

Estimating Activity

Materials Needed:

Large clear container

Large quantity of any small object (dried beans, candies, rocks, coins, etc.)

Several different size scoops (spoons, measuring cups, etc.)

Directions: Fill your container with a large quantity of any small object. After filling your container, answer the following questions.

1. Without actually counting the objects, ESTIMATE how many objects you think are in your container. _____
2. How did you come up with this estimate?
3. Can you think of a better strategy to estimate the number of objects in your container. Now how many objects do you think are in the container? _____ What was your new strategy?

Now you will be using your scoops!

Choose one of your scoops and scoop out a sample of the objects in the container (make sure you fill the entire scoop!)

Count the number of objects in your scoop.

Do this three times with the *same* scoop.

What are you using for your scoop? _____

4. About how many objects fit into each scoop? _____
5. About how many scoops will it take to empty the entire container? _____

- Put all of the objects back in your container. Now use the information you gathered from the scoop to estimate how many objects are in the entire container. _____

You are now going to use some of your other scoops to revise your estimate.

- Would it be better to use a larger or a smaller scoop to estimate how many objects are in the container? Why?

Using either smaller or larger scoops (based on your answer to question #8) repeat the process above and answer the following questions.

What are you using for scoop #2? _____

- About how many objects fit into each scoop? _____
- About how many scoops will it take to empty the entire container? _____
- Put all of the objects back in your container. Now revise your estimate of how many objects are in the entire container. _____

What are you using for scoop #3? _____

- About how many objects fit into each scoop? _____
- About how many scoops will it take to empty the entire container? _____
- Put all of the objects back in your container. Now revise your estimate of how many objects are in the entire container. _____

What are you using for scoop #4? _____

14. About how many objects fit into each scoop? _____

15. About how many scoops will it take to empty the entire container? _____

16. Put all of the objects back in your container. Now revise your estimate of how many objects are in the entire container. _____

Now you are done guessing!

Count all of the objects in your container.

17. How many objects are in your container? _____

18. Which one of your estimates was the closest? _____

19. How did you make this estimate? (did you get lucky or did you use a specific strategy?)

20. If you were to do this activity again with a DIFFERENT object in the container, come up with strategy that would USUALLY give you a good estimate of the number of objects in the container. What is your strategy?

21. Think of at least three *real-life* situations where you would need to use estimating.