

Investigate – Peeking Inside the Atom

In this lab, you will design an experiment to determine the shape of the object that is hidden underneath the aluminum pie tin without looking under it. All that you have to complete this experiment is the apparatus on your table, a dry erase marker and a marble.

I. Design:

A large, empty rounded rectangular box with a blue border, intended for writing the experimental design.

II. Purpose:

A horizontal, empty rounded rectangular box with a blue border, intended for writing the purpose of the experiment.


III. Materials:

A large, empty rounded rectangular box with a blue border, intended for listing the materials needed for the experiment.

IV. Procedure (If different from Design)

A large, empty rounded rectangular box with a blue border, intended for describing the experimental procedure.

V. Results



VI. Data Analysis

1. Based on your data above, what is the shape of the object hidden under the tin.
2. If the aluminum tin represents a single atom, what is the object that you determined the shape of in the center?
3. If the aluminum tin represented a Thomson atom, what would you have expected the marble to do.
4. Based on your answer to question #2, how would this new model of the atom be different from the Thomson model?