

Hydration Lesson Plan TRAIN @ School

Objectives

- Know how much of the body is made up of water
- Know signs of dehydration

Outline

- Introduction :
 - Discuss the importance of hydration
- Instruction:
 - Where does water come from?
 - How much water we need a day
 - Water and Exercise
 - Sponge activity
 - What happens when we don't get enough water
- Activity:
 - Measuring water
 - Sugar activity
 - Water log



Special Olympics

TRAIN
SO

Supplies

Time: 15-60 minutes
Materials:
Water, sponge, cup,
water bottles for
students, sugar cubes,
visual representation
of sugary drinks
(optional), glass,
measuring cup, clear
container

Resources:

Special Olympics Website : <http://www.specialolympics.org/>
TRAIN SO Website: <http://trainso.blogspot.com>

Hydration

- Time: 15-60 minutes
- Materials: Water, sponge, cup, water bottles for students, sugar cubes, visual representation of sugary drinks (optional), glass, measuring cup, clear container
- Objectives:
 - Students will verbally state how much of their body is made up of water.
 - Students will verbally state three signs of dehydration.
- Introduction
 - Introduce the topic of hydration to the students.
 - **Water is very important to our health, and it makes up a 70% of our bodies. This empty cup I have represents our bodies. I am going to pour water into the cup and I want you to tell me to stop when you have think that I have filled it up enough to show how much water our bodies are made out of.** (Fill up the cup a little at a time allowing students for them to tell you if that is how much water they think makes up our bodies. You want to fill the cup $\frac{3}{4}$ full because 70% is made up of water.)
 - **Over half of our body is made up of water! This was demonstrated with the cup. Water helps our body with many different things such as digesting our food and helping our brain and heart to function. If we don't drink enough water, we become dehydrated. When we are dehydrated we become tired, slow, and sick. We want to make sure we are drinking enough water each day to allow our body to work properly!**
- Instruction
 - Where do we get water from?
 - Explain to the students that we get water from what we drink. **Most of the water we get each day is from the beverages that we drink. The best way to make sure that our bodies are staying hydrated each day is to drink plenty of plain water. We do get some water when we drink soda and juice. However, soda and juice both have lots of extra sugar which is why we should not drink these very often. Water is always your best bet when trying to decide on a healthy beverage.**
 - **We also get some water from the food we eat each day. Fruits and vegetables both contain a significant amount of water which our body uses.**
 - How much water a day
 - **At some point we need to get rid of the old water in our bodies and replace it with fresh water. We get rid of the old water by breathing, sweating, and going to the bathroom.**

- **Trying to drink around 8 cups of water each day is a good goal to make. This way we know that we have replaced the water in our body and it will be able to work properly.**

- Water and Exercise

- **When I go hiking I make sure that I always have water with me. Can anyone think of other times when drinking water is very important?** (Write ideas the students come up with on the board. Some other times when it is important to drink water are while playing sports, playing outside, hot days.) **Those are all excellent times we need to drink more water!**
- **It is very important to drink water during exercise. While we exercise our body sweats so our muscles can keep working properly and the rest of our body does not get too hot. Sweat is made up of mainly water, so our body loses a good amount of water while we exercise. Make sure that you are replacing that water by taking a break every 15-20 minutes while exercising to drink some water. If you are exercising for more than an hour it may be a good idea to drink some sports drink along with the water to keep your energy up.**
- *This section of the lesson could include a small demonstration. Teacher gets a sponge wet (not dripping wet), and then passing it around the room, wringing it out at the end and see how much water is left. Then get the sponge wet again, and pass it around faster and faster. Point out the fact that when we exercise, we tend to lose water fast, and that it is important to replenish.*

- What may happen we don't get enough water

- **If we don't get enough water we may become dehydrated. If we forget to drink water while we are exercising or outside for a long time on a hot day, we have a very high risk of becoming dehydrated. Some signs that our body is dehydrated are feeling tired, dizzy, really thirsty, like you are going to throw up, and not going to the bathroom often. If you feel any of these things, tell an adult you trust. If this happens while you are at school, talk to your teacher or go see the school nurse.**
- **Some tips for making sure we always stay hydrated are to:**
 - **1. Carry around a water bottle with you throughout the day and keep refilling it with water when it becomes empty.**
 - **2. Take breaks often while exercising and playing outside to drink water, especially on hot days.**
 - **3. Substitute one of your sodas or juices a day with water.**

- Activity

- How much is 8 cups of water?

