

### SMART DRINKS LESSON PLANS

## EXPERIENCE: FILTER-BUSTER



Age	<input type="checkbox"/> Children 7-10	<input checked="" type="checkbox"/> Children 11-14	<input checked="" type="checkbox"/> Mixed Ages
Setting	<input type="checkbox"/> Classroom	<input type="checkbox"/> Camp	<input checked="" type="checkbox"/> Either
Location	<input type="checkbox"/> Outside	<input checked="" type="checkbox"/> Indoors	<input type="checkbox"/> 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
- Unsweetened tea
- Sports drinks
- Soft drinks
- Sweetened tea

**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.

- 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?




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