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## Appendix 1:

Eat a Rainbow









$$
\begin{aligned}
& 36 \\
& 4
\end{aligned}
$$




## Eat a Rainbow of Fruits \& Vegetables!



## Appendix 2:

## Edible Plant Parts








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8
$$

$$
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$$



## Plant Part Song Lyrics:

By the Banana Slug String Band

CHORUS:

Roots, stems, leaves, flowers, fruits, and seeds

Roots, stems, leaves, flowers, fruits, and seeds

That's six parts, six parts

Six plant parts that plants and people need!

| KEY for Edible Plant Parts Posters: |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| ROOTS | STEMS | LEAVES | FLOWERS | FRUIT | SEEDS |  |
| Beets | Celery | Spinach | Broccoli | Mangos | Corn |  |
| Radishes | Asparagus | Lettuce | Cauliflower | Apples | Sunflower Seeds |  |
| Carrots | Green onions | Cabbage | Artichoke | Oranges | Pumpkin Seeds |  |
| Turnips |  | Parsley |  | Grapes | Chickpeas |  |
| Sweet potatoes |  | Kale |  | Tomatoes | Green Peas |  |
| Onion |  |  |  | Cucumbers |  |  |
|  |  |  |  | Watermelon |  |  |
|  |  |  |  | Peppers |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
































## ROOTS

## STEM

- Hold the plant in the ground
- Get water and nutrients from the soil


## LEAVES

- Make food from sunlight
- Supports the plant
- Moves water and nutrients throughout the plant


## FLOWERS

- Make seeds
- Attract pollinators such as bees and birds


## FRUIT

- Protects the seeds
- Helps the seeds disperse

SEEDS

- Make new plants
- Reproduce themselves


## Appendix 3:

## Go, Grow Glow



| KEY for Go, Grow, Glow Food Posters: |  |  |
| :--- | :--- | :--- |
| GO <br> (whole grains) | GROW <br> (protein) | GLOW <br> (fruits \& veggies) |
| Whole Grain Bread | Chicken | Apples |
| Whole Grain Rice | Cheese | Oranges |
| Corn Tortillas | Beans | Cucumbers |
| Oatmeal | Fish | Broccoli |
| Whole Grain Pasta | Nuts \& Seeds | Tomatoes |
| Whole Grain Crackers | Yogurt | Pineapple |
|  | Milk | Carrots |
|  |  | Bell Peppers |
|  |  | Strawberries |
|  |  | Kiwis |
|  |  | Bananas |




























## Appendix 4:

## U.S. Food System







## Consumer






## U.S. Food System: Life of an Apple SCRIPT

Once upon a time, Farmer_ (student's name)_owned a beautiful apple farm in San Diego called __ (ask the class, "What should our farm be called?").

One day, Farmer $\qquad$ plants an apple seed on the farm.

Farmer $\qquad$ waters the seed often, and slowly the apple seed grows into an enormous, strong, leafy apple tree.

Apple blossoms begin to bloom on the apple tree.

The flowers turn into apples! Delicious apples hang from one of the tree's many branches.

Then one day, Farmer $\qquad$ comes along and picks the apples from the tree, putting them in barrels.

Truck Driver __(1)__ loads the barrels of apples onto his/her huge truck.

Truck Driver $\qquad$ drives the apples to a factory where they can get processed.

At the factory, Factory Worker $\qquad$ throws away the apples he/she doesn't like, washes all of the dirt off of the apples, puts stickers on them, and packages them.

Then Truck Driver __(2) _ loads the apples onto his/her truck and drives them to the grocery store.

Grocery Store Worker $\qquad$ takes the boxes of apples and puts them on display inside the store.

Now Consumer $\qquad$ is at home and she starts feeling hungry. He/she suddenly craves an apple, and knows that he/she must have one immediately!

So Consumer $\qquad$ gets in the car and drives to the grocery store.

At the store, Consumer $\qquad$ examines the apples on display, looking for the juiciest, crunchiest one.

Consumer $\qquad$ finally chooses an apple, and takes it to the cash register in order to buy it from Grocery Store Worker $\qquad$ .

After waving goodbye to the Grocery Store Worker, Consumer takes his/her prized apple home, slices it up, and eats it!

The End.











## Farm



## ת

## Farmers Market



## Consumer




## Factory



Consumer


Delivery





## Appendix 5:

## Seeds \& Healthy Cooking



# GRAINS are 

## the SEEDS

## of GRASSES



Wheat


Rice

Corn


Oats

## BEANS are

## the SEEDS

## of LEGUMES



Peas
Lentils


Beans (black beans, garbanzo beans, kidney beans, soybeans, etc.)

# NUTS are <br> <br> the SEEDS <br> <br> the SEEDS <br> <br> of TREES 

 <br> <br> of TREES}


Almonds

Pecans



Cashews

Walnuts

# SEEDS are 

## the SEEDS

## of PLANTS



Sunflower Seeds


Pumpkin Seeds


Poppy Seeds


Sesame Seeds

| Plant: | Seeds: | Food made from the Seeds: |
| :---: | :---: | :---: |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |



Recipe: Honey Seed Snacks
A healthy sweet treat made from seeds \& honey!
Measure $1 / 2$ cup of each into a large mixing bowl:

- Sesame seeds
- Sunflower seeds
- Rolled oats
- Nut or seed butter (e.g. sunflower butter or peanut butter)
- Carob Powder
- Honey

Mix well. Shape batter into bite-sized balls about 1-inch in diameter. Enjoy!

