

Natural Inquirer Reader Series

Meet Dr. Mercer!

Photo: Evan Mercer, Forest Service



Meet Dr. Mercer!

Table of Contents

Meet Dr. Mercer!..... 3

Critical Thinking Questions. 18

Glossary. 19

Try This!20

Possibility Possum Poem. back cover

Glossary words are in **bold**.

Written by
Julia Dobish
Jessica Nickelsen
Babs McDonald

Illustrated by
Stephanie Pfeiffer

<http://www.naturalinquirer.org>



This is Dr. Evan Mercer.



Photo: Evan Mercer, Forest Service

Dr. Mercer is a scientist who studies people and **forests**.



Photo: Forest Service, Northern Region

These students enjoy walking in the forest.

By the time he was in high school,
Dr. Mercer knew he wanted to be a scientist.



Photo: Forest Service, Northern Region

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.





Photo: Babs McDonald

Rural communities are areas with fewer people and more land.



Photo: Babs McDonald

Urban communities are areas with more people and more buildings.



Photo: Babes McDonald

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.



Photo: Daniel A. Leiffheit,
National Park Service

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.

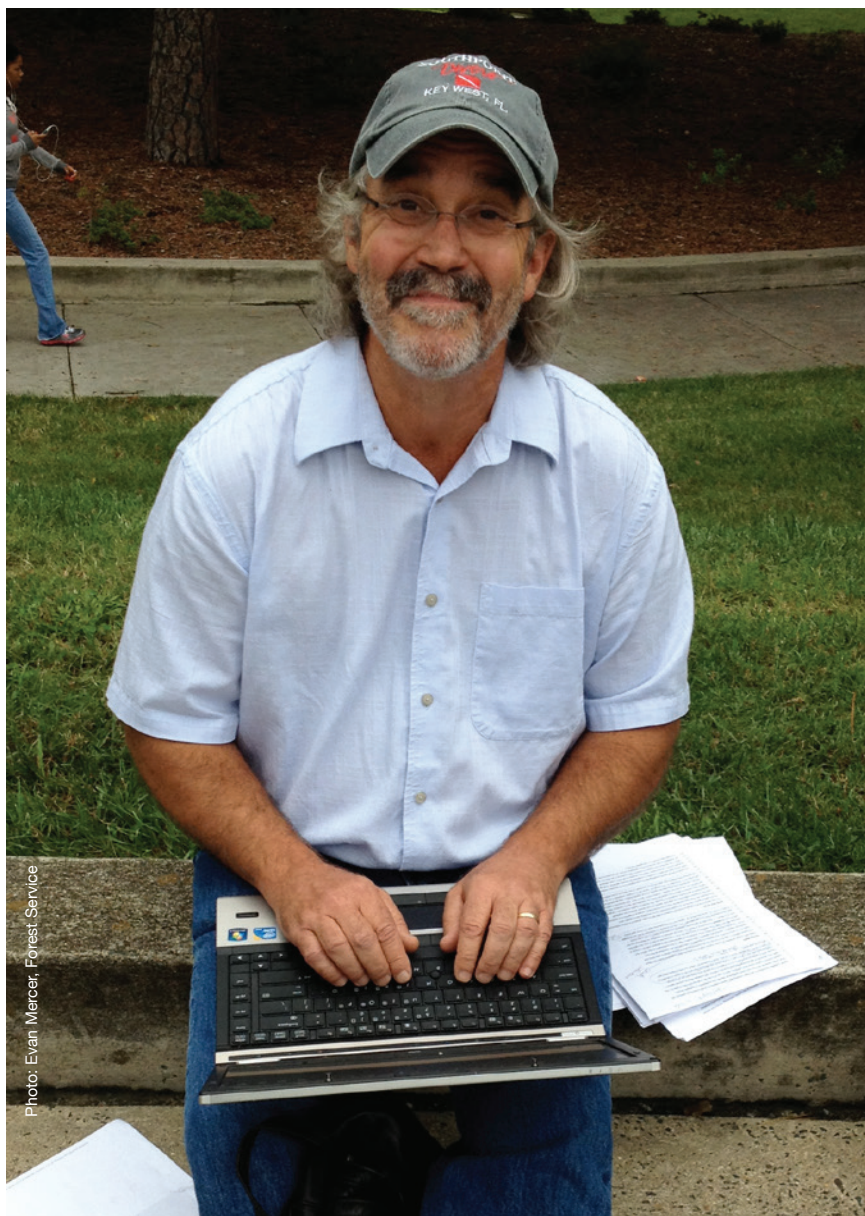


Photo: Evan Mercer, Forest Service

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**-mæt): 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 (**kyoŭr**-ē-əs): Eager to find out about things.

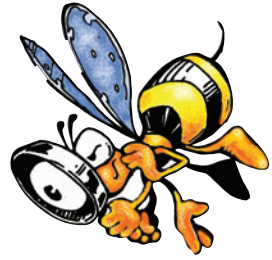
forest (**fôr**-əst): A very large area of trees.

