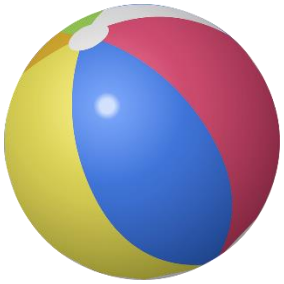
Name: _____ Period: _____ Date: _____

Writing Up an Investigation Lab Activity – Student Edition



Best Bouncer

Introduction:

This lab involves planning, conducting, and writing up a scientific investigation and will examine the skills covered in lessons 1-7 and 1-8 of this topic. Your teacher will give you time to carry out all three parts of the investigation in class.

Your task is to plan, carry out and report on which type of ball bounces the highest. You will have access to the following equipment to help you collect your data.

Equipment list:

- Meter ruler
- Ring stand and clamp.
- Golf ball
- Ping pong ball
- Rubber ball

Task 1: Planning your Investigation

Write a scientific plan which shows how you will carry out your experiment.

1. Write a hypothesis for your investigation in the space below:

   _____

   _____

2. Which variable will you change in this investigation?

   _____

3. Give a range for the variable described above.

   _____

Writing Up an Investigation Lab Activity – Student Edition

4. Identify the dependent variable for this investigation. Briefly describe how you will measure it to obtain some data.

_____

_____

5. List any other variables which you will need to control to make it a fair test. Briefly state how you will control them.

_____

_____

_____

_____

6. Write a detailed method which describes how you will collect your data.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

7. Draw a labelled diagram of your experimental set-up in the space below.

8. Conduct limited trials to check your method is workable. Place any notes from your trials in the space below:

_____
_____
_____
_____
_____

9. List any changes that you need to make to your method in the space below. If no changes are required leave this section blank.

_____
_____
_____
_____
_____

Task 2: Conducting your Investigation

Carry out your experiment and collect data which allows a trend to be observed.

10. Draw a results table in the space below to record any measurements you obtain. You also may leave space in your table for any processing you will do in task 3.

Name: _____ Period: _____ Date: _____

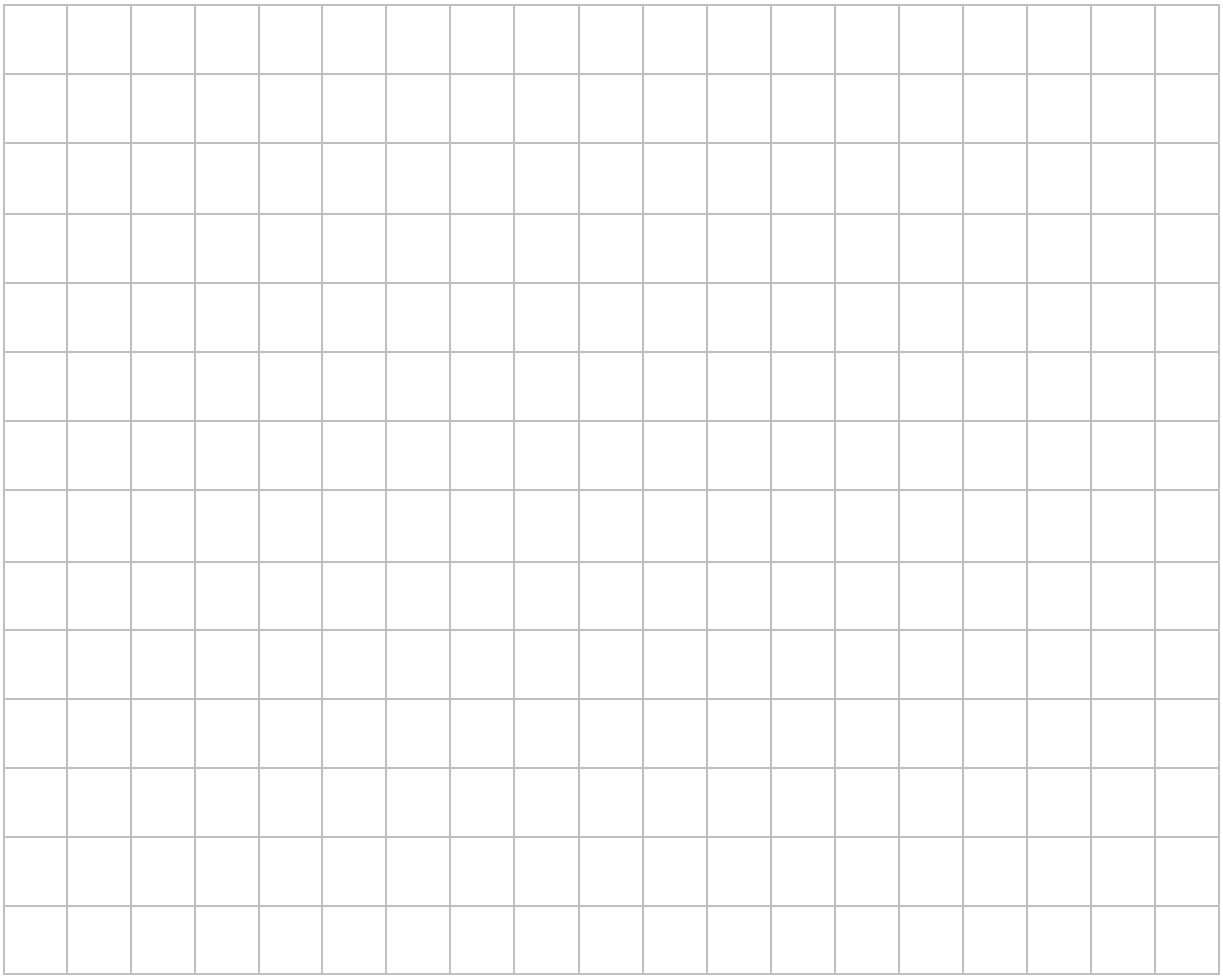
Writing Up an Investigation Lab Activity – Student Edition

Task 3: Writing Up your Investigation

Process and interpret your data to allow any trends to be identified and described.

11. Calculate averages and present your data as a graph in the grid below. Remember to use an appropriate scale and labels.

    Title: _____



12. Write an interpretation of your data.

    _____

    _____

    _____

    _____

Writing Up an Investigation Lab Activity – Student Edition

13. Summarize your findings as a conclusion which answers the hypothesis of the investigation.

_____

_____

_____

_____

_____

14. Evaluate your investigation using the following criteria:

    a. Identification of any outliers in your data and how they affected the trend.

_____

_____

_____

_____

_____

    b. Limitations to the investigation/ difficulties you faced in collecting your data.

_____

_____

_____

_____

_____

    c. Improvements you would make if you could repeat the investigation again.

_____

_____

_____

_____

_____