# The regions of North Carolina

BY PAULINE S. JOHNSON

These activities introduce students to the regions of North Carolina, its climate, and the economics of each region. Students will complete an essay as a culminating activity.

- Activity one: Physical features and major cities
- Activity two: Climate
- Activity three: Economics
- Activity four: Essay about the importance of geography

This lesson will be described as a cooperative learning activity. However, it is possible to have students work on this individually.

## Learning outcomes

- Students will examine the regions and sub-regions of North Carolina with attention to physical features, climate, and economics
- Students will analyze how geography impacts the lives of humans
- Students will work cooperatively in groups
- Students will practice critical thinking

## Activity one

### TEACHER PLANNING

**Materials needed**

- A copy of the regions chart for each student
- A transparency of the regions chart *or*
- A copy of the regions chart on newsprint
- NC transportation maps — You can request these at the NCDOT website[1]. Also, many welcome centers will give a quantity of maps to educators.
- "Two Worlds: Prehistory, Contact, and the Lost Colony"[2] module from LEARN NC

- Computers for each group
- LCD projector (optional, but useful)
- Internet access

**Time required for activity**

40 minutes

## PROCEDURE

1. Put students into cooperative groups of 3 or 4.
2. Ask for the three regions of North Carolina. [Mountains, Piedmont, Coastal Plain] (If you have done the introductory activity[3] you could remind the students about those subtopics.) Give each student a copy of the regions chart.
3. Ask the students why there are four rows on this chart. If the students do not know, you may want to help them to figure out that one of the regions is split into two. (Someone may notice that the last two rows are separated by a dotted line while the others are solid. If no one notices this, you may want to lead them to discover this.) [Inner Coastal Plain, Outer Coastal Plain or Tidewater] Have them fill in the first column with the names of the regions and sub-regions.
4. Explain that they will work together to fill in the second and third columns of the chart ("Physical Features" and "Major Cities") using "Two Worlds" page 1.1: "Natural Diversity[4]," the 3 Regions map 1b at the "North Carolina Atlas Revisited" website[5] (Go to the "Land Regions" chapter in the sidebar), and highway maps. The ten largest cities can be found at the State Library website[6].
    - Physical features — Students should list any physical feature, including specific places such as Mount Mitchell or the Sandhills, that can be found in each region. They should list elevation, major water sources, soils and major forms of vegetation. Some of the features will not be directly stated, but can be inferred. For example, the Piedmont does not have the elevation stated explicitly. However, from reading that the Inner Coastal Plain rises to 300 feet and that the western Piedmont is at 1500 feet (this information is located in the "Blue Ridge Mountains" section of the "Natural Diversity" page), students should recognize that the Piedmont is from 300 to 1500 feet in elevation.
    - Major cities – Explain that the students should compare the major cities with the map of the regions to discover which cities belong in each region or sub-region.
5. Ask the students to complete as much of the column as they can in 20 minutes.
6. Put up the transparency or newsprint chart. Fill in that chart by asking the students for responses. Encourage the students to fill in missing information on their own charts while the group is constructing the class chart.
7. Finish this activity by asking the students for their thoughts about the physical features and major cities. [Students should notice, for example, that the majority of the major cities in North Carolina are in the Piedmont.]

## ASSESSMENT

- Successful completion of the second and third columns of the chart

- Cooperative group work

# Activity two

## TEACHER PLANNING

**Materials needed**

- The regions charts that the students started in previous activity
- Computers for each group
- LCD projector and computer
- The partly completed regions chart transparency from the previous activity
- Two copies of the 3 regions map 1b from the "North Carolina Atlas Revisited" website[7] for each group

