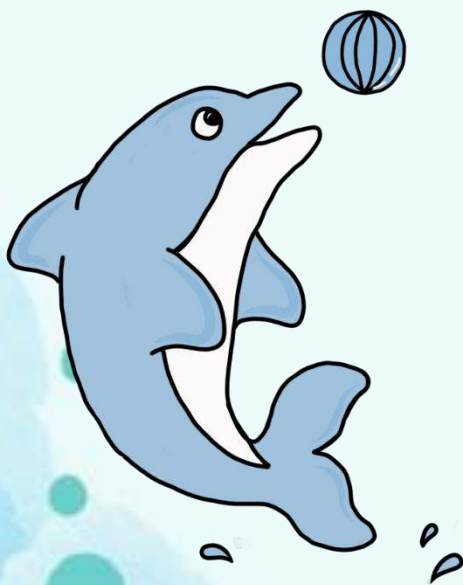




**Class-VI**

**Session:2026-2027**



**Dear Students (VI to VIII),**

As you step into the summer break, it is time to unwind, explore new hobbies, and create wonderful memories with your loved ones. While this vacation is all about relaxing and recharging, keeping your curiosity alive is equally important.

To ensure a smooth transition when you return, we have put together a series of engaging summer assignments.

These tasks are designed to reinforce your reading, writing, and analytical skills. Dedicating just a little time to Mathematics each day will boost your problem-solving speed and keep your concepts fresh.

Balancing fun with a bit of daily learning will give you a tremendous head start for the upcoming term.

**Key Guidelines for Your Assignments**

**Pace Yourself:** Complete the tasks daily rather than leaving them for the end.

**Work Space:** Do all assignments neatly in your classwork notebooks unless stated otherwise in the specific subject instructions.

**Keep it Balanced:** Dedicate a small amount of time each day to your studies so you can enjoy the rest of your day to the fullest.

**“Success is the sum of small efforts, repeated day in and day out.”**

Enjoy your well-deserved break, stay safe, and come back with renewed energy and enthusiasm!

Warm regards,  
Sadhana Singh  
Sr. Mistress.

O.P. Jindal School, Raigarh (C.G)



# MATHEMATICS



Solve from R S Aggarwal Book in Homework Notebook

WEEK	HOMEWORK
Week -1	<ul style="list-style-type: none"><li>• Recognizing patterns in different sequences. (Page No.- 28) (Read &amp; Write).</li><li>• Relations among number sequences. (Page No.- 29-32) (Read &amp; Write).</li><li>• Patterns in Shapes. (Page No.- 33) (Read &amp; Write).</li></ul>
Week -2	<ul style="list-style-type: none"><li>• Supercells Example 1 to 9 (Page No.82-84) (Solve)</li></ul>
Week -3	<ul style="list-style-type: none"><li>• Playing with Digits Example 1 to 12 (Page No. 84-85) (Solve)</li></ul>
Week -4	<ul style="list-style-type: none"><li>• Kaprekar's Operation and constant. (Page No. 89) (Read the concept then find the constant for any 10 different 4-digit number of your choice.) *MA Activity.</li><li>• The Collatz Conjecture (Read the concept and write few examples) (Page No. 90)</li></ul>
Week -5	<ul style="list-style-type: none"><li>• Exercise-5 (Page 91 to 92) Solve.</li></ul>
Week -6	<ul style="list-style-type: none"><li>• Read the concept of <i>Pretty Palindromes</i> from the <b>NCERT Mathematics textbook</b> (Class VI, Page 61). After understanding the definition and examples, <b>find and write palindromes for any five numbers each of the following types:</b><ol style="list-style-type: none"><li>1. Two-digit numbers</li><li>2. Three-digit numbers</li><li>3. Four-digit numbers</li></ol>* SEA Activity.</li></ul>

# संस्कृतम्



प्रस्तुत सम्पूर्ण कार्य दिव्यम् उत्तर-पुस्तिका में करिए:-

प्र-1 मञ्जूषातः रूपाणि चित्वा रिक्तस्थानानि पूरयत -

(मञ्जूषा से रूपों को चुनकर रिक्तस्थानों को पूर्ण कीजिए।)

**फलम् - पत्ता (नपुंसकलिङ्ग)**

विभक्ति	एकवचन	द्विवचन	बहुवचन
प्रथमा	.....	फले	फलानि
द्वितीया	.....	.....	.....
तृतीया	फलेन	फलाभ्याम्	फलैः
चतुर्थी	.....	फलाभ्याम्	फलेभ्यः
पंचमी	.....	.....	फलेभ्यः
षष्ठी	.....	फलयोः	फलानाम्
सप्तमी	.....	फलयोः	.....
सम्बोधन	हे फल !	फले !	हे फलानि !

मञ्जूषा - फलम्, फले, फलानि, फलाभ्याम्, फलस्य, फलेषु, फले, फलम्, फलाय, फलात्

**अकारान्त पुल्लिङ्ग शब्द - बालक**

विभक्ति	एकवचन	द्विवचन	बहुवचन
प्रथमा	बालकः	बालकौ	.....
द्वितीया	.....	बालकौ	बालकान्

तृतीया	बालकेन	बालकाभ्याम्	बालकैः
चतुर्थी	बालकाय	बालकाभ्याम्	बालकेभ्यः
पञ्चमी	.....	बालकाभ्याम्	बालकेभ्यः
षष्ठी	.....	बालकयोः	बालकानाम्
सप्तमी	.....	बालकयोः	.....

प्रतिदिनम् अकारान्त पुल्लिङ्ग शब्दस्य एकं रूपं स्मृत्वा लिखित्वा च अभ्यासं कुरुत ।  
प्रतिदिनम् अकारान्त पुल्लिङ्ग शब्द का रूप याद करके और लिखकर अभ्यास करिए।

**प्र-2 क्रीड् , चल् , वद् , खाद् , गम् धातूनाम् लट्, लृट् लकारस्य रूपम् लिखत ।**

(क्रीड् चल् पत् खेल् गम् धातुओं के लट् तथा लृट् लकार में रूप लिखिए ।)

**क्रीड् - खेलना (लट् लकार - वर्तमान काल)**

पुरुषः	एकवचन	द्विवचन	बहुवचन
प्रथम	क्रीडति	.....	क्रीडन्ति
मध्यम	क्रीडसि	.....	क्रीडथ
उत्तम	क्रीडामि	क्रीडावः	.....

**गम् -जाना [गच्छति].लृट् लकार - भविष्यत् काल**

पुरुषः	एकवचन	द्विवचन	बहुवचन
प्रथम	.....	गमिष्यतः	गमिष्यन्ति
मध्यम	गमिष्यसि	.....	गमिष्यथ
उत्तम	गमिष्यामि	.....	गमिष्यामः

**प्र-3 चित्रं दृष्ट्वा संस्कृतपदं लिखत । (चित्र देखकर संस्कृतपद लिखिए ।)**



.....



.....



.....



.....



.....



.....



.....



.....



.....



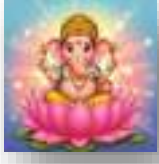
.....



.....



.....



.....

.....

प्र-4 प्रदत्त प्रहेलिकायाः पञ्च- पञ्च पुल्लिङ्ग , स्त्रीलिङ्ग , नपुंसकलिङ्ग शब्दान् अवचित्य लिखत-

(दी हुई वर्ग पहेली से पाँच-पाँच पुल्लिङ्ग, स्त्रीलिङ्ग तथा नपुंसकलिङ्ग शब्द चुनकर लिखिए)

र	म	का	अ	जा	रि	गृ
मू	ष	कः	श्	अ	थ	ह
त	ल	वा	वः	प	त्र	म्
प्र	प	न	श्र	ल	ता	नौ
म	यू	रः	व	बा	लि	का
गा	ट	क	न	पु	ष्प	म्
ल	फ	ल	म्	शि	क्षि	का

पुल्लिङ्ग

स्त्रीलिङ्ग

नपुंसकलिङ्ग

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

प्र-5 अपनी पाठ्य पुस्तक दीपकम् के पृथिव्यां त्रीणि रत्नानि पाठ से श्लोकों को कंठस्थ कीजिए ।.