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

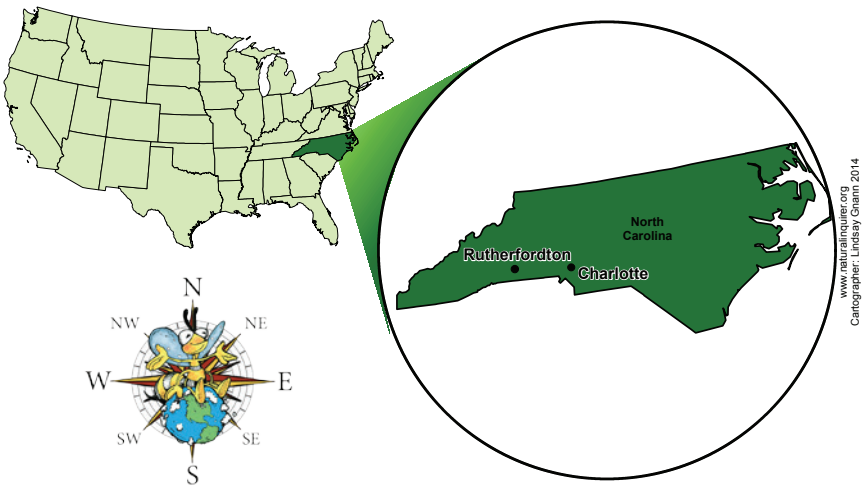
urban (**ər**-bən): About the city, city people, or city life.

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.

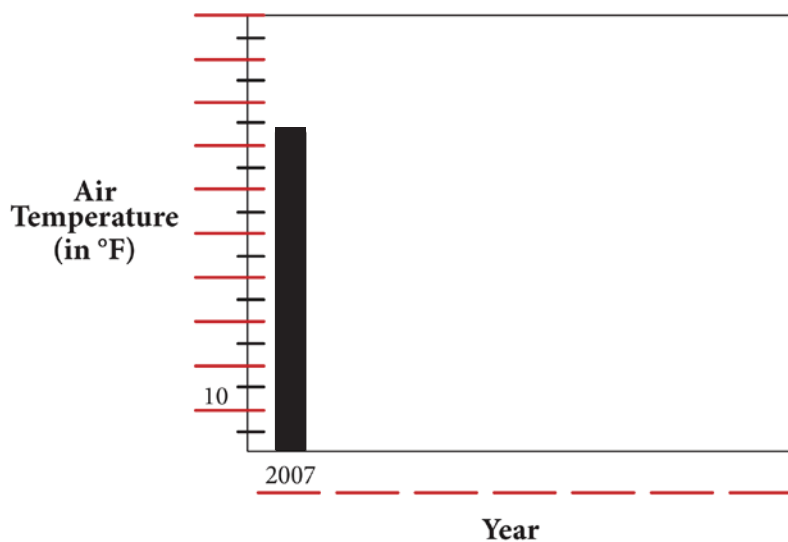


Look at the following table. This table shows the air temperatures in Charlotte and Rutherfordton on July 4 across the years 2007–2013. Create a bar graph using the air temperature data for Charlotte. Next, create a bar graph using the air temperature data for Rutherfordton. Use the blank graphs on page 22 to create your bar graphs.

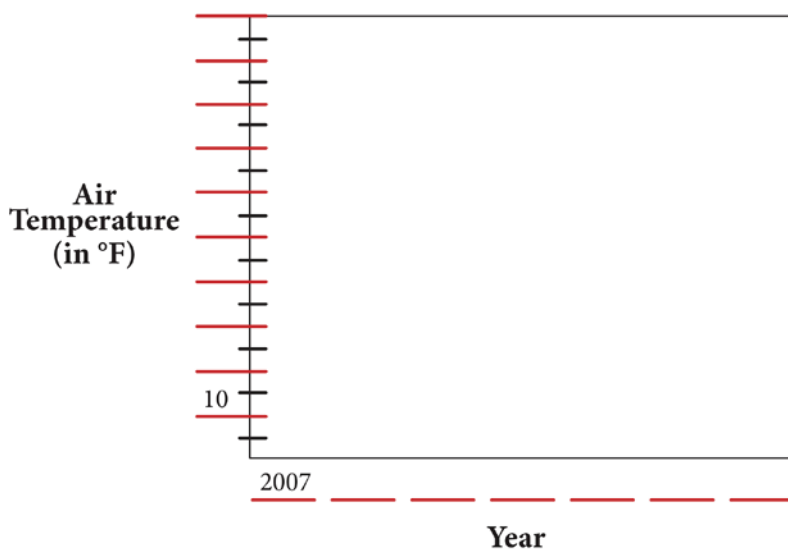
July 4	Charlotte	Rutherfordton
2007	74 °F	73 °F
2008	82 °F	78 °F
2009	72 °F	70 °F
2010	75 °F	74 °F
2011	82 °F	80 °F
2012	83 °F	78 °F
2013	80 °F	73 °F

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?



Community: Charlotte



Community: Rutherfordton

Natural Inquirer Reader Series

Number 1

Grades K–2

Word Count: 335

Genre: Nonfiction

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."

Production Staff

Julia Dobish, Cradle of Forestry in America Interpretive Association

Jessica Nickelsen, Cradle of Forestry in America Interpretive Association

Babs McDonald, USDA Forest Service

Michelle Andrews, University of Georgia

Emily Mclear-Daniels, Cradle of Forestry in America Interpretive Association

Forest Service

Thomas L. Tidwell, Chief

Jimmy L. Reaves, Deputy Chief, Research and Development

James Hubbard, Deputy Chief, State and Private Forestry

Daina Apple, Acting Director, Science Quality Services

Bill Helin, Acting Director, Conservation Education

Rob Doudrick, Director, Southern Research Station

Jennifer Plyler, Assistant Director, Southern Research Station

Evan Mercer, Forest Economist, Southern Research Station

Cradle of Forestry in America Interpretive Association

Carlton Murrey, Executive Director

Jennifer Grantham, Chair

Adam DeWitte, Director of Education

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotope, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W. Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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.

