Meet Dr. Sun!
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Glossary words are in bold.

Written by
Julia Dobish
Jessica Nickelsen
Babs McDonald

Illustrated by
Stephanie Pfeiffer

http://www.naturalinquirer.org
This is Dr. Ge Sun.

däk-tər jē sun
Dr. Sun is a scientist who studies the **water cycle**. He also studies changes in the **environment**.

The water cycle shows how water falls to Earth and **evaporates** back to the **atmosphere**.
Condensation

Evaporation
Dr. Sun thought science was fun in high school.

This is Dr. Sun in high school. He was 15 years old. He lived in China.
China is a long distance from the United States. Can you find China on a globe?
Dr. Sun is **patient**. He is a **hard worker**.

This student is a hard worker too.
Dr. Sun likes to ask questions about our world. Dr. Sun asked a question about changes in the environment.

Dr. Sun talks with others about his questions.
He was interested in changes in the Southern United States.
Dr. Sun was interested in changes happening over a long time—more than 100 years!
Dr. Sun studied changes in **land use**. These changes happened over more than 100 years.
People change the land to meet their needs.
Dr. Sun asked two questions: “How have humans changed the land over time? How did these changes help or hurt the environment?”
Dr. Sun used a computer to help him answer his question.
Dr. Sun discovered that land use changes can hurt the environment. He also discovered that some land use changes can help the environment.
Name two things you can do to help the environment.

This student wants to help the environment.
Critical Thinking Questions:

• Name two States in the Southern United States. Do you live in the Southern United States? If not, where do you live?

• List different land uses that you observe around your school or home. How do you think each land use helps or hurts the environment?

• Dr. Sun likes to ask questions. Why do you think it is important to ask questions?
Glossary:

data (dā-tә): Facts and figures about something.

environment (n-vī-rә(n)-mәnt): The surroundings in which a person, plant, or animal lives.

evaporate (i-vә-pә-rәt): To turn into vapor.

land use (lәnd yūs): The types of things an area of land is used for. One example is using land to grow corn. Another example is using land to build a school.

observe (әb-zәrv): To watch something.

patient (pā-shәnt): Able to wait calmly.

water cycle (wә-tәr sī-kәl): The process by which water travels around and through Earth and its atmosphere. Water from rivers and oceans evaporates into the air (evaporation), where it gathers to form clouds (condensation). The water then falls as rain (precipitation) and snow to fill the rivers and oceans. The process of evaporation, condensation, and precipitation repeats over and over again. It is a cycle.
Try This!

Dr. Sun wanted to learn more about changes in land use. For each photograph on pages 20-22, tell how the land is being used. Then tell how you think the land use helps and hurts the environment. Discuss your answers with a friend. Be ready to explain how you think each land use helps and hurts the environment.
Background Information: Different land uses can affect the environment in different ways. When pavement is poured, for example, the air above it is warmer than the air above vegetation, making the area slightly warmer overall. Pavement prevents rain from entering the ground and allows pollutants to wash into streams and rivers. Pavement, therefore, is a land use that can hurt the environment. When people let forests grow, or plant small organic gardens, the environment can be helped because natural nutrients are added and erosion is controlled. In this reader, students learn about land use and are challenged to observe how the land is used around them. For more information, read “Everything But the Carbon Sink” in Natural IQ, Southern United States Climate Change edition, http://www.naturalinquirer.org.
Be a Possibility Possum

Scientists make things possible; They ask and answer questions. You can make things possible If you follow these suggestions.

Observe your world and wonder; Ask how, what, why, and who? Ask and answer questions To make things possible for you.

Wonder is a good thing; It is very plain to see. When I ask and answer questions, I make things possible for me.