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| What Makes a Region? |
| **Target Audience** –Virginia Studies Time required – 45 - 60minutes |
| **Activity:** In this map-based investigation students will explore a variety of ways to divide Virginia into to establish of working definition of the concept of region. |
| **Standards** | **Students will understand that**There are an infinite number of geographic regions.The physical environment influences human activity.Regional specialization is based on economic activity.. |
| **Learning Outcomes*** Identify criteria that could be used to form regions.
* Interpret maps to obtain information.
* Explain the criteria the Virginia Standards of Learning used to define Virginia’s regions.
* Identify examples of regional specialization.
* Explain how people have interacted with their environments to make a living.
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| **Map URL:** <http://arcg.is/1M7IBPi>or <http://kempsodc.maps.arcgis.com/home/item.html?id=75224397f1df4782b89d791a3c6ca388> |
| **Observe:** What makes a region? |
| *Geographers use regions to group places with similar characteristics.*🡪 The map first opens with the legend visible. ? How many regions are shown on the map? What is the title of the legend?🡪 Click on Modify Map in the upper right. Click on the Contents icon.🡪 Uncheck Physical Regions and check VDOT Districts. VDOT stands for Virginia Department of Transportation. ? How many VDOT districts are there? What do you think is the purpose of these districts?🡪 Uncheck VDOT Districts and check the Watersheds layer.? How many watershed districts are there?*Geographers use regions to group places with similar characteristics. Each of the layers you examined divided Virginia into a set of regions.*? Why did the number of districts differ for each of the maps?  |
| **Describe:** Why do geographers use regions? |
| ? What is the major direction of the watersheds regions? (north to south or east to west).🡪 Check the World Hydro Reference Layer.? What other information was added to the map? How did the borders between the regions change? What do the dotted lines represent?Click the Watersheds layer’s name in the Contents window. Click the 3 dots and select Create Labels. {Reg Names} has been chosen for you. Click OK.? Into which body of water do the rivers in the northernmost region flow?? Into which body of water do the rivers in the South Atlantic Gulf Region flow? In what direction are the rivers flowing?? Into which body of water do the rivers in the Ohio Region flow? In which direction do the rivers flow?? Into which body of water do the river in the Tennessee Region flow?? What criterion was used to draw the borders for the Watersheds layer? |
| **Compare:** How are the regions alike and different? |
| 🡪 Check the Borders of Virginia Layers so that you can make comparison.? How are the Physical Regions and the Watersheds layers alike? (*In both cases feature of the physical environment was used to form them. Physical Regions by elevation and Watersheds by the direction of river flow and the body of water into which the rivers flow.*)? How are the Physical Regions and the Watersheds layers different? (*The Physical Regions run from north to south and the Watersheds regions run primarily from west to east.*)🡪Uncheck all of the layers you turned on in order to answer the questions above. Check the VDOT Districts layer. Click on an area of the map.? What information is available in the pop-up that opens? (*name, population, population per square mile, district, etc.*) ? ? Does the information describe physical or human characteristics? (*human*) What geographic units are contained within each of the VDOT districts? (*cities or counties*)? How might the purpose of a region influence its shape? Uncheck all layers |
| **Analyze:** *How does the physical environment influence economic activity?* |
| 🡪 Turn on the layers necessary to answer the following questions:? To what extent is there a relationship between the Physical Regions and the VDOT Districts layers? ? To what extent is there a relationship between the Physical Regions and the Watersheds layers?*Differing economic activities occur within the regions based on the physical and human resources available.*🡪 Check the Borders of Virginia Regions and the Physical Regions. You will examine each of the economic activity layers one at a time (Virginia Ports, High Tech Companies, VA Apple Growers, and Virginia Coal Mines)Based on your previous studies of Virginia’s regions, predict where the economic activity is likely to take place. Then turn on the layer and provide a brief explanation of why that economic activity is located there.***Ports***🡪 Change the Basemap to Imagery. Turn off the Physical Regions layer.? In what region are the Virginia ports most likely to be located? 🡪 Turn on the Virginia Ports layer and use the Bookmarks to zoom into each of the areas. Examine the pop-ups.? What is the difference between a yellow and an orange pin?? In which region are the ports concentrated? Why are they concentrated in that location? What bodies of water are connected? How can you tell you are looking at a port?🡪 Zoom to the Virginia Inland Port. Change the Basemap to Streets.? How do the interstate highways connect the inland port to other areas? Why is it important?***Coal Mines***🡪 Change the Basemap to Oceans. Turn off the Virginia Ports layer and turn on the Virginia Coal Mines layer. Click on the layer and select Zoom To. Zoom out as needed.? In which region are most of Virginia’s Coal Mines located?? According to the map which counties many counties are involved in the production of coal? Which has the most coal mines?? Why are some mines located outside of the state and the region’s boundaries? Could coal mining be an economic activity in other parts of the state? Why or why not?🡪 Change the Basemap to Imagery. Use the Bookmarks to view coal mining on the landscape.🡪 Use the measure tool to determine the length and width of the Greater Wise Mines area.? Approximately how many square miles does the area mined cover?**NOTE**: The USA railroads layer is only visible if students are logged into an organizational account.🡪Turn on the USA Railroads layer and use the Railroads bookmark to examine the connections between the coal mines and rail networks. Use the Connections bookmark.? What do you see? What might it mean?***High Tech Companies and Government Contractors***🡪 Turn off the Virginia Coal Mine layers. Turn on the High Tech Companies and Contractors layer. Click on its title. Click on the 3 dots and select Zoom to. Click on the title again and then the legend button.🡪 What does the size of the stars represent? Examine the pop-ups for additional information?? In which physical region are most of the high tech companies located? To what extent are they evenly distributed throughout the region? How would you best describe their location? ? Are the high tech companies concentrated in one region or in a particular part of the state?? To what extent might railroad transportation be important to this economic activity?? Do you think any companies would be located on the eastern side of Washington, D.C.? Why don’t they show up on the map?***Virginia Apple Growers****The layer shows the location of major apple growers within Virginia. Apples grow best where there are cold winter temperatures, moderate humidity, and moderate temperatures throughout the growing season.*🡪 Turn off previous layers. Turn on Virginia Apple Growers layers. Zoom to the layer. Turn on the World Physical Map layer. Zoom in as needed to answer the questions.? Zoom in as needed. What landform is most closely associated with the apple producer sites? Which regions of Virginia have that particular landform?? To what extent is apple production concentrated in a particular area of the state?🡪 Add a Map Notes layer and draw the boundaries for each of the 4 economic specialization areas—ports, coal mines, high tech companies, and apple growers.? Why do geographers create regions? |
| **Reflect:** How are the goods and services produced within a region linked to its resources? |
| ? Which of the following economic activities are likely to be present in all of Virginia’s physical regions? Are the activities goods or services? Be ready to provide a justification for your answers.* Grocery stores Gas stations Schools
* Car dealers Barber shops and beauty salons Bakeries
* Golf courses Parks and recreation facilities Electricity
* Real estate companies Banks Ship repair and dry docks
* Coal car repair yards Cold storage warehouses Pick –your-own apples sites