**Time required for activity**

20 minutes

## PROCEDURE

1. Put students into groups of 3 or 4 (these may be the same groups as the previous activity or new groups).
2. Explain that the students will use several maps to determine the climate of the regions and sub-regions of North Carolina. They will need to indicate on their charts the following:
   - Average precipitation
   - Dates of first and last average freeze
   - Average winter and summer temperatures
3. Tell the students to get out their regions chart from the last lesson. Pass out two of the North Carolina regions maps to each group.
4. Put the following link on the screen with the LCD projector — **http://www.nc-climate.ncsu.edu/images/climate/agriculture_freeze_big.jpg**
5. Tell the students to access the following link on their group computers — **http://www.worldbook.com/wb/Students?content_spotlight/climates/north_american_climate_no_carolina**
6. Have the students look quickly at the maps on the screen and on their computers. Explain that the climatic areas don't fit nicely into each of the region and sub-regions. There will be overlap and many variations within each region. Tell them that they should list the dominant numbers. (See the examples in the teacher chart.) For example, have the students look at the mountain region on the precipitation map. While there is a small area that has very little rain, most of the mountain region averages from 44 inches to more than 52 inches.
7. Have the groups examine the maps to fill in their charts for 15 minutes.
8. After that time, have the groups share their findings as you fill in the transparency of the regions chart.

### ASSESSMENT

- Successful completion of the fourth column of the chart
- Cooperative group work

## Activity three

### TEACHER PLANNING

**Materials needed**

- The regions charts that the students started in previous activities
- Blank notebook paper for each group

**Time required for activity**

20 minutes

### PROCEDURE

1. Put students into groups of 3 or 4 (these may be the same groups as the previous activity or new groups).
2. Ask the students for a definition of economics or economic activity. Answers will vary. For this particular activity, you will want the students to focus on land, labor, capital, and the impact of natural resources on the kind of jobs/products that are predominant in each of the regions.
3. Tell the students to examine the information about the Inner Coastal Plain on their regions chart. Ask them what specific information from that chart may give them clues about what type of economic activity (or activities) may occur in the Inner Coastal Plain. Answers will vary, but they should recognize — possibly with your help — that there is only one major city [perhaps because of a lower population in the sub-region], there is adequate rainfall and a long frost-free season, a generally warm climate, loose soils, and a fairly flat landscape. Ask the students what economic activities might be productive with these characteristics. [agriculture].
4. Allow the groups to brainstorm economic activities for the other regions/sub-region for about 5–10 minutes.
5. As a whole class, go over the ideas that the groups had for each of the regions. You may need to reinforce their brainstorming, clear up misunderstandings, or help lead them to new thinking about major economic activities in the regions. See the teacher guide to the regions chart for some of the more obvious economic activities in each of the areas. For example, some groups may have difficulty seeing the ties between outdoor activities and tourism as seen in the Mountain and Tidewater regions. Some may need help in understanding how the abundance of labor, good transportation, and power from swift rivers in the Piedmont have combined to make that a major industrial/manufacturing region.

### ASSESSMENT

- Successful completion of the last column on the regions chart
- Cooperative group work

## Activity four

### TEACHER PLANNING

**Materials needed**

- The regions charts that the students started in previous activities
- Copy of "Region Brainstorming" chart for each student *or*
- Transparency of this chart to project and have students copy on their own paper
- Computer with LCD to project "Region Brainstorming" chart *or*
- Overhead projector to project transparency of chart

**Time required for activity**

One class period, and homework time for the completion of the essay

### PROCEDURE

1. Put up the overhead or computer projection of the brainstorming page.
2. Ask the students what they believe the word "generalities" means. [A possible definition is "having general or widespread applications." In this case it would be ways in which two different topics can be compared.]
3. Explain that the class will be comparing and contrasting two of the regions/sub-regions of North Carolina. The class will be choosing the categories of generalities that will serve as the basis for the comparison.
4. Allow whole class discussion of what can be compared — the generalities. There are many possibilities, so you may want to either steer the class to some or have the class choose several and you add others to come up with a quality list of five. The list should include physical features, economics, population, and climate, which are the columns on the regions chart. The fifth should be different — leisure activities is a good category for this row. Relative location is another possibility. Write these categories in the middle column on the chart, under "Generalities."
5. Have the class choose two of the regions/sub-regions. Put the names of the regions in the headings of the right and left columns.
6. As a whole class, fill in the brainstorming chart on the overhead with examples from their regions chart and background knowledge of North Carolina. As the class suggests responses, students should fill in their personal copies of the chart. Leisure activities for each of the regions are particularly interesting: Examples for the Mountains and Tidewater regions can be outdoor personal activities such as mountain climbing or fishing, while examples for the Piedmont can focus more on spectator sports such as watching college or professional sports.

