

**Main Ideas, Key Points,  
Questions:**

*After watching the video segment, write down key points, main ideas and big questions.*

**Objective(s):**

- *To use the Kinetic Molecular Theory to explain the characteristics of gas particles.*
- *To use the Ideal Gas Law to calculate relationships between pressure, volume, temperature and number of moles of gas.*
- *To analyze data from engineering design challenge using the Ideal Gas Law.*
- *To describe practical applications of chemical analysis.*

**Notes:**

*During the video segment, use words, phrases or drawings to take notes.*

**Summary:**

*After watching the video segment, write at least three sentences explaining what you learned.  
You can ask yourself: "If I was going to explain this to someone else, what would I say?"*

**After watching the video and performing any associated labs and/or experiments, you should be able to answer the following:**

- 1. How many different air bag models did you test?**
- 2. What are the characteristics of optimum performance for an airbag?**
- 3. Which combination of sodium bicarbonate and acetic acid produced your optimum results?**
- 4. Use what you know about the Kinetic Molecular Theory to explain why adding more vinegar and baking soda produces a faster reaction.**
- 5. How can limiting the amount of vinegar cause the reaction to last for a specific amount of time?**
- 6. How are chemical reactions useful to scientists and technicians in the Georgia Aquarium?**