

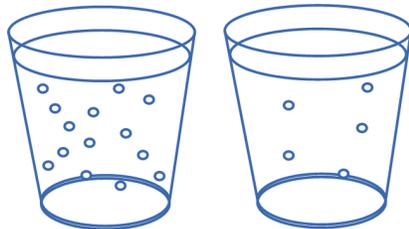
Layered Drinks for Kids

Exploring Density in the Kitchen with Layered Drinks



Density is the scientific way of saying how much stuff is in a space. A party with a couple people in the room isn't very dense. But if more and more people show up, the room will become very crowded and have a higher density. Liquids have different densities too!

Each of these glasses has sugar molecules in them. Can you tell which one is denser?



The one on the left has a lot more sugar but in the same size glass, thus it is denser!

Density can help us know which objects float. An object denser than water like a stone will sink while an object less dense than water like a balloon will float. We'll use this concept to make our layered drinks!

Follow along with our video and discover other activities at:

<https://theleonardo.org/leo-at-home>

Feeling Salty?

You have experienced different water densities if you have ever swam in the Great Salt Lake. The high salinity (having a lot of salt in it) makes the water denser, and makes it easier for you to float!



Materials

- Clear cups
- 2-3 juices or sodas of your choice
- Ice
- A spoon

You will use a **Nutrition Label** to figure out the different densities. Most will have it listed as grams of sugar per 8 fl oz (serving size). Here is an example of where to find both:

| Nutrition Facts | |
|-------------------------------|---------|
| 8 servings per container | |
| Serving size | 8 fl oz |
| Amount per serving | |
| Calories | 140.0 |
| % Daily value* | |
| Total Fat 0g | 0% |
| Saturated Fat 0g | 0% |
| Trans Fat 0g | |
| Cholesterol 0mg | 0% |
| Sodium 35mg | 1% |
| Total Carbohydrate 35g | 13% |
| Dietary Fiber 0g | 0% |
| Sugars 31g | |
| Protein 0g | |

Directions

1. Pick 2-3 juices to mix in your layered drink.
2. Take a look at the **Nutrition Label** on each drink (see left). The one with the most sugar will be the densest. Make sure the serving sizes are the same when comparing the drinks.
3. Fill glass with ice.
4. Pour the densest liquid into the cup about 1/3 full.
5. Choose the next densest drink. Gently pour on the back of the spoon to slow the flow into the glass. The spoon and ice should slow it down enough for the juice to form a layer.
6. If you have a third drink, repeat step 5.
7. Sit back and enjoy your refreshing colorful drink!

What's the Science? If we pour it gently enough, the less dense liquid will float right at the top, just like how a less dense item like a balloon will float on water. What do you think would happen if we tried to pour the densest liquid on the top layer?

Share with the Leo community!

How does your drink look? Did you discover an amazing new recipe? Show off your new drink by posting it on social media with:

#leoathome

and

#museumathome.