### पाठ 1 - मातृभूमि

1. एक 'देशभक्ति' कविता अपनी व्याकरण की उत्तर-पुस्तिका में लिखिए।
2. कविता का अर्थ अपने शब्दों में (5-6 पंक्तियों में) लिखिए।
3. मातृभूमि के प्रति अपने प्रेम को दर्शाते हुए एक चित्र बनाइए।
4. 'स्वच्छ भारत अभियान' विषय पर एक अनुच्छेद लिखिए।

### पाठ - 2 गोल (मेजर ध्यानचंद)

1. 'गोल' पाठ को पढ़कर कहानी का सार (5-6 पंक्तियों में) लिखिए।
2. मेजर ध्यानचंद के व्यक्तित्व के विषय में 5 महत्वपूर्ण बातें लिखिए।
3. 'विद्यार्थी और अनुशासन' विषय पर एक अनुच्छेद लिखिए।
4. इस पाठ से आपको क्या सीख मिलती है? अपने शब्दों में लिखिए।
5. मैच खत्म होने के बाद 'सैंपर्स एंड माइन्स' टीम के खिलाड़ियों में ध्यानचंद की घटना को लेकर अवश्य बातचीत हुई होगी जिसमें उस खिलाड़ी की चर्चा भी हुई होगी, जिसने गुस्से में आकर ध्यानचंद के सिर पर हॉकी स्टिक दे मारी थी। उसकी संभावित बातचीत को संवाद के रूप में लिखिए।

अथवा

कुछ दिनों से आपका स्वास्थ्य ठीक नहीं है। आप अपने पिताजी के साथ चिकित्सक के पास गए हैं। चिकित्सक और आपके मध्य होने वाली बातचीत को संवाद के रूप में लिखिए।

### रचनात्मक कार्य (Creative Work)

1. भारत के किसी एक खिलाड़ी का चित्र बनाकर उसके बारे में 5 वाक्य लिखिए।
2. आपकी बड़ी बहन का विवाह है। वैवाहिक कार्यक्रमों में भाग लेने के लिए प्राचार्य को पाँच दिन के अवकाश के लिए एक आवेदन पत्र लिखिए।

## निर्देश-

1. पाठ 1 'मातृभूमि' तथा 'गोल' पाठ से संबंधित ग्रीष्मकालीन अवकाश कार्य हिंदी व्याकरण कॉपी में करें।
2. स्वच्छ, सुंदर एवं स्पष्ट लिखावट का ध्यान रखें।
3. चित्रों में रंगों का प्रयोग करें।



## कार्य-पत्रक (Worksheet)

### पुनराभ्यास (कक्षा-5 के हिंदी व्याकरण शिक्षण पर आधारित)

प्रश्न 1. नीचे दिए गए वाक्यों में से संज्ञा शब्दों को रेखांकित कीजिए -

- 1 राम स्कूल जा रहा है।
- 2 बगीचे में सुंदर फूल खिले हैं।
- 3 मेरी बहन किताब पढ़ रही है।
- 4 गंगा भारत की पवित्र नदी है।
- 5 मोहन बाजार से फल लाया।

प्रश्न 2. नीचे दिए गए शब्दों में से संज्ञा शब्द छाँटकर लिखिए-

लड़का सुंदर पेड़ दौड़ना  
दिल्ली मिठाई हँसना शिक्षक

प्रश्न 3. संज्ञा के प्रकार लिखिए।

- 1 राम
- 2 शहर
- 3 पानी
- 4 बचपन
- 5 झुंड

प्रश्न 4. नीचे दिए गए वाक्यों में संज्ञा के स्थान पर उचित सर्वनाम भरिए।

1. राम स्कूल जा रहा है। \_\_\_\_\_ बहुत होशियार है।
2. सीता बाजार गई। \_\_\_\_\_ फल लेकर आई।
3. मोहन और सोहन दोस्त हैं। \_\_\_\_\_ साथ खेलते हैं।
4. यह मेरी किताब है। \_\_\_\_\_ बहुत अच्छी है।
5. शिक्षक कक्षा में आए। \_\_\_\_\_ पढ़ाने लगे।

**प्रश्न 5. सही सर्वनाम चुनकर वाक्य पूरा कीजिए।**

(वह, वे, मैं, तुम, हम)

- 1 \_\_\_\_\_ रोज स्कूल जाता हूँ।
- 2 \_\_\_\_\_ मेरे अच्छे मित्र हो।
- 3 \_\_\_\_\_ पार्क में खेल रहे हैं।
- 4 \_\_\_\_\_ मेरी बहन है।
- 5 \_\_\_\_\_ आज पिकनिक पर जा रहे हैं।

**प्रश्न 6. संज्ञा के स्थान पर सर्वनाम लिखकर वाक्य दोबारा लिखिए।**

- 1 राधा स्कूल जा रही है।
- 2 मोहन बहुत अच्छा लड़का है।
- 3 रीना और सीमा खेल रही हैं।

**Assignments1 (कक्षा-6 के पाठ्यक्रम पर आधारित)**

**प्र1. दिए गए शब्दों में कोई एक प्रत्यय जोड़कर शब्द बनाइए।**

1. वीर -----
- 2 निडर -----
- 3 मधुर -----
- 4 सरल -----
- 5 सुंदर -----

- 6 भला -----
- 7 अच्छा -----
- 8 बुरा -----
- 9 लंबा -----
- 10 चिकना -----

प्र 2. निम्नलिखित उपसर्गयुक्त शब्दों को उनके प्रकार के आधार पर सूचीबद्ध करें:

शब्द	हिंदी के उपसर्ग	संस्कृत के उपसर्ग	उर्दू के उपसर्ग	संस्कृत के अव्यय
चिरंजीवी				
पुरातत्व				
हमदर्द				
बेईमान				
अधपका				
कुपात्र				
भरपेट				

खुशकिस्मत				
निर्दोष				
सुगम				
उनतीस				
स्वतंत्र				
बदसूरत				
परिक्रमा				
निडर				

### Assignments 2

प्र 1. कबीरदास जी के विषय में जानकारी प्राप्त करते हुए उनके कोई पाँच दोहे कंठस्थ कीजिए।

निर्देश- इन दोहों के अलावा आप अन्य दोहे भी कंठस्थ कर कक्षा में सुना सकते हैं |

### Assignments 3

प्र. 1 निम्नलिखित वर्ग-पहेली में से विलोम शब्दों के जोड़े चुनकर रिक्त स्थान में लिखिए।

य	प	स	स	म	दे	अ	क
ल	ट	ज्ज	दा	न	व	प	च
दु	र्ज	न	वा	व	द	का	न
र	ख	दु	उ	प	का	र	ड
ण	थ	र्ब	ह	छ	ध	भ	ब
स	ब	ल	स	स	य	झ	स
र	ज	ओ	र	ख	ह	ट	ना
फ	कु	टि	ल	ऋ	अ	ना	थ

### विलोम शब्द

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**निर्देश:** दिए गए कार्य-पत्रक को हल कर प्रिंट व्याकरण उत्तरपुस्तिका में लगाएँ।



## Section A: (READING COMPREHENSION)

### 1. Read the given passage carefully.

- I.** Papaya is a healthy fruit with a list of properties that is long and exhaustive. You can munch on it as a salad, have it cooked or boiled or just drink it up as milkshake or juices. Papaya has many virtues that can contribute to our good health. The most important of these virtues is the protein-digesting enzyme it has. The enzyme is similar to pepsin in its digestive action and is said to be so powerful that it can digest 200 times its own weight in protein. It assists the body in assimilating the maximum nutritional value from food to provide energy and bodybuilding materials.



**II.** Raw papaya makes up for the deficiency of gastric juice and fights excess of unhealthy mucus in the stomach and intestinal irritation. The ripe fruit, if eaten regularly corrects habitual constipation, bleeding piles and chronic diarrhea. The juice of the papaya seeds also assists in the above-mentioned ailments. Papaya juice, used as a cosmetic, removes freckles or brown spots due to exposure to sunlight and makes the skin smooth and delicate. A paste of papaya seeds is applied in skin diseases like those caused by ringworm.

**III.** The black seeds of the papaya are highly beneficial in the treatment of cirrhosis of the liver caused by alcoholism, malnutrition, etc. A tablespoonful of its juice, combined with a hint of fresh lime juice, should be consumed once or twice daily for a month. The fresh juice of raw papaya mixed with honey can be applied over inflamed tonsils, for diphtheria and other throat disorders. It dissolves the membrane and prevents infection from spreading.

