Health Assignments: April 14 - May 1, 2020

Week 1 (Boys on Tuesday, April 14; Girls on Thursday, April 16)

1. Watch the three videos below about food groups and the food pyramid.
2. Refer to the food pyramid diagram to complete "Chef Solus.."
3. Complete "Chef Solus-- Exploring Food Groups" (Do the best you can.)

The 5 Fabulous Food Groups (SciShow Kids) (time: 4:31)
https://www.youtube.com/watch?v=L9ymkJK2QCU&t=89s

Food Pyramid (meiermaa) (time: 3:30)
https://www.youtube.com/watch?v=nyk11ZxNp3A

Food pyramid and balanced diet (Life of Ayan) (time: 1:16)
https://www.youtube.com/watch?v=Z7bARY3wO-Q

Week 2 (Boys on Tuesday, April 21; Girls on Thursday, April 23)

1. Watch the video below on nutrients
2. Read and refer to "Nutrients", Nutrients-- Department of Health," and "Nutrients and Their Functions" documents to complete "Food Nutrients Homework" document
3. Complete "Food Nutrients Homework" document

How The Six Basic Nutrients Affect Your Body (Bestie) (time: 6:41)
https://www.youtube.com/watch?v=inEPIZZ_SfA

Week 3 (Boys on Tuesday, April 28; Girls on Thursday, April 30)

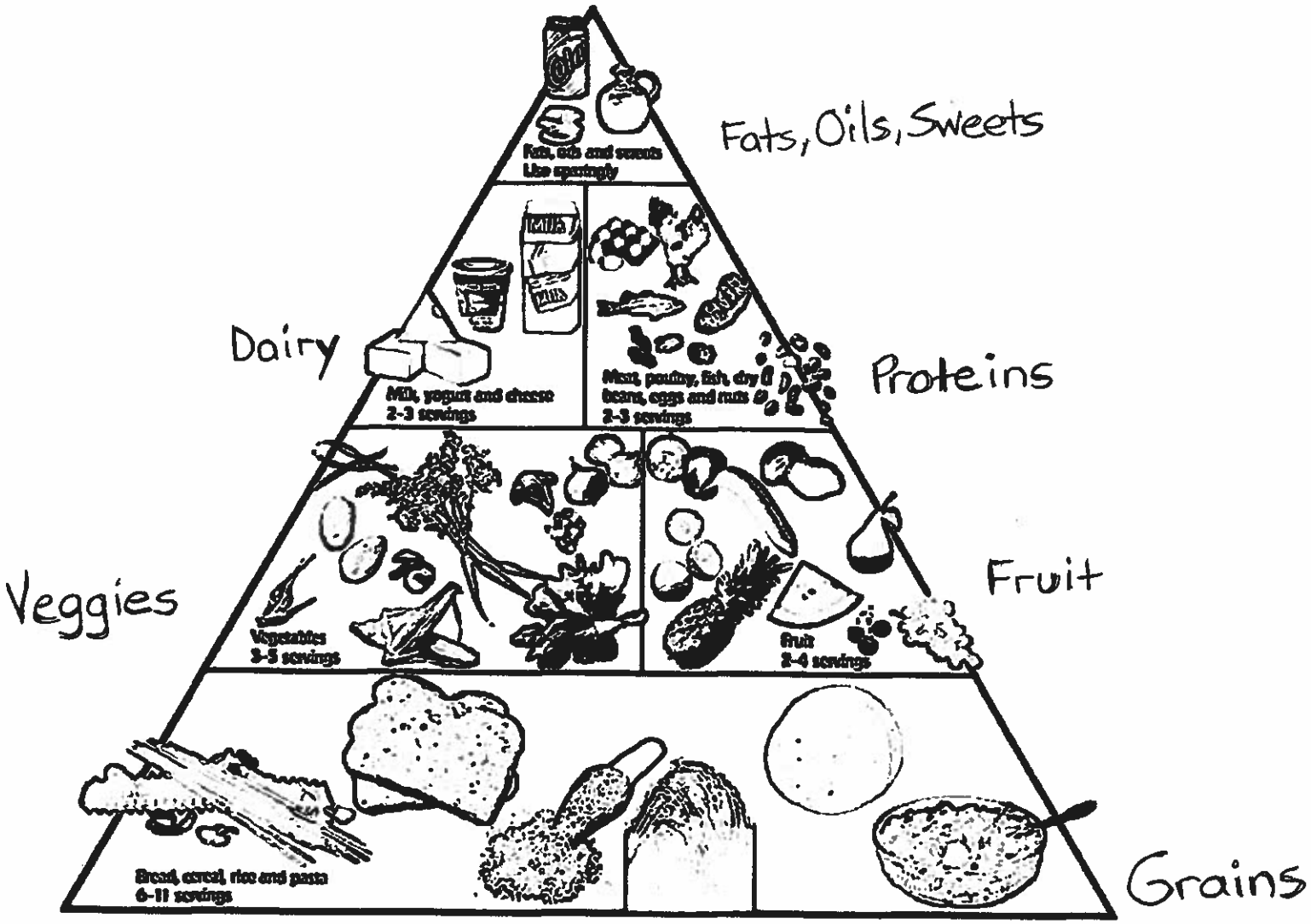
1. Watch the videos below on vitamins and healthy food choices
2. Read and refer to "There are 13 Essential Vitamins. Here's How to Get Them" document to complete "13 Essential Vitamins Worksheet"
3. Complete "13 Essential Vitamins Worksheet" document

