

WHICH PIZZA?

Performance Standard 10B.G

Plan a follow up study to one that has been already done in class to determine the favorite pizzas.

- *Mathematical knowledge*: Develop follow-up questions, gather data using a feasible plan;
- *Strategic knowledge*: Analyze the data gathered using a systematic process;
- *Explanation*: Explain completely what was done and why it was done.

Procedures

1. Provide students with sufficient learning opportunities to develop the following in order to formulate questions, design data collections methods, gather and analyze data and communicate findings.
 - Choose and use appropriate techniques to gather data, and
 - Formulate new questions using conjectures and plan new studies to answer them.
2. As a class devise a study to decide which type of pizza is the favorite of the most 7th graders. This should be a survey which allows students to choose the toppings they like best on their pizza, not brand or type of crust. For instance, the students may want to ask a sample of students to identify their favorite type of pizza. Work with them to devise sampling techniques, and to actually complete the data gathering process. Once the class has gathered their data and analyzed which pizza is the favorite of the most 7th graders. Ask them to devise a follow-up study. Each individual is to propose another question that will follow up on the first study. They must describe how they would gather data to answer their proposed question and how they will analyze the results. Provide each student with the assessment task worksheet. Have students work individually.
3. Use the standard scoring rubric. Give each student a score in each of the three categories. A score of 4 should indicate complete understanding of the types of questions that may be appropriate as a follow-up study, as well as a complete and detailed plan of how to carry out the proposed study. The plan should be feasible and include enough detail that it could be completed without further delineation. A three should represent a reasonable follow-up study, and the rationale should be sound, but the procedures for completing the study may not be completely explained. A two would indicate that students have some idea about the types of questions that might be appropriate as a follow up, but don't know how to answer the question or conduct the follow-up study. A one may propose a completely unrelated study and generally shows little understanding in their rationale for their procedures and processes. A score of zero generally reflects no ideas for follow-up or procedures and processes that do not relate to the question they propose.
4. Computational errors should not impact this task.
5. Appropriate follow-ups could be which brand of the previously decided pizza is the most popular, or which type of crust on that pizza, or whose ___ pizza has the most of that topping. Many follow-up ideas are appropriate, but they should build off the original study. (They should not propose to study the students' favorite flavor of ice cream.) The key is if the students can think of a follow-up question and develop a feasible plan for answering their question. Their plan should include sampling techniques, data gathering methods, and a plan for the analysis of the data.

Examples of Student Work not available

Resources

- Copies of the "Which Pizza?" task sheet
- Writing utensil
- Mathematics Rubric

Time Requirements

- One class period (If you want students to actually complete their proposed study, that will require extra time outside of class and in-class.)

NAME _____ DATE _____

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Student Task Sheet

As a class we have completed a study on which pizza topping was the favorite of the most 7th graders. We found the _____ was the favorite of the most 7th graders. However, when we gathered this data, some students may have told us their answer “depends” on something else.

Your task is to propose a question that we could investigate as a class to follow-up on the original pizza study. Then describe in detail how you would find the answer to the question. Include information on sampling, data gathering techniques, and how you would analyze your results.