

### BLM 3 – Using Samples to Collect Data

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Each group will need 50 marbles to represent a population of fish. One colour of marbles will represent male salmon and the other colour marbles will represent female salmon. You will not know the ratio of male to female in your population.

Without peeking, choose a sample of 10 fish from your population. Record the numbers of male and female fish in the table and use this to estimate the percent of male and female fish in the population.

- Repeat step 1 but use a sample of 20 fish.
- Repeat step 1 but use a sample of more than 40 fish.

	# of Males	# of Females	Male %	Female %
10-fish sample				
20-fish sample				
40-fish sample				

- Which estimate of the percent of male and female fish in the population do you think is most reliable, the 10, 20, or 40+-fish sample? Why?
- Count the actual number of male and female fish in the whole population and calculate the actual percent of male and female fish.

	# of Males	# of Females	Male %	Female %
Whole population				

- Does this agree with your prediction that the greatest sample is the most reliable?
- How could you check that the greatest sample size is usually the most reliable?