Vitamania Song - Meet The Vitamins (GenepoolTV) (time: 2:58)
https://www.youtube.com/watch?v=jumtdDxJu48

Smart Nutrition - 3 Key Vitamins & Minerals for Teens (Visualz)
(time: 3:41)
https://www.youtube.com/watch?v=3wL0BghxeHc

Healthy Food Choices for Teens (LIVESTRONG.COM) (time: 2:41)
https://www.youtube.com/watch?v=oONzEJi-VZI

Food Pyramid

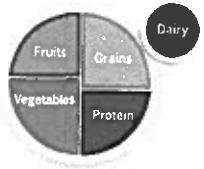


Chef Solus -Exploring Food Groups

Identify the Food Groups found in each of the Combination Foods

Combination food	Grains Group	Milk Group	Vegetable Group	Fruit Group	Meat Group	other group
Lasagna						
Bean Burrito						
Ham-Cheese sandwich						
Smoothie						
Sausage pizza						
Cheeseburger						
Peanut butter and jelly sandwich						
Macaroni and cheese						
Chicken noodle soup						

The fun way to learn about nutrition.



Visit www.ChefSolus.com for printable worksheets for kids, nutrition education games, puzzles, activities and more!

https://www1.health.gov.au/internet/publications/publishing.nsf/Content/canteen-mgr-tr1~nutrients

Nutrients: Page last updated: 08 October 2013

There are 6 essential nutrients that the body needs to function properly. Nutrients are compounds in foods essential to life and health, providing us with energy, the building blocks for repair and growth and substances necessary to regulate chemical processes.

There are **six major nutrients**: Carbohydrates (CHO), Lipids (fats), Proteins, Vitamins, Minerals, Water.

Proteins: meat, dairy, legumes, nuts, seafood and eggs

Carbohydrates: pasta, rice, cereals, breads, potatoes, milk, fruit, sugar

Lipids (most commonly called fats): oils, butter, margarine, nuts, seeds, avocados and olives, meat and seafood

Vitamins: common vitamins include the water soluble B group vitamins and vitamin C and the fat soluble vitamins A, D, E and K

- Fruits and vegetables are generally good sources of Vitamin C and A and folic acid (a B group vitamin)
- Grains and cereals are generally good sources of the B group vitamins and fibre
- Full-fat dairy and egg yolks are generally sources of the fat soluble vitamins A, D and E
- Milk and vegetable or soya bean oil are generally good sources of vitamin K, which can also be synthesised by gut bacteria

Minerals: (sodium, calcium, iron, iodine, magnesium, etc.): all foods contain some form of minerals.