**Based on your understanding of the passage answer the following questions by choosing the correct options:**

- i. The powerful protein-digesting enzyme in papaya helps the body by:
- improving blood circulation
  - assisting the body in assimilating the maximum nutritional value from food
  - increasing the resistance power of the body
  - slowing down the process of digestion

- ii. Papaya has many \_\_\_\_\_ that can contribute to our good health.
- Virtues
  - Lists
  - Juices
  - Hint
- iii. The cosmetic value of papaya is that \_\_\_\_\_.
- it prevents infection from spreading
  - it makes the skin smooth and delicate
  - it treats cirrhosis of the liver
  - it is helpful in treating chronic Diarrhea
- iv. Inflamed tonsils can be cured by \_\_\_\_\_.
- consuming a tablespoonful of papaya juice with a hint of fresh lime juice daily for a month
  - by applying a paste of papaya seeds on the tonsils
  - by eating ripe papayas
  - applying fresh juice of raw papaya mixed with honey on the tonsils
- v. The juice of the papaya helps to cure which ailments?
- Chronic diarrhea
  - Fever
  - Headache
  - Gastric
- vi. Freckles or brown spots are caused due to \_\_\_\_\_.
- Constipation
  - Malnutrition
  - Exposure to sunlight
  - Ringworm
- vii. A paste of papaya seeds helps in curing diseases like \_\_\_\_\_.
- Ringworm
  - Liver
  - Constipation
  - Piles
- viii. The most important virtue of the papaya is its \_\_\_\_\_.
- protein digesting enzyme
  - Body building material
  - energy giving ability
  - curing skin disease
- ix. Find the word from the passage which is the opposite of 'harmful'. (paragraph 3)
- Malnutrition
  - Beneficial
  - Infection

d) Cosmetic

x. Find the word from the passage which is the synonym of 'soft'. (paragraph 2)

- a) Chronic
- b) Delicate
- c) Smooth
- d) Mark

**2. Read the given passage carefully.**



- I. Milkha Singh, also known as The Flying Sikh, was an Indian track and field sprinter who was introduced to the sport while serving in the Indian Army. He is the only athlete to win gold in 400 metres at the Asian Games as well as the Commonwealth Games.
- II. He also won gold medals in the 1958 and 1962 Asian Games. He was awarded the Padma Shri, India's fourth-highest civilian honour, in recognition of his sporting achievements.
- III. He was disappointed with his debut performance at 1956 Melbourne Olympics. He said "I had been so excited by the prospect of being part of the Indian Olympics team, but, hadn't realized how strong and professional the competition would be. It was then that I understood what competition would be. It was then that I understood what competition actually meant, and that if I wanted to succeed in the international arena, I must be prepared to test my mettle against the best athletes in the world." Then he decided to make sprinting the soul focus of his life. "Running had thus become my God, my religion and my beloved." Every morning I would rise at the crack of dawn, get into my sports kit and dash off to the track, where I would run two or three miles in the company of my coach."
- IV. My only focus was to become the best athlete in the world and images of a packed stadium filled with cheering spectators, wildly applauding me as I crossed the finishing line, would flash across my mind and I would start again, encouraged by the visions of victory.

**Based on your understanding of the passage, answer the following questions.**

- a. What is Milkha Singh known as?

- b. When was he introduced to the world of sports?
- c. Mention his achievement as the only athlete.
- d. What honour was conferred upon him in recognition of his sporting achievements?
- e. What did he do to increase his speed in running?
- f. What was his only focus?
- g. What was he disappointed with?
- h. What did he learn from the 1956 Melbourne Olympics?
- i. Find the word from the passage that has the same meaning as 'daybreak'. (Paragraph 2)
- j. Find the word from the passage which is the opposite of 'lose'. (Paragraph 1)



## Section B: (GRAMMAR AND WRITING SKILLS)

### 3. Identify the Underlined Parts of Speech-

*Write the part of speech of the highlighted word in each sentence.*

- i. She quickly ran to the store.
- ii. The beautiful garden attracted many visitors.
- iii. He is sitting under the tree.
- iv. They played football after school.
- v. The cat is very lazy.
- vi. We saw a flock of birds in the sky.
- vii. She and her friend went to the library.
- viii. This is my book.
- ix. He spoke softly during the meeting.
- x. Wow! That was an amazing performance.

### 4. Identify the Subject and Predicate-

*Underline the subject once and the predicate twice.*

- i. The little boy is playing in the park.
- ii. My father drives to work every day.
- iii. The birds are singing in the tree.
- iv. She completed her homework on time.
- v. The old house stood on the hill.
- vi. Our teacher explained the lesson clearly.
- vii. The dog barked loudly at the stranger.
- viii. The children enjoyed the picnic.
- ix. The sun rises in the east.
- x. My friends are planning a trip.

### 5. Punctuate the Following Sentences

*Rewrite each sentence with correct punctuation.*

- i. where are you going

- ii. my brother who lives in delhi is a doctor
- iii. wow that is a beautiful painting
- iv. she said i will come tomorrow
- v. we visited mumbai jaipur and agra during our vacation

#### 6. Identify the Noun and Its Kind (Proper / Common / Collective / Abstract / Material)

- i. Honesty is the best policy.
- ii. The team won the match.
- iii. Gold is a precious metal.
- iv. Riya is my best friend.
- v. The children are playing in the park.

#### 7. Formal Letter (Leave Application – Sick Leave)

You are a student of Grade 6. You have been suffering from fever and are unable to attend school for three days. Write a **letter to the Principal** of your school requesting leave for the same. Mention the reason for your absence and the number of days you will be on leave. Use a proper formal letter format. (Word limit-80-100 words)

#### 8. Formal Letter (Leave Application – Family Function)

You need to attend a family function in another city and will not be able to come to school for two days. Write a **letter to the Principal** of your school requesting leave. Clearly mention the reason, dates of leave, and assure that you will complete the missed work. Use polite and formal language. (Word limit-80-100 words)

#### 9. Descriptive Paragraph Writing

Write a **descriptive paragraph** in about 100–120 words on the topic **“My Favourite Place.”** Describe the place by mentioning its location, what makes it special to you, what you see or do there, and how you feel when you visit it. (Word limit-80-100 words)

#### 10. Informal Letter Writing

Write a **letter to your friend** describing how you spent your summer vacation. Include details about where you went, what activities you enjoyed, and any special experiences you had. Use an informal and friendly tone. (Word limit-80-100 words)



## Section: C (SPELL BEE)

#### 11. Fill in the blanks with the words given as clues.

**groggily, captivate, declivity, bizarre, hesitate, debonaire, fabricate, apathy, etched, endurance, ambiguous, harrowing, gregarious, bridle, epiphany, embarrass, caliber, gratify, fluctuate, envision**

- i. The soldiers described the battle as a \_\_\_\_\_ experience they would never forget.
- ii. The storyteller managed to \_\_\_\_\_ the children with tales of dragons and heroes.
- iii. Don't \_\_\_\_\_ to ask questions if you don't understand the lesson.
- iv. The witness tried to \_\_\_\_\_ a story to avoid telling the truth.

- v. He walked into the room with a \_\_\_\_\_ charm that impressed everyone.
- vi. The teacher's praise would always \_\_\_\_\_ the students who worked hard.
- vii. The hikers struggled as they descended the steep \_\_\_\_\_ of the mountain.
- viii. His \_\_\_\_\_ toward the project made it clear he had no real interest in participating.
- ix. She could already \_\_\_\_\_ a future where her hard work paid off.
- x. The magician's trick was so \_\_\_\_\_ that the audience sat in stunned silence.
- xi. He woke up \_\_\_\_\_ after staying up all night studying.
- xii. The instructions were so \_\_\_\_\_ that no one knew exactly what to do.
- xiii. In a sudden \_\_\_\_\_, he realized the true meaning of friendship.
- xiv. She tried to \_\_\_\_\_ her anger, but her clenched fists gave her away.
- xv. Being naturally \_\_\_\_\_, she loved spending time with large groups of people.
- xvi. The surgeon's high \_\_\_\_\_ ensured that patients trusted her skill.
- xvii. He didn't mean to \_\_\_\_\_ his friend, but the slip of words embarrassed him.
- xviii. Stock prices tend to \_\_\_\_\_ depending on market conditions.
- xix. The memory of that day was permanently \_\_\_\_\_ into her mind.
- xx. Marathon runners need incredible \_\_\_\_\_ to finish the race.

