New

# INQUISITIVE SCIENCE

6

Kiran Ashok Kumar

S. CHAND School

www.schandpublishing.com

Web Support

New

# INQUISITIVE SCIENCE

## for Class 6

Kiran Ashok Kumar

S. CHAND School

**S. CHAND SCHOOL BOOKS**
(An imprint of S. Chand Publishing)
A Division of S. Chand And Company Pvt. Ltd.
(An ISO 9001 : 2008 Company)
7361, Ram Nagar, Qutab Road, New Delhi-110055
Phone: 23672080-81-82, 9899107446, 9911310888; Fax: 91-11-23677446
www.schandpublishing.com; e-mail : helpdesk@schandpublishing.com

Branches :

| | | |
|---|---|---|
| Ahmedabad | : | Ph: 27541965, 27542369, ahmedabad@schandpublishing.com |
| Bengaluru | : | Ph: 22268048, 22354008, bangalore@schandpublishing.com |
| Bhopal | : | Ph: 4274723, 4209587, bhopal@schandpublishing.com |
| Chandigarh | : | Ph: 2725443, 2725446, chandigarh@schandpublishing.com |
| Chennai | : | Ph. 28410027, 28410058, chennai@schandpublishing.com |
| Coimbatore | : | Ph: 2323620, 4217136, coimbatore@schandpublishing.com (Marketing Office) |
| Cuttack | : | Ph: 2332580, 2332581, cuttack@schandpublishing.com |
| Dehradun | : | Ph: 2711101, 2710861, dehradun@schandpublishing.com |
| Guwahati | : | Ph: 2738811, 2735640, guwahati@schandpublishing.com |
| Hyderabad | : | Ph: 27550194, 27550195, hyderabad@schandpublishing.com |
| Jaipur | : | Ph: 2219175, 2219176, jaipur@schandpublishing.com |
| Jalandhar | : | Ph: 2401630, 5000630, jalandhar@schandpublishing.com |
| Kochi | : | Ph: 2378740, 2378207-08, cochin@schandpublishing.com |
| Kolkata | : | Ph: 22367459, 22373914, kolkata@schandpublishing.com |
| Lucknow | : | Ph: 4026791, 4065646, lucknow@schandpublishing.com |
| Mumbai | : | Ph: 22690881, 22610885, mumbai@schandpublishing.com |
| Nagpur | : | Ph: 6451311, 2720523, 2777666, nagpur@schandpublishing.com |
| Patna | : | Ph: 2300489, 2302100, patna@schandpublishing.com |
| Pune | : | Ph: 64017298, pune@schandpublishing.com |
| Raipur | : | Ph: 2443142, raipur@schandpublishing.com (Marketing Office) |
| Ranchi | : | Ph: 2361178, ranchi@schandpublishing.com |
| Siliguri | : | Ph: 2520750, siliguri@schandpublishing.com (Marketing Office) |
| Visakhapatnam | : | Ph: 2782609, visakhapatnam@schandpublishing.com (Marketing Office) |

© Kiran Ashok Kumar

All rights reserved. No part of this publication may be reproduced or copied in any material form (including photocopying or storing it in any medium in form of graphics, electronic or mechanical means and whether or not transient or incidental to some other use of this publication) without written permission of the publisher. Any breach of this will entail legal action and prosecution without further notice.
**Jurisdiction :** All disputes with respect to this publication shall be subject to the jurisdiction of the Courts, Tribunals and Forums of New Delhi, India only.

First Published in 2011
This New Edition 2016

**ISBN :** 9789385676598 **Code :** 1016E 307

*The cover image shows The Cloud Gate.*
The Cloud Gate (nicknamed 'the bean') is located in Chicago's Millenium Park. It is made with 168 highly-polished stainless steel plates welded together seamlessly, creating an illusion of a drop of mercury.

Typesetting by Glyph Graphics Pvt Ltd

PRINTED IN INDIA

By Vikas Publishing House Pvt. Ltd., Plot 20/4, Site-IV, Industrial Area Sahibabad, Ghaziabad-201010
and Published by S. Chand And Company Pvt. Ltd., 7361, Ram Nagar, New Delhi -110 055.

# Preface

The ***New Inquisitive Science*** series consists of 8 carefully-structured books, for Classes 1 to 8, which aim the holistic development of a child. It is also in conformity with the vision of NCF and other progressive curricula which are shifting away from rote learning.

The children learn in a variety of ways—independently, in pairs and in groups. They learn through doing and making things, experimenting, reading, discussing, asking, listening, reflecting and expressing oneself in speech, writing or through art and craft work. This series provides a variety and challenge, bringing about their all-round development. The children are made aware of social and environmental issues so that they become responsible members of society. Evaluation is an integral part of the teaching learning process. This series addresses to both in-text and chapter-end exercises in the form of group/pair discussion, MCQs, collaborative work, quizzes, oral questions and independent research work, providing scope for diagnosis, remediation and enhancement of learning.