- Milk and dairy products are a good source of calcium and magnesium
- Red meat is a good source of iron and zinc
- Seafood and vegetables (depending on the soil in which they are produced) are generally good sources of iodine

Water: As a beverage and a component of many foods, especially vegetables and fruits.

Nutrients-- The Department of Health (Page last updated: 08 October 2013)
https://www1.health.gov.au/internet/publications/publishing.nsf/Content/canteen-mgr-tr1~nutrients

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Granville Schools

Nutrients & their Functions

Most of the nutrients serve more than one function, and all are essential and available from foods of the major food groups. We can list their functions under the following categories:

Nutrients That Build and Maintain Body Cells

- Proteins
- Mineral elements
- Water
- Fats
- Carbohydrates

Nutrients That Regulate Body Functions

- Water
- Vitamins
- Mineral Elements
- Carbohydrates, including fiber

Nutrients That Provide Energy

- Fats
- Carbohydrates (starches and sugars)
- Proteins

Calories

The number of calories you consume each day is the most important factor in determining whether you put on or lose weight – even more important than the composition (fats vs. carbohydrates vs. protein) of those calories. Your body will begin burning muscle tissue – taking amino acids from the bloodstream and muscle for energy – if you enter a catabolic state. Consuming adequate calories and protein while working out regularly will ensure an anti-catabolic (anabolic) state – the preferred environment for muscle growth.

Carbohydrates

As an athlete, carbohydrates are the major nutrients that give you energy. Everything you do in life requires a certain amount of carbohydrates, sleeping, studying, breathing, and training. Athletes who truly desire to become the top dog will stop at nothing to get the most out of the foods they consume and thus make wise choices as to what type of carbohydrates they eat.

All carbohydrates are not created equal. Carbohydrate is merely the scientific name for sugar. Sugar is not just the crystalline white stuff you put in your tea or coffee in the morning. A

piece of fruit, an apple, is sugar, too. The sugar you buy at the grocery store, table sugar, is a simple form of sugar, and an apple is a complex form of sugar. White crystalline table sugar is a small chain made up of two molecules (a simple carbohydrate). Because it has only two chemical links to break, table sugar is broken down and absorbed rapidly. The apple, however, is a bit more complicated - it's composed of more chemical links - and therefore your body takes longer to break it down. Sugars with more links in their chain are called complex carbohydrates.

CARBS: Sugars-- fruits (good sugar, good carbs) and Starches-- (grains and some veggies, like potatoes and corn = starch)

Forego simple carbohydrates in favor of complex carbs; in fact, nutritionists recommend you get five times more complex carbs in your diet than simple carbs, even though most Americans consume nearly equal amounts.

Eat a candy bar and you'll experience a "sugar rush", only to feel sluggish 30-45 minutes later. Eat an apple or a sweet potato and you'll feel evenly energized for hours. The difference in these snacks is the candy bar contains refined processed simple sugars and the apple and sweet potato contain natural unprocessed carbohydrates. When simple sugars enter your blood stream they enter rapidly and in great numbers, they are already similar to glucose – the form of carbohydrate used for energy. Your pancreas releases insulin and quickly absorbs the sugar into storage; so quickly that there is less carbohydrates available than before you ate the candy bar. This is called a sugar crash or insulin reaction. Complex carbohydrates are slowly converted to glucose and are therefore absorbed slowly, allowing a more constant supply of energy to be used.

However, carbohydrates aren't "free foods", as many believe. It's true that carbohydrates contain fewer calories than fat, but they can easily be stored as fat if they're over consumed.

