuclear scientist do in his spare time?
  6. How is energy conservation like a baseball team?
  7. What is burned by cars driven late at night?
  8. How are renewable power plants like people who enjoy going to the beach?
  9. In which part of the jail are energy criminals kept?
  10. What is a renewable energy source that is used every day, especially when you're at school?
  11. What did the solar cells say to their cloudy boss?
  12. How many energy students does it take to change a light bulb?



1. He wanted to grow a power plant. 2. They're blown away. 3. Because it has so many fans.  
4. He was shocked. 5. Goes fission. 6. They can both use a switch hitter. 7. Midnight oil.  
8. They all like sun, wind, and water. 9. The fuel cells. 10. Brain power. 11. We need rays.  
12. None! They're smart enough to use energy-efficient compact fluorescent bulbs which rarely need to be replaced.

Answers

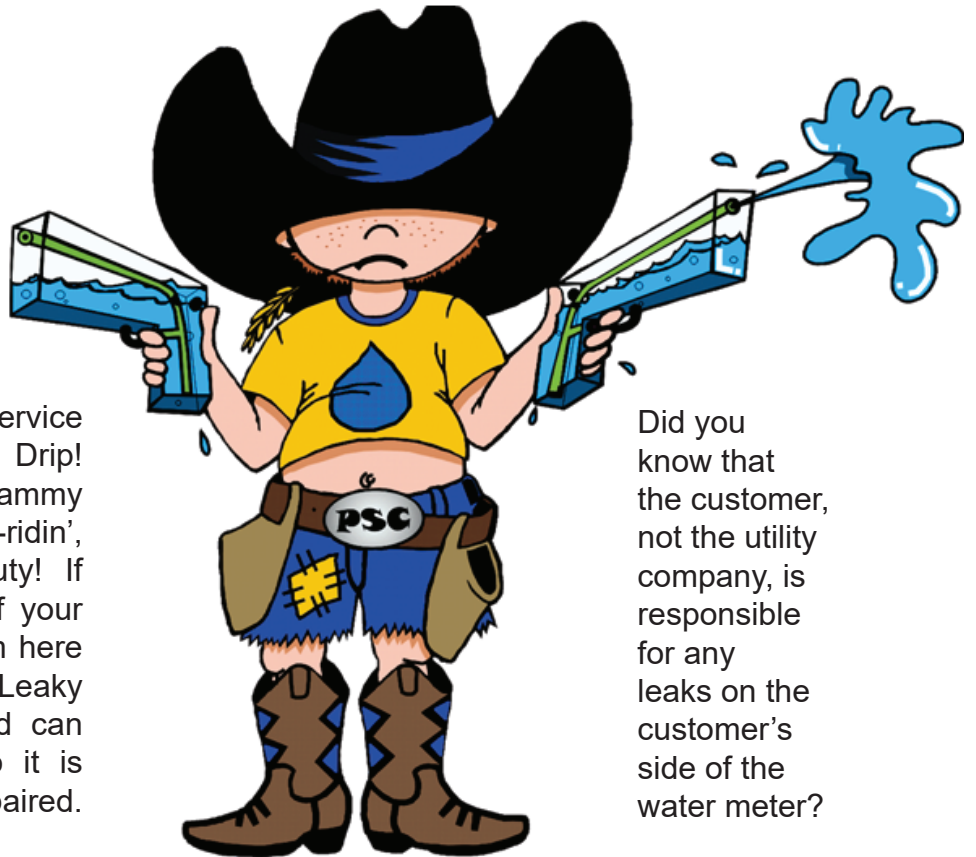
Source: Energy Information Administration

# Water

## Deputy Drip

Let's fix those leaks.

Howdy, I am the Public Service Commission's Deputy Drip! My friends Electra and Tammy Talkalot call me the rough-ridin', no-nonsense water deputy! If water drips are a part of your household problems, I am here to help you solve them. Leaky faucets are common and can increase a utility bill, so it is important to have leaks repaired.



Did you know that the customer, not the utility company, is responsible for any leaks on the customer's side of the water meter?