The books include many activities which help to develop scientific knowledge, skill and attitude so that children can meet the challenges of life with confidence and success. They work independently and collaboratively acquiring skills to:

- understand and comprehend
- analyse and evaluate their experience
- question and investigate
- think independently and critically
- apply concepts
- create questions

The ***New Inquisitive Science*** series caters to Scholastic as well as Co-Scholastic aspects of the child's progress. Scholastic aspects include curricular areas or subject specific areas, whereas co- scholastic aspects include Life Skills such as Thinking skills, Communication skills, Creative skills, Social skills, Problem-solving skills and positive attitude and value towards teachers and schoolmates.

This series is highly recommended in the modern age of 'learning by doing'.

I thank the S. Chand team for their support.

***Author***

**Disclaimer:** While the author of this book have made every effort to avoid any mistake or omission and have used their skill, expertise and knowledge to the best of their capacity to provide accurate and updated information. The author and S. Chand does not give any representation or warranty with respect to the accuracy or completeness of the contents of this publication and are selling this publication on the condition and understanding that they shall not be made liable in any manner whatsoever. S. Chand and the author expressly disclaim all and any liability/responsibility to any person, whether a purchaser or reader of this publication or not, in respect of anything and everything forming part of the contents of this publication. S. Chand shall not be responsible for any errors, omissions or damages arising out of the use of the information contained in this publication.

Further, the appearance of the personal name, location, place and incidence, if any; in the illustrations used herein is purely coincidental and work of imagination. Thus the same should in no manner be termed as defamatory to any individual.

# Special Features

## You Will Learn About

**Highlights the key ideas what the students will be learning in the chapter.**

## Activity

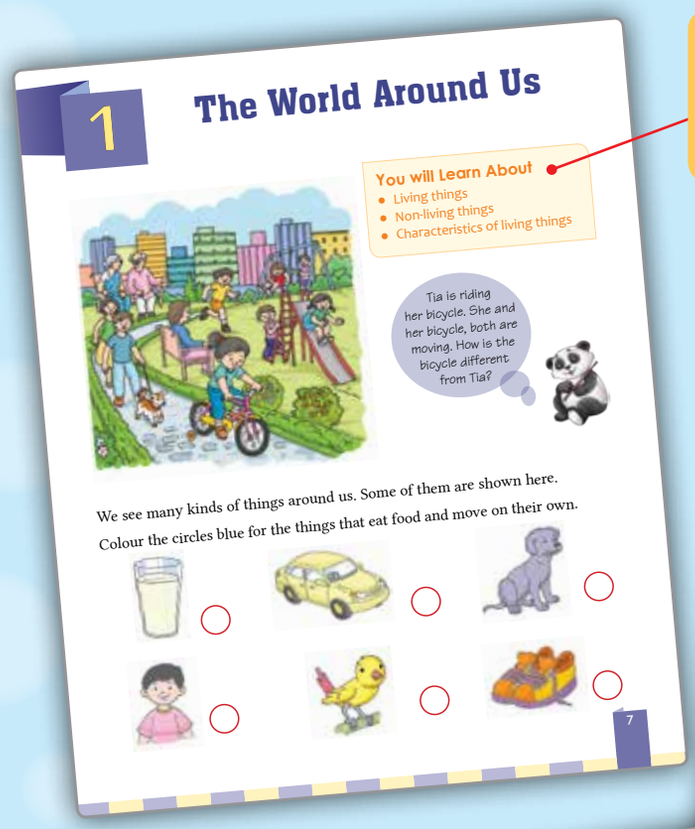
**Activities and experiments that help the students to explore and reaffirm their understanding of scientific concepts.**

## Did You Know?

**Some amazing facts that support the text and make the learning interactive.**

## Connect

**An interdisciplinary link that relates the text with other study areas.**


1

The World Around Us

You will Learn About
- Living things
- Non-living things
- Characteristics of living things

Tia is riding her bicycle. She and her bicycle, both are moving. How is the bicycle different from Tia?

We see many kinds of things around us. Some of them are shown here.

Colour the circles blue for the things that eat food and move on their own.

7

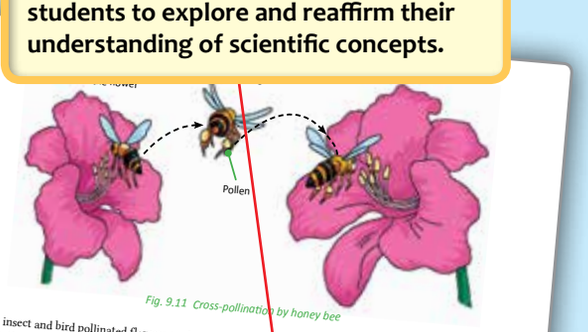


Fig. 9.11 Cross-pollination by honey bee

The insect and bird pollinated flowers are large, attractive, showy with brightly coloured petals. These flowers have fragrance to attract the animals for pollination. Insects also come to these brightly coloured flowers in search of nectar to make honey. When insects sit on the flower, the pollen grains get stuck to their body and when they approach another flower, they rub off these pollens there, which help in pollination.