*Geographers use the term regional specialization to describe economic activities tied to a region’s specific human and natural resources.*Based on your examination of the map and knowledge of the three types of resources fill out the chart below.

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| **Activity Layer** | **Purpose** | **Natural** | **Human** | **Capital** | **VA Region** |
| Virginia Ports | Receive goods from other countries/statesTransport goods Repair and build ships | Coastal locationDeep water | ShipbuildersCrane operatorsShip crews | Equipment for unloading shipsContainers for ships and trucksRoads, railroads | Coastal Plain |
| Virginia Coal Mines | Mine coal deposits | Coal deposits | Coal miners; management | Equipment used to mine coal | Appalachian Plateau |
| High Tech Companies | Create computer software and Internet servicesProvide services to the government departments | Land for the buildings | Computer engineersSoftware designersSpecialized services needed by various government departments | Computers and other specialized equipmentAccess to Internet and adequate electricity | Nearness to Washington, D.C. more important than specific region. |
| Virginia Apple Growers | Produce apples | Soil suitable for growing applesGood temperatures for apple growingAdequate rainfall | Orchard managersFarmers | Crates for applesWarehouses for storageTransportation networks | Areas with elevation so apples can have good air circulation and freezing temperaturesBlue Ridge, Northern part of Ridge and ValleyWestern Piedmont |
| Railroads | All—links goods to markets | Land for railroad | Railroad crews and repair people | Train tracks, train car | All |

Agree or disagree with the following statement: Economic activities are linked to a region’s resources. What evidence can you provide to support your stand? |