

SCIENCE SYLLABUS

Class – 1

1st Class Science Syllabus – An Overview

Students enter into a proper education system from class 1. They are unfamiliar with the school system and learning process. The Science syllabus of class 1 is designed in such a way that it creates students' interest in studies. The textbook also contains short stories, which are explained with infographics and pictures.

Here our chapters for ITSE Examination :-

Chapter 1. A Green World

Chapter 2. Food From Plants

Chapter 3. The Animal's World

Chapter 4. Food and Shelter of Animals

Chapter 5. Our Body

Chapter 6. Our Needs

Chapter 7. Healthy Habits

Chapter 8. Safety and First Aid

Chapter 9. We Need Air

Chapter 10. Water

Chapter - 1 (A Green World)

- Trees: Big, tall and strong plants.
- Shrubs: Plants smaller than trees.
- Herbs: Small and weak plants.
- Climbers: Small plants that need support to grow or climbs.
- Creepers: Weak plants that grow along the ground.
- Baby Plant: Small plant inside a seed.

Chapter - 2 (Food From Plants)

Topics and Sub-topics:

- 1. Introduction to Plants**
 - Different types of plants (trees, shrubs, herbs, climbers, creepers)
 - Basic parts of a plant (root, stem, leaves, flowers, fruits, seeds).
- 2. Plants as a Source of Food**
 - Edible parts of plants (fruits, vegetables, leaves, roots, seeds, flowers)
 - Examples of common plants and their edible parts (e.g., carrot as a root, spinach as leaves).
- 3. Fruits and Vegetables**
 - Identification and naming of common fruits and vegetables
 - Seasonal fruits and vegetables
 - Differentiating between fruits and vegetables.
- 4. Other Plant Products as Food**
 - Grains and cereals (e.g., rice, wheat)
 - Pulses (e.g., beans, lentils)
 - Nuts and seeds (e.g., almonds, sunflower seeds).
- 5. How Plants Grow**
 - Basic needs for plant growth (water, sunlight, soil)
 - Introduction to the life cycle of a plant (seed to plant)
- 6. Healthy Eating from Plants**
 - Importance of eating fruits and vegetables
 - Different ways to eat plant foods (raw, cooked, juices).
- 7. Plant-Based Foods in Daily Meals**
 - Common dishes and meals made from plant products (e.g., salads, vegetable curry)
 - Discussion on traditional foods from different regions.
- 8. Observing and Learning Activities**
 - Growing a plant from a seed in the classroom or at home
 - Identifying and categorizing foods that come from plants
 - Simple cooking or food preparation activities using plant-based ingredients.

Chapter - 3 (The Animal's World)

Topics and Sub-topics:

1. Introduction to Animals

- Different types of animals (domestic, wild, farm, and pet animals)
- Basic animal characteristics (body parts, movements, sounds).

2. Types of Animals

- **Domestic Animals:**
 - Animals that live with humans (e.g., cats, dogs)
 - Their uses and importance in daily life (companionship, assistance, etc.).
- **Wild Animals:**
 - Animals that live in forests or natural habitats (e.g., lions, tigers, elephants).
 - Their roles in the ecosystem.
- **Farm Animals:**
 - Animals that live on farms (e.g., cows, sheep, chickens)
 - Their contributions to human life (milk, meat, wool, eggs).
- **Pet Animals:**
 - Animals kept at home for companionship (e.g., birds, rabbits, fish)
 - Care and responsibilities of owning a pet.

3. Animal Habitats

- Different places where animals live (forests, deserts, oceans, rivers, homes)
- How animals adapt to their habitats (fur, scales, feathers, etc.).

4. Animal Sounds and Movements

- Different sounds animals make and their meanings (barking, meowing, roaring)
- How animals move (walking, flying, swimming, crawling).

5. Animal Food and Eating Habits

- Types of food animals eat (herbivores, carnivores, omnivores)
- How animals find and eat their food (grazing, hunting, scavenging).

6. Animal Families and Babies

- Introduction to animal families and their young ones
- Names of baby animals (calf, puppy, kitten, cub)
- How animals take care of their babies.

7. Importance of Animals in Human Life

- Animals as sources of food, clothing, and labor (milk from cows, wool from sheep)
- Animals in cultural practices and stories.

8. Observing and Learning Activities

- Observing animals around us (neighbourhood walks, visits to farms or zoos)
- Drawing and labelling common animals
- Identifying and mimicking animal sounds and movements.

Chapter – 4 (Food and Shelter of Animals)

Topics and Sub-topics:

1. Introduction to Animal Food and Shelter

- Understanding that animals, like humans, need food and a place to live.
- Basic needs of animals for survival.

