Answer the following questions to aid in planning for the Egg Drop. Be specific in explanations. Draw diagrams if necessary.

- 1. Explain how the egg falling to the floor is related to Newton's first law. That is, explain in terms of inertia.
- 2. How does Newton's second law affect the egg carrier that you are going to build? (Explain in terms of Mass)
- 3. Use the third law to explain the effect that force of the floor has on the egg carrier.
- 4. Explain how air bags in cars work? Use surface area and how they disperse force.
- 5. How do race car drivers survive bad crashes? What equipment is it that helps the driver stay safe?
- 6. What is rigidity?
- 7. What shapes are rigid?
- 8. What shapes are not rigid?
- 9. What are you going to build into your carrier that will protect your egg?
- 10. List three materials things you could to try to use for your egg carrier.
  - a.
  - b.
  - C.