Virginia Cooperative Extension



PUBLICATION 349-012

SMART DRINKS LESSON PLANS

EXPERIENCE: FILTER-BUSTER

Age	□Children 7-10	⊠Children II-I4	⊠Mixed Ages
Setting	□Classroom	□Camp	⊠Either
Location	□Outside	⊠Indoors	□Either

Virginia Standards of Learning

English 3.1, 3.2, 3.8, 4.1, 4.2, 5.1, 5.2, 6.1, 6.2, 7.1, 7.2, 8.6

Health 3.1, 3.2, 4.1, 5.1, 5.2, 6.2, 7.3

Math 3.14, 3.8, 4.12, 5.3, 5.11, 5.12, 6.10, 7.3

Project Skill: Filtering drinks

Success Indicators: As a result of this lesson, students will be able to:

- compare drinks by the rate at which they filter
- identify and discuss ingredients in different beverages

Life Skills: Decision making, Teamwork, Collaboration.

Preparation Time: Gather the supplies and set up stations.

SUPPLIES:

- Samples of different beverages
- Stopwatches
- Coffee filters
- Collection containers
- Measuring cups
- Paper or note cards

OPTIONAL SUPPLIES:

• Be a Drink Detective (VCE publication 348-242)

STEPS:

- 1. Set up different stations with different beverages.
- 2. Assign students to groups of four to five.
- 3. At each station, set up a task list.
- 4. Each group may circulate to each station and perform the experiment with each drink choice, if

time permits. Otherwise, they can visit each station and observe the beverage and the length of time needed to filter it.

- 5. Bring the class together to discuss which drink choices would most easily and readily be used by the body.
- 6. Hand out *Be a Drink Detective* and discuss the questions.

TIPS:

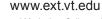
- Ask for help in setting up stations.
- For younger children, measure the liquids ahead of time.
- Milk and 100 percent juice (especially orange and grapefruit juice) will filter slower than other drinks because of the protein in milk and fiber pulp in the juice. They are still healthy drink choices, but they won't quench a person's thirst as quickly as water.

EXAMPLES OF BEVERAGES:

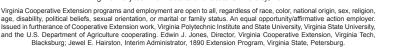
- Water
- · Soft drinks
- Unsweetened tea
- Sweetened tea
- Sports drinks

Tasks:

- Set up the coffee filter over the container.
- Measure out 1 cup of the drink.
- Write down the time.
- Pour the drink over the filter.



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- Record the time the liquid was completely filtered.
- Calculate how much time it took to filter and write the answer down on the paper or a note card.

SHARE:

- What were you asked to do in this activity?
- What did you learn?

PROCESS:

- Which beverages did you think would take the least and most amount of time to filter? Why?
- What else did you notice from this experiment?
- What surprised you about this activity?
- Based on this experiment, which drinks do you think would quench your thirst the fastest? Why?
- How many glasses of water should you drink each day?
- What other beverages are healthy options, even if they may not filter quickly?
- If you were to explain what you did today to a friend, what would you say?

GENERALIZE:

- What ingredients, besides sugar, in beverages may have negative consequences?
- What are some reasons you should choose healthy drinks?

APPLY:

• What will you tell others about this exercise?

The best thirst Quencher is water.

Sweetened beverages take Longer to digest, Just as they take Longer to filter.

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