## You can help conserve water by:

- ◆ Not letting the water run unnecessarily while you brush your teeth.
- ◆ Installing low-flow aerators on all water faucets.
- ◆ Taking shorter showers and shallow baths.
- ◆ Repairing dripping faucets by replacing washers.
- ◆ Cleaning driveways and sidewalks with a broom; using a hose can waste hundreds of gallons of water!
- ◆ Washing only full loads in your automatic dishwashers and washing machines.
- ◆ Rinsing your dishes in a sink full of water or by pouring water over them all at once rather than leaving the faucet running.
- ◆ Watering your landscape only when needed.
- ◆ Installing a toilet dam or displacement device such as a bag, bottle, or brick to cut down on the amount of water needed for each flush.
- ◆ Using mulch in plant beds to control weeds and retain moisture.



## Save Money by Conserving Water

Only 2.5 percent of the world's water is fresh water, and less than 1 percent of the fresh water is usable. Florida's growing population is putting greater stress on this essential and limited resource.

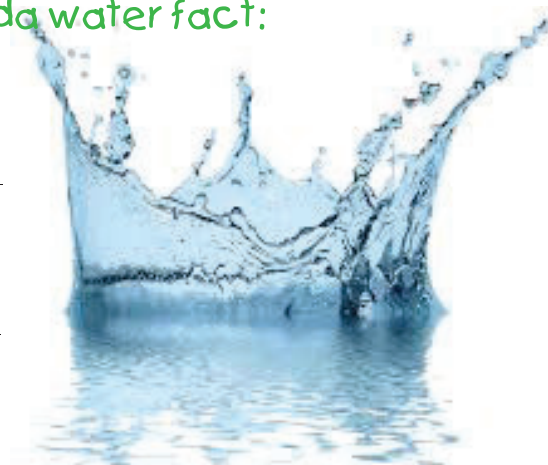
Using water wisely means saving money on water bills and protecting the water supply for future generations.

*Here are some Florida water facts –  
share them with your family and friends!*

- 💧 The average Floridian uses about 175 gallons of water per day (compared to the national average of 110 gallons per day).
- 💧 About 90 percent of Florida's 21.5 million residents get their drinking water from public supplies.
- 💧 About 62 percent of the water used comes from the Florida aquifer system; 17 percent comes from the Biscayne aquifer.
- 💧 Surface water sources include lakes, rivers, and the managed canal systems, with a total water area of 4,424 square miles.

*Research and write about your own Florida water fact:*

💧 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



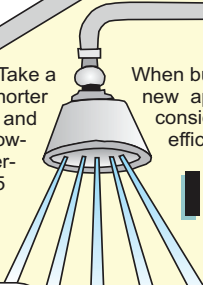


How many water-saving tips do you use?

Draw your own conservation house.

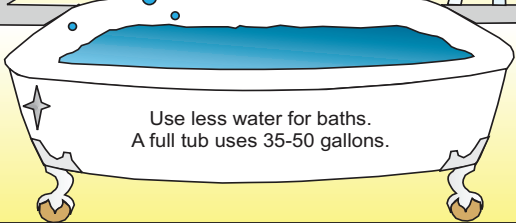
## INDOOR TIPS

Take a shorter shower and install a low-flow shower-head with a 2.5 gpm (gallons per minute) rating.




When buying new appliances, consider energy efficient models.

Use less water for baths. A full tub uses 35-50 gallons.



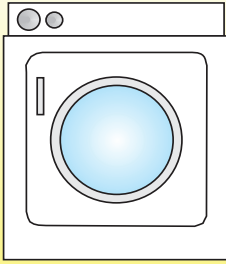
If the handle sticks in the flush position, water runs constantly. Replace or adjust the handle.



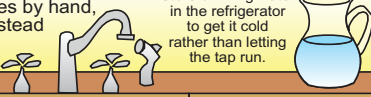
Dispose of tissue, insects, and other waste in the trash.

Check tank for leaks.

Wash clothes with full loads and cold water to save water and energy.



When washing dishes by hand, use tubs of water instead of running water.



Store drinking water in the refrigerator to get it cold rather than letting the tap run.

Use the garbage disposal sparingly. Compost vegetable scraps.

Install an instant water heater on the sink so the water doesn't need to run while heating up.