Recipe: Honey Seed Snacks
A healthy sweet treat made from seeds \& honey!
Measure $1 / 2$ cup of each into a large mixing bowl:

- Sesame seeds
- Sunflower seeds
- Rolled oats
- Nut or seed butter (e.g. sunflower
butter or peanut butter)
- Carob Powder
- Honey

Mix well. Shape batter into bite-sized balls about 1-inch in diameter. Enjoy!

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A healthy sweet treat made from seeds \& honey!
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- Nut or seed butter (e.g. sunflower
butter or peanut butter)
- Carob Powder
- Honey

Mix well. Shape batter into bite-sized balls about 1-inch in diameter. Enjoy!

## Recipe: Honey Seed Snacks

A healthy sweet treat made from seeds \& honey!
Measure $1 / 2$ cup of each into a large mixing bowl:

- Sesame seeds
- Sunflower seeds
- Rolled oats
- Nut or seed butter (e.g. sunflower butter or peanut butter)
- Carob Powder
- Honey

Mix well. Shape batter into bite-sized balls about 1-inch in diameter. Enjoy!

## Appendix 6:

Fruit, Sugar, \& Healthy Cooking

## SUGAR JEOPARDY!

| Names <br> for Sugar | Natural <br> Sugars | Added <br> Sugars <br> Healthy <br> Treats | Rethink <br> Your Drink <br> an |  |
| :---: | :---: | :---: | :---: | :---: |
| 100 | 100 | 100 | 100 | 100 |
| 200 | 200 | 200 | 200 | 200 |
| 300 | 300 | 300 | 300 | 300 |
| 400 | 400 | 400 | 400 | 400 |
| 500 | 500 | 500 | 500 | 500 |
| 600 | 600 | 600 | 600 | 600 |



## Which is a name for sugar?

(A) Honey
(B) Sodium


## (A) Honey has an extremely high sugar

 content, and the pasteurization process strips away some of its health benefits.Sodium is a mineral, an essential nutrient. We consume sodium by eating foods with salt. Many foods contain sodium naturally, and it is commonly added to foods during preparation or processing or as a flavoring agent. Most Americans consume far more sodium than their bodies need. Sodium intake is one of the factors known to affect high blood pressure.

## Which is a name for sugar?

## (A) Calcium

(B) Maple Syrup


## (B) Maple Syrup is less processed than other

 sugars, but is composed of mostly sucrose (aka table sugar) and contains minimal nutrients. It is made from the sap of maple trees.Calcium is vital for building strong bones and teeth. The time to build strong bones is during childhood and the teen years, so it is very important to get enough calcium now to fight against bone loss later in life. Weak bones are susceptible to a condition called osteoporosis, which causes bones to break easily. Calcium is found in milk, yogurt, cheese, broccoli, dark green leafy vegetables.


## Which is a name for sugar?

## (A) Protein


(B) Caramel

(B) Caramel is made by simply heating up
various sugars through the process of
caramelization, and it is high in both
carbohydrates and calories (calorie $=$ the amount of energy that foods will produce in
the human body).
Protein-rich foods include meat, fish, cheese, eggs, beans, nuts, and seeds. Protein helps you build muscle and grow strong.

## Which is a name for sugar?

## (A) High Fructose

Corn Syrup


## (B) Vitamins

## 



## (A) High Fructose Corn Syrup is found in

 lots of junk foods; your body metabolizes fructose in a way that encourages body fat storage.Vitamins are essential nutrients that are found in many fruits and vegetables; when we eat foods with vitamins, it helps our body glow and be very healthy!


## Which is a name for sugar?

## (A) Agave Nectar

 (B) Fiber

## (A) Agave nectar (aka agave syrup) is very

 sweet (so you will use less); but its sugar is more concentrated than even high-fructose corn syrup, meaning there will be no difference health-wise. It is made from the agave plant.Fiber is found in foods like fruits, vegetables, grains, and legumes. Foods with fiber make us feel full. Fiber is very healthy for us because it helps lower blood cholesterol and prevent diabetes and heart disease. Fiber helps move food through the digestive system.

## About how many different names for sugar are there?


(A) 10
(B) 30
(C) 60
(C) 60 - By any other name, sugar is just as sweet. Gone are the days when you see straight sugar listed on every sweet-tasting ingredient label. Instead, you should look for the nearly 60 other hidden names for sugar. Sugar is often a hidden ingredient in processed foods that enhances flavor, masked by an alternate name. The empty calories in sugar do not provide any nutritional benefit to the body, which is why it is important to know other names for sugar on food labels. Other names include: honey, maple syrup, high fructose corn syrup, agave nectar, brown rice syrup, barley malt, sucrose, fructose, glucose, date sugar, evaporated cane juice, carob syrup, fruit juice concentrate, molasses, etc.

