

# THE BEVERAGE OF LIFE

A program by Oklahoma 4-H Youth Development & Oklahoma Water Resources Center

**SKILL: SCIENCE    TIME: 20-30 MIN**

## OBJECTIVES:

Students will:

- Describe the importance of water in the body.
- Understand sources of water from our diet.
- Learn to make informed decisions regarding food and beverage choices.
- Develop an understanding of the signs of dehydration.

## LESSON PREP:

- Set up laptop and projector and display PowerPoint slide show on projector screen.
- Set up electronic buzzers on desks or tables behind the laptop where students can see the projector screen.
- Place one chair behind each buzzer. Make a row of chairs behind each buzzer so students can rotate from the front of a row to the back. For a class of 25, there would be 3-4 chairs per buzzer.

## VOCABULARY

- Dehydration

## MATERIALS

- The Beverage of Life PowerPoint Slides
- Electronic Buzzer System
- Extension Cord
- Projector
- Projector Screen
- Laptop Computer

## ADDITIONAL RESOURCES

- [HTTP://WWW.CLEMSON.EDU/EXTENSION/HGIC/FOOD/PDF/HGIC4151.PDF](http://www.clemson.edu/extension/hgic/food/pdf/hgic4151.pdf)

# 4H<sub>2</sub>O: THE BEVERAGE OF LIFE

## LESSON ACTIVITY:

This session is called The Beverage of Life and it focuses on YOU! Did you know that your body is made up of mostly water? Did you also know that if we didn't have water in our bodies, we would die? We need water every day for our body to function right!

We are going to play a game called The Beverage of Life. We are going to use these buzzers and divide into teams to play. The people seated at the buzzer will have a chance to answer a question. Once the answer is revealed and discussed, each person will rotate to the chair in front of them and the ones at the buzzer will go to the end of their line and sit down.

**INSTRUCTIONS FOR ZEECRAFT BUZZERS:** Let's review how the buzzers work. We will test them one time so you can see how to buzz in. On the table is a black handle with button on top and a small black box with a light on top. Each one is connected to the buzzer box. When the box is reset, all buzzers are active. I will ask you to not buzz in until I finish reading the question. Once I finish, if you think you know the answer, hit the button. If you are the first to buzz in, your light will come on. Don't answer until I call on you.

We will begin the game with our first question.

**Slide 1:** Title Slide — The Beverage of Life

**Slide 2:** What is odorless, colorless, tasteless, has no calories, but is something we must have to survive?

**Slide 3:** Water — Water is the beverage of life. It is vital in maintaining good health and life in general. Did you know that you can survive about six weeks without food, but you can't live more than a week without water?

**Rotate**

**Slide 4:** How much of our bodies is made up of water?

- A. 10%
- B. 25%
- C. 60%
- D. 95%

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**Slide 5:** The answer is C — 60%. Water is the most abundant substance in the human body and on earth. Like oxygen, you can't live without water. Body organs of all types contain water, including muscle (about 73% water), blood (about 83% water), and body fat (about 25% water). Even bones contain some water.

## Rotate

**Slide 6:** Why is water important?

- A. Water is found inside and around the cells of the body.
- B. Almost every function of the human body requires water.
- C. Water helps many of our medications work properly.
- D. All of the above

**Slide 7:** The answer is D — All of the above. Water is found inside and around the cells of the body. Almost every function of the human body requires water. These functions include: transporting nutrients and oxygen throughout the body, eliminating wastes, and temperature regulation. Water is also needed to help many of our medications work properly.

## Rotate

**Slide 8:** How do we get the water we need every day?

- A. Drinking water & other beverages
- B. Eating food
- C. Sweating
- D. Only A & B
- E. None of the above

**Slide 9:** The answer is D — only A & B. We need to replenish water in our body throughout the day because we lose water through sweating, urination and breathing. Nearly all the beverages we drink and food we eat contain water, so be sure to make good choices. Try to choose decaffeinated beverages over caffeinated ones. During hot, humid weather or if you are more physically active, you will lose more fluid, so increase your water intake to keep you hydrated! What are some examples of food that contain water?

## Rotate

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**Slide 10:** \_\_\_\_\_ is an excellent beverage choice because it supplies your body with calcium, vitamin A, Vitamin D and protein.

