1. What is your definition of scattering? Give a few examples of scattering.

Activity #1

2. Shine your flashlight and laser pens through the tank (but NOT into anyone's eyes!).
   - What is happening? What does the beam look like on the other side of the tank?
   - What does the beam look like inside the tank?
   - Is the light being scattered? In which direction?

3. Add the mystery particles to the tank. Shine your flashlight/lasers through the tank again.
   - Now what is happening? What does the beam look like on the other side of the tank?
   - What does the beam look like inside the tank?
   - Is the light being scattered? In which direction?

4. What is scattering the light? Does light always scatter in the direction you observe in this experiment? What about in the examples you listed in #1?

Activity #2

5. What do you think is in the flask?

6. Explore your hypothesis by shining laser pointers through the flask. What do you observe?

7. Now add the mystery material to the flask and mix it up. Again make observations using your laser pointers. What happened?

8. What phenomenon does this experiment demonstrate?

Activity #3

9. What is needed to form a cloud?

10. We are going to test this hypothesis. Use the pump to increase the pressure inside the plastic bottle. DO NOT OVERINFLATE THE BOTTLE. What happens when the pressure is released? Record your observations.

11. We will now try this process again after adding a mystery substance. What happens when the pressure is released? Record your observations.

12. What does this experiment teach us about how clouds in the atmosphere are formed? Do you still agree with your answer to #9?