Nutrition Outline

9th/10th Grade Health Class
Nutrition

- **NUTRITION** – Process by which the body takes in food.

- **NUTRIENTS** – substances in food that your body needs to grow & repair.

- **CALORIE** (kilocalorie) – units of heat that measure the energy value of food

- **HUNGER** – (unlearned) protects from starvation

- **APPETITIE** – is a desire, rather than a need to eat
Protein

■ 4 calories/gram 15% of your diet
■ Help to build and maintain cells
■ Composed of Amino Acids
  ■ Complete – contains all 9 essentials AA (fish)
  ■ Incomplete – contains some AA (beans)
  ■ Complementary – combining to form a compete protein.
■ Vegetarian – Does not eat meat
  ■ Protein Problems (too much) – Heart Disease, overweight, kidney problems
Carbohydrates

- **4 calories/gram** 55-60% of your diet
- Provides energy for the body
  - **Glucose** — A simple sugar that is the body’s main source of energy.
  - **Glycogen** — glucose that is stored in the liver & muscles as a starch-like substance
- **Types:** 1) Simple — broken down glucose
  2) Complex — Starch, glycogen
- **Fiber** — Complex Carbohydrate. Helps move waste throughout the digestive system.
Fats

- 9 calories/gram.  30% of diet (10% saturated)
- Protects organs, insulates, transport of vitamins
- **Types:** Saturated – solid at room temp (butter)  
  Unsaturated – liquid at room temp (oil)  
  Trans fat – natural or created

How to reduce fat – limit intake

**Cholesterol** – waxy lipid-like substance that circulates in the blood. Used to make cell membranes.

**HDL** – (Healthy) helps in the body

**LDL** – (Lousy) – builds up in arteries
Vitamins

- **Antioxidant** – chemical compounds that protect the body from free radicals

- **Types:**
  1) **Fat Soluble** – absorbed, stored and transported in fat
     
     Vitamin A, D, E and K

  2) **Water Soluble** – dissolve in water and need to be replenished regularly.

Enrichment / Fortification / Nutritional / Preserve / Preparation / Look / Taste
Minerals

- Substances that the body can not make but are needed for healthy body
  - **Calcium** – need for healthy bone & teeth
    - Osteoporosis – brittle bone disease
  - **Iron** - helps blood hemoglobin transport oxygen
    - Anemia – Deficiency of RBC / Hemoglobin
  - **Potassium** – maintains fluid/electrolytes balance
  - **Sodium** – regulates blood and body tissues
    - Hypertension – High Blood Pressure
Water

Essential for life. 55-75% of body made up of water.

2 - 3 liter a day (6-8 glasses a day)

Dehydration / Illness, activity / Kidney / Death

Dehydration conditions:

1) **Heat Cramps** – muscular contractions

2) **Heat Exhaustion** – paleness, dizziness

3) **Heat Stroke** – extremely high temperature

Very dangerous, Need fluids