

Lab Instructions: Making Peanut Milk

Background Information (Teacher Only)

Allergy Alert: This lab requires working with peanuts. Take appropriate safety measures and be sure to ask students about peanut allergies.

While students should not taste anything made in the lab it is ok, with your permission, to smell the product they create. As a comparison, you might have some varieties of milk available for them to compare with their creation.

Pre-lab discussion:

- What makes milk, milk? Does it depend on where it comes from or its chemical composition?
- Does it have to come from an animal?
- What do you think the process is for turning plants into milk?
- Bring in some different milks (cow, goat, almond, soy, coconut). Have students smell them and describe what they smell.

Advanced: Is plant-based milk true milk? (Push students to think about chemical composition and nutritional values)

Advanced: (Pasteurization is not a focus of this lab, but it could be an argument for or against the use of plant milk as a substitute for animal milk)

- What is pasteurization?
- Why is it important for cow milk to be pasteurized? Does plant milk have to be pasteurized?
- Why or why not?
- What impact does pasteurization, or the lack thereof, have on the health of the milk?

Pre-Lab Extension Activity:

Under teacher supervision have 2-3 students volunteer to be taste testers. Blindfold them and let them try different types of milk. See how many of them can correctly identify the milk they are drinking.

Data:

There is no true data to be collected in this experiment.

Conclusion:

The peanut can be used to produce a dairy substitute that is nourishing and appetizing. George Washington Carver solved the milk scarcity problem in the Belgian Congo by creating peanut milk from a plant easily grown in the area. George Washington Carver demonstrated the versatility of the peanut and helped it become an important crop.

Post-Lab Extension:

Encourage students to take their procedure and try it at home so that they can taste the milk. Have them report back on their opinion of peanut milk.