- A. Water
- B. Soda
- C. Milk
- D. Orange Juice

**Slide 11:** The answer is C — Milk. Milk supplies your body calcium and vitamin D which build strong bones and teeth. It also supplies vitamin A which helps to keep your cells healthy and growing. Milk also has protein helps repair the body and aids in building muscles.

## Rotate

**Slide 12:** This beverage is an excellent choice because it supplies your body with vitamin A and vitamin C?

- A. Water
- B. Soda
- C. Milk
- D. Fruity beverage/Juice

**Slide 13:** The answer is D — Fruity Beverage/Juice. Fruity beverages and juices supply various amounts of vitamins A and C. These vitamins promote growth and health of cells and tissues throughout the body. Be sure you choose 100% juice beverages, though! Be aware that juices have calories and some have added sugar.

## Rotate

**Slide 14:** What beverage helps replace fluids, supplies calories, and restores nutrients to the body that are lost through sweat?

- A. Water
- B. Soda
- C. Sports drinks
- D. Fruity beverages/Juice

**Slide 15:** The answer is C — Sports Drinks. There are times when sports drinks are preferred over water. Water is an adequate fluid replacement if exercising for less than 60 to 90 minutes. If activities last longer than 60 to 90 minutes, sports drinks may be a better source of fluid replacement. It provides fuel (in the form of carbohydrates) for muscles, and the sodium and glucose in the sports drink helps the body absorb the fluid better. As a result, sports drinks may enhance overall athletic performance, especially in endurance events.

## Rotate

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**Slide 16:** Is bottled water safer than tap water? Yes or No

**Slide 17:** The answer is No. Both bottled water and tap water are both tightly regulated by the government to ensure safety. So, what's the difference? Some people prefer the taste of bottled water. Tap water usually contains chlorine which can add a slight "flavor." Tap water also contains fluoride which helps teeth fight cavities. Bottled water is easy to carry and take along but may be expensive.

**Rotate**

**Slide 18:** Which beverages should we avoid drinking?

- A. Beverages with caffeine
- B. Soft drinks
- C. Diet soft drinks
- D. All of the above

**Slide 19:** The answer is D — All of the above. Teas and coffees are a source of caffeine, which can increase the body's water loss. Soft drinks are made with carbonated water and flavoring agents. To maintain adequate hydration, choose decaffeinated beverages. A better drink choice is water, milk, 100% fruit juice, or decaffeinated beverages.

**Rotate**

**Slide 20:** What are some signs of dehydration?

- A. Thirst and dry mouth
- B. Fatigue or tiredness
- C. Headache
- D. High body temperature
- E. All of the above

**Slide 21:** The answer is E — All of the above. **Dehydration** can have many different effects on your body. You cannot function properly at school, when you play, as an athlete or anything else you choose to do if you do not drink enough water. Not drinking enough water controls how you feel, think, act, speak, perform in school, etc.

**Rotate**

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**Slide 22:** How much water should we try to drink each day?

- A. 4-5 cups
- B. 8-12 cups
- C. 12-15 cups
- D. 18-20 cups

**Slide 23:** The answer is B — 8-12 cups. On an average day, a healthy person needs 8 to 12 cups of water to replace the amount lost through perspiration, breathing, urination, and bowel movements. These fluids must be replaced to avoid dehydration which is an abnormal loss of water in the body that can keep the body from working normally. When eating a high fiber diet, extra water is needed to process the additional roughage.

## Rotate

**Slide 24:** What foods contain lots of water?

- A. Fruits and vegetables
- B. Meats and nuts
- C. Dairy products
- D. Sweets

**Slide 25:** The answer is A — Fruits and vegetables. Fruits and vegetables — fresh, frozen and canned—contain lots of water. For example, watermelons, tomatoes, lettuce and celery contain more than 90% water, and oranges are 87% water. Half of your plate should be filled with fruits and vegetables so you get some water from these foods.

**Slide 26:** Let's Clean Up and Review

- Why is water important to our body?
- How much water should we drink each day?
- Describe how you will improve your choices in selecting foods and beverages.
- How can we maintain proper hydration?
- How can a person tell if they are getting dehydrated?

Lesson adapted from 4-H<sub>2</sub>O For You: Water: The Beverage of Life, Texas A&M AgriLife Extension Service, Guadalupe County



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