



Title: To Dome or Not to Dome
Grade: 5th Grade
Subject: Math
Author: Teacher Institute Group
Overview: Students will decide if building a dome in Birmingham is cost effective by analyzing data. Students will survey the community using online blogs and create graphs to display results.

Content Standards: MA (5) 3. Solve word problems that involve decimals, fractions, or money.
MA (5) 14. Analyze data collected from a survey or experiment to distinguish between what the data show and what might account for the results.
TC (3-5) 9. Use technology tools to organize, interpret, and display data.

Local/National Standards:

Primary Learning Objectives: Students will solve word problems related to building a dome. Students will use Microsoft Excel to create a bar graph representing the data collected from the survey.

Additional Learning Objectives:

Approximate Duration of Lesson: 90 minutes – Divided into two 45 minute sessions

Materials and Equipment: Prices of recently developed domes, chart paper, markers, paper, and pencils.

Technology Resources Needed: Desktop computer with internet and Microsoft Excel, Promethean boards, and printer.

Background/Preparation: Teacher will provide students with details about building a dome. Teacher will provide students with survey questions. Students will have basic understanding of graphs, blogging, and be familiar with using Microsoft Excel.

Procedures/Activities: Step 1 Present this scenario to the class: The citizens of Birmingham are discussing whether a dome is needed in the city. Today, we will analyze data and conduct a survey to present to the city to assist in the decision making process.
Step 2 Teacher will use the RAFT strategy to group students.
Step 3 Teacher will distribute data details to each group. Developers get the word problems and the interviewers get survey questions. Developers will look at different prices related to size, location, and materials needed to build the dome. They will create and solve word problems that represent the final cost of building a dome.

- Step 4 Interviewers will create the online survey through a blog site for the citizens to provide feedback. They will create a bar graph using Microsoft Excel as a visual representation of the data collected from the surveys.
- Step 5 Students will compile and arrange data to present to Birmingham City Council.

Attachments: RAFT
Assessment Rubric

Assessment Strategies: Assessment Rubric, Teacher observation, and Group presentation.
Extension: Students will create illustrations of what the dome could look like.
Remediation: Work with students in small groups on solving word problems and graphing.

RAFT

ROLE	AUDIENCE	FORMAT	TOPIC
<ul style="list-style-type: none"> • Interviewer (blogger) • Developer 	<ul style="list-style-type: none"> • Peer Group • Birmingham City Council 	<ul style="list-style-type: none"> • Brochure/Booklet • Editorial 	<ul style="list-style-type: none"> • Building a dome in Birmingham

ASSESSMENT RUBRIC

Standards	1 - Developing	2 - Accomplished	3 - Exemplary	Score
Worked well with group				
Data Collected				
Objectives Met				
Creativity				
Neatness				
Presentation				
Total Points (18)				