

Name _____

Date _____

Block _____

LESSON CLUSTER 5: Compressing and Expanding Air

Lesson 5.1: Explaining Things about Air

In the lessons that you have already studied, you have been learning quite a bit about molecules; what they are, how small they are, how they are arranged and how they move. These lessons have been helping you explain things in terms of molecules, not just in terms of what you see, hear, or feel.

In science, we often explain how things happen by giving molecular explanations. By using what we know about molecules in our explanations, we can better understand why something happens in a certain way.

For example, we have already learned that molecules are constantly moving. Because air molecules are constantly moving, they are always hitting objects in the air. This helps to explain why certain things happen. See if you can use the idea of air molecules hitting things to help you explain the demonstrations that your teacher will now do. Watch and discuss the demonstrations, then answer questions about these events.

1. hair dryer and ping pong ball
2. sitting on inflated basketball
3. blowing on wind chimes

Demonstration 5.1: Molecules Hitting Things

Answer the questions below after your teacher has done the demonstrations.



1. In your own words, explain how the ping pong ball stays up in the air. Use molecules of air in your answer.

2. Why doesn't the basketball get flat when you sit on it? What is holding a person up?



3. Are there molecules hitting the wind chimes when the air is "still"?

4. Why don't the wind chimes ring when the air is still?