

GENERAL SCIENCE SYLLABUS

7th CLASS

1. FOOD COMPONENTS

- " Listing out Food Components.
- " Essential components of food
- " Confirmation of presence of Food Components. (Carbohydrates, Fats, Protein conformation tests)
- " Roughages or dietary fibers and its sources.
- " Water
- " Balanced diet
- " Avoid junk food
- " History of food and nutrition.

2. ACIDS AND BASES

- " Listing out food items based on taste.
- " Making of turmeric paper - natural indicator
- " Natural indicators and changes.
- " Litmus tests to know acidic / basic nature of substance.
- " Acidic nature, basic nature
- " Chemical indicators - phenolphthalin, methylorange
- " Acid rains.
- " Neutralization
- " Organic manures.
- " Salts
- " Uses of acids, basics and salts.

3. ANIMAL FIBRE

- " Story of Silk
- " Moth to Egg
- " Cocoon to Fibre - process of reeling
- " Reeling to Weaving
- " Stores of wool
- " Different stages involved in producing fabric from wool. (Shearing, Scouring, Sorting, Mealing, Dying, Carding, Spinning, Rolling of twisting and Knitting of wool).
- " Differences between Silk and Cotton.

4. MOTION AND TIME

- " Identification of motion around us
- " Motion and Rest
- " Relative motion
- " Uniform and Non uniform motions
- " Types of motions (Translatory, Rotary, Oscillatory)
- " Slow and Fast motions
- " Estimating times and its units.
- " Stop clock - measuring time
- " Speed - its units and Calculations

5. HEAT - MEASUREMENTS

- " Seasons and temperature
- " What is temperature?

- " Heat - a form of energy
- " Conversion of Energy
- " Heat and temperature
- " How to measure temperature?
- " Types of thermometers (clinical, MMT, Digital, Laboratory)
- " How to use Thermometer?
- " Expansion of Liquids

6. WEATHER AND CLIMATE

- " Prediction about Weather
- " Understanding Weather Reports
- " Components of Weather
- " Measuring temperature by using MMT
- " Measuring rainfall by using Rain gauge
- " How to know direction of wind?
- " What is humidity?
- " Are weather conditions cyclic during the years?
- " What is climate?
- " Climate and Life style

7. ELECTRICITY - CURRENT AND IT'S EFFECT

- " Make your own cell
- " Dry cell
- " Symbols of Electric components
- " How to draw Circuit diagrams?
- " Series and Parallel circuits
- " Heating effect of electric current

- " Tube light and compact fluorescent lamps
- " Electric fuses
- " Miniature Circuit Breaker (MCB)
- " Electricity in our home - billing

8. AIR, WINDS AND CYCLONES

- " Air and it's influence on our daily life
- " Where do we find air
- " Air exerts pressure
- " Air expands on heating
- " Hot air is lighter than cold air
- " Warm air rises up
- " Effects of moving air
- " Wind - Uneven heating on the earth.
- " How the cyclones are formed?
- " Factors contributing to cyclones
- " Do's and Don'ts during cyclones

9. REFLECTION OF LIGHT

- " How light reflects after striking an object?
- " Observation of light reflection
- " Laws of reflections, regular and irregular reflections
- " Angle of incidence, Angle of reflections
- " Make your own Periscope
- " Mirror images, Virtual images, Real images
- " Make your own Kaleidoscope
- " Convex and Concave mirrors
- " Images with Spherical mirrors

10. NUTRITION IN PLANTS

- " Von Helmont experiment
- " What is photosynthesis?
- " Exchange of air - stomata
- " How plants make their food? (Autotrophic Nutrition)
- " Other modes of Nutrition in plants (Heterotrophic Nutrition)
- " Parasitic plants - Haustoria
- " Insectivorous plants.
- " Saprophytes
- " Symbiosis

11. RESPIRATION IN ORGANISMS

- " Respiration in human beings
- " Counting of beats in a minutes
- " Measuring of chest expansion
- " Measuring of air in each breath
- " Differences between exhaled and inhaled air
- " Discovery of Oxygen and Carbon dioxide
- " Gases in our breath
- " Breathing in other animals - Fish, Frog, Cockroaches, earthworm
- " Respiration in Plants and Sprouted seeds

12. REPRODUCTION IN PLANTS

- " Know more about flower
- " Floral parts - Thalamus, Calyx, Corolla, Androecium, Gynoecium
- " Complete and Incomplete flowers
- " Unisexual and Bisexual flowers

- " Sexual parts of a flower (Pollen grain, ovary)
- " Pollination (Self pollination, Cross pollination)
- " Agents of Pollination
- " Fertilization - Fruit - Seed
- " A Sexual reproduction (Budding, Spores)
- " Vegetative reproduction

13. SEED DISPERSAL

- " Why seeds dispersed?
- " Different kinds of seeds
- " Agents of seed dispersed (Wind, water, birds, animals, bursting of fruits and number beings)
- " Seeds in fruits

14. WATER - TOO LITTLE TO WASTE

- " Source of water on the earth
- " Water is a precious resource
- " Types of impurities in sewage
- " Waste water treatment
- " Diseases caused by untreated water
- " Sewage disposing methods
- " Drainage systems
- " Water conservation

15. SOIL - OUR LIFE

- " Usefulness of soil
- " Soil and life

- " Preparation of soil life chart
- " Soil is a good habitat
- " Properties of the soil
- " Types of soil
- " Moisture of soil
- " Percolation rate of soil
- " Substances present in soil
- " Horizons of soil
- " Soils in our village
- " Soil and crops
- " Soil conservation

16. FOREST - OUR LIFE

- " Know about orchard
- " What is forest?
- " Diversity in forest
- " Types of forests in our state

- " People living in forests
- " Destruction of forests
- " Conservation of forests

17. CHANGES AROUND US

- " Periodical changes.
- " Physical and chemical changes.
- " Changes in ice while heating.
- " Changes caused due to burning
- " Rusting of iron.
- " Galvanization.
- " Browning of cut vegetables and it's prevention.
- " Changes in magnesium ribbon.
- " Chemical changes - reaction of copper sulphate with iron reaction of vinegar with baking soda, burning of camphor.
- " Crystallization - crystallization of urea, copper sulphate.