



Orange Float

No, we are not going to make a refreshing summer drink, but we are going to see what occurs when we place an orange in water. Try the experiment below and see what happens. The record you observations below.

1. Result of oranges with peel on.
2. Result with the peel removed.

Why would taking something away cause the orange to no longer float?

It has to do with the properties of the orange, or the characteristics of the matter.

What are the physical properties of an orange that casuse it to react differently in this experiment?

The rind is very porous. It contains lots of tiny air pockets which give the fruit extra buoyancy that allows it float, similar to life jackets used for boating. When you remove the less dense rind, the heavier inside has nothing to help it stay afloat and it sinks.

Another Challenge: What happens when you...?

Try using a different type of fruit such as a lemon, a lime, and an apple. Does removing the peeling make a difference? Guess what you think will happen and then see if you are correct. Record your results below.

1. Lemon
2. Lime
3. Apple

Use these materials and instructions to conduct your experiment.

Materials	Instructions
<ul style="list-style-type: none"> • Large bowl, filled about $\frac{3}{4}$ of the way with water • 2 oranges 	<ol style="list-style-type: none"> 1. Place the two oranges gently on the top of the water in your bowl. Observe if they sink or float. Then remove 1 of the oranges. 2. Peel one orange and place it gently on the top of the water in your bowl. Observe if it sinks or floats. 3. Record your observations above.

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