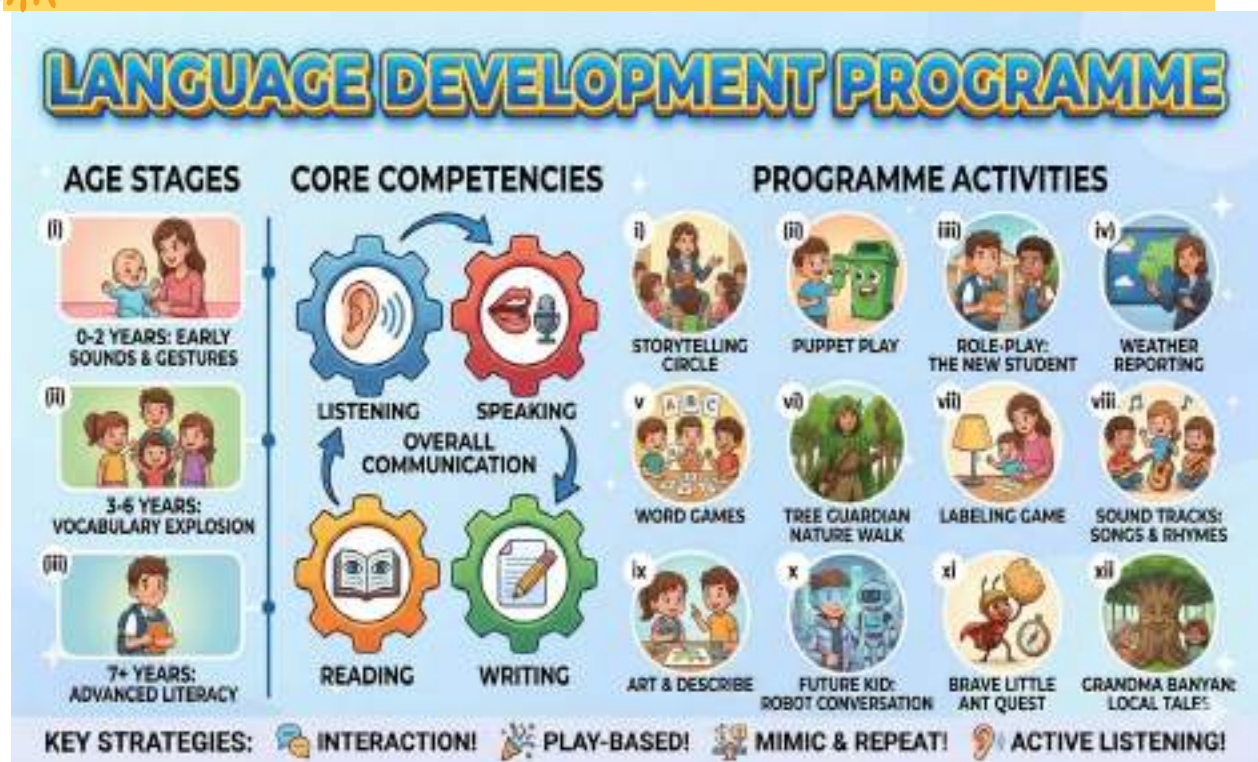
**12. Match the words with their correct meaning:**

S.No.	Words	Meanings
i.	Berate	A brief or quick look
ii.	Adept	Honest and frank expression
iii.	Apathy	Aggressive or ready to fight
iv.	Boisterous	To scold angrily
v.	Belligerent	A large and impressive event
vi.	Cacophony	Lacking order or planning
vii.	Cajole	Persuade by flattery or coaxing
viii.	Camouflage	Sudden disastrous failure
ix.	Candor	Skilled at something
x.	Caricature	Destroy a large part of
xi.	Debacle	Harsh, discordant mixture of sounds
xii.	Debut	To make someone aware or accustomed
xiii.	Decimate	Exaggerated portrait for humor

xiv.	Epitome	Very careful about details
xv.	Extravaganza	A perfect example of something
xvi.	Familiarise	Disguise to blend with surroundings
xvii.	Fastidious	Noisy, energetic and cheerful
xviii.	Fathom	First public appearance
xix.	Glimpse	Lack of interest or concern
xx.	Haphazard	To understand something deeply



## Section: D (LANGUAGE DEVELOPMENT)





**ROLE PLAY:** Record a video of 1 or 2 minutes on any one topic given below and send it to your respective English teacher.



(i) Future Kid from 2050



(ii) Talking Dustbin



(iii) Brave Little Ant



(iv) Grandma Banyan Tree



v The New Student



vi Tree Guardian



vii Sleepy Security Guard



viii Weather Reporter



Use your phone or tablet!



Be creative and have fun!




SUBMIT TO YOUR TEACHER!


OR

# TED Talk Review & Response: Agnive Vinoth

### LISTEN TO THE TALK




CORE MESSAGE OF THE TALK




"LEARNING BEYOND THE WALLS"  
<https://youtu.be/m4lk8Fhe1Cw>

1




IMPACT OF HIS JOURNEY AS A SIX-YEAR-OLD


GROWING SHARING



PRACTICAL SKILLS




3




EXPERIENCE SHARING


EXPERIENCE REVIEW CLUES



SHARING



GARDEN MUSEUM



### YOUR RESPONSE

1 [REPLY TO CLUE 1]





---

2 [REPLY TO CLUE 2]

---

3 [REPLY TO CLUE 3]

---

 LISTEN CAREFULLY! 
  STRUCTURE YOUR THOUGHTS! 
  BE REFLECTIVE! 
  SHARE YOUR VIEW!

LINK: <https://youtu.be/m4lk8Fhe1Cw?feature=shared>

## CLUES:

- Core Message of the Talk
- Impact of his journey as a six-year-old 'open-schooler' change your perspective on using practical skills (e.g: kitchen tools or digital content creation)
- Share your experience when you learnt something in gardens and museums rather than in classrooms?
- Word Limit: 100-150 words

OR

## TED<sup>x</sup> Gates Chili School - Sparsh Shah (13)

### 'How a 13 year old changed "Impossible" to "I'm possible"'

#### INTRODUCTION



How a 13 year old changed 'impossible' to 'I'm possible'

A captivating, inspiring journey by a talented singer and speaker who turns challenges into triumphs. Sparsh shares how he doesn't let Osteogenesis Imperfecta define him.

#### CORE MESSAGE OF THE TALK

Turning "IMPOSSIBLE" into "I'M POSSIBLE"

"A positive mindset is everything!"

#### ANALYSIS

Sparsh's main argument centers on the power of a mindset shift. With an unwavering positive attitude and willpower, he believes one can achieve excellence in everything.

Refused to let limitations hold him back.

#### REFLECTION & CALL TO ACTION

Start your journey towards your "I'm possible"!

If you change your mindset like Sparsh, what is **ONE SMALL, BRAVE STEP** you will take TODAY?



Set one small goal and work towards it.



Speak to someone about a fear or challenge.



Try something new or outside your comfort zone.



Keep pushing forward, believe in yourself!

WATCH NOW: <https://youtu.be/bC0hIK7WGcM?si=E1XKXCt1PsiZVJZ>

LINK: <https://youtu.be/bC0hIK7WGcM?si=E1XKXCt1PsiZVJZ>

## CLUES:

- Core Message of the Talk

- If you change your mindset to “I’m Possible” just like Sparsh did, what is one small, brave step you will take today to start turning “impossible” thing into a success?
- Word Limit: 100-150 words



## CLASS NOTES

- **DO AS DIRECTED:**

**Topic: Rama to the Rescue**



**Let us discuss (Pg.25)**

**Q.1 Work in pairs to match the words in Column A with the meanings in Column B. Check your answers by sharing them with your teacher and classmates. (TO BE DONE IN THE TEXT BOOK)**

Column A	Column B
1. wonder	(f) a feeling of surprise
2. yard	(c) an area outside a building
3. chatter	(d) talk for a long time about unimportant things
4. instead	(a) in place of someone or something
5. closely	(b) carefully
6. perhaps	(e) maybe

**Q.2 Fill in the boxes with suitable words as you read the story.**

**Main Characters** → Man, wife, Rama

**Setting** → In a Village

**Other Characters** → Thief

**Problem** → The thief was trying to find out the location of the money to steal it.

**Solution** → The wife started calling out Rama, the village Kotwal’s name. He heard his name and caught the thief.

**LET US THINK AND REFLECT (PAGE 26)(QUESTION 1& 2 MUST BE DONE IN THE TEXT BOOK)**

**(I) Read the following lines and then answer the questions that follow.**

**(a) Man: What’s the matter? What are you looking at?**

**Wife: Ssh! Listen!**

**Man:** Somebody is trying to get in.

**Wife:** I ... I think he has got in ... the noise has stopped.

**(i) What makes the man say the first line?**

Answer:

He notices that his wife's behaviour has changed and she is focused on something alarming.

**(ii) Choose the correct option.**

**The wife says 'Ssh! Listen!'. What does the word 'Ssssh' mean here?**

(a) sleep      (b) help      (c) rest      (d) be silent

Answer:

**(d) be silent**

**(iii) How can you tell that the wife was listening carefully?**

Answer:

The wife's concern about the incident proves the fact that she was listening carefully.

