

Slug Gun

Estimated Time for Activity: ~5 minutes

Optional Objectives:

The students will:

- Understand the concept of conservation of momentum.
- Use the conservation of momentum to gain insight into what will happen with 1 or more body problems.

Materials:

- Slug gun
- Slug
- Matches
- String

Optional Vocabulary:

- Momentum
- Conservation

Procedures:

- Pull the lever back on the gun and place the provided string around the lever and the set screw.
- Place the slug in the gun.
- Ask the students what the system is (*i.e.*, *gun and slug*) and what the initial momentum of the system is (*have students write it out*).
- Light a match and burn through the string.
- Observe the slug fly forward and the gun move backward.

Optional Post-Activity Question(s):

- Why did the gun move backward?