Activity 5

**Aim:** To study parts of a hibiscus flower

**Materials required:** A hibiscus flower, a blade, a glass slide and a hand lens

**Procedure**

1. Take a flower of hibiscus and observe it carefully. Make a note of the number of sepals, petals, stamens, etc.
2. Open out the petals of the flower and search the place where petals are attached to the flower.
3. You will see a long tube-like structure with a rounded tip. This is the carpel and it has a swollen base called ovary.
4. Carefully slice the entire tube lengthwise with a blade.
5. Use a hand lens to observe the inside portion of the ovary. There are some tiny ball-like structures in the ovary. These are called ovules.

Creepers

Some plants like watermelon and pumpkin with weak stems grow along the ground. These plants are called **creepers**.


Pumpkin


Watermelon

...G LIVING AND SEASONAL PLANTS

...s and some shrubs can live for many years. Such plants are called long ...g plants. Banyan and mehendi can live for hundred of years.

DidYouKnow?

You can find the age of a tree by counting the rings on its trunk. The trunk gets one ring in one year.


Mehendi


Banyan

However, most herbs and some shrubs live for a few months or one season only. Plants that live for a few months or one season are called **seasonal plants**. Examples are coriander, cauliflower and lady's finger.


Coriander


Cauliflower


Lady's finger

Connect

In my garden, there are 5 rose plants with 3 flowers each. 4 rose plants have 2 flowers each. Find out the number of rose flowers in my garden.

9

## Key Terms

**Brief explanation of the important scientific terms covered in the chapter.**

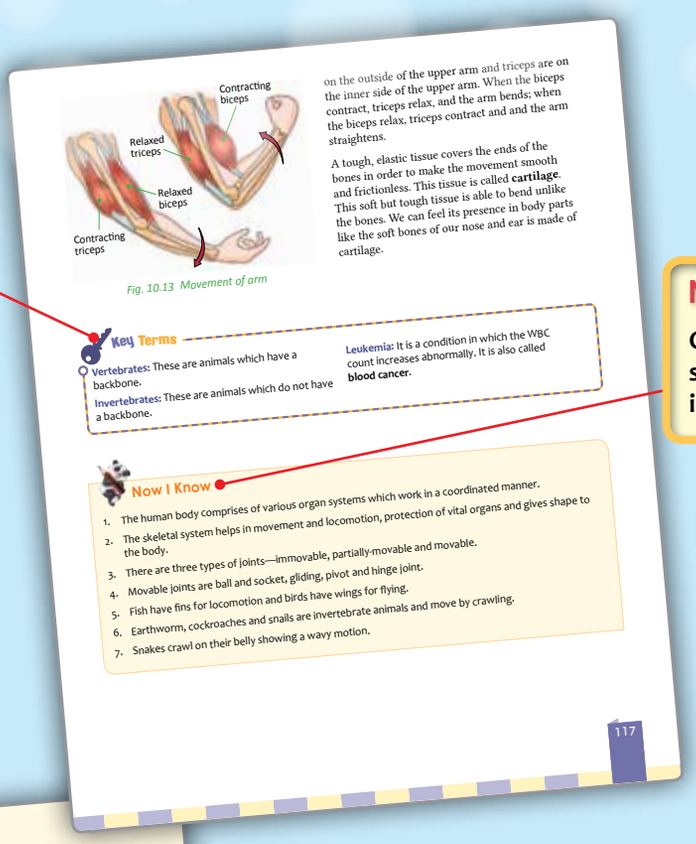




Fig. 10.13 Movement of arm

on the outside of the upper arm and triceps are on the inner side of the upper arm. When the biceps contract, triceps relax, and the arm bends; when the biceps relax, triceps contract and and the arm straightens.

A tough, elastic tissue covers the ends of the bones in order to make the movement smooth and frictionless. This tissue is called **cartilage**. This soft but tough tissue is able to bend unlike the bones. We can feel its presence in body parts like the soft bones of our nose and ear is made of cartilage.

**Key Terms**

**Vertebrates:** These are animals which have a backbone.

**Invertebrates:** These are animals which do not have a backbone.

**Leukemia:** It is a condition in which the WBC count increases abnormally. It is also called **blood cancer.**

## Now I Know

**Quick revision and summarization of the key ideas of the chapter.**

**Now I Know**

1. The human body comprises of various organ systems which work in a coordinated manner.
2. The skeletal system helps in movement and locomotion, protection of vital organs and gives shape to the body.
3. There are three types of joints—immovable, partially-movable and movable.
4. Movable joints are ball and socket, gliding, pivot and hinge joint.
5. Fish have fins for locomotion and birds have wings for flying.
6. Earthworm, cockroaches and snails are invertebrate animals and move by crawling.
7. Snakes crawl on their belly showing a wavy motion.

