## Introduction to Water Rockets

Answer the following questions about the science of rocketry. Use the knowledge learned to help design your rocket.

- 1. Describe what a water rocket is using words and pictures.
- 2. What is Newton's First Law? How does it apply to rocketry?
- 3. What is Newton's Second Law? How does it apply to rocketry?
- 4. What is Newton's Third Law? How does it apply to rocketry?
- 5. Why does a rocket with water fly higher than a rocket with no water?
- 6. What is air drag?
- 7. List three things you can do to your rocket to decrease air drag.
- 8. What is the purpose of fins on a rocket?
- 9. List two purposes of a nose cone on a rocket?

10. What is the purpose of using a ballast in your rocket?

In the space provided below, sketch out your rocket design. Make sure to draw a nose cone and fins to the shape you desire.



Will you be using a parachute or other device to slow down the decent? Explain how it will work: