Meet Dr. Mercer!
# Meet Dr. Mercer!

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Glossary words are in **bold**.

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http://www.naturalinquirer.org
This is Dr. Evan Mercer.
Dr. Mercer is a scientist who studies people and forests.

These students enjoy walking in the forest.
By the time he was in high school, Dr. Mercer knew he wanted to be a scientist.

This high school student wants to be a scientist, too.
Dr. Mercer is curious.

These students are also curious.
Dr. Mercer likes to ask questions about our world.

Dr. Mercer, on the right, talks with another scientist about his questions.
Dr. Mercer asked a question about rural and urban communities.
Rural communities are areas with fewer people and more land.
Urban communities are areas with more people and more buildings.
Dr. Mercer wanted to learn more about these areas and their **climate**. The climate of an area is the most typical **weather** it has over many years.

Hawai`i has a hot climate, but it may have days of cool weather.
Alaska has a cold climate, but it may have days of warm weather.
Scientists have observed that Earth’s climate is changing. Dr. Mercer asked, “How does climate change affect rural and urban communities?” He observed that a climate can change over many years.

As less rain fell over time, the forest pond became a forest stream.
Dr. Mercer used a computer to answer his question.
Dr. Mercer discovered that rural communities are affected by climate change differently than urban communities.
Scientists ask and answer questions about changes that they have observed. What is one change that you have observed in the world? What is one question that you have about this change?

What change might this boy be observing?
Critical Thinking Questions:

• Why is it important to study changes in the climate?

• Do you live in a rural community or an urban community? How do you know?

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

affect (a-fekt): To make something or someone different.

climate (kli-mət): The most typical weather a place has over many years.

community (kə-myü-nə-tē): A group of people who live together in the same place.

curious (kyoʊr-əs): Eager to find out about things.

forest (fôr-əst): A very large area of trees.

rural (rur-əl): About farms and the countryside, country people, or country life.

urban (ər-bən): About the city, city people, or city life.

weather (we-thər): The condition of the atmosphere at a certain place and time, such as the air temperature and whether or not it is raining.
Try This!

Charlotte is an urban community in North Carolina. Many people live and work in Charlotte. Charlotte has a lot of roads and buildings. Rutherfordton is a rural community in North Carolina. Rutherfordton is 70 miles away from Charlotte. Rutherfordton has a lot of land, few people, and few buildings.
Look at the following table. This table shows the air temperatures in Charlotte and Rutherfordton on July 4 across the years 2007–2013. Create a bar graph using the air temperature data for Charlotte. Next, create a bar graph using the air temperature data for Rutherfordton. Use the blank graphs on page 22 to create your bar graphs.

<table>
<thead>
<tr>
<th>July 4</th>
<th>Charlotte</th>
<th>Rutherfordton</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>74 °F</td>
<td>73 °F</td>
</tr>
<tr>
<td>2008</td>
<td>82 °F</td>
<td>78 °F</td>
</tr>
<tr>
<td>2009</td>
<td>72 °F</td>
<td>70 °F</td>
</tr>
<tr>
<td>2010</td>
<td>75 °F</td>
<td>74 °F</td>
</tr>
<tr>
<td>2011</td>
<td>82 °F</td>
<td>80 °F</td>
</tr>
<tr>
<td>2012</td>
<td>83 °F</td>
<td>78 °F</td>
</tr>
<tr>
<td>2013</td>
<td>80 °F</td>
<td>73 °F</td>
</tr>
</tbody>
</table>

Data obtained from http://www.wunderground.com

Were the temperatures the same in Charlotte and Rutherfordton on July 4 during any of the years? Which community had a pattern of higher temperatures? What differences do you notice when you compare the air temperatures in Charlotte with the air temperatures in Rutherfordton?
Background Information: Climate change will impact every community. Some areas of impact include human health, impacts on indigenous populations, and economic impacts. Urban communities and rural communities will feel these effects differently. In this reader, students are introduced to rural and urban communities, climate, and climate change. For more information about Dr. Mercer's research, read “Wide Open Spaces” in Natural IQ, Southern United States Climate Change edition, http://www.naturalinquirer.org.

Note: For more background information and a lesson plan, visit http://www.naturalinquirer.org and click on “Natural Inquirer Reader Series.”

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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.