**(b) Rama, the village Kotwal, ran to the house from which he heard his name being called.**

**Rama: Oh, Oh! Some thief has dug his way into this house.**

**(i) Fill in the blank with the correct word from the given lines.**

The villagers caught the thief and took him to the \_\_\_\_\_

Answer:

**Police Station**

**(ii) Choose the correct option.**

**What do the words "Oh, Oh!" show here?**

(a) surprise      (b) anger      (c) pain      (d) happiness

Answer:

**(a) surprise**

**(iii) How can you tell that the kotwal was good at his job?**

Answer:

He came quickly once he heard his name. This shows that the kotwal was good at his job.

**ANSWER THESE QUESTIONS. (TO BE DONE IN THE NOTEBOOKS)**



**Question 2.**

**Give one reason why the man and his wife were not able to fall asleep.**

Answer:

The strange sounds coming from their home show that the man and his wife were not able to fall asleep

**Question 3.**

**What did the thief wish would happen? Did it happen?**

Answer:

Thief wishes that they talk about their money or they fall asleep. No, it did not happen.

#### **Question 4.**

**How did the man and his wife get help from the Kotwal?**

Answer:

The man and his wife got help from the kotwal (Rama) because he heard his name being called when the thief was breaking in. Rama immediately responded, ran to their house and apprehended the thief.

**VALUE BASED QUESTION. (TO BE DONE IN THE NOTEBOOKS)**



#### **Question 5.**

**Do you think cleverness can help us solve our problems? Why do you say so?**

Answer:

Yes, cleverness can help us solve problems. In the story, the husband, wife, and Rama's alertness and quick thinking solve the problem of the thief breaking into the house. Cleverness involves being resourceful, observant, and making wise decisions, which are often necessary to overcome challenges effectively.

**Topic: The Unlikely Best Friends**

Let us do these activities before we read. (Page 39)



#### **Question 1.**

**Friends are an important part of our lives. Why do you think so? Share your ideas with your friend. What do you do when you are with your friends and how do you feel?**

**ANSWER:** I think friends are really important because they make our lives happier and more fun. Friends are there to share our joys and help us when we are sad. They make us laugh and play with us, so we never feel lonely.

When I'm with my friends, we do a lot of different things. Sometimes we play games like hide and seek or tag, and other times we just talk and share stories. We also help each other with homework and projects, which makes studying a lot more enjoyable. During breaks, we like to draw, sing songs, or even make up little plays.

When I'm with my friends, I feel happy and relaxed. It's like having a team of people who understand me and make everything better. We trust each other and can be ourselves without worrying about being judged. Having friends makes every day brighter and more exciting.

#### **Complete the Sentences (PG39-TO BE DONE IN THE TEXT BOOK)**

With my friend, I play, laugh, share stories, do homework together.

With my friend, I feel happy, relaxed, understood, excited.

#### **Question 2(Pg. 39)**

**The title of the chapter is 'The Unlikely Best Friends'.**

**(a) What can be the meaning of 'unlikely'? Discuss in groups, and then discuss with your teacher.**

**Answer:**

The word “unlikely” means something that is not expected to happen or is not probable. It suggests a situation or relationship that is surprising or unusual. In the context of friendships, “unlikely” best friends are people who, at first glance, seem too different to get along or have a close bond. They might have different backgrounds, interests, or personalities, but despite these differences, they form a strong friendship.

**LET US DISCUSS (PAGE 42) TO BE DONE IN THE TEXT BOOK**

**Question 1.**

Talk about the things that Gajaraj and Buntree did together. Now, write in the shapes given below. One has been done for you.

**Answer:**

Buntree and Gajaraj

played

bathed

ate

slept

**Question 2. TO BE DONE IN THE NOTE BOOK**

**Why did the farmer hug Buntree?**

**Answer:** The farmer hugged Buntree as he was glad to see Buntree. The farmer has been looking for Buntree since he disappeared from his house.

**Question 3. TO BE DONE IN THE NOTE BOOK**

**Do you think Buntree will leave Gajaraj and go home with the farmer?**

**Answer:**

No, Buntree is unlikely to leave Gajaraj and go home with the farmer voluntarily. The story shows that Buntree and Gajaraj share a deep bond and have become inseparable friends.

**LET US DISCUSS. (PG 45) (TO BE DONE IN THE NOTEBOOK)**



**Q1. Why did Gajaraj not eat his food?**

Gajaraj did not eat his food because he was feeling sad and lonely after Buntree, the dog, was taken away from him. He missed his friend deeply, and this emotional distress affected his appetite.

**Q2. Who were friends at the end of the story?**

At the end of the story, the friends were:

Gajaraj (the elephant), Buntree (the dog), the mahout (elephant trainer) and the farmer. The story concludes with the reunion of Gajaraj and Buntree, who continue their friendship. Additionally, the mahout and the farmer also form a friendship as they bond over their shared concern for Gajaraj and Buntree's happiness.

**LET US THINK AND REFLECT (PAGE 45)**

**(QUESTIONS 1-A I, II & B-I, IV & TO BE SOLVED IN THE TEXT BOOK)**



**Q1. Read the following lines and answer the questions that follow.**

**(a) Despite royal comforts, Gajaraj was sad because he had no friends. The mahout, or elephant trainer, was the only one he ever interacted with. The mahout was a kind man who served Gajaraj food and gave him a bath in the elephant pond daily. He was a good caretaker, but not a friend.**

**(i) Complete with one word:**

mahout : kind :: Gajaraj : \_\_\_\_\_

**Answer:**

**Sad**

**(ii) The mahout was a good caretaker because he gave \_\_\_\_\_ to Gajaraj and a \_\_\_\_\_ in the pond.**

**Answer:**

**Food, Bath**

**(iii) What do you think is the difference between a friend and a caretaker?**

**Answer:**

while both friends and caretakers play important roles in the lives of others, the difference lies in their relationship, the roles they fulfill, and the emotional connection they share. Friends provide companionship, emotional support, and mutual understanding, whereas caretakers focus on meeting practical needs and ensuring the physical well-being of those under their care.

**(b) "Are you missing your friend?" asked the farmer remembering the happy look on Buntree's face while sitting on the elephant's back. "I cannot see you go hungry," said the farmer, "If you miss your friend so much, go to him." The farmer removed the rope with which he had tied the dog.**

**(i) The farmer uses the word \_\_\_\_\_ to refer to the elephant.**

**Answer:**

**Friend**

**(ii) How did the farmer know that Buntree was hungry?**

The farmer noticed that Buntree had not touched his food since coming home with him. Hence he could see that Buntree was hungry.

**(iii) Why did the farmer remove the rope with which he had tied Buntree?**

**Answer:**

The farmer removed the rope because he empathized with Buntree's longing for his friend, Gajaraj. Seeing Buntree unhappy and not eating, the farmer realized that Buntree's happiness lay with Gajaraj. Therefore, he allowed Buntree to go back to his friend by removing the rope.

**(iv) Complete with one word:**

Gajaraj : Buntree :: \_\_\_\_\_ : farmer

**Answer: Mahout**

**Q2. Give two examples to show that Gajaraj was very happy to have a friend.**

**Answer-** Gajaraj shared his food with Buntree when the dog was hungry, showing his generosity and care. Gajaraj playfully splashed water on Buntree during their bath together, indicating their playful and joyful interactions.

**Q 3. How did the mahout come to know that Gajaraj was sad?**

**Answer-** The mahout noticed that Gajaraj was not eating his food, which was unusual behavior for the elephant. Despite checking Gajaraj's physical condition and finding nothing wrong, the mahout suspected that Gajaraj might be feeling sad due to the absence of Buntree, his only friend.

**Q4. Why do you think Buntree licked the farmer's hand?**

**Answer-** Buntree licked the farmer's hand as a gesture of gratitude and affection. The farmer had shown kindness and understanding by allowing Buntree to return to Gajaraj, which made Buntree happy. Licking the farmer's hand was Buntree's way of expressing thanks and acknowledging the farmer's compassion.

**Value Based Question (PG39-TO BE DONE IN THE NOTE BOOK)**



**Q 5. What was 'unlikely' about the friendship of Gajaraj and Buntree?**

**Answer-** The friendship between Gajaraj and Buntree was unlikely because they were different species – an elephant and a dog. Normally, elephants and dogs do not interact closely in natural settings. However, their friendship blossomed due to their shared circumstances and the emotional bond they developed through their interactions and mutual care.