We have talked about drinking at least 8 cups of water. What does 8 cups of water look like? How much is that? We aren't talking about 8 glasses of water, but actually measuring out 8 cups of water. Teacher may want to hold up a visual representation of a common drinking glass, along with a measuring cup. **This is a measuring cup, it will hold one cup of water. We are going to measure out 8 cups of water to see how much water that is.** Measure out 8 cups of water as a class and pour it into a large clear container. If measurable water bottles are available, measure out 8 cups of water by using multiple water bottles to show them a total of 8 cups.

- **Planned Differentiation:** The set up for this activity could be varied (at the front of the classroom, gathered around a small table, etc). The teacher can decide how to divide up who measures water, pours water, etc. Teacher can have water bottles available to the students at this time. So that they are sure that the students are drinking water during the school day.
- **Guided:** The teacher will measure out 8 cups of water and place it on the table. If there is a lid on the clear container, allow student to lift the container to see how heavy 8 cups of water is.
- **Limited Guidance:** The students will fill up the measuring cup and pour it into the large clear container. If possible, allow each student to play a role whether that be filling up the measuring cup, or pouring it into the container. The teacher will help them to prevent spilling and keeping track of how many cups have been poured into the large container.
- **Independent:** The student will fill up the measuring cup and pour it into the large clear container. The students will work together as a group to pour the 8 cups into the large clear container.

- Sugar activity

Soda and Juice taste good but are full of sugar. We may think that just because soda, juice and other drinks are liquids they are good for us to drink and give us water. They do have some water but have so lots of sugar in them as well. Therefore, it is not good to drink soda, juice, and other sugary drinks very often. Before we look at how much sugar is in some common sodas, I'm going to explain what I am going to do. I have sugar cubes that I will use to show how much sugar are in the sodas. Have a bowl of sugar cubes in front of the class as well as various cans of soda. **Does anyone want to guess how much sugar is in a soda? You can tell me how many sugar cubes you think there are, or come up to the front and pull out the sugar cubes you think that are in the soda.** After students have guessed, begin the demonstration of sugar content in sodas. Use the guide attached for how many sugar cubes are in various common sodas. **We will look at some juices too that have a lot of sugar. Juice is source of fruit, but**

many have lots of sugar added to them. When choosing juice look for 100% juice and no sugar added.

- Planned Differentiation: Teacher could allow students to add the sugar cubes, to a glass, or do it themselves. They can also do some research to find some other common drinks to do this activity with. They may also want to cover the topic of adding flavor packets to water. Many flavor packets have a low amount of sugar and give students another option of something to drink.
- Guided: The teacher will allow student guesses of how much sugar is in each soda. The teacher will then measure out the correct amount of sugar cubes and place them in front of each soda. It is beneficial to have a bottle of water next to all of the sodas, showing that water has no sugar at all.
- Limited Guidance: The teacher will allow the students to guess how much sugar is in the sodas. The teacher will then tell the class how much is in each soda and allow the students to work together and measure out the correct number of sugar cubes.
- Independent: The teacher will allow student guess of sugar content in the sodas. The teacher will then tell the class how many grams of sugar are in each soda and the students must figure out how many sugar cubes make up each soda's sugar content (one sugar cube= 4 g of sugar). For more advanced students, the teacher can allow students to look on the back of the soda cans and calculate how many sugar cubes it contains from the nutrition facts.
- Logging Water Intake:

An option for the classroom is to allow students to document how much water they drink throughout the whole day (8 cups) or school day (around 5 cups). A classroom graph can be used with stickers placed for each cup of water students report to drink.