2. Types of Animal Foods

- **Herbivores:**
 - Animals that eat plants (e.g., cows, deer, rabbits)
 - Examples of plant-based foods they consume (grass, leaves, fruits)
- **Carnivores:**
 - Animals that eat other animals (e.g., lions, tigers, hawks)
 - Understanding their hunting habits and food chain roles.
- **Omnivores:**
 - Animals that eat both plants and animals (e.g., bears, pigs, humans)
 - Examples of varied diets.
- **Special Diets:**
 - Animals with unique diets (e.g., pandas eating bamboo, koalas eating eucalyptus leaves)
 - How diet influences their habitat and lifestyle.

3. How Animals Find Their Food

- Foraging and grazing habits of herbivores.
- Hunting strategies of carnivores.
- Scavenging and food storage (e.g., squirrels storing nuts).

4. Animal Shelters

- **Natural Shelters:**
 - Caves, nests, burrows, and other natural habitats.
 - How these shelters protect animals from predators and weather.
- **Human-Made Shelters:**
 - Stables, coops, kennels for domestic animals.
 - Examples of how humans provide shelter for animals.
- **Specific Examples:**

- Birds building nests in trees.
 - Bees creating hives.
 - Rabbits living in burrows.
5. **Animals and Their Homes**
- Matching animals to their typical shelters (e.g., dogs in kennels, birds in nests).
 - Importance of habitat for animal well-being.
6. **Different Environments and Animal Shelters**
- Forests: Shelters in trees, underbrush, or ground.
 - Deserts: Adaptations like burrows to escape heat.
 - Oceans and Rivers: Coral reefs, sea caves, riverbanks for aquatic animals.
7. **Animal Families and Shared Shelters**
- Animals living in groups (e.g., packs, herds, colonies).
 - How family groups share shelters and protect each other.
8. **Human Responsibility Towards Animal Food and Shelter**
- Feeding pets and providing them with proper shelter.
 - Respecting wildlife habitats and not disturbing their homes.
 - Role of sanctuaries and zoos in providing shelter for animals.
9. **Observing and Learning Activities**
- Identifying and categorizing animals based on their diet (herbivore, carnivore, omnivore).
 - Simple activities like making bird feeders or building a small animal shelter model.
 - Drawing and labelling pictures of animals and their homes.

Chapter - 5 (Our Body)

Topics and Sub-topics:

1. **Introduction to the Human Body**
- Understanding that the human body has various parts that work together.
 - Basic appreciation of the body as a whole.
2. **Main Parts of the Body**
- **Head and Face:**
 - Parts of the head (hair, forehead, eyes, ears, nose, mouth, chin)
 - Basic functions of each part (e.g., eyes for seeing, nose for smelling)
 - **Trunk:**
 - Upper body parts (neck, shoulders, chest, abdomen)
 - Functions such as breathing (chest), digestion (abdomen)

- **Limbs:**
 - Arms and hands (shoulder, elbow, wrist, fingers)
 - Legs and feet (thighs, knees, ankles, toes)
 - Functions like holding, writing (hands), walking, running (legs).
- 3. **Functions of Body Parts**
 - How each body part helps us in daily activities (e.g., hands for holding, feet for walking).
 - Introduction to the concept of sense organs and their functions.
- 4. **The Five Senses**
 - **Sight:**
 - The role of eyes in seeing.
 - How we use sight to recognize people and objects.
 - **Hearing:**
 - The role of ears in hearing.
 - Importance of sound in communication and safety.
 - **Smell:**
 - The role of the nose in smelling.
 - Examples of different smells (flowers, food, smoke).
 - **Taste:**
 - The role of the tongue in tasting.
 - Different tastes (sweet, sour, salty, bitter).
 - **Touch:**
 - The role of skin in feeling.
 - Sensations of touch (hot, cold, soft, hard).
- 5. **Keeping Our Body Healthy**
 - Importance of cleanliness (bathing, brushing teeth, washing hands).
 - Basic hygiene practices to keep body parts clean and healthy.
 - Importance of a balanced diet and regular exercise.
- 6. **Posture and Movements**
 - Simple concepts of good posture (sitting, standing, walking).
 - Basic movements and their benefits (stretching, bending, jumping).
- 7. **Caring for Our Body**
 - Recognizing the need for rest and sleep.
 - Avoiding harmful habits (not putting objects in ears/nose, not touching sharp things).
 - Wearing appropriate clothing for protection and comfort.
- 8. **Observing and Learning Activities**
 - Identifying and naming different body parts.
 - Simple exercises to demonstrate the use of different body parts.
 - Activities involving the senses (e.g., guessing objects by touch, identifying smells).