7. After the students have filled in the brainstorming chart, ask them if they can see a common connection in the generalities. Lead them, through questioning and directed discussion, to the discovery that these generalities are aspects of geography or the influence of geography.
8. Ask them how the answers they put on their charts and brainstorming sheet are all affected by the geography of each region. Answers will vary, but students should realize through this activity that human activity is greatly influenced by the geography of the areas in which people live and work. Students will often try to find exceptions to this, such as church activities or school attendance. In those cases, you will want to ask if either of these activities has been cancelled or postponed due to a weather event such as snow, ice storm, or hurricane.
9. Ask the students to think of a "discovery statement" that will explain in one sentence what they have discovered about the importance of geography to the lives of humans. This is a topic sentence. There are many possibilities, but one could be "Geography has an impact of the lives and activities of human beings."
10. Take several suggestions from the class and put them on the board.
11. With your help, have the class choose the one that is their favorite.
12. Explain that this discovery statement will be the topic sentence of an essay that they will write using the brainstorming chart to provide supporting details.
13. Model the style of essay that you prefer. One method that is successful is to do the introductory paragraph together as a class and then have the students write a second paragraph that describes the geographic conditions in one region, a third paragraph that describes the geographic conditions in the other region, a fourth comparing and contrasting the two regions as to the impact of their geography on the lives of the population, and a concluding paragraph.
14. Assign the essay to be completed for homework.

## ASSESSMENT

- A completed essay that conforms to your model (Rubric can include: complete essay, appropriate details from the brainstorming chart, style, length of essay, grammar, and spelling.)

# Regions and sub-regions of North Carolina

In the PDF version of this lesson plan (see sidebar), each chart appears on a separate page for ease of printing.

| Region or sub-region | Physical features | Major cities | Climate | Economics |
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| Region or sub-region | Physical features | Major cities | Climate | Economics |
|---|---|---|---|---|
| | | | | |

# Regions and sub-regions of North Carolina (teacher guide)

| Region or sub-region | Physical features | Major cities | Climate | Economics |
|---|---|---|---|---|
| **Mountains** | • Mountainous; Blue Ridge Mountains are part of the Appalachian Mountan chain<br>• 1500 to 6684 feet elevation<br>• Mount Mitchell is the highest peak in the eastern U.S.<br>• Major rivers: French Broad, Pigeon, New, Little Tennessee<br>• Eastern Continental Divide | • Asheville | **Precipitation**<br>44" – more than 52"<br>**Freeze**<br>Sept. 18/Nov. 2 – Apr. 11/May 11<br>**Winter temp.**<br>Less than 36 to 40°<br>**Summer temp.**<br>Below 76° | • Tourism<br>• Timber |
| **Piedmont** | • Rolling hills<br>• Rapid rivers<br>• Hard rock and clay soil<br>• Monadnocks<br>• 300 feet to 1500 feet elevation<br>• Major rivers: Pee Dee, Catawba, Yadkin, Neuse, and Cape Fear | • Cary<br>• Charlotte<br>• Durham<br>• Greensboro<br>• High Point<br>• Raleigh<br>• Winston-Salem | **Precipitation**<br>44" – 48"<br>**Freeze**<br>Oct. 18/Nov 2 - Mar 27/Apr. 11<br>**Winter temp.**<br>36 to 44°<br>**Summer temp.**<br>76 to 80° | • Manufacturing / Industry<br>• Colleges / Universities<br>• Research Triangle Park<br>• Banking / Finances |
| **Inner Coastal Plain** | • Fall line border with Piedmont<br>• Elevation is near sea level to 300 feet<br>• Sandhills<br>• Generally flat<br>• Soft rocks; sandy and loose soil<br>• Wetland areas<br>• Inner and Outer Coastal Plain is about 45% of land area in NC<br>• Major rivers: Neuse, Cape Fear, and Tar | • Fayetteville | **Precipitation**<br>48" – more than 52"<br>**Freeze**<br>Nov 2/17 – Mar 12/ Apr 11<br>**Winter temp.**<br>40 to above 44°<br>**Summer temp**<br>78 to above 80° | • Agriculture |

