Discovering STEM Program

Estimania Worksheet

Question	My Answer	Actual Answer
1. How many pennies are in the jar?		
2. Choose any object in the room and predict how many Popsicle sticks long it is.		
3. Predict how many Popsicle sticks long your arm is. Measure and compare.		
4. How many toothpicks are in the bag?		
5. How many beans are in the bag?		
6. How many spoonfuls (of salt) will it take to fill the container marked #6?		
7. How many ounces of water will the bottle hold?		

Discovering STEM Program

Key to Estimania

1. The event supervisors should count out the number of pennies they will use and record it for reference. Pennies can be placed in the jar marked #1 on the bottom.

2. Answers will vary. Please note that the Popsicle sticks are used just like rulers and you measure to the nearest whole stick.

3. Answers will vary. Please note that the Popsicle sticks are used just like rulers and you measure to the nearest whole stick.

4. The event supervisors should count out the number of toothpicks they wish to use and record it for reference. Toothpicks can be placed in the box marked #4 on the bottom.

5. The event supervisors should count out a number of beans prior to the event and place them in a ziplock bag.

6. The box will hold about 20 spoonfuls of salt. A funnel has been provided so that the salt may be poured back in the container.
   Please tape the salt container shut in order to reduce spills.
   Thank you! 

7. The bottle will hold about 9 ounces of liquid.

Tips for Estimania

The skill of estimating is very useful as it helps give clues as to how likely an answer is to be correct. For example, if one was estimating the cost of remodeling a room and came up with a cost of $200, 000, one could be fairly certain that a major error had been made.

In this activity, students answer a series of questions that require estimating. The questions are as follows:

1. How many pennies are in the jar? (Jar of pennies is provided. Correct answer is given on key found in kit.)

2. Choose any object in the room and predict how many Popsicle sticks long it is. Then measure the object and compare. (Popsicle sticks are in the kit.)

3. Predict how many Popsicle sticks long your arm is. Measure and compare.

4. How many toothpicks are in the box? (Box of toothpicks is provided.)

5. How many jellybeans are in the bag? (A plastic jar of jelly beans is provided. You may need to prepare a bag of jellybeans as these seem to disappear!)

6. How many spoonfuls of salt will it take to fill the box marked #8? (Have students estimate this and then demonstrate it using the spoons, salt and box. Or have a student do the measuring for the group.

7. How many ounces of water will the bottle (jar) hold? A bottle and a funnel are provided. After students make their predictions, have them do the actual measurement.)

Students observe and make predictions in #1, 4, 5, and 6.

Students use reasoning to make predictions in #7.

Students make predictions and then do the actual measuring using a nonstandard item in #2 and 3.