Chapter - 6 (Our Needs)

Topics and Sub-topics:

1. Introduction to Basic Needs

- Understanding what basic needs are.
- Importance of basic needs for survival.

2. Need for Food

- **Why We Need Food:**
 - Food as a source of energy.
 - Role of food in growth and keeping us healthy.
- **Different Types of Food:**
 - Examples of different foods (fruits, vegetables, grains, proteins, dairy).
 - Categorizing foods (breakfast, lunch, dinner, snacks).
- **Eating Habits:**
 - Importance of eating fresh and clean food.
 - Benefits of eating a variety of foods.
- **Healthy Eating:**
 - Understanding balanced meals.
 - Avoiding junk food and eating in moderation.

3. Need for Clothing

- **Why We Need Clothes:**
 - Protection from weather (hot, cold, rain).
 - Keeping our body clean and covered.
- **Types of Clothes:**
 - Seasonal clothing (summer, winter, rainy).
 - Special clothing for different occasions (school uniform, festive attire).
- **Material and Comfort:**
 - Different materials clothes are made from (cotton, wool, synthetic).
 - Choosing appropriate clothes for comfort and safety.

4. Need for Shelter

- **Why We Need Shelter:**
 - Protection from weather, safety, and a place to live.
 - Shelter as a place for rest and comfort.
- **Types of Shelters:**
 - Different types of homes (houses, apartments, huts).
 - Understanding how shelters can vary by region (e.g., igloos in polar areas, stilt houses in flood-prone areas).
- **Parts of a House:**
 - Basic parts of a house (rooms, doors, windows, roof).

- Functions of different rooms (kitchen for cooking, bedroom for sleeping).
5. **Need for Water**
- **Why We Need Water:**
 - Water for drinking, cooking, cleaning, and bathing.
 - Importance of water in keeping us hydrated and healthy.
 - **Sources of Water:**
 - Different sources of water (tap, well, river, rain).
 - Importance of clean and safe drinking water.
 - **Water Conservation:**
 - Simple ways to save water (turning off taps, using a bucket instead of a hose).
6. **Need for Air**
- **Why We Need Air:**
 - Air is essential for breathing.
 - Importance of clean and fresh air.
 - **Sources of Air:**
 - Natural sources (trees, plants).
 - Activities that provide fresh air (playing outside, opening windows).
7. **Healthy Lifestyle Habits**
- Importance of exercise and physical activity.
 - Rest and sleep as essential needs for the body.
 - Simple hygiene practices to stay healthy (hand washing, brushing teeth).
8. **Observing and Learning Activities**
- Identifying and discussing different foods, clothes, shelters in their environment.
 - Sorting and categorizing items based on seasons and occasions.
 - Practical activities like dressing dolls in different clothes, drawing homes, and discussing their parts.

Chapter – 7 (Healthy Habits)

Topics and Sub-topics:

1. **Introduction to Healthy Habits**
 - Understanding what healthy habits are.
 - Importance of practicing healthy habits for overall well-being.
2. **Personal Hygiene**
 - **Daily Hygiene Practices:**
 - Brushing teeth twice a day.
 - Washing hands regularly, especially before eating and after using the restroom.

- Taking a bath or shower daily.
- **Hair Care:**
 - Combing and washing hair regularly.
 - Keeping hair clean and free of lice.
- **Nail Care:**
 - Trimming nails regularly.
 - Keeping nails clean to avoid dirt and germs.
- 3. **Eating Habits**
 - **Balanced Diet:**
 - Eating a variety of foods including fruits, vegetables, grains, proteins, and dairy.
 - Understanding the importance of different food groups.
 - **Meal Times:**
 - Eating at regular times throughout the day.
 - Avoiding skipping meals.
 - **Healthy vs. Unhealthy Foods:**
 - Identifying healthy foods (fresh fruits, vegetables) and unhealthy foods (junk food, sugary snacks).
 - Moderation and making healthier choices.
 - **Hydration:**
 - Drinking plenty of water daily.
 - Benefits of staying hydrated.
- 4. **Exercise and Physical Activity**
 - **Importance of Exercise:**
 - Benefits of physical activity for strength and health.
 - How exercise helps in staying fit and active.
 - **Types of Physical Activities:**
 - Different ways to exercise (playing sports, running, dancing, cycling).
 - Simple daily exercises or yoga practices suitable for children.
 - **Play and Outdoor Activities:**
 - Encouraging outdoor play and limiting screen time.
 - Examples of fun and active play (tag, hide and seek).
- 5. **Rest and Sleep**
 - **Importance of Sleep:**
 - How sleep helps in growth and repair of the body.
 - Recommended hours of sleep for young children.
 - **Healthy Sleep Habits:**
 - Establishing a regular bedtime routine.
 - Creating a calm and quiet sleep environment.
- 6. **Cleanliness in Surroundings**
 - **Keeping the Home Clean:**
 - Tidying up toys and belongings.
 - Helping to keep living spaces clean and organized.