Proteins

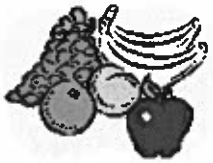
Proteins received their name from the Greek and mean "to take first place." As nutrients, they actively build living nitrogenous tissue, they are the building blocks for all human tissue; if you do not eat them, you do not recover and rebuild after tough workouts. Plain and simple. However this does not mean the more you eat the more you rebuild/grow. Balance is the key to proper sports nutrition. Your body can only assimilate and absorb between 30-40 grams of quality protein per meal. If you consume more protein, or any macronutrient, than your body can use, it will place unnecessary strain on your digestive system as well as end up being stored as excess energy/fat. For protein to work properly it must be complete, all the essential amino acids must be present.

Consuming more protein than your body can utilize can result in an increase in fat storage. Your liver virtually converts the excess protein into fat. Over-consumption of protein for a prolonged period of time can also increase the formation of a highly toxic ammonia called urea. Since the

Food Nutrients Homework

Use a range of sources of information (revision guides, books from the library, internet sites) to fill in the table below in as much detail as possible.





Nutrient Group	Foods with this nutrient in	What it is used for in the human body
Carbohydrate (Sugars)		
Carbohydrate (Starch)		
Protein		
Fat		
Fibre		
Vitamins		
Minerals		
Water		

THERE ARE 13 ESSENTIAL VITAMINS. HERE'S HOW TO GET THEM
(Mind & Body 6-28-18)
https://curiosity.com/topics/there-are-13-essential-vitamins-heres-how-to-get-them-curiosity/

As much as you may love potato chips, you know you can't survive on them for the rest of your life. Beyond just plain getting sick of them, these beloved salty crisps won't give you the vitamins you need to live a long, healthy, happy life. Sure, maybe that's obvious. The actual functions of the essential vitamins in question, however, are probably a little hazier.

Very Vital

Vitamins are necessary for normal cell function, growth, and development. And we're not talking about those chalky Flintstones chews you had as a kid. Unless you have a condition that prevents it, a healthy diet will provide you with the 13 essential vitamins you need to survive. Vitamins are one of four groups of essential nutrients you need, the others being minerals, essential fatty acids, and essential amino acids. As far as essential vitamins, those fall into two categories:

Fat-soluble vitamins. These, which include vitamins A, D, E, and K, are stored in the body's fatty tissue. They're absorbed more easily in the presence of dietary fat.

Water-soluble vitamins. The body must use these nine vitamins right away since any leftover water-soluble vitamins will get flushed out through the urine. Vitamin B12 is the only one in this group that can be stored in the liver for years.

Break It Down

The two vitamin groups comprise 13 essential vitamins. And like a sports team, they all have different roles in achieving one common goal: a healthy you. Here are the players, and exactly what they do:

Vitamin A

It helps to form and maintain healthy teeth, bones, soft tissue, mucous membranes, and skin.

How to get it: dark leafy greens, dark-colored fruits, egg yolks, fortified dairy products (some cheese, yogurts, butters, and creams — check the label), liver, fish, beef.

Vitamin B6

Also called pyridoxine, it helps form red blood cells and maintain brain function.

How to get it: avocado, bananas, legumes, poultry, meats, nuts, whole grains.

Vitamin B12

Like the other B vitamins, it's important for metabolism and helps form red blood cells and maintain the central nervous system.

How to get it: eggs, meat, milk, organ meats (especially liver and kidney), shellfish, poultry, fortified foods (like soy milk).

Vitamin C

Also called ascorbic acid, it's an antioxidant that promotes healthy teeth and gums, as well as wound healing. It helps the body absorb iron and maintain healthy tissue.

How to get it: broccoli, Brussel sprouts, cauliflower, cabbage, citrus fruit, potatoes, spinach, tomatoes, strawberries.

Vitamin D

It helps the body absorb calcium, which you need for the normal development and maintenance of healthy teeth and bones.