Use the dishwasher with full loads.

Running the tap water for 2 minutes wastes 3-5 gallons of water.

Top loading washers use about three times as much water as front-loading washing machines.

Each toilet flush uses 5-7 gallons of water. Replace older models with high efficiency toilets that use less than 2 gallons per flush.

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## OUTDOOR TIPS


### LAWN

- Lawns only need about a half inch of water at a time.
- In spring, water once every 3-5 days.
- In summer, water once every 6-7 days.
- In winter, water once every 10-14 days.
- Watering in the morning minimizes evaporation and waste. Watering in the evening is the next best alternative.
- Avoid watering on windy days.
- Reduce fertilizer use because fertilizers increase the need for water.
- Higher grass is more drought resistant.
- Raise the lawn mower blades to at least three inches.

Check sprinkler systems regularly to make sure they are operating correctly.

Know your local area weather patterns. A strong rain can eliminate watering needs up to two weeks.

Use rainwater for watering landscape plants.

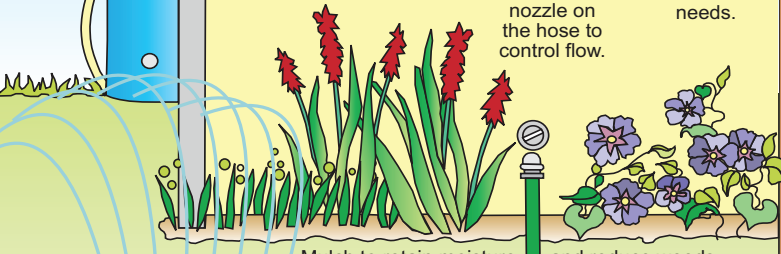


Collect water from the roof into a rain barrel.

Landscape with Florida-friendly, drought tolerant plants, trees, and grasses.

Turn water off at the spigot to reduce leaks. Place a shut-off nozzle on the hose to control flow.

Group plants together based on similar water needs.



Mulch to retain moisture and reduce weeds.

Use a sprinkler timer.

Buy a rain gauge.

Install soaker hoses or drip irrigation for flower beds and shrubs.

Watering with a hose uses 10 gallons per minute.

Make sure water from the sprinkler falls on grass and shrubs, not on paved areas.

A pinhole-sized leak wastes 170 gallons a day.

# Telecommunications

## Tammy Talkalot



Hi, I'm Tammy Talkalot, and this is my dog, Bo. As Electra mentioned, I am the expert on telecommunications. My friends at the PSC wanted me to share a few ideas on telephone service. Some of you may already know that on March 10, 1876, Alexander Graham Bell invented the telephone. And, in 1877, Florida's first telephones became available in Pensacola and Jacksonville.

### Did you know that Florida has 23 area codes?

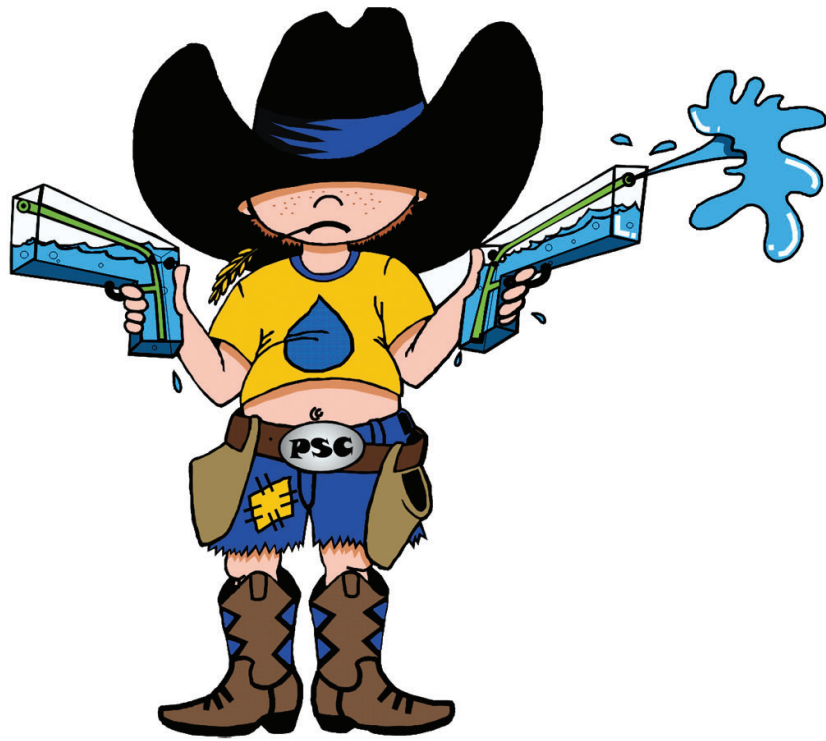
So, if you live in Tallahassee and your grandparents live in Tampa, you have to call a different area code to talk to them. Area codes serve a specific geographic area. Why do we add new area codes?