# Science



**Note: This assignment has total 4 sections namely A, B, C & D.**

## SECTION-A: NCERT Chapter Notes

### **INSTRUCTION:**

\* Note down all the content from “*Chapter 2: Diversity in Living World*” (attached at the end of the document) in your Science notebook, ensuring neat and clean handwriting.

## SECTION B: Worksheets based on the textbook chapters.

**INSTRUCTION:** SOLVE THIS WORKSHEETS IN A SEPARATE SCIENCE ACTIVITY NOTEBOOK (92 Pages).

## Worksheet-1

### Chapter 2: Diversity in Living Organisms

#### **I. Multiple Choice Questions:**

**1. Which of the following correctly matches an organism with its habitat and adaptation?**

- A. Fish – Desert – Thick fur
- B. Camel – Desert – Hump stores fat
- C. Frog – Air – Wings
- D. Polar bear – Water – Gills

**2. Why do aquatic plants have air spaces in their tissues?**

- A. To absorb more sunlight
- B. To float on water
- C. To store food
- D. To grow faster

**3. Which feature is most helpful for animals living in cold regions?**

- A. Long legs
- B. Thin fur
- C. Thick layer of fat under skin
- D. Bright colours

**4. A plant has needle-like leaves and a thick stem. It is most likely found in:**

- A. Mountains
- B. Desert
- C. Grassland
- D. Water

**5. Which of the following is NOT an adaptation?**

- A. Webbed feet in ducks
- B. Thick fur in polar bears
- C. Growing randomly without purpose
- D. Long roots in desert plants

**6. Which of the following animals is incorrectly matched with its habitat?**

- A. Whale – Aquatic
- B. Camel – Desert
- C. Monkey – Arboreal
- D. Fish – Terrestrial

**7. Why do desert animals usually come out at night?**

- A. To find more food
- B. To avoid predators
- C. To escape extreme heat
- D. To sleep

**8. Floating plants like lotus have broad leaves mainly to:**

- A. Reduce water loss
- B. Help them float better
- C. Capture maximum sunlight
- D. Store water

**9. Which of the following statements is correct about biodiversity?**

- A. It includes only animals
- B. It includes only plants
- C. It includes all living organisms and their variations
- D. It includes only microorganisms

**10. An animal with streamlined body, fins, and gills is adapted for:**

- A. Flying
- B. Running
- C. Swimming
- D. Climbing

**11. Which adaptation helps a bird to fly efficiently?**

- A. Heavy bones
- B. Hollow bones
- C. Thick fur
- D. Large teeth

**12. Plants in dry areas have small or no leaves to:**

- A. Increase photosynthesis
- B. Reduce water loss
- C. Attract insects
- D. Grow taller

**13. Which of the following best explains why diversity is important?**

- A. It makes organisms look similar
- B. It helps organisms survive in different environments
- C. It reduces competition
- D. It stops evolution

**14. Which of the following organisms shows adaptation for climbing trees?**

- A. Fish
- B. Monkey
- C. Camel
- D. Whale

**15. A student observes an animal with webbed feet, waterproof feathers, and a flat beak. The animal is most likely:**

- A. Eagle
- B. Duck
- C. Tiger
- D. Goat

**II. Fill in the blanks:**

1. The presence of different types of plants and animals in various habitats shows \_\_\_\_ in the living world.
2. The place where an organism lives and grows is known as its \_\_\_\_.
3. Plants that are specially adapted to live in deserts are called \_\_\_\_.
4. Animals that can live both on land and in water are called \_\_\_\_.
5. Fish have \_\_\_\_ which help them to breathe underwater.

**III. Match the column A with the correct answer in column B.**

**1. Match the Following**

- | Column A   | Column B           |
|------------|--------------------|
| i. Frog    | A. Desert habitat  |
| ii. Camel  | B. Aquatic animal  |
| iii. Fish  | C. Amphibian       |
| iv. Monkey | D. Arboreal animal |

## 2. Match the Following

- | Column A        | Column B                  |
|-----------------|---------------------------|
| i. Blubber      | A. Helps in floating      |
| ii. Air spaces  | B. Found in desert plants |
| iii. Spines     | C. Fat layer for warmth   |
| iv. Webbed feet | D. Help in swimming       |

## 3. Match the Following

- | Column A       | Column B             |
|----------------|----------------------|
| i. Lotus       | A. Desert plant      |
| ii. Cactus     | B. Floating plant    |
| iii. Pine tree | C. Cold region plant |
| iv. Mango tree | D. Terrestrial plant |

## 4. Match the Following

- | Column A         | Column B                       |
|------------------|--------------------------------|
| i. Gills         | A. Help birds to fly           |
| ii. Hollow bones | B. Help fish to breathe        |
| iii. Thick fur   | C. Cold region adaptation      |
| iv. Long roots   | D. Absorb water from deep soil |

### IV. One-word answer.

- The feature that helps an organism survive in its habitat is \_\_\_\_\_.
- The process of grouping organisms based on similarities is called \_\_\_\_\_.
- Animals that can live both on land and in water are called \_\_\_\_\_.
- The loss of water in plants through leaves is called \_\_\_\_\_.

e) Animals that eat dead and decaying organisms are called \_\_\_\_\_.

f) Plants that grow in dry conditions are called \_\_\_\_\_.

g) The special feature of camel to survive in desert is \_\_\_\_\_.

h) The long sleep taken by animals during winter is called \_\_\_\_\_.

**V. Answer the following questions in short.**

1. Why do organisms living in the same habitat sometimes show different adaptations? Explain with an example.

2. How does classification help in understanding biodiversity? Give two reasons.

3. Some plants grow in deserts while others grow in water. What differences in their structure help them survive in such opposite conditions?

4. Why is it incorrect to classify animals only based on their size or shape? Explain briefly.

5. A cactus and a lotus are both plants, yet they look very different. What does this tell us about diversity in plants?

**VI. Answer in detail.**

1. Explain how habitat influences the type of plants and animals found in a particular region. Support your answer with at least two examples.

2. Describe the various ways in which animals can be grouped based on their food habits and movement. Give examples for each category.

3. How do external features of organisms help in their classification? Explain with suitable examples from both plants and animals.

4. Discuss the importance of adaptation in living organisms. What might happen if organisms fail to adapt to changes in their environment?

5. Compare Adaptations between the animals found in desert and aquatic habitats.

<b>Feature</b>	<b>Desert Animals</b>	<b>Aquatic Animals</b>
Body covering	_____	_____
Movement	_____	_____
Breathing	_____	_____
Special feature	_____	_____

**VII. Case based questions.**

1. In a forest, different animals like deer, lions, monkeys, and birds were found. Deer eat plants, lions hunt other animals, monkeys climb trees, and birds fly in the sky.

**Questions:**

- a) Classify these animals based on their food habits.
- b) Which animals are adapted for climbing and flying?
- c) Why do different animals live in the same habitat but behave differently?

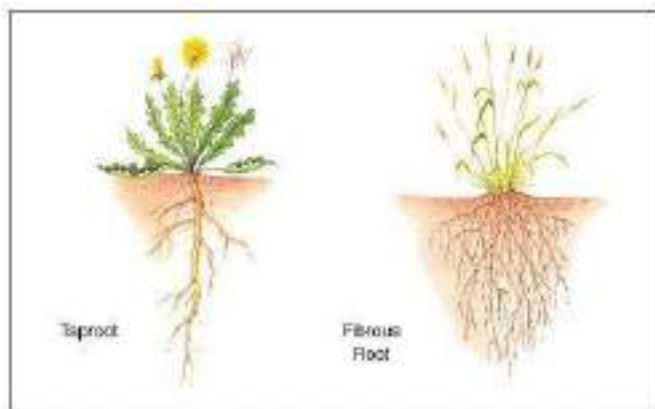
2. In a cold mountain region, Meena observed animals like yak and snow leopard. These animals had thick fur and strong legs. Plants were fewer and mostly small.

**Questions:**

- a) What type of habitat is described?
- b) Why do animals here have thick fur?
- c) How do strong legs help these animals?

**VIII. Think and answer. (Diagram-based questions)**

I.



- a) Which root prevents soil erosion? Why?
- b) Which root reaches deeper water?
- c) Which plant survives drought better?

II.