## Which food has added sugar and which food has only

| Natural <br> Sugars <br> Steg |
| :---: |
| 100 | natural sugar?

## (A) Fruit

(B) Chocolate Milk


## Natural Sugar: Fruit (fructose) - the fructose in fruit has

 a natural advantage over table sugar and other added sugars because fruit contains so many vitamins, minerals, and nutrients. According to the USDA, the nutrients in fruit (vitamins, minerals, fiber) can help reduce the risk of heart attack, stroke, cancer, diabetes, obesity, high blood pressure, and other diseases.Added Sugar: Chocolate Milk - milk that has been
flavored with cocoa and sweetened with sugar.

## Which food has added sugar and which food has only

 natural sugar?

## (A) Milk

## (B) Fruit Yogurt



## Natural Sugar: Milk (lactose) - milk, plain yogurt, and

 other unsweetened dairy products contain the naturally-occurring sugar lactose. Unlike added sugars, which contribute plenty of calories but zero nutritional value, the natural sugars in dairy and fruit are part of a nutrient-dense package, so they are not something you need to worry about limiting in your diet. Milk and yogurt are among the richest sources of calcium, and they also provide protein, potassium, and other micronutrients.Added Sugar: Fruit Yogurt - Regular milk and plain yogurt do not contain any added sugar, but many flavored yogurts and milks do, which is why their sugar counts are higher on the nutrition label.

## Which food has added sugar and which food has only

Sugars


300 natural sugar?

## (A) Breakfast Cereal

(B) 100\% Fruit Juice


Added Sugar: Breakfast Cereal
Natural Sugar: 100\% Fruit Juice

## Which food has added sugar and which food has only

Natural
Sugars


400 natural sugar?

## (A) Apple


(B) Candy, cookies, donuts, cake, soda

Natural Sugar: Apple
Added Sugar: Candy, cookies, donuts, cake, soda

## TRUE or FALSE: Our love for

 sugar is biological! In times when humans were hunters and gatherers, bitter foods were associated with poison so most sweet foods were safe to eat.
## (A) True <br> (B) False

## (A) True - Sugar-sweetened foods trigger brain chemicals

 and hormones to be released, part of what is known as the Food Reward Pathway. Food Reward is crucial to feeling satisfied after eating and shares brain circuitry with addictive behaviors, including drugs. While artificial sweeteners provide sweet taste, many researchers believe that the lack of calories prevents complete activation of the food reward pathway. This may be the reason artificial sweeteners are linked with increased appetite and cravings for sugary food in some studies.
## Which food has added

 sugar and which food has
## only natural sugar?

## (A) Protein Bars

## (B) Sweet Potatoes



## Added Sugars: Protein Bars

Natural Sugars: Sweet Potatoes

## Added Sugars are...


(A) healthy
(B) unhealthy


## (B) unhealthy...are digested very quickly by our bodies and can lead to spikes in blood sugar -

 high blood sugar levels can lead to heart disease, diabetes, high blood pressure, weight gain, tooth decay, etc.
## How many items at the

## supermarket contain added

## Added

## sugars?

## (A) Almost none <br> (B) About half <br> (C) Almost all



## (C) Almost All - at least 70\% - The best way to avoid

 hidden sugars in your meals is to make them at home so you know exactly what is in them. However, if you need to buy prepackaged food, make sure you check the label to identify any hidden added sugars.Surprising foods with added sugar: BBQ sauce, granola, ketchup, fruit flavored yogurt, spaghetti sauce, fruit juice, sports drinks, chocolate milk, Vitaminwater, pre-made soup, cereal bars, canned fruit, bottled smoothies, breakfast cereal, instant oatmeal, sweetened dried fruit,

## Added sugars are added to foods during

 preparation or production to make it taste better.
## (A) unprocessed



## (B) processed


(B) processed - added sugars are added to processed foods during preparation or production to make it taste better. They have little nutritional value other than giving you extra calories.

## What is added sugar made

 from?

## (A) Sugar Cane

(B) Sugar Beets

(C) All of the Above

## (C) All of the Above - the sugar cane grass plant is

harvested, processed in a factory, and turned into sugar; same goes for the sugar beet plant; maple tree sap is turned into maple syrup, another name for sugar.

## Foods containing added



## sugars are:

## (A) Sometimes foods <br> (B) Always foods


(A) Sometimes foods - try to limit your consumption of these foods, and only have them once in a while as a treat. It is okay to eat sugary foods from time to time. Think of them as a special treat instead of an everyday food.

## Too much added sugar can contribute to:

(A) Diabetes
(B) Heart Disease
(C) Weight Gain
(D) Tooth Decay \& Cavities
(E) All of the Above
(E) All of the Above - Diabetes is a group of diseases that result in too much sugar in the blood (high blood glucose). Type 1 pancreas produces little or no insulin (insulin is a hormone made by the pancreas that allows your body to use sugar (glucose) from carbohydrates in the food that you eat for energy or to store glucose for future use; insulin helps keep your blood sugar level from getting too high (hyperglycemia) or too low (hypoglycemia)). Type 2 - affects the way the body processes blood sugar (glucose).

