2012

World Population and Food Distribution

Matt Hoodjer

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School and District Names not available

<table>
<tr><td>Grade Level (Req.): 9th-10th grade</td><td>Content Area (Req.): World Cultures, World Geography, Human Geography</td><td>Unit (Opt.):</td></tr>
<tr><td colspan="3">Connections to Other Disciplines (Opt.):
Students must use math skills to calculate percentages.</td></tr>
<tr><td rowspan="2">Time Frame (Req.): One 45 minute class period</td><td colspan="2">Goal (Req.): To simulate the differences in population density among the continents, as well as the distribution of the world's food supply.</td></tr>
<tr><td colspan="2">Objective (Req.): Students will be able to identify what parts of the world are and are not heavily populated. Students will be able to identify the regions of the world with a scarce food supply. Students will be able to propose strategies to correct the imbalance of the world food distribution.</td></tr>
<tr><td colspan="2">Materials Needed (Req.):
Calculator
2 bags of Hershey's kisses (or other type of food)(this lesson was designed for 24 students)
Continent name tags wadded up (1-N. America, 2-S. America, 3-Europe, 4-Africa, 14-Asia)</td><td>New Vocabulary (Opt.):</td></tr>
<tr><td colspan="3">Anticipatory Set/Introduction [Inquiry Question is required] (Req.): Ask students to list what they had to eat for one meal or all of their meals the day before. Compare lists and ask the students if they believe they get enough food to live on. Could they survive on less?</td></tr>
<tr><td colspan="3">Instructional Sequence/Procedure (Req.):
Instruct: There are 6.8 billion people in the world breaks down to the following: North America: 337,000,000 = 6%; South America: 577,000,000 = 8%; Europe: 734,000,000 = 11%; Africa: 973,000,000 = 14%; Asia: 4,054,000,000 = 60%; Australia: 34,000,000 = .5%. The students will represent the percentages of each continent making up the total percentage of the world population. Ask if anyone can explain how to figure this out? (% x # of students)
Have the students figure how many of them belong to each continent. 2 students would live in N. America (.06x24 = 1.44 = 1 student), 2 students would live in South America (.08x24 = 1.92 = 2 students), 3 students would live in Europe (.11x24 = 2.64 = 3 students), 4 students would live in Africa (.14x24 = 3.36 = 4 students), 14 students would live in Asia (.60x24 = 14.4 = 14 students). We won't use Australia because it is such a small % of the total population.
Distribute 1 continent labeled paper wad to each student. Break the students into 4 groups</td></tr>
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scattered around the class. (Tell each group they represent a different country – doesn't matter which – and that sometimes countries fight.) When everyone is in place the students will have a paper wad fight among the other groups. After the teacher has determined we have had enough "fighting", the teacher will stop the fighting. Each person will pick up one paper wad and go back to their seats. Each student will open their paper wad and find which continent they belong to.

4. Each continent will group together, clustered in different areas of the classroom. Everyone must stand up. Have students note how many people they have in their section of the world and how much room they have.
5. The teacher will pass out the Hershey's Kisses representing the world food supply. Once they pass out the food the ones who did not receive any must remain standing while the ones with the food will get to sit down. The teacher will take one bag of Hershey's Kisses and distribute as follows: The North Americans receive half the bag (everyone sits down); The Europeans receive half the bag (everyone sits down). The teacher will take the second bag of Hershey's Kisses and distribute it as follows: 1 African receives no Hershey's Kisses because 1 out of 3 Africans go to bed hungry, one African must stand and watch the others; 3 Asians receive no Hershey's Kisses because 1 out of 5 Asians go to bed hungry, three Asians must stand and watch the others; 1 South American does not receive any and the other one receives only a couple of Hershey's Kisses because 1 out of 8 South Americans go to bed hungry.
6. After the food has been distributed, we will review the total population numbers of each continent that had been posted on the overhead and add the ratio that go to bed hungry. Africa: 973,000,000 = 1 out of 3 go to bed hungry, Asia: 4,054,000,000 = 1 out of 5 go to bed hungry, South America: 577,000,000 = 1 out of 8 go to bed hungry.
7. Using the information, students will figure the total number of population in each continent that go to bed hungry. (The one African standing represents 324,000,000 people who go to bed hungry.)(The three Asians standing represent 900,800,000 people who go to bed hungry.)(The one South American standing represents 72,125,000 people who go to bed hungry.)
8. Students will return to their seats, take out a piece of paper and answer the following questions: Where do most people live? (Over half in Asia) Where is there a surplus of food? (North America and Europe, where farmers are high-tech) Where is there a shortage of food? (Africa, Asia, and South America, where farmers are low-tech) Where are the worst food shortages? (Africa – the only continent with two giant deserts) If Africa and Europe have the roughly around the same populations, then why is one hungry and the other not? (Africa's population is growing faster than its food production. Africa has two deserts and a rainforest that cannot produce food. Farming is more high tech in Europe with land capable of producing more food) What can be done to help the people going to bed hungry? (Europe and North America could share their food. Africans and Asians could increase their food production by using fertilizer to improve soil, irrigate to water the crops and use high tech machines to do the work) What would have to happen long term to help with the food imbalance? (In the long range, a country's population should be roughly equal to its food production)
9. Students will turn in their answers. After all have been collected discuss the questions and answers. Students may eat the candy. Encourage students to share with those that did not get any.
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Formative Evaluation (Req.): Participation points awarded for student answers and informal assessment by checking for participation and understanding.	Assessment (Req.): Students' answers to the questions
Iowa Core Curriculum Standards Used (Req.): • Geography, grade 9-12: Understand how human factors and the distribution of resources affect the development of society and the movement of populations. • Geography, grade 9-12: Understand how physical and human processes shape the Earth's surface and major ecosystems. • Geography, grade 9-12: Understand how human actions modify the environment and how the environment affects humans. • • • • • • •	
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. • • • •	
NGS Standards Used (Req.): • The characteristics and spatial distribution of ecosystems on Earth's surface • How human actions modify the physical environment • How physical systems affect human systems • The changes that occur in the meaning, use, distribution, and importance of resources • • • • • •	
Five Themes of Geography Used (Req.): • Place • Human-Environmental Interaction • Region • •	School District Standards and Benchmarks (Opt.): • • •
21st Century Universal Constructs (Opt.): Critical Thinking	

Other Disciplinary Standards (Opt.): • • • • •
Other Essential Information (Opt.):
Other Resources (Opt.): • • • •