117

## Practice Time

**Questions to assess how far the students have imbibed the key concepts of the chapter.**

**Practice time**

**A** Tick (✓) the correct answer.

1. Which of the following have four wings?
   a. Eagle b. Butterfly c. Lion
2. Which one of the following is a water animal?
   a. Cow b. Zebra c. Fish
3. Which one of the following can not live both on land and in water?
   a. Frog b. Tortoise c. Dog
4. Which one of the following is a big animal?
   a. Cat b. Elephant c. Rabbit
5. Which one of the following is a small animal?
   a. Elephant b. Deer c. Rabbit

**B** Fill in the blanks.

fish feelers wings bird

1. A parrot is a .....
2. Birds have ..... to fly.
3. ..... have scales on their body.
4. All insects have a pair of ..... to sense their surrounding.

**C** Give two examples for each.

1. Birds that can fly .....
2. Insects that can fly .....
3. Animals that can live on land and in water .....
4. Animals that can swim .....

40

## Explore

**Interesting science projects to promote hands-on experience for interactive learning.**

3. the chips are very spicy
4. the paint on the wall is green .....
5. the floor is cold .....

**G** Cross (X) out the body parts that do not belong to you.

**Explore**

Stick or draw your photograph in your scrap book and label the following parts: 1. hair 2. nose 3. neck 4. arm 5. hand 6. leg 7. foot

## High Order Thinking Skills (HOTS)

**Questions that intend to reinforce the understanding of concepts and inculcate thinking skills.**

**HOTS**

Circle the actions in which you will have to use both your hands and legs.



58

# Syllabus

| Sub-theme | Questions | Key concepts | Resources | Activities/Processes |
|---|---|---|---|---|
| **1. FOOD** | | | | 20 |
| **Sources of food** | What are the various sources of our food? What do other animals eat? | Plant parts and animal products as sources of food; herbivores, carnivores, omnivores | Examples of food from different parts of plants and of food from animal sources. | Germination of seeds such as mung, chickpea, etc.; preparing a chart on food habits of animals and food culture of different regions of India. |
| **Components of food** | What is our food made up of? Why do we eat a variety of food? | Carbohydrates, fats, proteins, vitamins, minerals, fibres, their sources and significance for human health; balanced diet; diseases and disabilities due to food deficiencies | Mid Day Meal; Charts, pictures/films of children suffering from food deficiencies and disabilities. | Studying the variety of food in different regions in India; preparing a menu of balanced diet in the context of the diversity of foods eaten in different parts of the country. Classifying foods according to food components; test for starch, sugars, proteins and fats. |
| **Cleaning food** | How do we separate the grains after harvesting the wheat/ rice crop? | Threshing, winnowing, hand picking, sedimentation, filtration. | Talking to some elders about practices after harvesting the crop; kit materials. | Discussion on threshing, winnowing, handpicking; experiments on sedimentation, filtration. Separating a mixture of salt and sand. |
| **2. MATERIALS** | | | | 26 |
| **Materials of daily use** | What are our clothes made of? How did people manage when there were no clothes? | Different types of cloth materials—cotton, wool, silk and synthetics. Development of clothing materials | Sharing of prior knowledge with parents and community. Archaeological and historical accounts. | Whole class discussion. Simple activities to distinguish among different types of cloth. |
| | Are some of our clothes made of materials obtained from plants? In what kinds of places do these plants grow? Which parts of the plants are used for making clothes? | Plant fibres, especially cotton and jute; production of cotton, jute and other locally available plant fibres; types of soil required for the growth of different fibrous plants. | Sharing of prior knowledge with parents and community. | Whole class discussion. Field survey/collecting information on locally available plant fibres (coconut, silk cotton, etc.) |
| **Different kinds of materials** | What kinds of things do we see around us? | Grouping things on the basis of common properties. | Materials, kit items | Collecting and grouping things on the basis of gross properties, e.g., roughness, lustre, transparency, solubility, sinking/floating using prior knowledge, through experiments. |