- **School and Community Cleanliness:**
 - Keeping school premises clean.
 - Importance of not littering and proper waste disposal.
- 7. **Safety and First Aid**
 - **Basic Safety Rules:**
 - Safety at home (not playing with sharp objects, staying away from hot surfaces).
 - Safety outside (crossing roads safely, not talking to strangers).
 - **Understanding First Aid:**
 - Basic first aid for minor cuts and bruises.
 - Importance of telling an adult when hurt or feeling unwell.
- 8. **Healthy Mind and Emotions**
 - **Positive Attitude:**
 - Being happy and cheerful.
 - Importance of kindness and sharing.
 - **Dealing with Emotions:**
 - Identifying basic emotions (happy, sad, angry, scared).
 - Simple ways to express and manage feelings.
- 9. **Observing and Learning Activities**
 - Identifying and practicing daily hygiene routines.
 - Role-playing different scenarios for practicing safety and cleanliness.
 - Drawing and discussing favourite healthy foods and activities.

Chapter - 8 (Safety and First Aid)

Topics and Sub-topics:

1. **Introduction to Safety**
 - Understanding what safety means.
 - Importance of staying safe at home, school, and outside.
2. **Safety at Home**
 - **Kitchen Safety:**
 - Staying away from hot stoves, ovens, and sharp objects.
 - Avoiding handling electrical appliances without adult supervision.
 - **Bathroom Safety:**
 - Being careful on wet floors to avoid slipping.
 - Keeping bathroom items like soaps and shampoos out of reach of small children.
 - **General Household Safety:**
 - Not touching or playing with electrical sockets and wires.
 - Keeping away from medicines and chemicals.

3. Safety at School

- **Classroom Safety:**
 - Keeping the classroom clean and free of obstacles.
 - Not running or pushing inside the classroom.
- **Playground Safety:**
 - Playing safely and being mindful of others.
 - Using playground equipment properly and not engaging in rough play.
- **School Bus and Transport Safety:**
 - Following rules while getting on and off the bus.
 - Staying seated and behaving properly during the ride.

4. Safety Outdoors

- **Road Safety:**
 - Crossing the street safely (looking both ways, using pedestrian crossings).
 - Importance of holding an adult's hand while crossing roads.
- **Safety During Play:**
 - Playing in safe areas away from traffic.
 - Being aware of surroundings and avoiding strangers.
- **Water Safety:**
 - Staying away from deep water and pools unless supervised.
 - Never going near water bodies alone.

5. Safety with Strangers

- **Understanding Stranger Danger:**
 - Who is considered a stranger.
 - Why it's important to be cautious around people we don't know.
- **Rules for Safety:**
 - Not talking to strangers or accepting things from them.
 - Telling a trusted adult if approached by a stranger.

6. Emergency Situations

- **Recognizing Emergencies:**
 - What to do if there's a fire, earthquake, or other emergencies.
 - Importance of staying calm and following instructions.
- **Emergency Contacts:**
 - Learning important phone numbers (parents, guardians, emergency services).
 - Knowing how to call for help if needed.

7. Basic First Aid

- **First Aid for Minor Injuries:**
 - Treating small cuts and scrapes (cleaning the wound, applying a bandage).
 - Using an ice pack for minor bumps and bruises.
- **When to Seek Help:**
 - Knowing when to tell an adult or seek medical help.

- Understanding that not all injuries can be treated at home.
- 8. **Observing and Learning Activities**
 - **Role-Playing Safety Scenarios:**
 - Practicing crossing the road safely, or what to do in a fire drill.
 - **Demonstrating Basic First Aid:**
 - Using bandages on a doll or stuffed toy.
 - **Safety Games and Drills:**
 - Playing games that reinforce safety rules (matching, sorting safety items).

