

The Mystery of



MYSTERY #4 THE MIRACLE OF WATER

MYSTERIOUS VOCABULARY WORDS

Freshwater
Precipitation
Evaporation
Conserve
Conservation
Irrigation



KANSAS CORN
STEM

Mystery of Corn K-5 Reader | Mystery #4

The Earth is made up of a lot of water!
Three-fourths of the Earth is water! How do
you use water? Do you know how to
conserve water? Let's investigate the
mystery of the Earth's water!

Top Secret Report from Agent X

While most of the Kansas corn crop is watered by rainfall, we have learned through our investigation that some farmers use irrigation. Their center-pivot sprinklers use water from the Ogallala Aquifer to water their crops. Just over one-fourth of acres of corn grown in Kansas are irrigated.

EVIDENCE



Farmer Steve Rome adjusts his center-pivot irrigation system.

WHY IS THIS FARMER WEARING A RAIN SUIT ON A HOT, DRY DAY?



NASA SHARED THIS SATELLITE PHOTO OF KANSAS CROP CIRCLES

THE CASE OF THE MYSTERIOUS CROP CIRCLES

Through our investigation, we've learned that an **irrigation** system is a series of tubes that are connected to make a HUGE sprinkler for the whole corn field. The irrigation system pumps water from an underground well (or a pond or river) to water crops. The system pivots around the center to water the crops in a circle. Could this be the reason for the crop circles we found?

DISCOVERING EARTH'S WATER



Salt water (oceans) is very important to our Earth because it provides almost half of the oxygen that humans, animals and plants use. It makes sense why our Earth has so much salt water! Keeping the oceans safe and clean is just as important as taking care of the Earth's land.



ONLY 3% OF EARTH'S WATER IS FRESHWATER

- 2/3 of freshwater is frozen, stored in glaciers, ice caps & mountain tops.
- Only 1% of Earth's water is in liquid form for human use, stored in ponds, lakes, rivers and aquifers.



WATCH ME

How Does a Corn Crop Get Water?



Rainfed

Some areas have more rain which is how the farmers water their crops. In dry years when it rains less, the fields may produce less of a crop.



Irrigated

Some areas have drier climates and get less rain but they can also use irrigation to provide the additional water needed to grow their crop. Some farmers can irrigate their crops with underground water, called an aquifer. Farmers drill wells to reach the underground water and use it to water their crops. Also, some farmers can irrigate from nearby ponds, lakes and streams.

Ogallala Aquifer

The Ogallala Aquifer is an underground water source that can be found in western Kansas and seven other states. Kansas is lucky because some farmers are able to use the aquifer to water their crops. The western part of the state has a drier climate and farmers use the aquifer to provide enough water for their crops. The eastern part of the state doesn't have this aquifer, but the climate is wetter allowing crops to grow from rain.



WATCH ME



Aquifer Regions



WHAT IS AN AQUIFER?
Watch this Farmer Bill video to find out!



Technology Helps Farmers Conserve Water!

When farmers use water to irrigate, they want to make sure they are conserving water as much as possible. Farmers are helping invent new **conservation** technology to reduce the amount of water needed to grow corn crops!

IRRIGATION TECHNOLOGY

Watch this Farmer Bill video to learn how farmers use cutting edge technology to **conserve** water while irrigating!



WATCH ME

How Do Humans Use Water?



- Agriculture: 42%
- Electricity: 39%
- Manufacturing: 11%
- Home Use: 8%

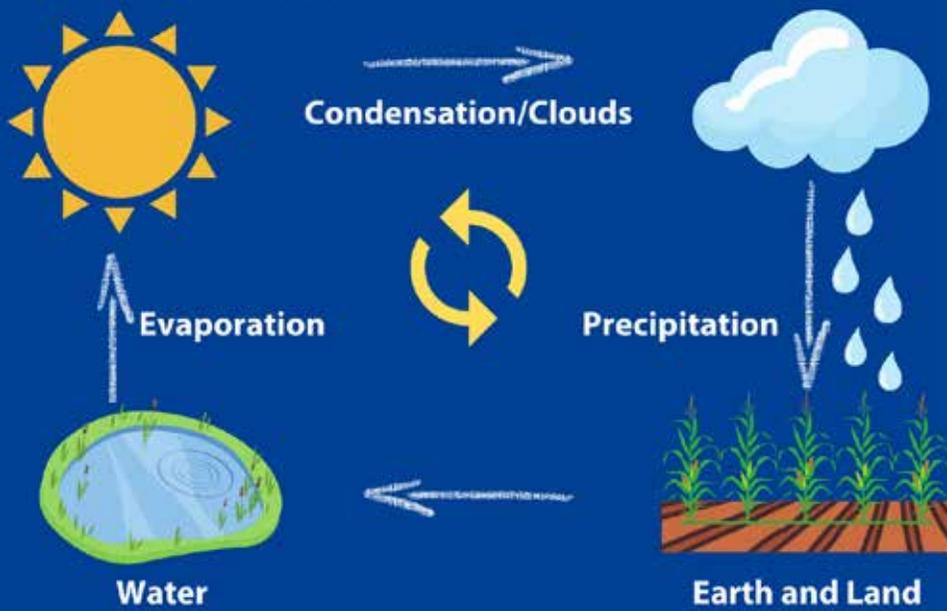
As you can see, a large amount of freshwater is used for agriculture which makes sense because that is where our food, clothing and other supplies we rely on every day come from. Farmers do all they can to conserve water.

LET'S THINK! Out of all the water on Earth, only 3% is **freshwater!** Since humans can only use 1% of the water on earth, we need to really be careful about how we use it. It is very important to conserve water. How can you **conserve** water? Watch this Farmer Bill video to learn how farmers conserve water!



WATCH ME

THE WATER CYCLE



Learn About the Water Cycle

Let's learn a bit more about the water cycle before we dive into the fun experiment below!

DID YOU KNOW? The Earth cannot make more water. The water just gets cycled around into different forms.

The Water Cycle

Watch this Farmer Bill video to learn about the water cycle!



WATCH ME

Water Cycle & Desalination Experiment

Almost all the world's water is saltwater. Can we use the water cycle to turn saltwater into clear clean freshwater? Learn about the water cycle and learn about desalination!

LAB TIME!

MATERIALS NEEDED

- Shallow bowl
- Smaller bowl to fit inside the shallow bowl
- Water
- Salt
- Food coloring
- Plastic wrap
- Small ball

DIRECTIONS

Follow this video by Farmer Bill for step-by-step instructions for this fun experiment!



WATCH ME



The Mystery of Corn reader series is provided by:

KANSAS CORN
STEM
kansascornstem.com