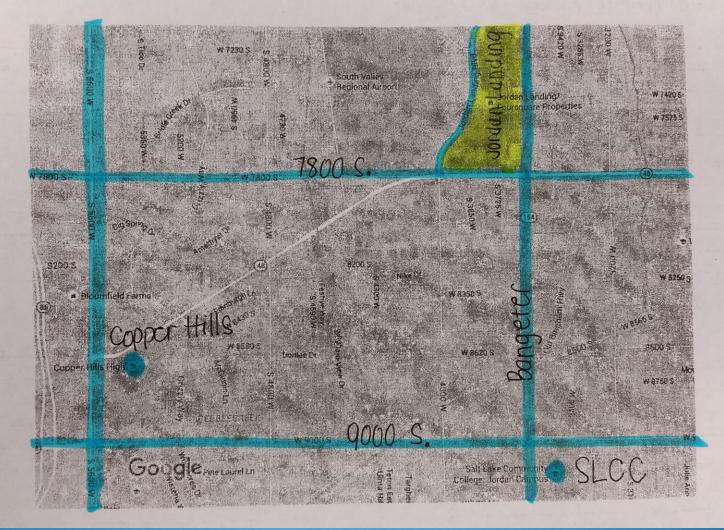
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Nutrients Chapter 10 Lesson 2

How does your body use nutrients?

- As an energy source
- To heal, build and repair tissue
- O To sustain growth
- O To help transport oxygen to cells
- O To regulate body functions

Nutrients that provide energy

Carbohydrates, Proteins and Fats

What are carbohydrates?

- Starches and sugars found in foods, which provide your body's main source of energy
- It is recommended that 45-65 percent of your daily calories are from carbohydrates
- O 1 carbohydrate gram = 4 calories
- O Three types: Simple, complex and fiber

Simple Carbohydrates

 3a. simple carbohydrates are sugars such as fructose (found in fruit) and lactose (found in milk)

3b. Simple carbohydrates can occur naturally in foods or be added to foods









Complex Carbohydrates

 4a. Complex carbohydrates, or starches, are long chains of sugars linked together

 4b. Common sources include grains, bread and pasta, beans and root vegetables like potatoes.





Fiber

- 5a. Fiber is a tough complex carbohydrate that the body cannot digest
- 5b. Fiber moves waste through your digestive system
- 5c. Sources of fiber includes fruits and vegetables, whole grains, and products made from grains, nuts and seeds.

Role of carbohydrates

<u>http://www.youtube.com/watch?v=6esFOcj_laY</u>

Questions

O What happens if we eat too many carbs?

- Our bodies will store them as excess fats
- O What are bad types of carbs?
 - White bread, white rice, white flour (refined carbs like simple sugars)
- O What are good types of carbs?
 - Foods that are close to their natural state as possible (unrefined and most complex carbs)

Proteins

- 7a. nutrients the body uses to build and maintain cells and tissues
- ⊘ 7b. 1 protein gram = 4 calories
- ✓ Types of proteins
 - 8a. Amino Acids: Nonessential (11) amino acids and essential (9) amino acids (building blocks to build proteins in the body)
 - ⊘ 8b. Other proteins are from animal sources, plants and soy

Two Types of Proteins

- Essential amino acids vs non-essential amino acids
- 9a. Your body produces the 11 nonessential but it does not produce the 9 essential. Your body must get the essential amino acids from food.









Roles of proteins

 10a. Supports growth, maintains cells and tissues, provides energy, functions as hormones, helps carry oxygen to all blood cells

<u>http://www.youtube.com/watch?v=DRHCVQEIAw</u>

Questions

What is the only plant protein that is complete?
Soybeans
What are the best sources of animal proteins?
Lean meats like poultry without the skin and fish

Types of Fats

I1a. Unsaturated: found in vegetable oil, nuts and seeds

11b. Saturated: found mostly in animal based foods

 11c. Trans fats: found in processed, package foods such as cookies and crackers

⊘ 11d. 1 fat gram = 9 calories

Roles of Fats

- 12a. provided a concentrated form of energy, important for brain development, blood clotting and controlling inflammation as well as maintains healthy skin and hair.
- O What is cholesterol?
 - 13a. a waxy, fatlike substance and excess of this in your blood can build up inside of your arteries
- <u>http://www.youtube.com/watch?v=3Gqo3Y6WFYA</u>

Vitamins

Compounds found in food that help regulate many body processes like blood clotting, forming and maintaining new cells and aids in bone formation.
 Examples: A, D, E, K, B1, B2, B3, B6, B12, C, Folic Acid

Minerals

Elements found in food that are used in the body

O The body cannot produce minerals and it must get them from food

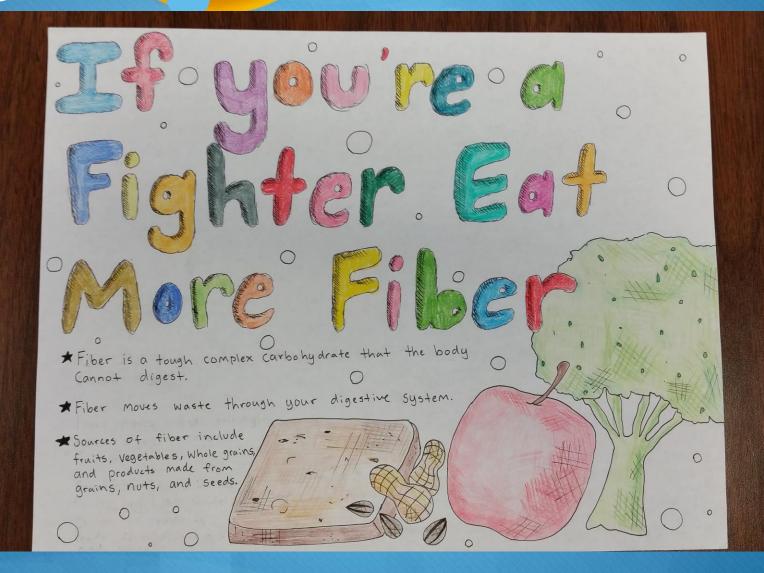
O Examples: Calcium, Phosphorus, Magnesium, Iron

Water

- O moves food through the digestive system
- helps with digesting carbohydrates and protein, and aiding in other chemical reactions in the body
- O transports nutrients and removes wastes
- Stores and releases heat
- Cools the body through perspiration
- O cushions the eyes, brain, and spinal cord
- ✓ lubricates the joints

Create an Ad

- During 2006, food and beverage manufacturers spent \$1.6 billion on marketing their products to American children.
- Your assignment is to create an advertisement that promotes healthier food choices.
 - Your ad needs a catchy, unique slogan
 - O Your ad needs pictures
 - O Your ad needs to focus on at least one of the 6 nutrients
 - Your ad needs to also include health benefits and food sources (except water) of the nutrient you chose.



Eat your CAPPP boby drates Mate!

- It's your bodies main source of knergy so go buy some before they run out.
- · 1 carbohydrate gram= 4 calories
- It's recommended that 45-65% of your daily calories are from carbohydrates.