# Which is the healthier sweet 

option? (meaning natural sugar instead of added sugar):

## (A) Smoothie

## (B) Milkshake



## Smoothie

## Which is the healthier sweet

option? (meaning natural sugar instead of added sugar):

## (A) Starburst

## (B) Frozen Grapes



Frozen Grapes

## Which is the healthier sweet

 option? (meaning natural sugar instead of added sugar):
## (A) 100\% fruit popsicles



## (B) Ice Cream



100\% fruit popsicles

## Which is the healthier sweet

option? (meaning natural sugar instead of added sugar):

## (A) Soda

## (B) 100\% Fruit Juice



100\% Fruit Juice (with sparkling water)

## Which is the healthier sweet

 option? (meaning natural sugar instead of added sugar):
## (A) Jell-O

## (B) Applesauce



## Applesauce (make sure it says - no sugar added!)

## Which is the healthier sweet

 option? (meaning natural sugar instead of added sugar):
## (A) Fruit Salad

## (B) Froot Loops



Fruit Salad

# Which drink has the most 



## added sugar?

## (A) Soda

## (B) Apple Juice



## (A) Soda -

Sugary drinks - including soda, energy drinks, and sports drinks - are the largest source of added sugar in the diet. Drinks with added sugar often provide extra calories, but few nutrients or fiber. Besides increased tooth decay, experts believe they add to obesity, which increases the risk for type 2 diabetes and heart disease. Milk, 100\% fruit juice, and water and better options if you are thirsty.

The next time you reach for a soda or other sugary drink, think about eating 16 packets of sugar. That is how much sugar is in a 20 oz. soda! Instead, try mixing $100 \%$ fruit juice with sparkling water.

## TRUE/FALSE: The average American drinks about 46

Rethink Your
 gallons of sugar sweetened drinks each year.

(A) True<br>(B) False


(A) TRUE: 46 gallons (that is 40 lbs . of sugar!)

## Water, Plain Milk,

## Unsweetened Tea:


(A) Drink Freely
(B) Drink Never

(A) Drink Freely

## 100\% Juice, Chocolate Milk, Strawberry Milk:


(A) Drink Sometimes
(B) Drink Never

(A) Drink Sometimes

## Sodas, Sports Drinks, Energy Drinks, Sweetened Tea, Fruit

## Drinks with added sugar:

(A) Drink Freely
(B) Drink once in a while, if at all

(B) Drink once in a while, if at all

What does Rethink Your Drink


## mean?

(A) Choose drinks like water that have no added sugar
(B) Choose drinks like soda that have lots of added sugar
(A) Choose drinks like water, plain milk, 100\% fruit juice, unsweetened tea, etc. that have no added sugar, INSTEAD of drinks like soda, sports drinks, energy drinks, sweetened fruit drinks, etc. that haves lots of added sugar

## All of the following are names for sugar EXCEPT:


(A) Honey
(B) Sodium
(C) Maple Syrup
(D) High Fructose Corn Syrup
(B) Sodium - sodium is a mineral, an essential nutrient. We consume sodium by eating foods with salt. Many foods contain sodium naturally, and it is commonly added to foods during preparation or processing or as a flavoring agent. Most Americans consume far more sodium than their bodies need. Sodium intake is one of the factors known to affect high blood pressure. Honey has extremely high sugar content, and the pasteurization process strips away some of its health benefits. Maple Syrup is less processed than other sugars, but it is composed of mostly sucrose (aka table sugar) and contains minimal nutrients. High fructose corn syrup is found in lots of junk foods; your body metabolizes fructose in a way that encourages body fat storage.

## All of the following are names for sugar EXCEPT:



## (A) Date Sugar <br> (B) Fructose <br> (C) Sucrose <br> (D) Calcium

(D) Calcium - calcium is vital for building strong bones and teeth. The time to build strong bones is during childhood and the teen years, so it is very important to get enough calcium now to fight against bone loss later in life. Weak bones are susceptible to a condition called osteoporosis, which causes bones to break easily. Calcium is found in milk, yogurt, cheese, broccoli, dark green leafy vegetables. Date sugar is made from chopped-up dates, making it less processed than other types; however it remains extremely high in sugar content. Fructose consumption has been strongly tied to rising obesity rates in the past several decades; it is often added to baked goods and soft drinks, and is found naturally in fruits and honey. Sucrose aka table sugar; found in cookies, cakes, biscuits, ice cream.

## All of the following are names for sugar EXCEPT:


(A) Magnesium
(B) Caramel
(C) Evaporated Cane Juice
(D) Carob Syrup

## (A) Magnesium - magnesium helps muscles and nerves

 function, steadies the heart rhythm, and keeps bones strong. It also helps the body create energy and make proteins. A good source of magnesium is whole grains. Caramel is made by simply heating up various sugars through the process of caramelization, and it is high in both carbohydrates and calories (calorie = the amount of energy that foods will produce in the human body). Evaporated cane juice is actually not a juice but a sweetener derived from sugar cane syrup; that means it is much more concentrated (less water?) than a juice and has trace amounts of nutrients. Carob syrup is from carob fruit; when processed into carob syrup, the beneficial proteins and nutrients found in carob fruit are stripped away, and what you are left with is mostly empty calories.
## All of the following are names for sugar EXCEPT:


