

Planning a Class Field Trip

By: Tommy and modified by Erica Papp on 29 January 2004.
Subjects: Math, Social Studies, Computers/Internet
Grade Level: 6-12

Summary:

The focus of this lesson is determining the variables used in planning field trips. It captures students' interest, provides a review of the previous unit objectives, and assesses students' prior knowledge. This experience enables students to consider the variables that must be accounted for in planning a class field trip. Originally there are seven other lessons in this unit. Time spent on each lesson will vary according to the needs and abilities of your students but they have been designed to take about 45 minutes.

Objectives:

Based on the NCTM and Ohio state standards, students will be able to:

1. Recognize variables and apply mathematics in contexts outside of mathematics. (Connections, Problem-Solving)
2. Select appropriate methods and tools for computing with whole numbers using mental computation, estimation, technology, and paper and pencil. (Reasoning & Proof, Problem-Solving)
3. Draw and verify reasonable conclusions about elapsed time and distance. (Reasoning & Proof, Communication)
4. Use tables to model and solve problem situations. (Representation, Problem-Solving)
5. Work in a cooperative group in accordance to the 5 Norms of Cooperative Behavior (positive interdependence, individual accountability, group process, social skills, face-to-face promotive interaction).

Materials:

calculators, computers with Internet, MS Excel and MS Word, overhead projector and transparencies

Activities/Strategies:

Warm-up Activity

As students enter the classroom, the following questions will be on the overhead:

1. If you were planning your family vacation this summer, where would you go? Why?
2. What type of decisions do you have to take into consideration while planning the trip?
What are all the details that go into planning a vacation?

Discuss the students' responses, which should lead them into identifying variables that must be considered in planning a trip.

Main Activity

Ask students to identify variables that must be considered when planning a class field trip (time of trip, distance, duration, cost of transportation, cost of food, need for special permissions, and need for additional chaperones). Write down the responses on a transparency for future reference (more variables may be added later).

Discuss with students how these variables affect decisions about the trip by having the students explain and defend their choices. Ask students if one variable is more important than other variables and if needed, prioritize the variables from most important to the least (priority value will be determined by local circumstances).

Break students up into groups of 2-3; each group should have access to a computer. Have each group brainstorm possible field trip locations that are of interest and within driving distance of the school. Students will search the Internet for possible field trip ideas using websites such as these (teacher will provide a list of websites for the students): http://www.ohiotourism.com/default_f.asp, www.visitohio.com, and <http://www.uakron.edu/law/lawadmissions/attractions.php>. They will also determine the distance from the school to the destination using www.mapquest.com.

After each group decided on a destination, they are to approve their field trip with the teacher to make sure no two groups are doing the same idea. The teacher will provide the students with a copy of the school's field trip policy. Students will then continue the planning process in accordance to the school's policy. Students will be given a sheet with a list of guiding questions to help facilitate their planning.

Guiding Questions:

1. What type of transportation can we use?
[Sample responses include parent drivers, school bus, public transportation and rent a private bus.]
2. How can we keep travel costs down?
3. What time will we need to leave school to be there when the attraction opens?
4. What will be our schedule at the attraction?
5. What time do we need to leave the attraction to get back to school by departure time?
6. Everyone is bringing his or her own lunch. How much time should we plan in our schedule for lunch?
[Sample response: We can set aside 30 minutes for lunch.]

They will record their data in an Excel spreadsheet including the cost, departure time, duration, return time, and other considerations.

Students will then draft a permission slip and a request for chaperones.

Assessment:

	Beginning 1	Developing 2	Accomplished 3	Exemplary 4
Recognize variables and apply mathematics in contexts outside of mathematics	Uses none of the variables when planning field trip.	Uses few of the variables when planning the field trip	Uses most of the variables when planning the field trip.	Uses all variables when planning field trip.
Select appropriate methods and tools for computing with whole numbers using mental computation, estimation, technology, and paper and pencil	Did not compute data.	Inaccurately computed data.	Computed data with minor mistakes.	Accurately computed data.
Draw and verify reasonable conclusions about elapsed time and distance	Did not determine time and distance.	Determined time and distance with major mistakes.	Determined time and distance with minor mistakes.	Accurately determined time and distance.
Use spreadsheets to model and solve problem situations	Did not complete spreadsheet.	Spreadsheet did not organize data logically and not fully coherent.	Spreadsheet partially organized data and not fully coherent.	Spreadsheet organized data logically and coherent.
Work in a cooperative group in accordance to the 5 Norms of Cooperative Behavior	Did not follow the 5 Norms of Cooperative Behavior	Followed 1-2 Norms of Cooperative Behavior	Followed 3-4 Norms of Cooperative Behavior	Followed all 5 Norms of Cooperative Behavior

Score: _____