

## Field Trip Planning Math Task Grades 3-5



**Warning! This is not your typical lesson plan!** The goal of this math task is to allow for students to be the ones doing the majority of the thinking and problem solving. They are not given the step-by-step instructions ahead of time like many of them are used to. Choosing to fight the battle of creating thinkers is not an easy one, but it is purposeful one. Also, this task, centered on problem solving, is designed to milk as many objectives from one scenario versus completely 20 problems on one content skill.

### Notice and Wonder

Your class wants to go on a field trip to the zoo (or anywhere). This requires quite a bit of planning, usually done by the teacher, but why? Tell the students, if they want to go on this trip, they will have to help with the plans.

"What do you think we need to plan for?"

Anticipated Responses:

Where to go, how to get there, how much it will cost, what will we have for lunch, etc. What can we bring, can we sit by our friend on the bus, how long will the trip take, what animals will we see, etc? Don't dismiss the questions that aren't number related. They are still relating math to their real world, and that is a valuable way to spend math class time. So, factor in time to answer some of those questions.



*\*There are so many practical math concepts involved in these plans, why would you ever NOT involve your students in this real world planning again?*

### Turning the Questions into Math

#### ▶ How will we get there?

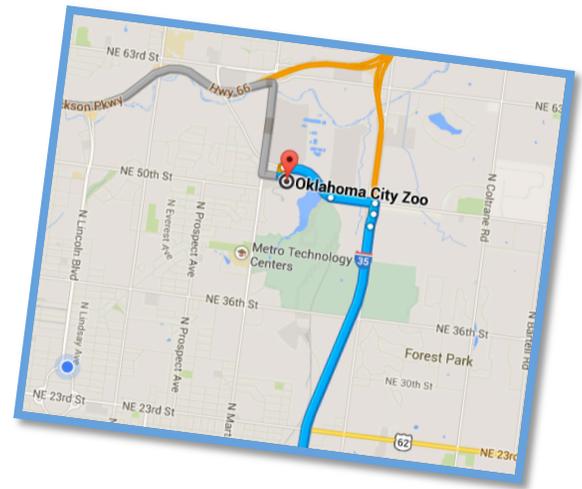
Ask students to write down, in an individual written commitment, one or two questions or ideas for how to get to the zoo. Have students present their question in small groups to work out some ideas. Once they have had a chance to discuss in small groups, call the groups together in a whole class discussion and record their ideas. More than likely, they will have worked through the ideas of cars being too small, needing too many, and will have already arrived at the conclusion that they will need to take at least one bus. At that point, ask them to decide as their small groups, how many busses they think they will need. This should generate a conversations about how many students are going, is it just one class or will they have to get information on how many students are in the other classes going, how many people can fit on one bus, etc.? Once they have worked through that information as a whole group, come to a consensus about how many busses you will need, record, on an anchor chart, any information the students generated that they may need to refer back to while planning the rest of the trip, such as number of students going, number of "tour groups" to break into, number of parents needed, number of busses needed, etc. *Interpreting the quotient?*

#### ▶ What will we have for lunch?

Have students brainstorm options. Would they bringing their own or have boxed lunches from the cafeteria? Is there somewhere there to eat? Perhaps, have the menu from the restaurant there so students can see what is offered and the prices. Steering the conversation to the cost may make it easier to get to the conclusion that boxed lunches are better. If not, discussing the time it takes away from other things the want to do will help. You can always make the compromised that, if after their box lunch, if their tour group wants to stop in and get a snack later; they can bring extra money for that.

**How long will it take to get there?**

One of the best things to come out of the Internet is online mapping! Have students map out the best route they will need to take to the zoo on Google or Bing, they will both tell you the miles and estimated time it will take to reach your destination. It will also tell you if there is a toll road involved. Have small groups plan what they think is the best route and then, as a whole group, compare the routes and decide which one you will use. Record any important information about the route on the anchor chart. Consider printing off a picture of the map and attaching it to the anchor chart.



**How much will it cost?**

Calculate the amount of gas needed and, with current gas prices, how much it should cost. Don't forget to add in the price of the bus driver and tolls. Entrance fees for everyone, including sponsors, in another great scenario for calculation. How many student tickets vs. adult tickets? What will be the total cost of the trip? What is the total divided among the participants? How much are the extra shows? What about souvenirs? How much spending money do they want to bring? The possibilities of learning are endless.

**Milking the Problem**

**Map of Zoo**

Did the students like the map of the route to the Zoo? How much math is in the map of the actual zoo? Download the map from the website and give each group one. Have them map out what they want to see, the distance between the exhibits, the idea of a scale on the map, etc. The motivation is there to investigate the zoo, and they learn that math is a tool for discovering what they want to know. It almost feels like when you sneak veggies into your child's dinner and he/she doesn't know it but announces how wonderful it is!

**Throw in a Twist**

Is there more than one way to get to the zoo? What if there is construction or what if we don't want to pay the tolls, are there some other ways to get to the same destination? What if one of the teachers was coming in their own car from a different direction? What if you were going to the zoo from your house? What happens if you have a different starting point but ending at the same destination? This would be the whole idea behind multiple entry points to a math task.

**Task's Strengths**

1. How many hours have you spent planning field trips for your students? How much math was involved? How many of you turned it over to the "mathy" teacher? The one doing the work is doing the learning. This is something they want, why not let them work for it. Show them how we use math in everyday.
2. Working together in this exploration will help build teamwork and a classroom culture of cooperative learning.
3. Getting to, not only plan, but follow it through with the actual experience of the field trip is powerful. This will be one of those memories that will come first to their minds when they are asked as an adult, "What do you remember doing in school?"