(A) Fruit Juice Concentrate
(B) Molasses
(C) Potassium
(D) Glucose
(C) Potassium - potassium helps with heart, muscle, and nervous system function. It also helps the body maintain the balance of water in the blood and body tissues. It is found in broccoli, green leafy vegetables, citrus fruits, bananas, dried fruits, and legumes. Fruit juice concentrate is made by removing water from fruit juice, leaving out pulp and nutrients that would otherwise be found in naturally squeezed juice; it is found fruit juices and fruit-flavored yogurts. Molasses is a good source of iron and calcium, but has laxative properties and can trigger allergies and asthma attacks due to its high sulfur content; it is a thick, dark brown syrup obtained from raw sugar during the refining process. Glucose has the ability to raise the acidity of your blood, and has been linked with high cholesterol, heart disease, and obesity. Glucose is the simple sugar that is the chief source of energy; it is found in the blood and is the main sugar that the body manufactures.

## All of the following are names for sugar EXCEPT:


(A) Agave Nectar
(B) Brown Rice Syrup
(C) Barley Malt
(D) Iron
(D) Iron - iron helps red blood cells carry oxygen to all parts of the body. Symptoms of iron-deficiency anemia include weakness and fatigue, lightheadedness, and shortness of breath. Iron-rich foods include red meat, pork, fish, poultry, lentils, beans and soy foods, green leafy vegetables, and raisins. Agave nectar (aka agave syrup) is very sweet (so you will use less); but its sugar is more concentrated than even high-fructose corn syrup, meaning there will not be any difference health-wise. Brown rice syrup (aka rice syrup or rice malt) is a sweetener made by breaking down the starch in cooked brown rice, turning it into easily digestible sugars and stripping it of nutrients); it has been found to contain significant levels of arsenic, which is toxic to humans. Barley malt is a grain-based sugar that is half as sweet as white sugar, but just as high on the glycemic index (a measure of how much a food spikes your blood sugar).

## About how many different names for sugar are there?


(A) 10
(B) 30
(C) 60
(D) 100
(C) 60 - By any other name, sugar is just as sweet. Gone are the days when you see straight sugar listed on every sweet-tasting ingredient label. Instead, you should look for the nearly 60 other hidden names for sugar. Sugar is often a hidden ingredient in processed foods that enhances flavor, masked by an alternate name. The empty calories in sugar do not provide any nutritional benefit to the body, which is why it is important to know other names for sugar on food labels.

# Natural sugars are the only sugars found in which food or drink: 

Natural Sugars


## (A) BBQ Sauce <br> (B) Fruit <br> (C) Granola <br> (D) Chocolate Milk

## (B) Fruit (fructose) - the fructose in fruit has a natural

 advantage over table sugar and other added sugars because fruit contains so many vitamins, minerals, and nutrients. According to the USDA, the nutrients in fruit (vitamins, minerals, fiber) can help reduce the risk of heart attack, stroke, cancer, diabetes, obesity, high blood pressure, and other diseases.(Chocolate milk is milk that has been flavored with cocoa and sweetened with sugar.)

# Natural sugars are the only sugars found in which food or drink: 

Natural Sugars

## (A) Milk <br> (B) Fruit Yogurt <br> (C) Ketchup <br> (D) Protein Bar

## (A) Milk (lactose) - milk, plain yogurt, and other

unsweetened dairy products contain the naturally-occurring sugar lactose. Unlike added sugars, which contribute plenty of calories but zero nutritional value, the natural sugars in dairy and fruit are part of a nutrient-dense package, so they are not something you need to worry about limiting in your diet. Milk and yogurt are among the richest sources of calcium, and they also provide protein, potassium, and other micronutrients. Regular milk and plain yogurt do not contain any added sugar, but many flavored yogurts and milks do, which is why their sugar counts are higher on the nutrition label. An 8-oz. glass of chocolate milk comes with an extra 2 teaspoons of added sugar.

# Natural sugars are the only sugars found in which food or drink: 

Natural Sugars


## (A) Canned fruit <br> (B) Breakfast Cereal <br> (C) Vitaminwater <br> (D) 100\% Fruit Juice

## (D) $100 \%$ Fruit Juice -

Some canned fruit is peeled and preserved in sugary syrup. This processing strips the fruit of its fiber and adds a lot of unnecessary sugar to what should be a healthy snack. Whole, fresh fruit is best. If you want to eat canned fruit, look for canned fruit that has been preserved in juice rather than syrup, which has a slightly lower sugar content. Vitaminwater is marketed as a healthy drink containing added vitamins and minerals. However, like many other so-called health drinks, Vitaminwater comes with a large amount of added sugar. The sugar-free version is sweetened with artificial sweeteners (made with chemicals and containing 0 calories) instead. Plain water or sparkling water are much healthier choices if you are thirsty.

