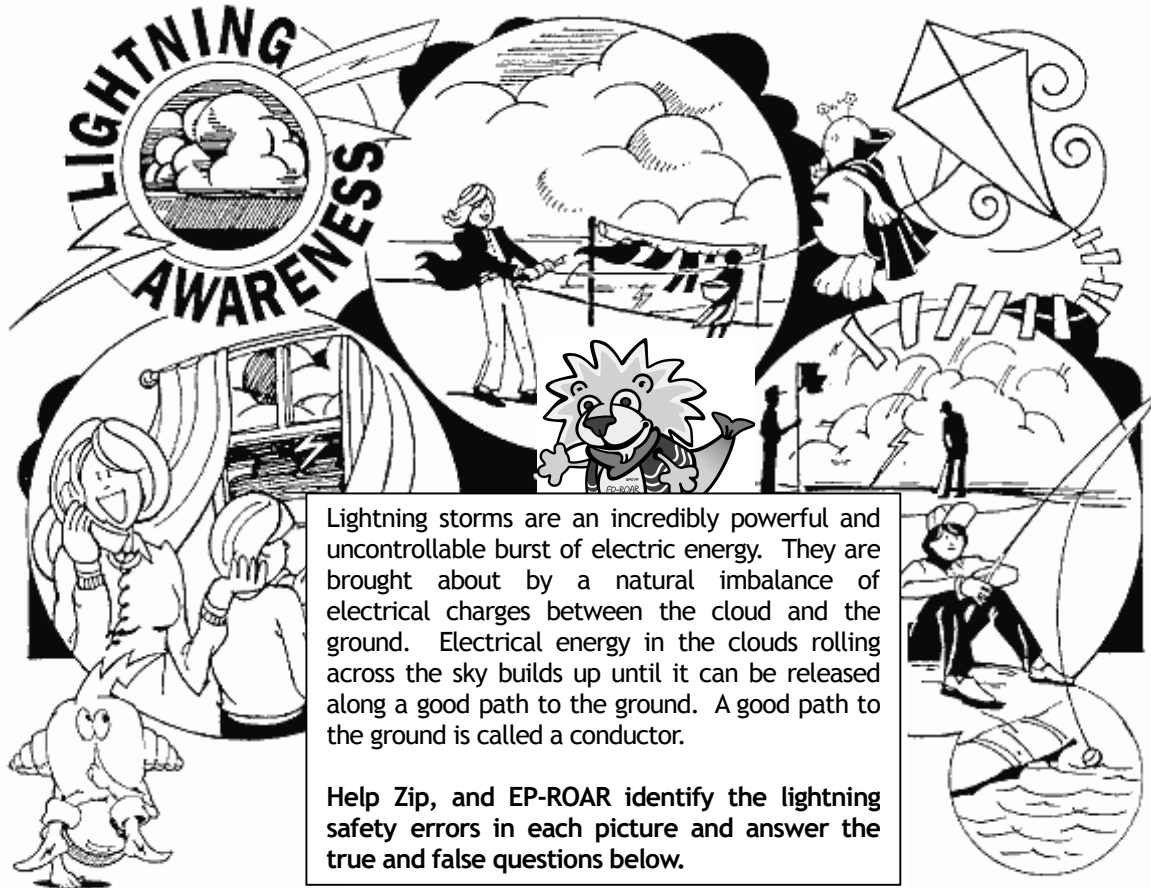


# LIGHTNING AWARENESS



Lightning storms are an incredibly powerful and uncontrollable burst of electric energy. They are brought about by a natural imbalance of electrical charges between the cloud and the ground. Electrical energy in the clouds rolling across the sky builds up until it can be released along a good path to the ground. A good path to the ground is called a conductor.

Help Zip, and EP-ROAR identify the lightning safety errors in each picture and answer the true and false questions below.

1. T F Metal and water are good conductors of electricity.
2. T F High open places are not safe during a lightning storm.
3. T F Lightning will jump from a good conductor to a poor one.
4. T F Tall trees wet with rain are not safe shelter in a lightning storm.
5. T F Cars provide good protection during lightning storms.
6. T F Thunder can be heard during the winter.
7. T F Wire fences and railroad tracks are poor conductors of electricity.
8. T F Being in a boat or on water is a safe place to be during a lightning storm.
9. T F The body is a poor conductor.
10. T F Watching a storm through an open window is safe.
11. T F Swimming in a pool is not safe during a lightning storm.
12. T F Household plumbing and wiring are poor conductors of electricity.
13. T F July is the most common month for thunderstorms in Canada.
14. T F Crouching low is safer than lying flat on the ground during a lightning storm.
15. T F Fishing poles and golf clubs make good conductors.
16. T F Alberta has about 18 days of thunderstorms per year.
17. T F Staying indoors is the safest place to be during a lightning storm.

# LIGHTNING AWARENESS



18. T F Lightning is the largest single cause of forest fires.

## TRUE and FALSE ANSWERS

1. T A good path to the ground is called a conductor. Metal and objects with a high water content, like people, make good conductors.
2. T Out in the open you become a close and more accessible path to the ground.
3. T A path to the ground may be good or bad; neutralizing the charged particles is the goal of the lightning.
4. T Wet trees are very good conductors. The sap inside the tree helps to make it a good conductor, especially in the spring.
5. T The rubber tires stop the electric charge from reaching the ground, therefore the charge must take another route to the ground.
6. T An imbalance of electrical charges within the clouds can occur during the winter months.
7. F Wire fences and railroad tracks are ideal conductors of electricity.
8. F Water is a good conductor. A boat is higher than the water and when surrounded by water becomes a good conductor, even if the boat has no metal parts.
9. F A very high proportion of the body is water, and water is a good conductor.
10. F The charged particles are everywhere in the air during a lightning storm. Standing in an open window can be dangerous.
11. T Water is a good conductor and attracts the charged electric particles, the body is also a good conductor.
12. F Plumbing and wires are made of metal and metal is a good conductor of electricity.
13. T The most lightning strikes and injuries caused by lightning occur during July in Canada.
14. T One small point of contact, especially if you wear rubber soled shoes, makes you a poorer conductor than if you were to lie flat on the ground.
15. T Any metal or wet object is a good conductor of electricity.
16. T Statistics on thunderstorms have been kept for many years; 18 days is the average for Alberta.
17. T Stay indoors and refrain from using good conductors of electricity such as the bathtub, shower or telephone.
18. T The drying heat of the summer combined with a rain shower makes, dry, brittle trees ideal conductors of electricity.

## The Six Lightning Safety Errors Made in the Picture Are:

- Woman on the telephone; should lightning strike a telephone line she would receive a shock.
- Boy in the open window; he could be struck by lightning while standing in the breeze of the open window.
- Girl flying kite; the kite and string become wet in the rain, making them good conductors.
- Women hanging laundry; wet laundry, tall poles and the wet line are all good conductors of electricity.
- Men golfing; the flag and golf clubs are all metal, both good conductors of electricity.
- Boy fishing; the metal fishing pole is a good conductor.