Science Journal Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**A.** Put your finger on the end of the syringe and push in the plunger.

1. What happened?

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1. Could you push in the plunger all the way or only part of the way?\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Explain why \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Is there any matter inside the syringe?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ What evidence do you have?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. When you push in the plunger at the end and cover the other end with your finger, what happens to the matter inside the syringe?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**B.** When you cover one end and push in the plunger, you increase the pressure inside the syringe. **Pressure** is caused by the air particles bumping against each other and the sides of the container.

1. Why is there more pressure when you push in the plunger? \_\_\_\_\_\_\_\_\_\_\_

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1. Push the plunger in all the way without your finger on the end. Can you do it? Why does it go all the way in this time? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. When you don’t have your finger over the end and you push in the plunger, have you increased the pressure inside the syringe?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Explain. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**C.** Push the plunger all the way in. (No finger on the end.) Once the plunger is all the way in, put your finger on the end and then try to pull out the plunger.

1. What happened when you tried to pull out the plunger? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Explain why you could not pull out the plunger. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**D.** Remove your finger from the end of the syringe. Remove the plunger. Drop a marshmallow into the syringe. Let the marshmallow fall to the tip. Put the plunger back in place, and push it in to the top mark. Do not move the plunger close to the marshmallow.

1. Put your finger over the tip of the syringe and try to push in the plunger. Keep your finger over the tip. Observe what happens to the marshmallow inside. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Explain why the marshmallow seems to shrink. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. A marshmallow is made of different kinds of particles. Most of the ingredients are gelatin, water, and sugar. But what makes the marshmallow fluffy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Draw a picture showing the particles in the marshmallow when they are under pressure. Then draw a picture of the particles as they normally are.

*Marshmallow particles under normal conditions.*

*Marshmallow particles under pressure.*

**E.** Summary

1. Explain how to change the pressure inside the syringe. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Explain what happens when you increase the pressure on a gas (the air inside the marshmallow.)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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