
7th Grade Science Syllabus

I. Astronomy

A. Universe

1. Hierarchy of the universe
2. Formation of the universe
3. Galaxies

B. Stars

1. Classification of stars
2. Life cycle of stars
3. Light pollution

C. Solar System

1. Formation of the solar system
2. The planets
 - a. terrestrial planets
 - b. gas planets
3. Orbits of the planets
4. The sun
5. The moon
 - a. phases
 - b. eclipses
 - c. tides

II. Waves and Rays

A. Waves

1. Characteristics of waves
 - a. crest
 - b. trough
 - c. wave length
 - d. amplitude
2. Types of waves
 - a. transverse

b. longitudinal

c. surface

3. Properties of waves

- a. speed
- b. amplitude
- c. frequency
- d. intensity

B. Sound

1. Movement of sound
2. Relationship of amplitude, loudness, frequency and wavelength
3. Sound and the ear
4. Noise Pollution

C. Light

1. Properties of light
2. Transmission of light
 - a. opaque
 - b. translucent
 - c. transparent
3. Shadows
4. Reflection of light
5. Refraction of light
6. Concave and Convex lenses
7. Electromagnetic spectrum

D. Eyes

III. Diversity of Life

A. Living or non-living

Characteristics of living organisms

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- B. Microscope
 - 1. Use of microscope
 - 2. Making wet mount slides
 - C. Plant and animal cells
 - 1. Parts of the cell
 - 2. Comparing plant and animal cells
 - 3. Functions of organelles
 - 4. Diffusion
 - D. Classification
 - 1. Classifying organisms
 - 2. Five Kingdoms
 - a. viruses, protista, and monerans
 - 3. Organs
 - 4. Organ systems
 - B. Respiratory system
 - C. Circulatory system
 - D. Excretory system
 - E. Digestive system
 - F. Skeletal system
 - G. Muscular system
 - H. Nervous System
 - I. Endocrine System
- b. fungi
 - c. plants
 - d. animals
- 3. Sexual and Asexual reproduction
 - a. mitosis
 - b. plant reproduction
 - c. flowering plants
- ### IV. Human Systems
- A. Levels of organization
 - 1. Cells
 - 2. Tissues