

Follow That Pizza

Maine Learning Results: Math:M1, B1, M2, F2; Science:L, M.4, M.6; Social Studies:A1, A2, C1, D1

Purpose: To discover concrete numerical information for evaluating the importance of food choice as an environmental and economic issue.

Key Concepts:

- How our food is processed and handled has an environmental and economic impact
- Using a little bit of information and some further research and calculation we can become educated consumers

Activity:

- Explain to the group that we are going to do an activity about pizza. Ask the group "what do we think of when we think of pizza?." Responses might be something like "I'm hungry, yum, lunch, etc." Explain that today we are going to think about pizza a little more in-depth. We are going to follow some of the main ingredients in pizza and figure out where they come from. Most people agree that pizza is yummy no matter where it comes from, but not all pizzas are built the same. (At Gorham we do this as a precursor to the Maine Harvest Lunch and as one of the introductory activities to a larger unit on local foods, but you could do this activity at any point in the year.) Explain to the kids that we will be focusing on the dough, the sauce and the cheese of the pizza. Solicit responses from the group as to what the main ingredient of those three things are: wheat, tomatoes and milk. Explain to the students that they will be comparing and contrasting two different pizza companies. One will be Flatbread Pizza company in Portland, and the other will be Dominoes*. Explain to the students that they will break up into 6 small groups and each group will be focused on one ingredient and will receive a worksheet with information about their ingredient.(worksheets are attached.) As a group, they need to work together to figure out all of the stops that their ingredient has made on it's way from the farm to their house in Gorham, and to calculate how many miles it has traveled. Write on the board *Flatbread*, and *Dominoes*, and three subcategories under each of those titles for the three ingredients. Each group will also receive a map of the United States and a ruler. The instructor should go over the worksheet and how to use the scale key on a map and a ruler to calculate distance.
- Groups can then take 10-15 minutes to fill out their worksheet and calculate the miles. When they are finished each group should designate one person to report back to the class and tell what they found out.
- As groups report back the instructor writes the total mileage for each ingredient up on the board. When everyone has reported back, the instructor, with help from the class, can total up the mileages of all ingredients for the Dominoes pizza, and all mileages for the Flatbread Pizza and groups can compare and contrast. Take responses and questions from the group on our results.

Follow Up:

- Calculate the gallons of gasoline used by each ingredient, or pizza as a whole. Large diesel trucks don't get more than 15 miles to the gallon. Discuss the impact of fossil fuels usage on the environment, and ask the students to speculate how rising fuel costs might effect food prices.
- Using mileage and driving times, estimate the days in which your ingredient traveled from the farm to your house. Compare and contrast the freshness of the Dominoes ingredients with those from Flatbread. Road atlases have driving times between major cities in their trip calculator, or the AAA website has a trip calculator to assist in this lesson.
- Estimate the amount of packaging that goes into each ingredients' journey from the farm to your home.
- From the price of the pizzas, estimate the amount of money that makes it back to the farmer. Consider trucking costs, employee time, packaging costs and processing costs. Continue to compare the Flatbread results to the Dominoes results.

Keep these worksheets in a garden activities binder along with any follow-up work. The finished information could be graphed or charted. The successful completion of this activity demonstrates multiple mathematics standards for middle grades from the MLR and follow-up activities through debate, writing sample or discussion tie in with many MLR social studies standards as well.

Materials: worksheets [Attach:Dominoespizzadough.doc](#), [Attach:Dominoespizzasauce.doc](#), [Attach:Dominoespizzacheese.doc](#), [Attach:Flatbreadpizzadough.doc](#), [Attach:Flatbreadpizzasauce.doc](#), [Attach:Flatbreadpizzacheese.doc](#), pencils, rulers, maps of the United States and northern Mexico.

Time Frame: 1/2 hour for the original activity, 1 week for follow up activities.

- The information given about Dominoes ingredients in this lesson is largely inferred with assistance from a Dominoes manager, because it is apparently near impossible even for Dominoes staff to get the actual information on where Dominoes pizza ingredients come from. If we publish this lesson we certainly won't name names here and we will have to come up with another name for the corporate example in this pizza lesson.