## Natural sugars...


(A) ...take longer to digest so our blood sugar rises and falls more slowly
(B) ...are digested very quickly by our bodies
and can lead to spikes in blood sugar
(A)...take longer to digest so our blood sugar rises and falls more slowly

## TRUE or FALSE: Our love for

 sugar is biological! In times when humans were hunters and gatherers, bitter foods were associated with poison so most sweet foods were safe to eat.
## (A) True <br> (B) False

## (A) True - Sugar-sweetened foods trigger brain chemicals

 and hormones to be released, part of what is known as the Food Reward Pathway. Food Reward is crucial to feeling satisfied after eating and shares brain circuitry with addictive behaviors, including drugs. While artificial sweeteners provide sweet taste, many researchers believe that the lack of calories prevents complete activation of the food reward pathway. This may be the reason artificial sweeteners are linked with increased appetite and cravings for sugary food in some studies.
## Does your body need

 natural sugar?
## (A) Yes <br> (B) No

(A)Yes - in a sense. Your body does need carbohydrates, which are broken down into sugar in your body. This sugar is essential for your body to create energy to survive. However, it is not necessary to include sugary foods or added sugars in the diet in order for your body to make energy. A diet with adequate complex carbohydrates (from foods such as whole grains and legumes) as well as foods containing natural sugar (such as fruit and milk) will fulfill this role.

## Added Sugars...


(A) ...take longer to digest so our blood sugar rises and falls more slowly
(B) ...are digested very quickly by our bodies
and can lead to spikes in blood sugar
(B) ...are digested very quickly by our bodies

## and can lead to spikes in blood sugar -

high blood sugar levels can lead to heart disease, diabetes, high blood pressure, weight gain, tooth decay, etc.

## At least ___ \% of items at the

 supermarket contain added

## sugars.

## (A) $2 \%$ <br> (B) $10 \%$ <br> (C) $50 \%$ <br> (D) $70 \%$

(D) 70\% - The best way to avoid hidden sugars in your meals is to make them at home so you know exactly what is in them. However, if you need to buy prepackaged food, make sure you check the label to identify any hidden added sugars.

## Added sugars are added to

 foods during preparation or production to make it taste better.
## (A) all <br> (B) unprocessed <br> (C) processed

(C) processed - added sugars are added to processed foods during preparation or production to make it taste better. They have little nutritional value other than giving you extra calories.

## What is added sugar made

from?

(A) Sugar Cane
(B) Sugar Beets
(C) Maple Tree Sap
(D) All of the Above

## (D) All of the Above - the sugar cane grass plant is

harvested, processed in a factory, and turned into sugar; same goes for the sugar beet plant; maple tree sap is turned into maple syrup, another name for sugar.

## Foods containing added



## sugars are:

## (A) Sometimes foods <br> (B) Always foods <br> (C) Never foods

(A) Sometimes foods - try to limit your consumption of these foods, and only have them once in a while as a treat. It is okay to eat sugary foods from time to time. Think of them as a special treat instead of an everyday food.

## Too much added sugar can contribute to:

(A) Diabetes
(B) Heart Disease
(C) Weight Gain
(D) Tooth Decay \& Cavities
(E) All of the Above
(E) All of the Above - Diabetes is a group of diseases that result in too much sugar in the blood (high blood glucose). Type 1 pancreas produces little or no insulin (insulin is a hormone made by the pancreas that allows your body to use sugar (glucose) from carbohydrates in the food that you eat for energy or to store glucose for future use; insulin helps keep your blood sugar level from getting too high (hyperglycemia) or too low (hypoglycemia)). Type 2 - affects the way the body processes blood sugar (glucose).

# For each question, name the healthier sweet option <br> (meaning natural sugar instead of added sugar): 



## (1) Smoothie OR Milkshake

(2) Plain yogurt with fresh strawberries OR

Strawberry yogurt
(1) Smoothie
(2) Plain yogurt with fresh strawberries

# For each question, name the healthier sweet option <br> (meaning natural sugar instead of added sugar): 



## (1) Gumballs OR Frozen grapes

(2) $100 \%$ fruit juice (with sparkling water) OR Soda
(1) Frozen Grapes
(2) $100 \%$ fruit juice (with sparkling water)

# For each question, name the healthier sweet option <br> (meaning natural sugar instead of added sugar): 



## (1) 100\% fruit popsicles OR Ice cream sandwiches <br> (2) Ice Cream OR Yogurt parfait

(1) $100 \%$ fruit popsicles
(2) Yogurt parfait

## For each question, name the healthier sweet option


(meaning natural sugar instead of added sugar):

## (1) Brownies OR Honey Seed Snacks

(2) Unsweetened dried fruit OR Sweetened dried fruit
(1) Honey Seed Snacks
(2) Unsweetened dried fruit

## For each question, name the healthier sweet option


(meaning natural sugar instead of added sugar):

## (1) Applesauce OR Jell-O <br> (2) Whole fruit OR Canned fruit

(1) Applesauce (make sure it says - no sugar added!)
(2) Whole fruit

# For each question, name the healthier sweet option 

(meaning natural sugar instead of added sugar):

## (1) Dates OR Starburst <br> (2) Froot Loops OR Fruit salad

(1) Dates (you can explain that they kind of look like giant raisins!)
(2) Fruit Salad

## Which of the following drinks has the highest sugar <br> 

## content?

(A) 1\% Milk
(B) Soda
(C) Apple Juice
(D) Chocolate Milk

## (B) Soda -

Sugary drinks - including soda, energy drinks, and sports drinks - are the largest source of added sugar in the diet. Drinks with added sugar often provide extra calories, but few nutrients or fiber. Besides increased tooth decay, experts believe they add to obesity, which increases the risk for type 2 diabetes and heart disease. Milk, 100\% fruit juice, and water and better options if you are thirsty.