Because area codes are made of 10,000 unique telephone numbers, adding an area code provides more telephone numbers for people to use. As Florida's population continues to grow, there is an increase demand for phone numbers being assigned to accommodate this growth. Prior to 1995, our state had only four area codes: 305, 407, 813, and 904. Since then, another 19 area codes have been added.

Can you list all of Florida's area codes?  
Try it out!

- 954
- 941
- 904
- 863
- 850
- 813
- 786
- 772
- 754
- 728
- 727
- 689
- 656
- 645
- 561
- 448
- 407
- 386
- 352
- 324
- 321
- 305
- 239

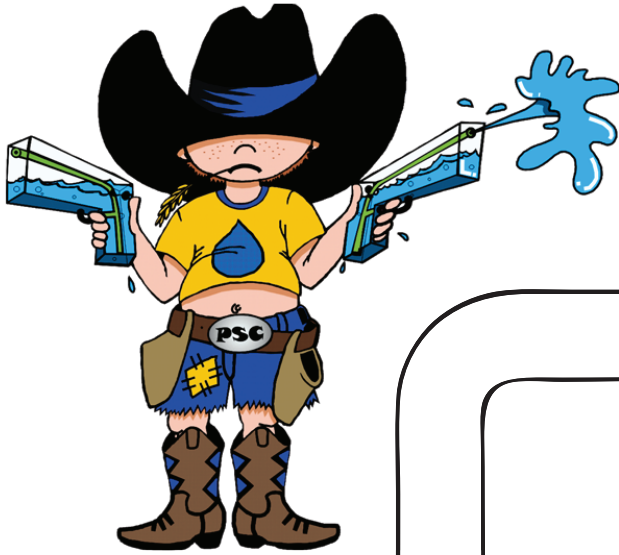
ANSWERS:



