

Try this Activity (Nelson 12, p. 49)

Comparing Horizontal Range

- The purpose of this activity is to illustrate the relationship between the angle of projection and the maximum height and horizontal range of a projectile. The entire class can make individual calculations (1 or 2 each) for various angles of projection (every 3° from 3° to 87° is suggested) and summarize the calculations in a table. The maximum horizontal range corresponds to a projection angle of 45° , and the maximum height corresponds to the steepest projection angle. If time is an issue, teachers may want to compute these calculations quickly using a spreadsheet.
- Time: 10 min

Teacher Preparation

- A table on the blackboard or on an overhead transparency provides an efficient way for students to record and summarize their results.

Materials and Equipment Notes

- Not applicable

Safety and Disposal

- Not applicable

Student Preparation

- Students must be aware of the concepts of projectile motion and be adept at making the appropriate calculations.

Teacher Suggestions

- This exercise should take a short time. Preparing a recording table in advance makes the exercise more efficient.

Extensions/Modifications

- It is worthwhile pointing out that for every horizontal range recorded in the table, there are two corresponding projection angles.