Football Data Analysis Lab; SCSh4 a.b, SCSh5 a.b

Purpose: To use the scientific method to collect and analyze data.

Instructions for making a paper football:

- Take a sheet of notebook paper and fold it like a hot dog. Fold it like a hot dog again.
- Take the top-left corner and fold it diagonally.
- Continue to fold the little triangle in the top downwards until there is a little rectangle in the bottom.
- Fold the rectangle in to the little gap in the bottom and you have a paper football.

Instructions for collecting data: Lay a meter stick on the table. Try to thump the football across the desk to land within the general proximity of the designated distances (30 cm, 55cm, 75 cm, 90 cm). You will need to record the number of attempts that it took you to successfully reach the designated distances. *The number of attempts will always be equal to or greater than the number of successes.*

Now copy down the following table on your OWN PAPER:

Distance	# of attempts	# of successes
30 cm		2
55 cm		4
75 cm		5
90 cm		3

Q1. Create a line graph for the results of your experiment. Place the distance on the X-axis and BOTH the number of successes and number kicks on the Y-axis. This means you will have two separate lines on the same graph so plan to use different colors or patterns for each line and make a key.

Q2. All scientific measurements are taken in metric (SI). Convert each of the four distances in your data table from centimeters (cm) to meters (m) and express each answer in scientific notation. For example, 530 m would be written as 5.3×10^2 m.

Q3. To determine the accuracy of your "kicking ability", you will need to calculate the percentage using the following equation: # of successes ÷ # of attempts x 100 = percentage of accuracy. Complete this calculation for all four distances.

Q4. Describe how each step of the scientific method used in this lab could be applied to another experiment or data set. First, list the steps that were used for this activity, and then describe a different experiment of scenario that could also use those steps. Please justify your responses.

King-Henry-Doesn't-[Usually]-Drink-Chocolate-Milk
Kili-Hecto-Deka-[Unit]-Deci-Centi-Milli