THE

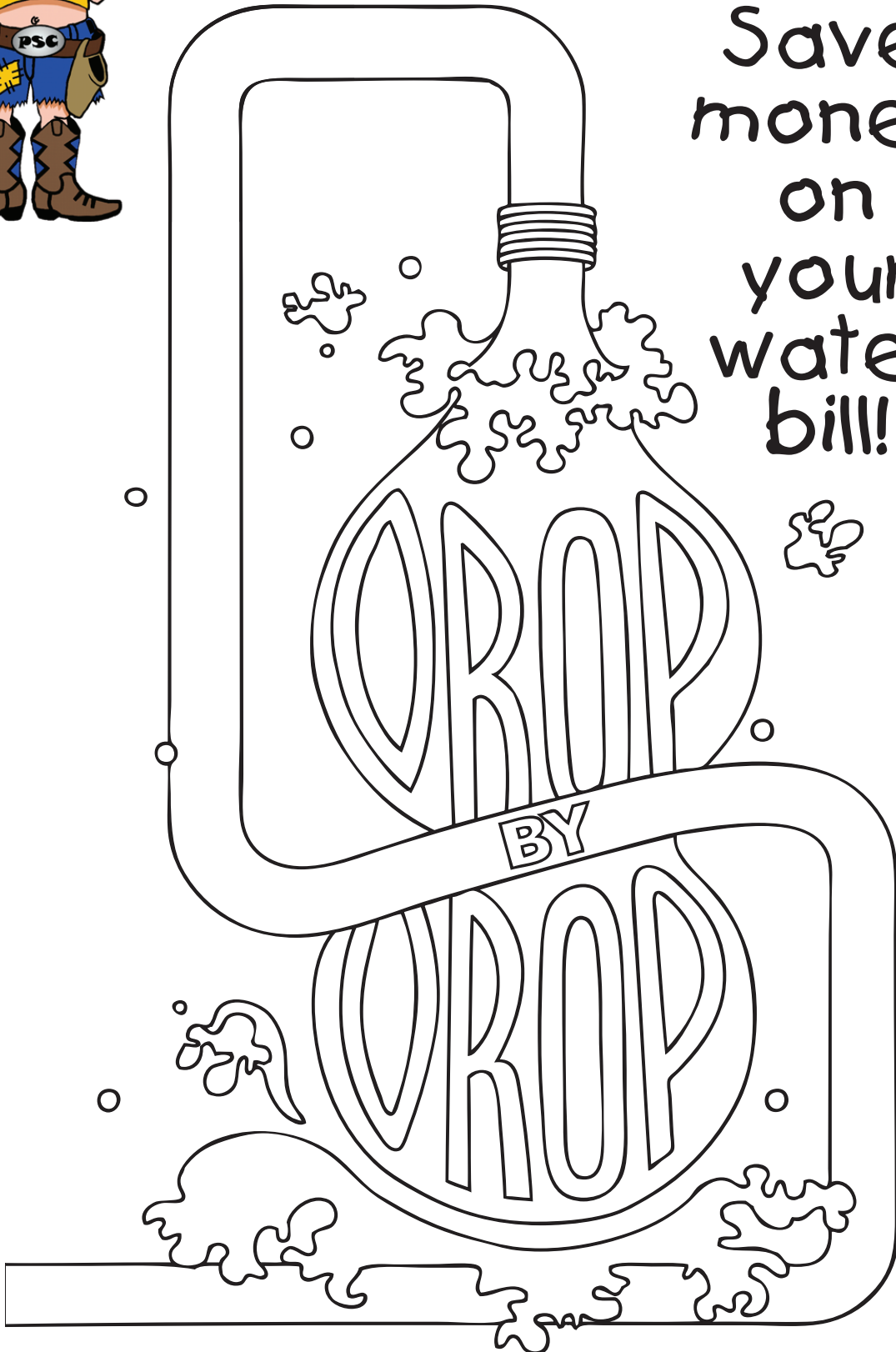
# CONSERVATION GAMES SECTION





**Deputy Drip would like you to help him color this picture.**

Save  
money  
on  
your  
water  
bill!



# Conservation

Directions: Fill in the correct letters to spell each word.

C\_NS\_\_VAT\_\_N

COM\_I\_SION

W\_T\_R

EN\_\_GY

INVES\_OR-\_WNED

E\_E\_TRIC

MET\_\_

\_OL\_R

P\_WER

OUTA\_ES

REGU\_ATI\_N

N\_TUR\_L GAS

U\_\_LI\_Y

R\_USE

WA\_ER DRO\_

RAT\_\_AKING

INTE\_RUPT\_ONS

POW\_R SURG\_

G\_L\_ON

W\_SH\_R

TEM\_ER\_\_URE

HO\_\_EH\_LD

LEAK\_ FAU\_ET

CONS\_MP\_ION

VEN\_ILA\_ION

INS\_LA\_E

FIL\_ER

W\_A\_HER-\_TRI\_PING

*Answers from left to right: conservation, commission, water, energy, investor-household, leaky faucet, consumption, ventilation, insulate, filter, weather-stripping, water drop, ratemaking, interruptions, power surge, gallon, washer, temperature, owned, electric, meter, solar, power, outages, regulation, natural gas, utility, reuse, W\_A\_HER-\_TRI\_PING*



# GREEN THINKING

W P L P A L R J W S S S K N I  
B C C C O E U H Y T H L P O O  
T U V G D L R D M L E Y C I M  
L N C U E R L Z L S P S A T U  
E L C R E S O U R C E S R A N  
N E I P M C U E T C N A D V I  
E Q A F K F P E M I E L B R M  
R P P P D A T A R L O G O E U  
G W A J P N G B C O I N A S L  
Y C C S Y A A Y O S M N R N A  
G J W I Z Z C L A T C V D O W  
R E F I S E I R E T T A B C M  
N E N E R E T A W U Z L N H D  
E E T R E E S H N L J P E S C  
S J C B P L A S T I C V C S J

