

Grasping for Air

Section: Forces & Interactions

Name: _____

Date: _____

Inquiry Question

Write down what you'll be learning today! What do you want to understand?

Procedure

1. Place a trash bag inside of a trash can.
2. Reach inside the bag and push it against the trash can, starting from the bottom, so that all the air is squeezed out. The bag should be flat against the can all the way around.
3. Fold the top of the bag over the rim of the trash can and tape seal it with duct tape. Make sure the bag is totally sealed so no air can come in or out.
4. Reach into the can and try to pull the bag out. Try doing this by grabbing different parts of the trash bag and angling the can different ways.



Observations, Data Collection & Analysis

Write down your observations below.

1. Make a prediction: what will happen when you try to pull the bag from the trash can? Why?

2. What happens when you try to pull the trash bag out of the can? Is it different when you change the position of the trash can or the direction in which you are pulling?

3. What kind of force stops you from pulling out the bag? Is it a push or a pull force? What direction does the force point?

4. How does the air pressure between the bag and the wall change when you pull the trash bag out?

5. Draw a diagram showing the space between the trash bag and the trash can, and the air outside of the trash bag. Fill it in with air particles. Which space has a higher concentration of air particles?

6. What might happen if there were holes in the trash bag or trash can?