Chapter - 9 (We Need Air)

Topics and Sub-topics:

1. **Introduction to Air**
 - Understanding what air is.
 - Recognizing that air is all around us even though we cannot see it.
2. **Importance of Air**
 - **Breathing:**
 - Learning that air is necessary for breathing.
 - Basic understanding of how breathing works (inhaling and exhaling).
 - **Plants and Animals Need Air:**
 - Air as essential for plants, animals, and humans.
 - Simple explanation of how plants use air (photosynthesis).
3. **Properties of Air**
 - **Air is Invisible:**
 - Air cannot be seen but can be felt.
 - Simple activities to demonstrate air (blowing, waving a fan).
 - **Air Occupies Space:**
 - Demonstrating that air takes up space (inflating a balloon).
 - **Air Can Move:**
 - Observing how air moves (wind blowing leaves, flags waving).
 - **Air is Everywhere:**
 - Air is present all around us, inside and outside.
4. **Uses of Air**
 - **In Everyday Life:**
 - Air used for various activities (blowing bubbles, inflating tires, drying clothes).
 - Air as a medium for flying kites, balloons, and paper planes.
 - **In Nature:**
 - Wind helping in the dispersal of seeds.
 - Air allowing birds and insects to fly.

5. Air and Weather

- **Wind:**
 - What wind is and how it is just moving air.
 - Different types of winds (breeze, strong winds).
- **Weather Changes:**
 - How air and wind affect weather (cooling effects, carrying rain clouds).

6. Keeping the Air Clean

- **Pollution:**
 - Simple understanding of what air pollution is.
 - Common sources of air pollution (smoke from vehicles, factories).
- **Protecting Air Quality:**
 - Basic ways to keep air clean (planting trees, avoiding burning waste).
 - Importance of clean air for health.

7. Observing and Learning Activities

- **Feeling Air:**
 - Activities like blowing on hands, using fans to feel the movement of air.
- **Air in Everyday Objects:**
 - Identifying items that use air (balloons, tires, bubbles).
 - Simple experiments like using straws to blow air into water and create bubbles.
- **Air Movement:**
 - Observing wind using leaves or pinwheels.
 - Making simple wind indicators (paper windsocks, pinwheels).

Chapter – 10 (Water)

Topics and Sub-topics:

1. Introduction to Water

- Understanding what water is.
- Recognizing that water is essential for life.

2. Importance of Water

- **For Living Beings:**
 - Water is essential for drinking and staying hydrated.
 - Basic understanding of how plants, animals, and humans need water to live.

- **Daily Uses:**
 - Common uses of water in everyday life (drinking, cooking, bathing, cleaning).
 - How water is used in different activities (watering plants, washing clothes).
- 3. **Sources of Water**
 - **Natural Sources:**
 - Different sources of natural water (rivers, lakes, ponds, oceans, rain).
 - Recognizing local water sources around us.
 - **Man-Made Sources:**
 - Water supplied through taps, wells, and hand pumps.
 - Basic understanding of water storage systems (tanks, reservoirs).
- 4. **Forms of Water**
 - **Different States:**
 - Water can be in liquid (water), solid (ice), and gas (steam) forms.
 - Simple examples of these states in daily life (ice cubes, boiling water).
 - **Changing Forms:**
 - Basic understanding of how water changes form (melting ice, boiling water).
- 5. **Water in Nature**
 - **Water Cycle:**
 - Simple introduction to the water cycle (evaporation, condensation, precipitation).
 - How rain forms and why it is important.
 - **Water in the Environment:**
 - Role of water in supporting life in rivers, ponds, and oceans.
 - How water supports plants and animals in their habitats.
- 6. **Water Conservation**
 - **Why We Need to Save Water:**
 - Understanding that water is a limited resource.
 - Importance of using water wisely to avoid wastage.
 - **Ways to Save Water:**
 - Simple habits to conserve water (turning off taps, fixing leaks, using buckets instead of hoses).
 - Practicing water-saving techniques in daily life.
- 7. **Clean Water and Health**
 - **Need for Clean Water:**
 - Importance of drinking clean and safe water.
 - Basic understanding of how dirty water can cause illness.
 - **Keeping Water Clean:**
 - Simple ways to keep water sources clean (not throwing garbage in water, covering stored water).

- Using clean containers to store drinking water.

8. Observing and Learning Activities

- **Exploring Water:**
 - Observing different sources of water around the home and community.
 - Simple experiments with water (floating and sinking, freezing and melting).
- **Water in Everyday Life:**
 - Identifying how we use water in daily activities.
 - Drawing or creating a chart showing different uses of water.
- **Water Saving Practices:**
 - Demonstrating ways to save water at home and school.
 - Role-playing scenarios to practice water conservation.