Find the following words related to recycling and energy use:

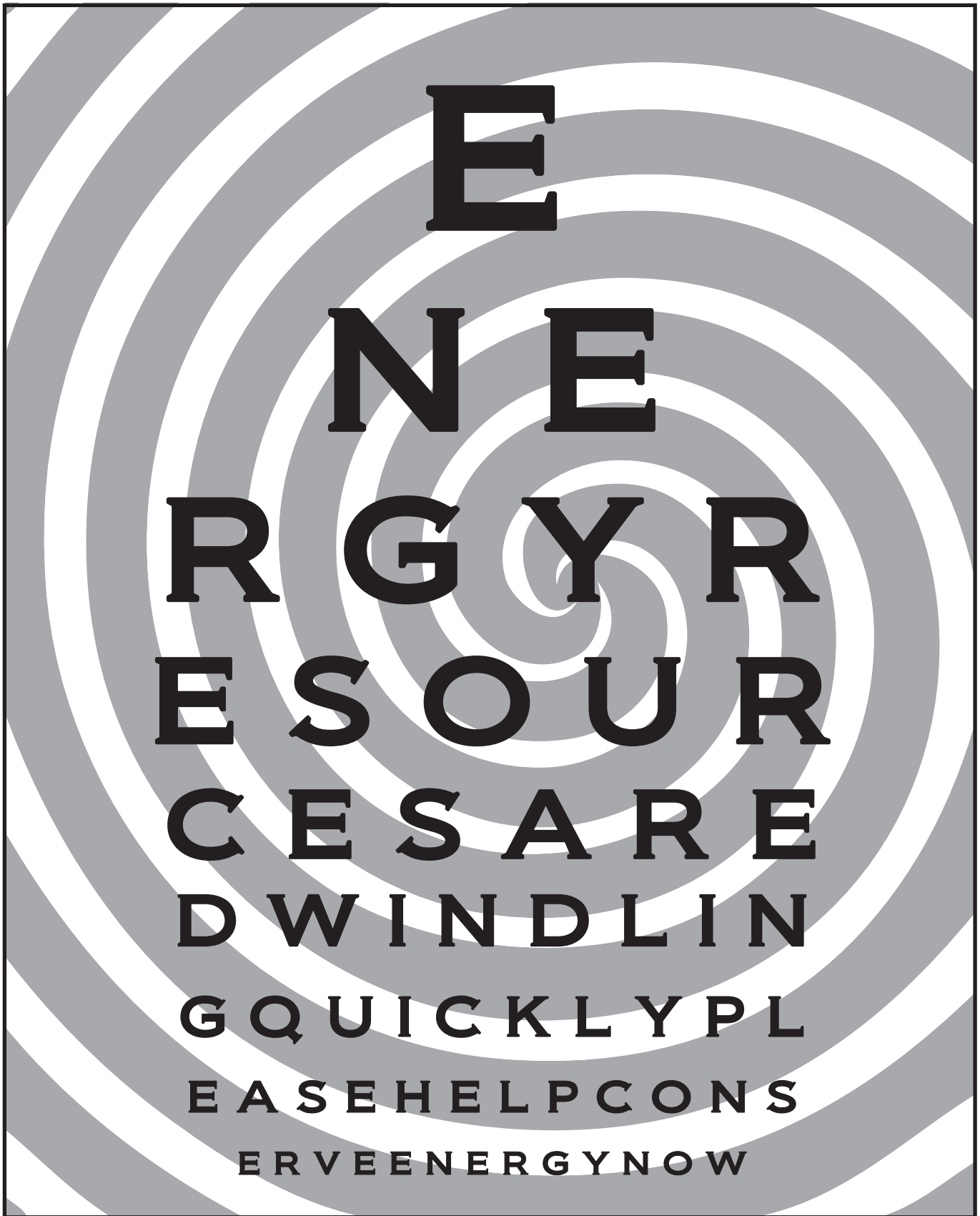
**ALUMINUM  
CANS  
ENERGY  
MAGAZINES  
PLASTIC  
REDUCE  
TREES**

**BATTERIES  
CARDBOARD  
GLASS  
NEWSPAPERS  
POLLUTION  
RESOURCES  
WATER**

**BOTTLES  
CONSERVATION  
LANDFILL  
PAPER  
RECYCLE  
REUSE**

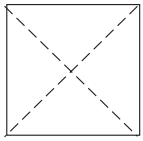


Take a look at the eye chart.  
Can you figure out the message?