| Region or sub-region | Physical features | Major cities | Climate | Economics |
|---|---|---|---|---|
| **Outer Coastal Plain or Tidewater** | • Outer Banks or Barrier Islands<br>• Wetlands & estuaries<br>• Pamlico Sound & Albemarle Sound<br>• Elevation: Sea level to less than 20 feet<br>• Extends 20 to 30 miles inland | • Wilmington | **Precipitation**<br>More than 52"<br>**Freeze**<br>Nov 2/Dec 17 – Feb 25/Mar 27<br>**Winter temp.**<br>40 to above 44°<br>**Summer temp**<br>78 to above 80° | • Tourism<br>• Fishing |

# Region brainstorming chart

| Region A: _____ | Generalities | Region B: _____ |
|---|---|---|
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**Discovery statement:**

## North Carolina Curriculum Alignment

### SOCIAL STUDIES (2003)

**Grade 8**

- **Goal 1**: The learner will analyze important geographic, political, economic, and social aspects of life in the region prior to the Revolutionary Period.
  - **Objective 1.01**: Assess the impact of geography on the settlement and developing economy of the Carolina colony.

## National Standards

In addition to meeting objectives of the North Carolina Standard Course of Study, this lesson plan addresses the following national standards.

### NATIONAL GEOGRAPHY STANDARDS

Standard 1: How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information.

Standard 3. How to analyze the spatial organization of people, places, and environments on Earth's surface.

Standard 4. The physical and human characteristics of places.

Standard 5. That people create regions to interpret Earth's complexity.

Standard 8. The characteristics and spatial distribution of ecosystems on Earth's surface.

Standard 18. To apply geography to interpret the present and plan for the future.

### NATIONAL ECONOMICS STANDARDS

Standard 3. Allocation of goods and services

Standard 6. Specialization and trade

Standard 13. Role of resources in determining income

Standard 15. Growth

## On the web

**Natural diversity**

http://www.learnnc.org/lp/editions/nchist-twoworlds/1.1

North Carolina has within its borders the highest mountains east of the Mississippi River, a broad, low-lying coastal area, and all the land in between. That variety of landforms, elevations, and climates has produced as diverse a range of ecosystems as any state in the United States. It has also influenced the way people have lived in North Carolina for thousands of years.

**More from LEARN NC**

Visit us on the web at www.learnnc.org to learn more about topics related to this article, including Appalachians, Blue Ridge Mountains, Bogue Inlet, Inner Coastal Plain, Jocassee Gorges, North Carolina, Outer Coastal Plain, Piedmont, barrier islands, coastal plains, continental divide, eastern continental divide, ecology, estuaries, forests, geography, geology, maps, mountains, river basins, rivers, salt marshes, watersheds, and wetlands.

## Notes

1. See http://www.ncdot.org/public/publications/.
2. See http://www.learnnc.org/lp/editions/nchist-twoworlds.
3. See http://www.learnnc.org/lp/pages/1990.
4. See http://www.learnnc.org/lp/editions/nchist-twoworlds/1.1.
5. See http://www.ncatlasrevisited.org/homefrm.html.
6. See http://statelibrary.dcr.state.nc.us/NC/GEO/GEO.HTM.
7. See http://www.ncatlasrevisited.org/homefrm.html.

## About the author

**PAULINE S. JOHNSON**

I am currently the Director of a Teaching American History Grant for Buncombe County Schools, Asheville City Schools, and Madison County Schools. I have taught history and English in the seventh and eighth grades for over twenty-six years at Reynolds Middle School in Asheville, North Carolina. I am currently doing adjunct work for Mars Hill College and Western Carolina University. I have a Masters Degree from Western Carolina University and am Nationally Board Certified in Early Adolescence/Social Studies-History. I am certified to teach K–12 and I also have Academically-Intellectually Gifted certification.