- a) Predict impact of deforestation on animals.
  - b) Which animals suffer most due to deforestation?
  - c) Suggest two solutions to minimise the problem.
- 

## Worksheet-2

### Chapter 6: Materials Around Us

#### I. Choose the correct answer:

**1. A material suitable for making a cooking utensil should be:**

- a) Soft and transparent
- b) Hard and heat-resistant
- c) Soluble in water
- d) Lightweight and soft

**2. Which of the following combinations is correct?**

- a) Glass – Opaque
- b) Wood – Transparent
- c) Butter paper – Translucent
- d) Iron – Transparent

**3. A material that is lustrous but not a metal can be:**

- a) Plastic-coated object
- b) Wood
- c) Rubber
- d) Cotton

**4. Which of the following will NOT dissolve in water?**

- a) Salt
- b) Sugar
- c) Sand

d) Glucose

**5. Why are steel chairs preferred over plastic chairs in public places?**

a) Steel is lighter

b) Steel is more durable and stronger

c) Steel is softer

d) Steel is soluble

**6. Which property is most important for making a raincoat?**

a) Transparency

b) Absorbency

c) Waterproof nature

d) Softness

**7. A material that allows partial visibility is:**

a) Transparent

b) Opaque

c) Translucent

d) Soluble

**8. Which of the following statement is correct?**

a) All shiny materials are metals

b) All metals are always shiny

c) Some non-metals can appear shiny

d) All non-metals are dull

**9. Which of the following materials is most suitable for making a window pane?**

a) Wood

b) Glass

c) Iron

d) Rubber

## 10. Which material is suitable for storing chemicals?

- a) Paper
- b) Glass
- c) Cloth
- d) Sponge

### II. Fill in the Blanks:

1. Materials that do not allow light to pass are called \_\_\_\_\_.
2. The ability of a material to dissolve in water is called \_\_\_\_\_.
3. \_\_\_\_\_ materials have a shiny surface.
4. The amount of matter in an object is called \_\_\_\_\_.
5. Materials like butter paper are \_\_\_\_\_.
6. The process of arranging objects based on properties is called \_\_\_\_\_.
7. Sand is \_\_\_\_\_ in water.
8. Anything that has mass and occupies space is called \_\_\_\_\_.
9. Materials that can be compressed easily are called \_\_\_\_\_.
10. The space occupied by matter is called \_\_\_\_\_

### III. Short Answer Questions

1. Why are different materials used for making the same type of object? Explain with an example.
2. Explain why a tumbler cannot be made of cloth.
3. What is the difference between soluble and insoluble substances? Give examples.
4. Why do metals lose their lustre over time?
5. How can you test whether a material is hard or soft?
6. Explain why glass is used for windows but not for doors.
7. What is the importance of classification of materials?

### IV. Long Answer Type Questions

1. Explain classification of materials based on different properties such as:
  - o Appearance
  - o Hardness
2. Differentiate between the following with examples:
  - a) Transparent, translucent, and opaque materials
  - b) Hard and soft materials
  - c) Soluble and insoluble substances
3. A student performs an experiment by mixing sugar, sand, and oil in water.

- a) What observations will the student make?
- b) Write a pair of soluble materials and a pair of insoluble materials.
- c) Classify each substance based on solubility.

4, Can a material be both hard and soluble? Give an example and explain.

4. Look at the figure and answer the following questions:



- a) What is the main aim of the activity?
- b) Name any three properties used to group objects in this activity?
- c) Identify which objects are:

- Hard
- Soft

d) Which objects are made of same materials? List them

6. A student says: "All shiny materials are metals."

- a) Do you agree?
- b) Give reasons and examples to support your answer

7. Is water transparent? Can it be made opaque?

8. Does everything you put in water disappear? Explain with examples

## V. Case-Based Questions

**Case 1:** A builder is selecting materials for windows in a new house. He considers glass, plastic sheets and wood.

**Questions:**

- a) Which material is most suitable for windows and why?
- b) Why is wood not preferred for window panes?
- c) Can plastic sheets replace glass? In what situations?
- d) Which properties are most important for window materials?

**Case 2:** Students are given sugar, sand, chalk powder, and oil to test in water.

**Questions:**

- a) Predict which substances will dissolve and which will not.
- b) Which substance will float and why?
- c) What conclusions can be drawn about solubility?

**Case 3:** Cooking utensils are usually made of steel or aluminium, not plastic or wood.

**Questions:**

- a) Why are metals preferred for cooking utensils?
- b) What would happen if plastic utensils were used for cooking?
- c) Why is wood sometimes used in handles of utensils?
- d) Which properties are important for cooking materials?

**SECTION-C: EXPLORE THE WORLD** 

**Instruction:** WRITE THE ANSWERS OF THE FOLLOWING QUESTIONS IN THE SCIENCE ACTIVITY NOTEBOOK.

**Q1: Activity: Know Your Scientists**

Choose any three Indian scientists from the chapters under the “*Know A Scientists*” sections in your NCERT Class 6 Science (*Curiosity*) book. Write a short note (about 100 words each) on them based on your research.

**Instructions:**

- Select any 3 scientists from the textbook.
- **For each scientist, include:**

- Full name
- Field of work (e.g., physics, biology, space science)
- Major contribution or discovery
- One interesting fact about their life
- You may paste a picture or draw a sketch of the scientist(optional)

**Q2. Write a short paragraph (about 100–120 words) on ISRO and its role in space science.**

**Instructions:**

- Include the following points in your answer:
- What is ISRO and when was it established?
- Its main work and objectives
- Any 2 famous space missions (e.g., satellites or moon missions)
- How ISRO helps in our daily life (weather forecast, communication, etc.)

**Q3. Climate Change / Global Warming: Write about climate change.**

**Instructions:** *Your answer should include:*

- What is climate change or global warming?
- Causes (greenhouse gases, etc.)
- Effects (weather changes, melting ice, etc.)
- What we can do to help

**Q4. Plastic Pollution:** Why is plastic harmful to the environment?

**Instruction:** *Your answer should include:*

- What is plastic pollution?
- Why plastic is dangerous
- Effects on animals and nature
- Alternatives to plastic

**Q5. Activity: Awareness on Sustainability**

**Research and report activity- “Recycle & Reimagine”**

**Objective:**

To explore recyclable materials around you, understand their importance, and present your findings creatively.

**Task Instructions:**

**1. Explore Your Surroundings**

Look around your home, school, or neighbourhood and identify **at least 5 different materials** that can be recycled (example: paper, plastic, glass, metal, etc.). Fill the following table as per the materials.

**2. Observation Table:**

S.No	Material Name	Where Found	How It Is Recycled	Importance of Recycling
i				
ii				
iii				
iv				
v				

**3. Write a short paragraph in about 50 words on “What I learned from this project”**

**4. What do you understand by the term Upcycling”? Write any 5 examples of upcycling that we can do at home.**

**5. Hands-on Activity:**

Choose any one or two **recyclable materials** and create a **useful or decorative item** (like a pen stand, bird feeder, organizer, wall hanging decoration for classroom etc.) using waste materials at home.

**Q6. Write about Project Tiger in India.**

**Instructions:** Your answer should include:

- What is Project Tiger?
- When and why, it was started in India .
- Importance of saving tigers .
- Steps taken by the government to protect tigers (national parks, reserves, etc.)
- How people can help in tiger conservation?

**SECTION-D: SEA & MA Activities**



**(Each activity should be done on separate Activity notebook)**

**Q1: SEA-I:** - Prepare a short research report on **“Millets of Chhattisgarh”**, highlighting their importance, nutritional value, and role in daily life.

**Instructions:**

- **WRITE THE REPORT IN THE SCIENCE ACTIVITY NOTEBOOK.**

- Your report must include:
  - i. **Introduction to Millets** (What are millets? Why are they important?)
  - ii. **Types of Millets grown in Chhattisgarh** (any 2–3 examples with their local names)
  - iii. **Nutritional Value** (health benefits, why they are called superfoods)
  - iv. **Climatic Conditions Required** (soil, rainfall, temperature – basic idea)
  - v. **Popular Dishes** made from millets (local or Indian examples)
  - vi. Which year in was celebrated as International Year of Millets?
  - vii. Add **pictures/illustrations** wherever possible.
  - viii. Write one Add a **small recipe** or a **fun fact** about millets

## **Q2: SEA-III: Germination of Seed**

**Objective:** To study the germination of seeds under different conditions.

**Instructions:** Perform an activity to observe how seeds germinate under different conditions such as **air, water, and sunlight**. Record your observations and draw conclusions.