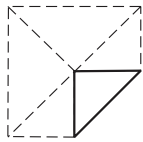


Message: Energy Resources Are Dwindling Quickly Please Help Conserve Energy Now

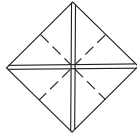
# Conservation Makes Sense!



Start with picture side down.



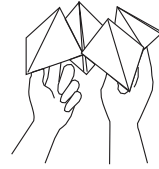
Fold each corner to the center.



Now, turn the paper over.



Again, fold each corner to the center.



Put a finger in each section and use.

**What should I recycle?**

- Recycling reduces landfill waste
- Recycle paper and cardboard
- Recycle glass and plastic
- Buy products that use recycled materials
- Buy eco-friendly products

**Why should I recycle?**

**How can I save electricity?**

- Turn off the lights when leaving a room
- Set your thermostat to 68° in winter and 78° in summer
- Use ceiling fans
- Insulate your hot water heater
- Hang clothes outside to dry
- Use compact fluorescent light bulbs
- Check and replace air filters regularly
- Lower the water heater temperature to 120°
- Plant shade trees
- Water the lawn between 6 p.m. - 9 a.m.

**How can I save energy at home?**

**How can I conserve water?**

- Fix leaky faucets and toilets
- Wash only full loads in the dishwasher
- Use the proper load setting (and cold water) when you wash clothes
- Take shorter showers

**How can I use more resources wisely?**

**How can I use water more efficiently?**

**How can I trim my electric bill?**



# Make a REUSE, RECYCLE, and REDUCE Pyramid

Cut out the figure, fold on the lines, and glue the tabs.



## Informative Web Sites:

National Institute of Environmental Health Sciences  
[www.niehs.nih.gov](http://www.niehs.nih.gov)

Earth911.com Making Every Day Earth Day  
<http://earth911.com>

The Container Recycling Institute  
<http://www.container-recycling.org>

Environmental Protection Agency  
<http://www.epa.gov>

All Free Crafts.com  
<http://www.allfreecrafts.com>

## Recycling Facts:

Recycling 1 aluminum can saves enough energy to run a computer for 3 hours.

Recycling 1 ton of paper saves 17 trees and 7,000 gallons of water.

Recycling 5 plastic bottles makes enough fiberfill for a jacket.

Glass can be recycled forever.

A computer disk takes 500 years to degrade.

# REUSE



One person's trash is another person's treasure

Wash and reuse plastic "disposable" cups, plates, and utensils

Purchase second-hand items at yard and garage sales or thrift shops

Pass your unwanted items to someone else or donate them to a charitable organization

FOLD AND GLUE

FOLD

### Florida Public Service Commission

2540 Shumard Oak Boulevard ♦ Tallahassee, FL 32399-0850

[www.floridapsc.com](http://www.floridapsc.com)

1-800-342-3552



Save energy and recycle almost everything!  
Aluminum and steel cans  
Paper, magazines, cardboard  
Plastic bottles and jars  
Glass bottles and jars  
Wood, branches, and yard waste  
Tires, appliances, electronics, paint, and oil

# RECYCLE



Save energy and recycle almost everything!