The next time you reach for a soda or other sugary drink, think about eating 16 packets of sugar. That is how much sugar is in a 20 oz. soda! Instead, try mixing $100 \%$ fruit juice with sparkling water.

# On average, how many sugar 

 sweetened drinks does each person in the U.S. drink/year?
(A) 46 gallons
(B) 33 gallons
(C) 28 gallons
(D) 19 gallons
(A) 46 gallons (that is 40 lbs . of sugar!)

# Water, Seltzer Water, Skim or 



## 1\% Milk, Unsweetened Tea:

(A) Drink Freely
(B) Drink Sometimes
(C) Drink Rarely, if at all
(A) Drink Freely

100\% Juice, Chocolate Milk,
Strawberry Milk, Low Sugar Drinks:
(A) Drink Freely
(B) Drink Sometimes
(C) Drink Rarely, if at all

## (B) Drink Sometimes

# Sodas, Sports Drinks, Energy <br> Drinks, Sweetened Tea, Fruit 


\& Juice Drinks with added

## sugar:

(A) Drink Freely
(B) Drink Sometimes
(C) Drink Rarely, if at all
(C) Drink Rarely, if at all

## What is the maximum

 amount of added sugar you

## should eat or drink in a day?

(A) 25 grams aka 6 teaspoons aka 6 sugar packets
(B) 50 grams aka 12 teaspoons aka 12 sugar packets

## (A) 25 grams aka 6 teaspoons aka 6 sugar

 packets - (for adult women) ( 1 teaspoon $=4$ grams sugar $=1$sugar cube) - so if you divide the grams of sugar from a nutrition label by 4, you can find how many sugar packets would be in that food item.
The American Heart Association recommends a cap of 6 to 9 teaspoons of sugar per day; this applies only to added sugar, because that is the type that has been linked to weight gain and other health problems when consumed in excess. Likewise, the Dietary Guidelines Advisory Committee proposal calls for limiting added sugar - not all sugar - to $10 \%$ of total calories.

## Question Covers for Sugar Jeopardy Board:

Directions: Cut these out into 30 rectangles. After a student selects a question on the Sugar Jeopardy Board, cover it up with one of these covers so that you can keep track of which questions have already been asked/answered, and which ones have not.


## Recipe: Fruit Smoothie

A healthy, refreshing, \& creamy fruit drink!
Measure 1 cup of each into a blender:

- Frozen Strawberries
- Frozen Blueberries
- Fresh ripe banana
- Orange Juice

Blend until smooth and creamy.
Pour into cups. Enjoy with the whole family!


Recipe: Fruit Smoothie
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Blend until smooth and creamy.
Pour into cups. Enjoy with the whole family!

## Appendix 7:

## Vegetables \& Healthy Cooking




## How can you prepare Vegetables? anc...................



#  



## Carrie Carrot



Orange. Healthy for your eyes.

Sarah Celery


## Katie Kale


/am...
Green. Healthy for your bones \& teeth. Yummy in a salad. The leaves of a plant.

## Peter Pepper

## Aaron Arugula



Tommy Tomato
Rachel Radish


I am...
Red. Healthy for your heart. Yummy on pizza. The fruit of a plant.

## Bianca Brussels Sprout



Cara Cauliflower


I am...
Green. Healthy for your bones \& teeth. Yummy in a salad. The leaves of a plant.

## I am...

White. Healthy for fighting off disease. Yummy with a dip. The flowers of a plant.

## Gary Green Bean

Ava Asparagus


I am...
Green. Healthy for your bones \& teeth. Yummy in a stir fry. The fruit of a plant.

## Sam Spinach


/ am...
Green. Healthy for your bones \& teeth. Yummy in a salad. The leaves of a plant.

Olivia Onion

/ am...
White. Healthy for fighting off disease. Yummy on pizza. The root of a plant.

## Benny Beet



I am...
Red. Healthy for your heart. Yummy in a salad. The root of a plant.


## Suzy Sweet Potato



I am...
Orange. Healthy for your eyes. Yummy in a soup. The root of a plant.

Polly Purple
Cabbage


I am...
Purple. Healthy for your memory. Yummy in salad. The leaves of a plant.

## Leo Lettuce

## / am...

Green. Healthy for your bones \& teeth. Yummy in a sandwich. The leaves of a plant.


