DISCUSS AIR AS PARTICLES

1. What is the air in the syringe and the air in the bubble made of?
   air particles, mostly nitrogen and oxygen

2. What happens to the air particles in the syringe when you push on the plunger?
   Air particles get forced closer together; they are compressed into a smaller volume.

3. What happens to the air particles in the bubble when you pull up on the plunger?
   Pulling creates a larger volume. Air particles expand to fill the larger volume.

4. Are there more air particles in the bubble when it is compressed or when it is expanded?
   The syringe is a closed system, so the number of particles does not change.

5. When you push on the plunger, are the air particles closer together in the syringe or in the bubble?
   closer together in both subsystems, but equally close together in both

6. What is between air particles?
   space; distance; vacuum; void; nothing (except possibly other air particles)

7. What happens to air particles when a volume of air is compressed?
   Nothing happens to the particles themselves; they just get closer together.

   When a volume of air expands?
   Nothing happens to the particles themselves; they just get farther apart.