2012

Rice: It Feeds the World

Kelly Davidson

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Kelly Davidson – School not available

Grade Level (Req.): 6th-8th grade	Content Area (Req.): World Geography, Physical Geography, English/Reading, Technology	Unit (Opt.):

Connections to Other Disciplines (Opt.):

- Science: Biomes of world rice producing areas, biology of a rice plant.
- Life Skills: Prepare recipes from India, eat an Indian meal, share with staff and/or students.
- Math: Book, "One Grain of Rice: A Mathematical Folktale" by Demi, use to make calculations and predictions and look for cultural cues.
- Language Arts: Concept maps of stories read, create a classroom book of cherished family recipes

Time Frame (Req.): 3-4 class periods	Goal (Req.): To learn about how nature influences the opportunities a country has.
	Objective (Req.): Students will identify countries mentioned in the text and locate them on a world map. Students will use an atlas to identify the climatic conditions necessary for growing rice. Students will explain the movement of cultural traditions from a country or origin to a new country.

Materials Needed (Req.):	New Vocabulary (Opt.):
• Book, "Everybody Cooks Rice" by Norah Dooley; Notecards for each country name, family name, country map, and recipe mentioned in "Everybody Cooks Rice" • Large wall map of the world; Classroom set of atlases • Computers with Internet access • Spray can of room deodorizer • World globe; Blank state map of India • "Everybody Cooks Rice" Comparison Grid • Colored pencils	• • • • •

Anticipatory Set/Introduction [Inquiry Question is required] (Req.): How does rice grow? Where in India is rice grown?

Instructional Sequence/Procedure (Req.):

1. Write the phrase "Cultural Diffusion" on the board. Tell the students that you are going to do a demonstration to show the meaning of the word diffusion. Hold up the spray can of room deodorizer. Say "I am going to spray a little of this room deodorizer from this corner of the room. Please raise your hand as soon as you can smell the special aroma." (Hands should be raised in a pattern from close to far away.) Ask the students to describe a pattern in the movement of the aroma. As you put the can aside, tell the students that this was an example of diffusion, when the aroma spread out from one location to other locations.
2. Pass out the "Everybody Cooks Rice" notecards, one per student. Students may need to pair up or double up, depending on class size.
3. Handout copies of the "Everybody Cooks Rice" Comparison Grid.

4. Explain that you will be reading a book that shows how traditions about rice can be diffused from one country to another as people move around the world. As students listen, they should jot down notes on their grids. At this point, they should not worry about correct spelling. In addition, they should be aware of what they have on their own notecard. Later, they will be searching for the rest of their group. For example, if they have the Indian curry recipe, they will search for the Indian family name, the word, India, and the map of India.
5. Read "Everybody Cooks Rice" aloud. Pause as needed for good note taking.
6. Have students circulate the room searching for their 'group'. Groups should compare their grids and add to them, if necessary. Discuss: What recipes sounded good? Less tasty? Have you ever eaten any of these dishes?
7. Explain that many of the families mentioned in the story may have grown their own rice in their native countries. Ask if any of the students know how rice is grown. Explain that rice is a grain and that most of the people who grow it plant it by hand.
8. Have groups divide themselves into dyads. Dyads will share a computer and look up rice growing facts at the Ask Asia website (listed below). Although the photographs on the page make reference to rice grown in Indonesia and California, the facts will remain the same.
9. Allow dyads the remainder of the class period to explore the website. Allow for five minutes at the end for groups to share what they have learned.
10. Begin the next class period with a brief review of the previous day.
11. Have students return to their dyad groups. Distribute a world atlas to each group. Have the students open to the rainfall map of the world. Is there a correlation with rainfall and the countries mentioned in the book? (Most of these countries receive high amounts of rain, above 40 inches per year.)
12. Have the students look at the Growing Seasons map and use the legend to read the length of the growing season in some of the countries from the book. (Most of the countries have a long growing season of 8-12 months.)
13. Make the generalization with the students that rice requires a warm climate with heavy rainfall or a constant supply of water. Ask "Could you grow rice in a garden in Iowa? Do we have the resources and climate conditions to grow rice here in Iowa?" Have the students use the rainfall and growing season maps of Iowa to investigate this question. (Iowa's average yearly rainfall is 34-35 inches with early frost.)
14. Tell the students that rice is the main food for over half the people of the world. In some countries, rice is eaten at every meal. Point out that the families in the story may have brought their rice recipes with them because, in their native country, rice was their most important food and it satisfied their need for food. Have students share some favorite rice dishes that are prepared and served in their homes.
15. Pass out the copies of the Indian state maps and the Rice Production Data. Explain that we will be creating a choropleth map to show where in India rice is produced.
16. Allow students to use an atlas and colored pencils to complete their maps. All completed maps must have a title, key, scale, color, and compass.
17. Discuss: What do these maps tell us about climate conditions in India? Compare your map to rainfall, biome, population, and growing season maps from an atlas. What do you notice?
18. Enrichment Ideas: Create population pyramids. Select a location from "Everybody Cooks Rice" and look up its five themes of geography. Display findings on a poster. Research farming in India.
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20.

Formative Evaluation (Req.): Class participation	Assessment (Req.): "Everybody Cooks Rice" Comparison Grid, Rice in India Choropleth Map

Iowa Core Curriculum Standards Used (Req.):

- Geography, grade 6-8: Understand the use of geographic tools to locate and analyze information about people, places, and environments.
- Employability Skills, grade 6-8: Communicate and work productively with others, considering

different perspectives, and cultural views to increase the quality of work.

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Common Core Curriculum Standards Used (Opt.):

- Speaking and Listening, grade 6-12: Engage effectively in a range of collaborative discussions (one-on-one, in groups and teacher-led) with diverse partners on specific grade level topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
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NGS Standards Used (Req.):

- How to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective
- Analyzing the spatial organization of people, places, and environments in a spatial context
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Five Themes of Geography Used (Req.):

- Place
- Human-Environmental Interaction
- Movement
- Region
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School District Standards and Benchmarks (Opt.):

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21st Century Universal Constructs (Opt.):

Other Disciplinary Standards (Opt.):

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Other Essential Information (Opt.):

Other Resources (Opt.):

- Ask Asia – Rice: The Global Crop website: http://www.askasia.org/for_educators/fe_frame.htm
- Rice production in India statistics:

http://www.economywatch.com/database/areaproductionyieldrice.html

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