| | | | | |
|---|---|---|---|---|
| **How things change/react with one another** | In what ways do things change on being heated? Do they change back on being cooled? Why does a burning candle get shorter? | Some changes can be reversed and others cannot be reversed. | Prior knowledge, kit items | Experiments involving heating of air, wax, paper, metal, water to highlight effects like burning, expansion/compression, change of state. Discussion on other changes which cannot be reversed—growing up, opening of a bud, ripening of fruit, curdling of milk. |
| | How much salt can be dissolved in a cup of water? | Solubility, saturated solutions Amount of substance dissolving varies with temperature. At the same temperature amounts of different substances that dissolve varies. | Salt, sugar and other common substances, kit items. | Experiments for testing the solubility of commonly available substances. Experiments on the effect of heating and cooling on solubility. Comparison of solubilities of different substances using non-standard units (e.g., spoon, paper cone). |
| **3. THE WORLD OF THE LIVING** | | | | 36 |
| **Things around us** | Are all things around us living? What is the difference between living and non-living? Are all living things similar? Do all living things move? Where do plants and animals live? Can we grow plants in the dark? | Living/non-living characteristics; habitat; biotic, abiotic (light, temperature, water, air, soil, fire) | Recollection of diversity of living organisms and the habitat where they live. | Listing of things around us, listing of characteristics after making observations say on size, colour, shape, etc., categorization; observations on habitat; observing germination of seeds, also observing under dark conditions; growth and development of domestic animals, hatching of birds' eggs, etc., developing drawing skills. |
| **The habitat of the living** | How does habitat affect plants and animals? How do fish live in water? | Habitat varies – aquatic, deserts, mountains, etc. – plants and animals show adaptation; other plant part modifications like tendrils, thorns, etc. Animals in deserts and water. | Potted plants or seeds, pots, etc.; thermometer, any water plants, any xerophytic plants. Information on desert and aquatic plants and animals. | Listing the diverse set of living organisms around us; preparing herbarium specimens of different leaves, plants; studying modifications in plants and animals; observing how different environmental factors (water availability, temperature) affect living organisms. |
| **Plants – form and function** | What is the structure and function of various parts of the plants – stem, leaf and roots? How do different flowers differ from one another? How does one study flowers? | Morphological structure and function of root, stem, and leaves. Structure of the flower, differences. | Plants, flowers, blade, hand lens. | Studying plant parts—types of stems, roots, leaves, seeds; experiment to show conduction by stem, activity to show anchorage by roots, absorption by roots. Study of any flower, counting number of parts, names of parts, cutting sections of ovary to observe ovules. |

| | | | | |
|---|---|---|---|---|
| **Animals – form and function** | What is inside our bodies? How do animals move? Do all animals have bones in their bodies? How do fishes move? And birds fly? What about snakes, snails, earthworms? | Structure and functions of the animal body; Human skeletal system, some other animals, e.g., fish, bird, cockroach, snail. | Observation of nature; model of skeleton, X-rays of arms or legs, chest, hips, jaws, vertebral column (could be given in the textbook). | Activities to study X-rays, find out the direction in which joints bend, feel the ribs, backbone, etc. Observation/discussion on movement and skeletal system in other animals. |
| **4. MOVING THINGS, PEOPLE, AND IDEAS** | | | | 12 |
| **Moving** | How did people travel from one place to another in earlier times? How did they know how far they had traveled? How do we know that something is moving? How do we know how far it has moved? | Need to measure distance (length). Measurement of length. Motion as change in position with time. | Everyday experience; equipment (scale, etc.) to measure length. Stories for developing contexts for measuring distances. | Measuring lengths and distances. Observation of different types of moving objects on land, in air, water, and space.<br>Identification and discrimination of various types of motion. Demonstrating objects having more than one type of movement (screw motion, bicycle wheel, fan, top, etc.) Observing the periodic motion in hands of a clock/watch, sun, moon, earth. |
| **5. HOW THINGS WORK** | | | | 28 |
| **Electric current and circuits** | How does a torch work? | Electric current. Electric circuit (current flows only when a cell and other components are connected in an unbroken loop) | Torch. Cell, bulb or LED, wires, key | Activity using a bulb, cell and key and connecting wire to show flow of current and identify closed and open circuits. Making a switch. Opening up a dry cell. |
| | Do all materials allow current to flow through them? | Conductor Insulator | Mica, paper, rubber, plastic, wood, glass, metal clip, water, pencil (graphite), etc. | Experiment to show that some objects (conductors) allow current to flow and other (insulators) do not. |
| **Magnets** | What is a magnet? | Magnet | Magnet, iron pieces | Demonstrating how things are attracted by a magnet. Classification of objects into magnetic/non-magnetic classes. |
| | Where on a magnet do things stick? | Poles of a magnet | Magnet, iron pieces, iron filings, paper | Activity to locate poles of a magnet; activity with iron filings and paper. |
| | How is a magnet used to find direction? | A freely suspended magnet always aligns in a particular direction. North and South poles. | Bar magnet, stand, thread, compass | Activities with suspended bar magnet and with compass needle. |
| | How do two magnets behave when brought close to each other? | Like poles repel and unlike poles attract each other. | Two bar magnets, thread, stand | Activities to show that like poles repel and unlike poles attract. |