 - Planned Differentiation: Teacher could have a premade log book for students to fill out or allow them to be creative and make their own.
 - Guided: Teacher sets a side a small amount of time each day to have the students get their water logs out and fill in as a class. Teacher may need to remind them why they are doing this and review the topic.
 - Limited Guidance: Teacher asks students to get out and update their water log, but allows them to fill it on their own.
 - Independent: Students fill out their water log throughout the day on their own without teacher reminders.

- Conclusion

Drinking water is very important because it keeps our body healthy. 70% of our body is water. Soda and juice may taste better, but it also has a lot of sugar so you need to be careful with how much you drink. 8 cups of water a day is a goal, but if you improve and drink 2 more cups a day, it is progress! Look for signs of dehydration in yourself and your friends. If someone is feeling: sleepy, dizzy, nauseous (like you are going to throw up), feeling really thirsty, with dry mouth, sunken eyes, or haven't gone to the bathroom in 12 hours (or have

dark urine), tell an adult around you. If you aren't able to tell someone right away, find them a drink of water. To make sure you aren't dehydrated- drink 8 cups of water a day. Ask students if they have any questions regarding this subject before the end of the lesson.

- Curriculum Connections
 - Mathematics
 - Numbers and Operations

Students will convert grams of sugar into the sugar cube equivalence.
Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
Understand meanings of operations and how they relate to one another.
 - Measurement

Students will measure out 8 cups of water as well as measure the amount of sugar cubes in sodas and juices.
Understand measurable attributes of objects and the units, systems, and processes of measurement.
Apply appropriate techniques, tools, and formulas to determine measurement.
 - English
 - Writing

Have students write out their guesses of sugar content as well as the different beverages.
Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.
 - Reading

Students will read the chart of sugary drinks themselves and student lead this section of the lesson.
Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.
Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).
 - Life Skills
 - Food preparation

The teacher can choose a soda and heat it on the stove in a pot, letting the soda simmer until all the water has evaporated. A thick syrup should be left in the pot. This is another visualization of how much sugar is inside sodas. The thick syrupy mixture is very hot and can be someone easily. This should only be done when appropriate with special precautions made for the safety of the students and the teacher. Discussion of food safety would be very beneficial.

Sugar Cube Activity Instructions

Objective: Students will identify which drinks have lots of sugar in them, and why water is a better option.

Materials: Cans of soda, juice containers, sugar cubes, water, cups

Setup: Place the soda/juice containers in front, along with cup/bottles of water. Have sugar cubes next to a clear cup.

Do the activity:

What are some of your favorite drinks? List these on the board. **Lots of people like drinks such as soda and juice. These drinks may taste delicious, but they have lot of sugar in them. Therefore, it's a good idea to drink these drinks occasionally. I want to show you how much sugar is in your favorite drink.** Teacher does an example. **One of my favorite sugary drinks is Dr. Pepper. If I look on the back of the can, I see that Dr. Pepper has 40 grams of sugar in it. There are 4 grams of sugar in one sugar cube. Therefore, if I were to pour out my drink into this cup (hold up a clear cup) I would have 10 sugar cubes.** Count out the sugar cubes as you are putting them into the cup. **That's a lot of sugar!** Let the students see how much sugar that is. Then remind them that water doesn't have any sugar and is always a healthy option.

Beverage	Grams of Sugar	Sugar Cubes
Coca-Cola	39	9.75
Pepsi	41	10.25
Dr. Pepper	40	10
7-up	39	9.75
Sprite	38	9.50
Mountain Dew	47	11.75
Sierra Mist	39	9.75
Orange Juice	39	9.75
Apple Juice	42	10.5
Grape Juice	58	14.5