Aluminum and steel cans  
Paper, magazines, cardboard  
Plastic bottles and jars  
Glass bottles and jars  
Wood, branches, and yard waste  
Tires, appliances, electronics, paint, and oil

FOLD AND GLUE

# REDUCE



Use resources wisely and reduce waste

Say "no" to junk mail

Buy only what you need (and use it all)  
Buy products with packaging that can be recycled or reused








Buy in bulk and bring your own bags

FOLD AND GLUE

FOLD



# Save Money By Being Energy Efficient





-  Keep the drapes closed in hot weather to block the sun.
-  During the summer, turn up your thermostat to 80 degrees or higher when away from the house. By adjusting your thermostat 10-15 degrees higher in the summer for eight hours, consumers can save about 10 percent on cooling costs each year.
-  Buy a programmable thermostat to pre-set the house temperature throughout the day.
-  Use dimmer controls, high/low switches, or three-way bulbs to adjust the level of lighting to exactly what is needed.
-  Wash clothes in cold or warm water whenever possible.
-  Keep the refrigerator between 36 and 38 degrees and the freezer between zero and five degrees.
-  Limit the number of times the refrigerator door is opened during the day. Make sure that the refrigerator is kept at least partially full. Locate the refrigerator away from sources of heat, such as sunlight, ovens and dishwashers.

**Conservation begins with you,  
and the things that you do at home every day!**

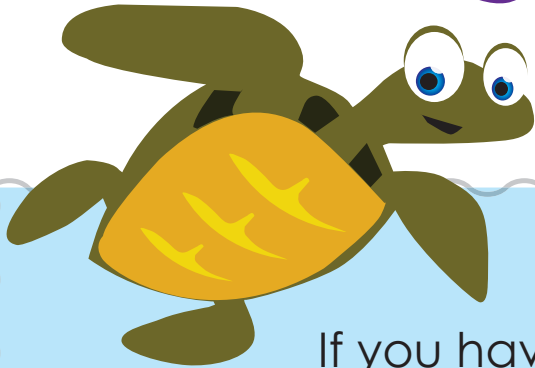


## Water Conservation Helps You Save Money

The Florida Public Service Commission offers these water conservation tips to aid in saving money this summer.

-  When watering the lawn, water in the cooler times of the day, specifically in the evening, to avoid rapid evaporation. This is better for the lawn and allows a reduced amount of water to be used. Check the weather forecast before watering outside. If there is a chance of rain, hold off seeing if Mother Nature will help out.
-  Using less water in the bathroom can also help conserve water. The simplest ways are to take shorter showers and turn off the water while brushing teeth. To find out whether a bath or shower saves more water try plugging the drain while taking a shower. If there is less water in the tub after the shower than is normally used for a bath, consider taking more showers.
-  If using a dishwasher, remember to always do full, instead of partial, loads. Using a dishwasher efficiently instead of doing dishes by hand will save water and money.
-  Be sure to check all household faucets for leaks, annually.

# Get Wise and Conserve Florida



If you have questions, call the  
Florida Public Service Commission's  
Office of Consumer Assistance & Outreach at

1-800-342-3552,

Fax questions to

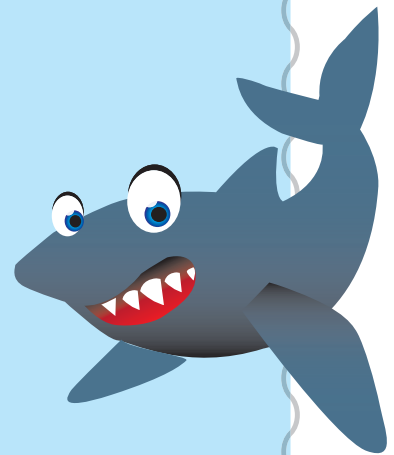
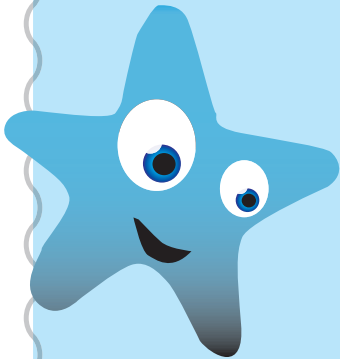
1-800-511-0809,

or contact the FPSC via e-mail:

[contact@psc.state.fl.us](mailto:contact@psc.state.fl.us)

See our Internet home page at

[www.FloridaPSC.com](http://www.FloridaPSC.com)



Or write:

Florida Public Service Commission  
Office of Consumer Assistance & Outreach  
2540 Shumard Oak Boulevard  
Tallahassee, Florida 32399-0850