| **6. NATURAL PHENOMENA** | | | | 26 |
|---|---|---|---|---|
| **Rain, thunder, and lightning** | Where does rain come from? How do clouds form? | Evaporation and condensation, water in different states.<br>Water cycle | Everyday experience; kit items | Condensation on outside of a glass containing cold water; activity of boiling water and condensation of steam on a spoon. Simple model of water cycle. Discussion on three states of water. |
| **Light** | Which are the things we can see through? | Classification of various materials in terms of trans-parent, translucent, and opaque. | Previous experience, candle/torch/lamp, white paper, card-board box, black paper. | Discussion, observation; looking across different materials at a source of light. |
| | When are shadows formed? Do you get a shadow at night - when there is no light in the room, no moonlight or other source of light? What colour is a shadow? On what kinds of surfaces can we see images? | A shadow is formed only when there is a source of light and an opaque material obstructs it. A shadow is black irrespective of the colour of the object. Reflecting surfaces; images are different from shadows. | Child's own experience, candle/ torch/lamp, white paper, black paper, coloured objects.<br>Experience, objects with polished surfaces, mirror etc. | Discussion; observing shadow formation of various objects of different shapes, and of same shape and different colours; playing and forming shadows with the hands in sunlight, in candle light, and in a well lit region during daytime; making a pinhole camera and observing static and moving objects. Observing differences between the image and the shadow of the same object |
| **7. NATURAL RESOURCES** | | | | 26 |
| **Importance of water** | What will happen to soil, people, domestic animals, rivers, ponds and plants and animals if it does not rain this year? What will happen to soil', people, domestic animals, plants and animals living in rivers and ponds, if it rains heavily? | Importance of water, dependence of the living on water. Droughts and floods | Experience, newspaper reports | Estimation of water used by a family in one day, one month, one year.<br>Difference between need and availability. Discussion.<br>Activity: plant growth in normal, deficient and excess water conditions |
| **Importance of air** | Why do earthworms come out of the soil when it rains? | Some animals and plants live in water; some live on land and some live in upper layers of soil; but all need air to breathe/to respire. | Experience | Discussion |
| **Waste** | Do you throw away fruit and vegetable peels and cuttings? Can these be re-used? If we dump them any-where, will it harm the surrondings? What if we throw them in plastic bags? | Waste; recycling of waste products; things that rot and things that don't. Rotting is supported by animals/ animal and plant products. | Observation and experience | Survey of solid waste generation by households; estimation of waste accumulated (by a house/ village/ colony, etc.) in a day, in a year; discussion on 'what is waste'; Activity to show that materials rot in soil, this is affected by wrapping in plastics. |

# Contents

# 1 Food: Where Does It Come From?

## You will Learn About

- Sources of food
- Food obtained from plants
- Food obtained from animals
- Cooking and food value
- Food culture in different regions of India
- Food habits of animals
- Interdependence in nature

## SOURCES OF FOOD

Food is one of the basic necessities of life. It nourishes our body, provides us energy to do work, helps in growth and development and keeps us healthy.

In our meal, we take vegetables, fruits, eggs, meat, milk, bread, butter, pulses, spices, etc., which add variety as well as taste to our food. The food we eat comes from two main sources—**plants** and **animals**. Foods like vegetables, pulses, cereals, oil, fruits, spices are valuable gifts of plants. On the other hand, foods like milk, meat, egg, etc., are obtained from animals. In following sections, we will study these sources in detail.

### Activity 1

Make a list of food items that you and your friends ate yesterday. Write their ingredients and identify their sources. Now, fill the table given below.

| Food item | Ingredients | Sources |
|---|---|---|
| | | |
| | | |

## FOOD FROM PLANTS

Ankita has a beautiful vegetable garden in her house. Every day her mother collects vegetables for cooking. One day, Ankita decided to help her mother in collecting vegetables. Which part of the plant should she look for, to get the following?

Tomato, lady's finger, bitter gourd, onion, potato, ginger, mint, yam

Different parts of the plant serve differently as source of food. We get food from root, stem, leaf, fruit and flower of plants.

**Roots as food:** The roots of the plant anchor the plant to the soil and also absorb water and minerals from the soil. However, in some plants, roots are found to be swollen. Such roots have food stored in them, for example, beetroots, carrots, etc.

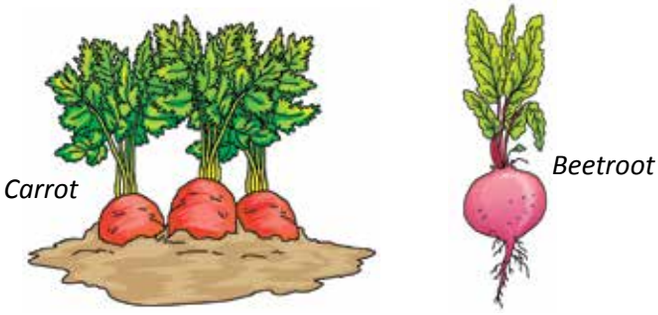


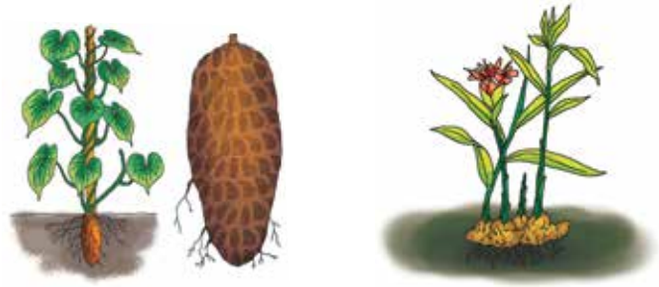

*Fig 1.1 Storage of food in roots*



Inquisitive Science_Book 6.indb 11 05-01-2016 11.39.53 AM

**Stem as food:** The stem of a plant is involved in the transport of water and food to different parts of the plant. It also bears leaves on it. Like roots, stems of some plants also store excess food in them, such as potato tuber, yam, ginger, etc.

*Potato*



*Yam* *Ginger*

*Fig 1.2 Storage of food in stems*

**Leaves as food:** In green plants, leaves prepare food by the process of photosynthesis using sunlight. This food is prepared by the plants for their own use. In some green plants, leaves also store excess food.

*Lettuce* *Spinach* *Cabbage*

*Fig 1.3 Storage of food in leaves*

In lettuce, the reserve food in leaves is part of our diet. Cabbage is another example where the leaves store food.

**Flowers as food:** The flowers of some plants also become an important part of our food.

In cauliflower, broccoli, etc., the flowers are the edible part of the plant.

*Broccoli* *Cauliflower* *Banana flower*

*Fig 1.4 Storage of food in flowers*

In some parts of India, the flowers of banana are also cooked and eaten.

**Fruits and seeds as food:** Other than stem, leaves and roots, plants also store food in fruits and seeds. All edible fleshy fruits such as mango, guava, pear, apple, etc., are examples of fruits with food stored.

Some seeds are also used for making vegetable oils. Such seeds are called **oil seeds** like mustard, groundnut, sunflower, etc.

Plants like rice, wheat, maize, etc., store their unused food in their seeds that we use as our food in the form of cereals and pulses.

*Fig 1.5 Storage of food in fruits and seeds*

**Did You Know?**

The staple food of most of the people of the world is obtained from cereals. The word **Cereals** comes from **'cere'**, after the name of the Roman goddess of grain.

## FOOD FROM ANIMALS

Animals have been our friends for a long time. We keep them for specific purposes. Some are



Inquisitive Science_Book 6.indb 12 05-01-2016 11.39.56 AM

kept for their milk, some for their meat, eggs, and yet others for doing work for us. The practice of taming animals and keeping them with us for their use is called **domestication**. Some animals commonly domesticated by man are cow, buffalo, sheep, chicken, goat, horse and camel. Animals like dog and cat are pet animals, kept for pleasure, however dogs guard our house too.

Like plants, animals also act as a good source of nutrition for us.

We get a variety of food from animals. Thus, we can classify them on the basis of the food product they yield.

## Milk-Yielding Animals

In India, there are 32 varieties of cow and seven varieties of buffalo. They are domesticated for their milk.

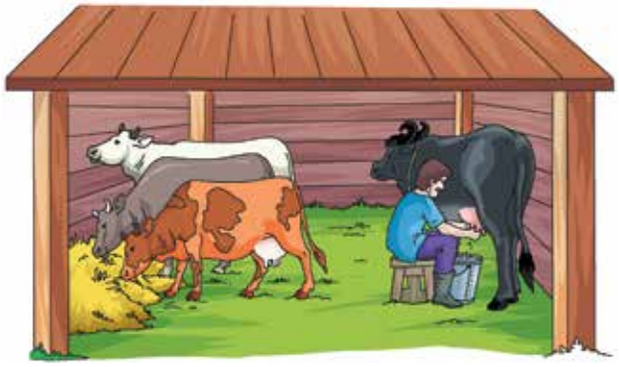


*Fig 1.6 Milk-yielding animals*

Cows, buffaloes and goats are thus called **milk-yielding** or **dairy animals**. Since buffalo's milk is rich in fat, it is used for making various milk products. Cow and goat's milk, on the other hand, contain low fat and, therefore, it is good for infants, old and sick people.

### Milk

Every day we take a glass of milk in breakfast because milk is a rich source of many nutrients.

The products we obtain from milk are called **dairy products** which include **paneer, cheese, ghee, butter, cream** and **curd**.

### Making Dairy Products

***Paneer*** – We can make *paneer* by adding some lemon juice or vinegar to the milk. This separates the soft, solid part of the milk from the liquid milky portion. Thus, separated soft, solid layer is called *paneer*, which adds delicacy to most of the Indian dishes. The process of making *paneer* is called **curdling.**

**Cheese** – It is obtained from curdled milk.

**Cream** – When hot milk is allowed to cool, a fatty layer forms on top of the milk which when collected is called *cream*.

**Butter** – Churning of cream results in the formation of *butter*.

**Ghee** – *Ghee* is a fatty liquid substance which is formed by gentle heating of butter and removing the solid matter.

**Curd** – We can make curd by adding a small amount of curd in warm milk. It starts the action of microorganisms present in the curd that convert milk into curd.