How to get it: your body (humans produce it in response to sunlight), fatty fish (salmon, herring, mackerel), fish liver oils, fortified dairy products and cereals.

Vitamin E

It's an antioxidant also known as tocopherol that helps the body form red blood cells and use vitamin K.

How to get it: avocado, dark-green veggies (spinach, asparagus, broccoli), oils (safflower, corn, sunflower), papaya, mango, seeds, nuts, wheat germ.

Vitamin K

It helps the blood coagulate, and may be important for bone health.

How to get it: cabbage, cauliflower, dark-green veggies (broccoli, asparagus, Brussel sprouts), dark leafy greens (spinach, kale, collards), fish, liver, beef, eggs.

Biotin

It's essential for the metabolism of proteins and carbohydrates, and in the production of hormones and cholesterol.

How to get it: egg yolks, legumes, milk, nuts, organ meats (especially liver and kidney), pork, yeast, chocolate, cereals.

Niacin (Vitamin B3)

It's a B vitamin that helps maintain healthy skin and nerves. It also has cholesterol-lowering effects at higher doses.

How to get it: eggs, avocado, fish (especially tuna and other saltwater fish), legumes, nuts, potatoes, poultry, fortified cereals and breads.

Folate

It works with vitamin B12 to help form red blood cells. It is needed for the production of DNA, which controls tissue growth and cell function.

How to get it: asparagus, broccoli, beets, dried beans (pinto, navy, kidney, lima), leafy greens (spinach, romaine), oranges, lentils, peanut butter, brewer's yeast, fortified cereals, wheat germ.

Pantothenic Acid (Vitamin B5)

It's essential for the metabolism of food and plays a role in the production of hormones and cholesterol.

How to get it: avocado, kale, broccoli, eggs, legumes, lentils, mushrooms, organ meats, poultry, sweet potatoes, whole-grain cereal, milk.

Riboflavin (Vitamin B2)

It works with the other B vitamins to promote growth and the production of red blood cells.

How to get it: eggs, organ meats, lean meats, milk, green vegetables, fortified grains and cereals.

Thiamine (Vitamin B1)

It helps your cells change carbohydrates into energy.

How to get it: eggs, lean meats, nuts, seeds, legumes, organ meats, peas, whole grains.

Less Is More

Don't let all this vitamin talk get you too amped up on supplements and pills. You most likely don't need to be taking a multivitamin or vitamin supplements at all if you're a thoughtful grocery shopper, according to studies. In fact, when it comes to vitamins and minerals, too much of a good thing can be very bad. Loading up on vitamins can quickly build up to toxic levels of the stuff in your body. According to MedlinePlus, "The best way to get all the daily vitamins you need is to eat a balanced diet that contains a wide variety of fruits, vegetables, fortified dairy foods, legumes (dried beans), lentils, and whole grains."

Name _____ Date _____

13 Essential Vitamins!

List foods that contain these important vitamins.

A Retinol	Needed for healthy bones, teeth, skin, eyes, and nervous, respiratory and digestive systems.
B1 Thiamine	Helps release energy from food. Benefits heart and nervous system.
B2 Riboflavin	Promotes healthy skin and helps body cells use oxygen.
Niacin	Essential for cell metabolism and use of carbohydrates.
B6	Needed for protein, fat, and carbohydrate metabolism.
Pantothenic Acid	Helps convert proteins, fats, and carbohydrates into energy.
B12 Cobalamin	Needed for development of red blood cells and healthy functioning of the nervous system.
H Biotin	Helps form fatty acids and maintains healthy skin.
Folate	Helps produce red blood cells.
C Ascorbic acid	Needed for sound teeth and bones. Helps the healing process.
D Cholecal-ciferol	Needed for calcium and phosphorus metabolism.
E Tocopherol	Helps restore cell membranes and other body structures.
K Phylloquinone	Essential for normal blood clotting.