**Bouncing Ball Experiment**

**Question:** Which type of ball bounces highest?

**Materials for each team:** 1 meter stick, 4 different kinds of balls, 1 pencil, 4 calculators, 3 sheets of paper, tape

**Hypothesis:**

**Procedure:**
1. Prepare an area to test your hypothesis. Tape 3 sheets of paper together, end to end. Tape them to a wall so that the plain side is showing and the bottom is touching the ground.
2. Stand a meter stick against the wall in front of the paper, with the 0 cm end on the ground. Person #1 is going to drop their ball from the 100 cm mark, and the rest of the team will observe its bounce height. They will put their fingers on the paper at the height of the bounce, and make a mark to show the location. Everyone will record the bounce height on the data chart in the Trial 1 box.
3. Repeat these steps 2 more times from the 100 cm mark for Trials 2 and 3.
4. Repeat the experiment with Person #2 dropping their ball. Be sure to perform 3 trials, and allow time for team members to record the data. Then have Person #3 and Person #4 test their balls.
5. At the end of the experiment, everyone should use their calculators and figure the average bounce height for each ball in the experiment. **Round the average to the nearest whole number.** Check with your teammates to be sure that you all have the same results.
6. Graph your data on the bar graph by first writing in the different names of the ball types on the lines at the bottom. Then color a bar to match the average height of each ball type.
7. Answer the questions at the end of the activity.
Conclusion: Was your hypothesis correct? Explain your answer.

What were your variables in this experiment?

What steps did you take to make sure that your results were reliable?

What are two other questions to investigate using bouncing or rolling spheres?
1. 
2. 

Connections:
Describe how you applied the following science concepts in the experiment.
1. Hypothesis
2. Variable
3. Data
4. Graph

Using your State Standards Indicators chart, list the code(s) covered below: