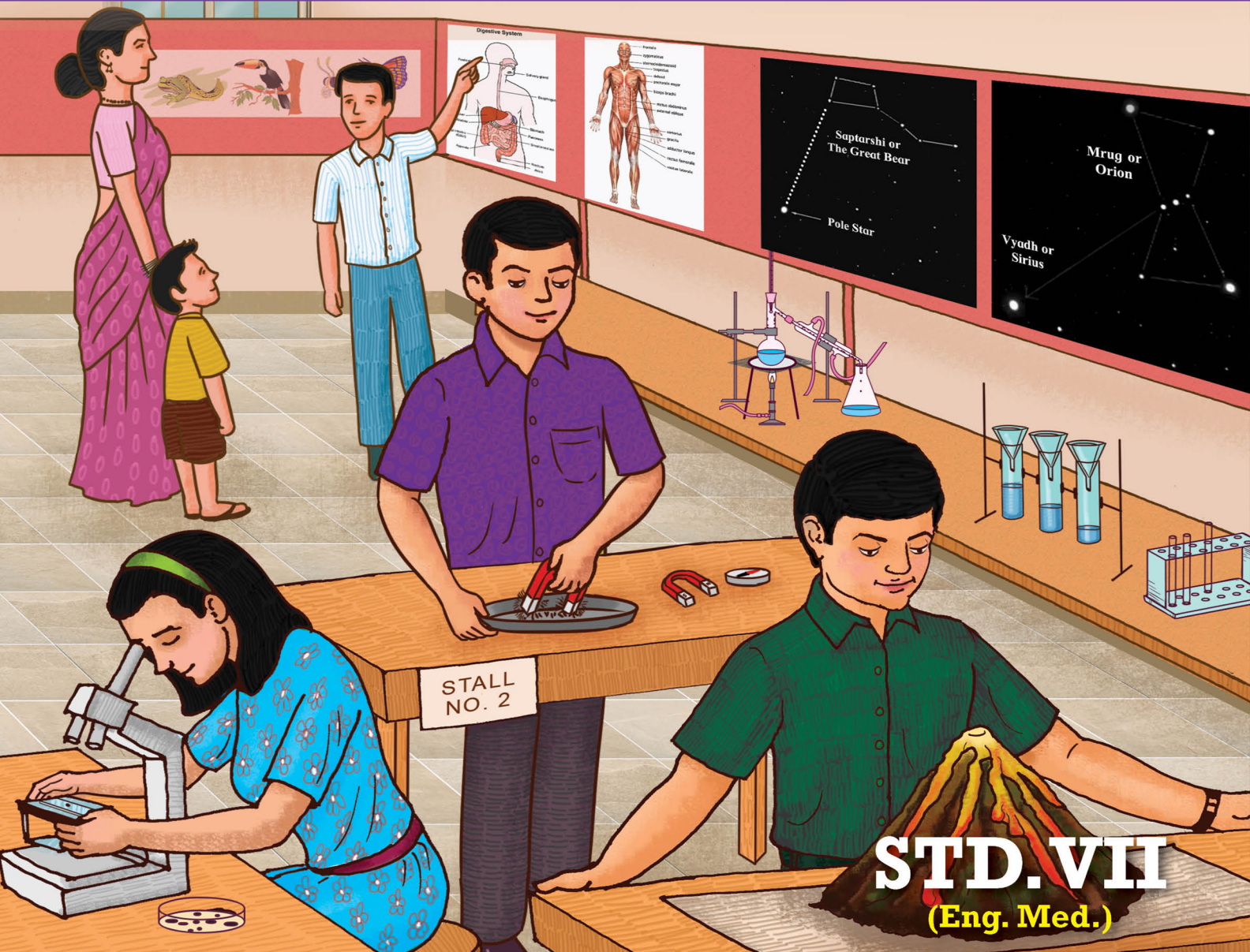




GENERAL SCIENCE

WORKBOOK



General Science

WORKBOOK

Std. VII (English Medium)

Salient Features

- A quick revision of theory at the beginning of every chapter
- Complete coverage of textual exercise questions
- Variety of additional Questions for thorough practice
- Oral Test in every chapter for knowledge testing
- Textual Activities/Projects that help in experiential learning
- Adequate space to for written practice

Name:

School:

Standard: **Division:** **Roll No.:**

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◆◆◆ PREFACE ◆◆◆

Target’s General Science Workbook: Std. VII has been designed to cater to the objectives of ‘Continuous Comprehensive Evaluation’ (CCE) pattern. The selection of questions is such that it promotes active-learning and makes the process of recapitulation of concepts learned enjoyable and interesting.

Every chapter begins with ‘**Let’s Revise**’ section that offers a brisk overview of concepts in the form of pointers, memory maps, tables etc. The ‘**Summative Assessment**’ that follows the overview includes questions based on the theory of each chapter.

It is segregated into four sections viz., ‘**Textual Exercise**’ ‘**Intext Questions**’, ‘**Let’s Practise!**’ and ‘**Oral Test**’.

‘Textual Exercise’ covers exercise questions serially. Questions belonging to textual sections such as ‘*Use your brain power*’, ‘*can you tell?*’, etc. and are vital from examination point are placed under section of ‘Intext Questions’. To give students additional practice and boost their confidence, supplementary questions are incorporated in section ‘Let’s Practise!’.

‘Oral Test’ section comprises of thought stimulating short answer type questions that can be answered verbally.

The chapter is concluded by **Formative Assessment** which comprises of textual activities and project Work.

Open Ended Questions are marked in the chapter so that students can locate them with ease.

To get the best results out of our workbook, as soon as a chapter is taught in the school and revised by the student, he or she should write answers to the questions without referring to study material, by his or her own. There is adequate space provided for writing the answers and the boxes are laid out to draw diagrams wherever applicable. This habit of completing workbook on timely manner will enable student to gauge his or her preparation and pave path for excelling in the examination.

The journey to create a complete book is strewn with triumphs, failures and near misses. If you think we’ve nearly missed something or want to applaud us for our triumphs, we’d love to hear from you.

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A book affects eternity; one can never tell where its influence stops.

Publisher

Edition: Fourth

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◆◆◆ KEY FEATURES ◆◆◆

Oral Test

Oral Test section includes questions that would stimulate the students to think and arrive at an answer based on their understanding of the concepts covered in the chapter



Open Ended Questions

Open Ended Questions indicates students get the freedom to answer the question (with the help of their observation) on their own. These questions are specially included since they aid to build the students observation skill and reasoning ability.



Variety of Questions

A variety of questions enables students to get better practice of the lessons and understand the concepts better.



CCE pattern

Latest CCE pattern followed in workbook, dividing the chapter into summative and formative section. This is a more child-centric approach and helps in better overall growth and development of students.

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*Note: Textual Questions are represented by * mark.*

1. The living world : Adaptations and Classification

◆◆◆ Let's Revise ◆◆◆

➤ DIVERSITY IN LIVING THINGS

Diversity in plants	Diversity in Animals
Plants grow in water, in dessert region, in snowy region, etc.	Unicellular and multicellular
Flowering and non-flowering plants.	Vertebrates and invertebrates
Microscopic and huge plants.	Aquatic, terrestrial, amphibian, reptilian, aerial, etc

➤ ADAPTATION IN PLANTS

Aquatic plants	
<ul style="list-style-type: none"> Waxy layer is present on leaves and stems. Some plants have thin and slender, ribbon like leaves (To withstand fast water currents). Air spaces are present in stems and petioles (Helps plant to float). 	
Rooted aquatic plants	<ul style="list-style-type: none"> Rooted in the soil, with submerged stems. Leaves and flowers float on surface.
Floating aquatic plants	<ul style="list-style-type: none"> Not rooted in the soil.
Desert plants	
<ul style="list-style-type: none"> Leafless, or with small needle like leaves, or leaves are modified into thorns. They have green, fleshy stems with waxy layer present on them. Roots penetrate deep into the soil in search of water. 	
Plants of snowy regions	
<ul style="list-style-type: none"> Conical shaped trees with sloping branches and thick bark. e.g. Deodar and pine. 	
Plants of forest regions	
<ul style="list-style-type: none"> Trees, shrubs and herbs compete amongst themselves for sunlight. Example of adaptation: Spring like tendrils growing on the stems of some climbers. 	
Plants of grassland	
<ul style="list-style-type: none"> Elephants, tigers and deer can remain hidden in very tall grasses of the equatorial regions. Animals such as rabbits are found in very short grasses of cold regions. Vast meadows are found in hilly areas and plains. 	

➤ ADAPTATION FOR INGESTION OF FOOD IN PLANTS

- Most of the plants are autotrophic.
- Dodder** (*Cuscuta*): A parasitic plant.
It has yellow wire like-stems. It is leafless and cannot perform photosynthesis.
- Fungi:**
 - They lack chlorophyll and cannot perform photosynthesis.
 - Fungi obtain their food from starchy food materials like bread and *bhakri*
- Plants like *Drosera* (sundew), Venus flytrap, pitcher plant, etc. fulfill their need for nitrogen by consuming insects.



➤ ADAPTATION IN ANIMALS

Aquatic Animals	
Fishes	<ul style="list-style-type: none"> • Have fins and scales. • Body tapers towards both the ends, like a spindle. • Have gills for breathing and eyes with transparent eyelids. • Air bladders within the body to help them float.
Ducks and waterhen	<ul style="list-style-type: none"> • Ducks use their legs like oars as they have webbed toes. • Waterhen and duck have waxy feathers.
Frog	<ul style="list-style-type: none"> • Have a triangular head, webbed toes and slippery, smooth skin. • Have the ability to breathe through their skin in water and through their nose and lungs on land. They can live on land as well as in water. • They can hide among grasses because of typical colours of their back.
Forest and Grassland animals	
Carnivores	<ul style="list-style-type: none"> • They have strong legs to run fast and capture their prey. • They have claws and sharp and pointed teeth. • Eyes of predatory carnivores are located in front of their head.
Herbivores	<ul style="list-style-type: none"> • Eyes are located on either side of the head. • Long and tapering legs with strong hooves for running fast. • Long and freely moving ears and strong teeth. • Blackbucks and deer have colours that merge with their surroundings.
Desert Animals	
<ul style="list-style-type: none"> • They have thick skin, long legs with flat and cushioned soles and thick and long eyelashes. • Folds of skin protect nostrils. • Snakes, spiders, lizards and rats live in deep burrows during day time and are active at night. 	
Animals of Snowy Regions	
<ul style="list-style-type: none"> • Silver or white body colours, thick, long hairs on the skin. 	
Aerial Animals	
Birds	<ul style="list-style-type: none"> • Spindle shaped body to minimize the resistance of air while flying. • Hollow bones, feathers, modification of forelegs into wings.
Insects	<ul style="list-style-type: none"> • Light weight body that tapers at both the ends. • Two pairs of wings to fly and six stick-like legs to walk.
Bats	<ul style="list-style-type: none"> • They fly with the help of thin fold of skin between forelegs and hind legs known as patagium.
Adaptation in Reptiles	
<ul style="list-style-type: none"> • Garden lizard, house lizard and crocodile use their muscles for creeping. • Monitor lizards and house lizards have clawed toes and thin soles. • Snakes have scaly skin. 	

➤ DARWIN'S THEORY OF EVOLUTION

1. Charles Darwin's 1st principle- **Theory of 'survival of the fittest'**: Only those organisms are likely to survive which can adapt themselves to a changing environment.
2. Charles Darwin's 2nd principle- **Theory of 'natural selection'**: If an organism is born with a new beneficial characteristic and is able to survive, this change is preserved in the next generation.



➤ **CLASSIFICATION OF LIVING ORGANISMS**

Hierarchy of classification: Kingdom, Phylum, Class, Order, Family, Genus, Species.

➤ **BINOMIAL NOMENCLATURE**

1. Scientific name assigned according to binomial nomenclature consists of two parts- the first part is the '**genus**' and second is the '**species**'.
2. As per the guidelines of the **International Code of Nomenclature** all identified organisms have been assigned binomial names.

◆◆◆ **Summative Assessment** ◆◆◆

Textbook Exercise

I. Fill in the blanks

***1. Find my match!**

	Group 'A'	Answers		Group 'B'
(i)	Lotus	-----	(a)	Flower and leaves attract insects
(ii)	Aloe	-----	(b)	Haustorial roots for absorption of food
(iii)	Cuscuta	-----	(c)	Adapted to live in desert
(iv)	Venus flytrap	-----	(d)	Adapted to live in water

II. Read the paragraph and answer the following questions.

I am a penguin. I live in polar region covered by snow. My abdomen is white. My skin is thick with a layer of fat underneath. My body is spindle-shaped. My wings are small. My toes are webbed. We live in flocks.

***1. Why is my skin white and thick and why is there a thick layer of fat underneath?**

Ans: -----

***2. Why do we live in flocks sticking close to each other?**

Ans: -----

***3. Which geographical region do I inhabit? Why?**

Ans: -----



*4. Which adaptations should you have to enable you to live permanently in the polar region? Why?

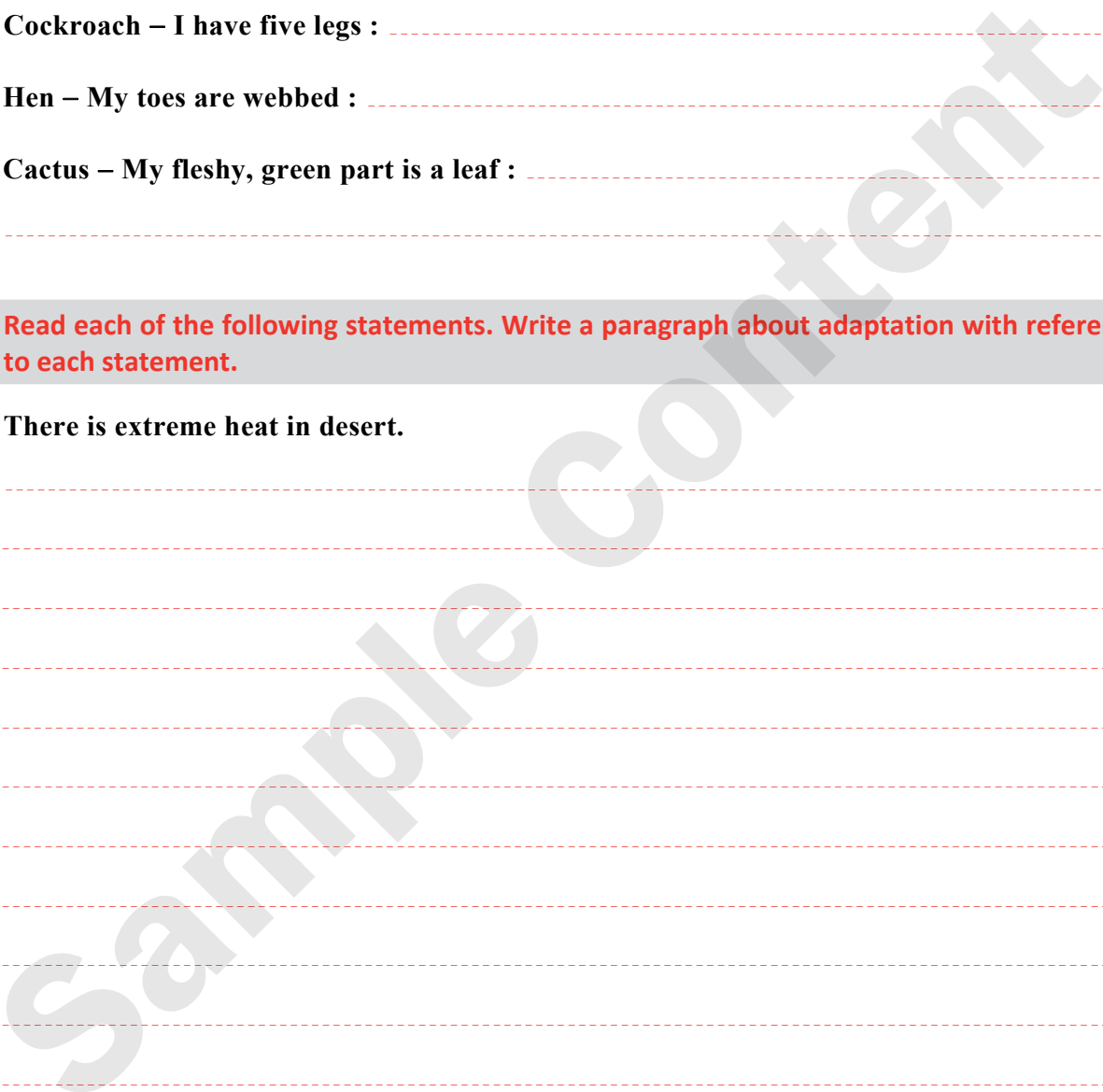
Ans: _____

III. Who is lying?

*1. Cockroach – I have five legs :

*2. Hen – My toes are webbed :

*3. Cactus – My fleshy, green part is a leaf :



IV. Read each of the following statements. Write a paragraph about adaptation with reference to each statement.

*1. There is extreme heat in desert.

Ans: _____

*2. Grasslands are lush green.

Ans: _____



***3. Insects are found in large numbers.**

Ans:

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***4. We hide.**

Ans:

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***5. We have long ears.**

Ans:

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V. Answer the following

***1. Why is the camel called the 'ship of the desert'?**

Ans:

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***2. How can the plants like cactus and *Acacia* live in deserts with scarce water?**

Ans:

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***3. What is the inter-relationship between the adaptations of organisms and their surroundings?**

Ans:

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***4. How are organisms classified?**

Ans:

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Intext Questions

1. What is the function of canine teeth in carnivorous animals? (Textbook page no. 5)

Ans:

2. How white or silver body colour, long, thick hairs on the skin of animals in snowy regions are useful to them? (Textbook page no. 6)

Ans:

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I. Can you tell?

1. Are the plants and animals from Kashmir and Rajasthan of the same type? Can you elaborate on any differences between the two? What is the reason for these differences?

(Textbook page no. 1)

Ans:

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2. In what way are sloping branches useful to plants in a snowy region? *(Textbook page no. 3)*

Ans:

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Let's Practise!

I. Fill in the blanks

1. trees like pine, deodar flourish in snowy regions like Kashmir.
2. The surfaces of leaves and stems of many aquatic plants are covered with a layer.
3. The of the desert plants stores water and food.
4. Ducks have toes which are used like oars.
5. Binomial nomenclature was discovered by



II. Match the Following

1. Match the living organisms mentioned in Group ‘A’ with their scientific names mentioned in Group ‘B’.

	Group ‘A’	Answers		Group ‘B’
(i)	Dog	-----	(a)	<i>Hibiscus rosa-sinensis</i>
(ii)	Cow	-----	(b)	<i>Sorghum bicolor</i>
(iii)	Jowar	-----	(c)	<i>Canis lupus familiaris</i>
		-----	(d)	<i>Bos taurus</i>

III. How are we different?

1. Adaptation in desert plants and Adaptation in aquatic plants.

Ans:

Adaptation in desert plants	Adaptation in aquatic plants
-----	-----
-----	-----
-----	-----
-----	-----
-----	-----
-----	-----
-----	-----
-----	-----
-----	-----
-----	-----

IV. Answer the following

1. What does the theory of survival of the fittest suggest?

Ans: -----

2. What is the theory of natural selection?

Ans: -----



V. Give reasons

1. Fishes are able to float in water.

Ans:

.....

.....

2. Deer and blackbucks can receive sounds from long distances.

Ans:

.....

3. Desert animals have thick skin.

Ans:

.....

Oral Test

1. Which types of roots are present in *Cuscuta*?
2. Name animals found in deserts.
3. What is the purpose of webbed toes of ducks?
4. Name some insectivorous plants.

Formative Assessment

Activities / Project

- *1. Find out how the gradual adaptation from primitive man to modern man must have taken place.

Teacher's Remark:

Date:



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NOTES

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- Mathematics

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