Chris Cabbage

/ am...
Green. Healthy for your bones \& teeth. Yummy in a salad. The leaves of a plant.


| COLOR: |  |
| :--- | :--- |
| Red |  |
| Orange |  |
| Yellow |  |
| Green |  |
| Purple |  |
| White |  |


| HEALTHY FOR... |  |
| :--- | :---: |
| Heart |  |
| Eyes | 0 |
| Fighting <br> disease |  |
|  <br> Teeth |  |
| Memory | a |


| THE __OF A |  |
| :--- | :--- |
| PLANT |  | Vegetable


| YUMMY IN... |  |
| :--- | :--- |
| Salad |  |
| Soup |  |
| Stir Fry |  |
| Sandwich |  |
| Pizza |  |
| Lasagna |  |
| W/a Dip | 2 |


| I am... <br> Red | I am... <br> Orange |
| :---: | :---: |
| Peter Pepper, Tommy Tomato, Rachel Radish, Benny Beet | Carrie Carrot, Suzy Sweet Potato |
| I am... Yellow | I am... <br> Green |
| Cora Corn, Sofia Squash | Sarah Celery, Katie Kale, Brody Broccoli, Aaron Arugula, Bianca Brussels Sprout, Gary Green Bean, Al Artichoke, Ava Asparagus, Sam Spinach, Zach Zucchini, Steve Snap Pea, Kevin Cucumber, Leo Lettuce, Chris Cabbage |
| I am... <br> Purple | I am... <br> White |
| Ella Eggplant, Tara Turnip, Raul Rutabaga, Polly Purple Cabbage | Cara Cauliflower, Olivia Onion |
| I am... <br> Healthy for your heart | I am... <br> Healthy for your eyes |
| Peter Pepper, Tommy Tomato, Rachel Radish, Benny Beet | Carrie Carrot, Suzy Sweet Potato |



| I am... <br> Yummy on a pizza | I am... <br> Yummy with a Dip |
| :---: | :---: |
| Tommy Tomato, Olivia Onion, Al Artichoke | Carrie Carrot, Sarah Celery, Brody Broccoli, Cara Cauliflower, Steve Snap Pea |
| I am... <br> The root of a plant | I am... <br> The stem of a plant |
| Carrie Carrot, Rachel Radish, Olivia Onion, Benny Beet, Suzy Sweet Potato, Tara Turnip, Raul Rutabaga | Sarah Celery, Ava Asparagus |
| I am... <br> The leaves of a plant | I am... <br> The flower of a plant |
| Katie Kale, Aaron Arugula, Bianca Brussels Sprout, Sam Spinach, Leo Lettuce, Polly Purple Cabbage, Chris Cabbage | Brody Broccoli, Cara Cauliflower |
| I am... <br> The fruit of a plant | I am... <br> The seeds of a plant |
| Peter Pepper, Tommy Tomato, Gary Green Bean, Zach Zucchini, Ella Eggplant, Steve Snap Pea, Kevin Cucumber, Al Artichoke, Sofia Squash | Cora Corn |

ALL: Veg-ta-ble, Veg-veg-ta-ble, Vegetable!
ALL: Veg-ta-ble, Veg-veg-ta-ble, Vegetable!

ME: Hey $\qquad$ ,

Recipe: Kale Salad
A healthy, crunchy, \& tangy salad!
Measure each ingredient into a large bowl:

- 3 cups Kale (wash, rip leaves off stems, + tear leaves into bite-sized pieces)
- 2 tablespoons Olive Oil
- 1 tablespoon Apple Cider Vinegar
- $1 / 4$ cup Pumpkin Seeds
- $1 / 4$ cup Dried Cranberries

Massage everything together with your hands until kale is soft + dark green in color. Enjoy!

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## Appendix 8:

## Building Healthy Meals

(fruits/veggies/proteins/whole grains/fats)

## Kid's Healthy Ealing Plate

 School of Public Health

Copyright © 2015 Harvard T.H. Chan School of Public Health. For more information about The Kid's Healthy Eating Plate, please see The Nutrition Source, Department of Nutrition, Harvard T.H. Chan School of Public
Health, hsph.harvard.edu/nutritionsource/kids-healthy-eating-plate

## FRUITS \& VEGETABLES



About $1 / 2$ of your plate

Foods like...


## WHOLE GRAINS



## Foods like...



## HEALTHY PROTEIN



## HEALTHY FATS



## HEALTHY DRINKS \& DAIRY



## Foods \& Drinks like...





Cut out these Player Pieces. Split the class into 2 to 4 teams. Assign 1 player piece to each team, and place it on the "Start" shape on the game board.



## Recipe: Veggie Hummus Pinwheels

A healthy and fun snack full of protein, whole grains, and vegetables!

Spread the following ingredients onto a large whole wheat tortilla:*

- 3 tablespoons hummus
- $1 / 4$ cup spinach or lettuce, chopped
- 1 small carrot, shredded
- 1 small cucumber, sliced

Tightly roll the tortilla, and cut into about 8 pieces. Enjoy your pinwheel sandwiches!
*add sliced tomatoes, avocado, and/or bell peppers if desired

Recipe: Veggie Hummus Pinwheels
A healthy and fun snack full of protein, whole grains, and vegetables!

Spread the following ingredients onto a large whole wheat tortilla:*

- 3 tablespoons hummus
- $1 / 2$ cup spinach or lettuce, chopped
- 1 small carrot, shredded
- 1 small cucumber, sliced

Tightly roll the tortilla, and cut into about 8 pieces. Enjoy your pinwheel sandwiches!
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