All these dairy products are good sources of essential components required for our growth and health.

## Meat-Yielding Animals

Animals like sheep and goats are commonly used as source of meat in our diet. Apart from these

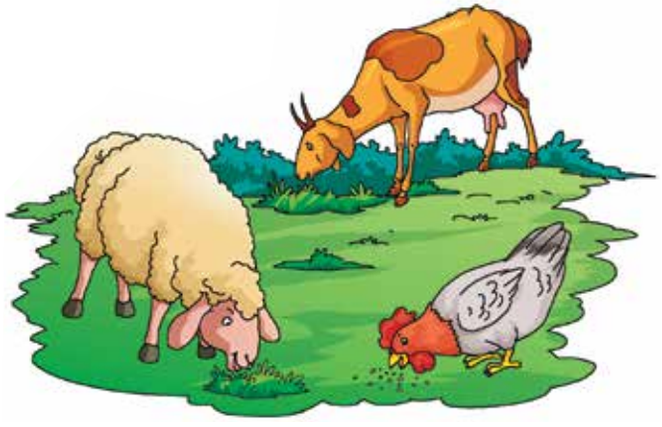


*Fig 1.7 Meat-yielding animals*



Inquisitive Science_Book 6.indb 13 05-01-2016 11.39.57 AM

animals, there are some birds which provide us both meat and eggs for our food. Such birds are called **poultry birds**.

Chicken, duck and turkey are examples of poultry birds.


*Fig 1.8 Poultry birds*

## Milk and Egg – Nutritious Food

Milk is obtained from animals like cow, buffalo and goat. People living in deserts use camel's milk too. Milk is generally considered as a perfect food because it contains all the important nutrients such as proteins, carbohydrates, fats and minerals. If you keep milk for a few days, it gets spoiled. However, **pasteurization** is one method to keep milk a longer period without being spoiled.

Egg is another nutritious food that we get from animals. Hen and duck eggs are commonly consumed by man. Egg contains proteins, fats and vitamins. The white part of the egg, called **albumin** is rich in proteins while the yellow part, called **yolk** is rich in fats.

## Marine Food Products

A large section of our population, particularly near the coastal areas, depends on fish as their staple food. The flesh of fish is soft and therefore easy to cook and digest. Prawns, shrimps and crabs are also eaten by man.

*Prawns*


*Crabs* *Fish*

*Fig 1.9 Marine food*

## Honey

Bees live in a **beehive**. Honey is obtained from small compartments of beehives where honeybees prepare it from the sweet nectar of flowers. The sweet honey is enriched with highly beneficial medicinal properties. It is often consumed as such but many times, it forms an important ingredient for various culinery preparations.

*Fig 1.10 A beehive*

# COOKING AND FOOD VALUE

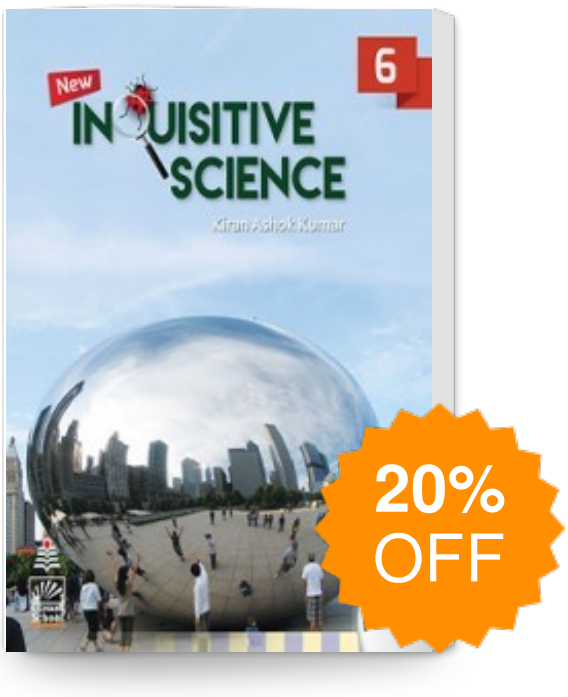
We cook most of our food items before consumption. Only edible fruits such as apple, pear, orange, guava, banana, etc. are eaten raw. Thus, the food value of these fruits is fully available to us.

In case of pulses, cereals, etc., the food is steamed, boiled or roasted. However, practices like overcooking of food and excessive washing of vegetables reduce the food value. Excessive washing of vegetables should be avoided as many vitamins get washed away in the water. On the other hand, sprouting of pulses enhances their food value.



Inquisitive Science_Book 6.indb 14 05-01-2016 11.40.01 AM

# New Inquisitive Science Book 6




Publisher : SChand Publications ISBN : 9789385676598 Author : Kiran Ashok Kumar

Type the URL : http://www.kopykitab.com/product/12074

Get this eBook