### **Materials Required:**

- Dry seeds (chana/gram, Kidney beans, peanuts etc.)
- 3 small bowls/containers
- Cotton or tissue
- Water
- A dark place (cupboard) and a sunny place

**Instructions:** Take 3 sets of gram seeds and label them as A, B, and C. Place cotton in each container and keep seeds on it. Add water and keep it in sunlight (set A). Add water but keep it in a dark place (Set B). Do not water, keep it in sunlight (set C). Observe the seeds daily for 4–5 days. Note changes like swelling, sprouting, root/shoot growth. Record your observations in the table given below.

**Observation Table:**

Day	Set A (Water + Sunlight)	Set B (Water + No Sunlight)	Set C (No Water + Sunlight)
Day 1			
Day 2			
Day 3			
Day 4			
Day 5			

**Now answer the following questions on the basis of the above activity:**

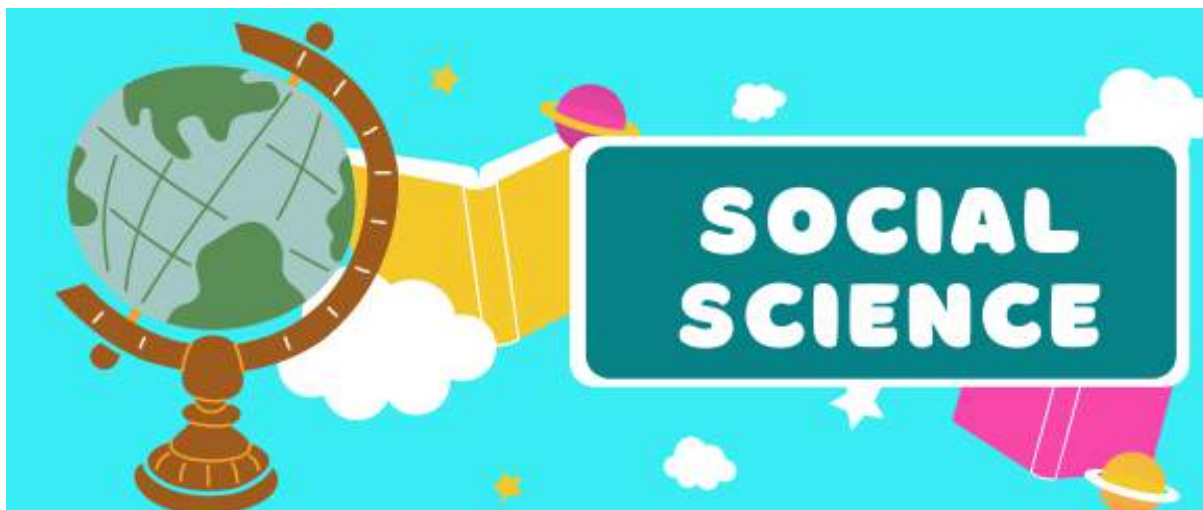
- a) What is germination?
- b) Name the seed used by you in this activity.
- c) Why are seeds soaked in water before germination?
- d) What happens to the seed after it absorbs water?
- e) Why did seeds not germinate in the container without water?
- f) In which set did germination occur best? Why?
- g) Compare the growth of seeds kept in sunlight and in darkness.

**Q3.MA-II: Poster Making Activity:**

Design a creative and informative poster on the topic **“Conservation of Environment”** focusing on any one type of pollution—**Air Pollution, Water Pollution, or Noise Pollution.**

**Instructions:** Use an A4 size sheet. Choose any one type of pollution. Add a catchy title or slogan. Use colours to make your poster attractive.

.....



### Day 1

**Instruction:** Write the following questions and answers neatly in your social science notebook and learn all the answers.

#### CHAPTER-4. TIMELINE AND SOURCES OF HISTORY

**History:** The study of the human past.

**Fossils:** Impressions of footprints, or parts of plants or animals that are found preserved within layers of soil or rocks.

**Auspicious:** favourable or bringing luck; for instance, 'an auspicious beginning'.

**Source of history:** A place, person, text or an object from which we gather information about some past event or period.

**Historian:** A person who studies and writes about the past.

**Afterlife:** A life that begins after death.

**Gregorian calendar:** The calendar now used the world over; it has 12 months adding up to 365 days, and a leap year every four years. However, century years — for example, 1800, 1900, 2000 — are leap years only if they are multiples of 400; so in the three centenary years above, only 2000 is a leap year.

#### EXERCISE QUESTION

**Q2. Can we compare historians to detectives? Give reasons for your answers.**

Ans. 1) Yes, detectives can be compared to historians as both look for clues to solve mysteries but their purposes for solving the mysteries are different.

2) A detective focuses on solving a specific case or crime by collecting evidences or they interview the witnesses to catch the criminal.

3) On the other hand, a historian studies the past by examining different sources of history.

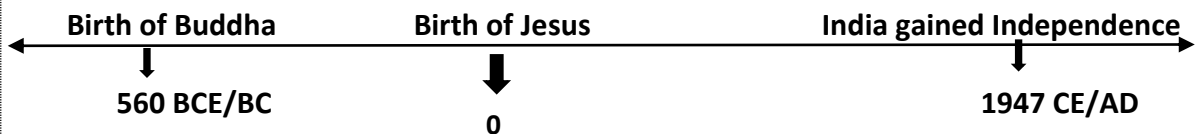
#### ADDITIONAL QUESTIONS

**Q1. What does the term Before Common Era (BCE) refer to and how is it different from term Common Era (CE) or Anno Domini (AD)?**

Ans. 1) In the west the birth of Jesus Christ has generally been taken to be the starting point for calendar.

2) The year before the birth of Jesus Christ is marked with BCE or BC (Before Common Era or Before Christ).

3) The year after the birth of Jesus Christ is marked with CE or AD (Common Era or Anno Domini).



**Q2. Explain the term timeline and its use in history.**

Ans. 1. A timeline is an easy tool to mark the events of history in series or sequence that covers a particular period in history.

2. It helps us in understanding the order in which events in history took place.

3. By looking at the timeline we can tell which event took place before or after.

**Q3. Enlist different sources of history, give an example for each.**

Ans. There are four different sources of history:-

1) Oral sources like folklore

2) Archaeological sources like monuments or tools

3) Literary sources like Vedas and Upanishads

4) Artistic sources like paintings and sculptures

**Q4. Describe the challenges faced by early humans.**

Ans. The life of early humans were not easy, they faced many challenges: -

1) They had to move from one place to another in search of shelter, food and water.

2) They were hunters and gatherers so they had to travel in search of animals and plants to eat.

3) They had to live in temporary shelters or caves.

4) They had to face threat from wild animals.

5) They had to survive change in season and had to depend on natural resources.

**Q5. How do we come to know about the life of early humans?**

Ans. We came to know about life of early humans through many sources like: -

1) Remains of tools made by early humans like stone axes, blades, arrowheads tell us about their hunting activities.

2) Rock paintings made by them in hundreds of caves shows their day to day life.

3) We learn about early humans through the ornaments made up of bones and stones.

**Q6. If King Chandragupta was born in 320 CE; which century did he belong to? And how many years was that after the Buddha's birth?**

Ans: - Chandragupta belonged to in the 4<sup>th</sup> century.

Birth of Chandragupta 320 CE

Birth of Buddha 560 BCE

320 CE + 560 BCE - 1 = 879 years after the birth of Buddha

**Q7. Rani of Jhansi was born in 1828. Which century did she belong to? How many years was that before India's Independence?**

**Ans:** - She belonged to 19<sup>th</sup> century  
1947-1828= 119 years before independence

**Write all the 12 months from panchanga in Hindi.**

**Day - 2**

**Instruction: Write the following questions and answers neatly in your social science notebook and learn all the answers.**

### **CHAPTER 9 FAMILY AND COMMUNITY**

#### **NCERT SOLUTIONS**

**1. Why is the family unit important?**

**Ans:** The family unit is important because

- i. It gives love and support, teaches right and wrong and helps people grow.
- ii. It is a safe place where children learn how to behave, take responsibility, and understand their culture.

**2. What is a community and what is its role?**

**Ans:** A community is a group of people who live near each other or have similar interests.

**Roles of community**

- It helps people support each other and share things.
- It also makes people feel like they belong and can work together to grow and stay happy

#### **LET'S EXPLORE**

**1. What types of families do you see in your neighbourhood?**

**Ans:** Here is a list of common family types and the number of households for each type in a typical neighbourhood:

- Nuclear families
- Extended families
- Single-parent families
- Joint families

**2. What types are more frequent? Why do you think this is so?**

**Ans:** In cities, most families are nuclear (parents and children only) because jobs and moving make smaller families easier.

- They are easier to manage in small city homes.
- Bigger families, like joint families, are more common in villages, where people live together and share work and traditions.

**3. In the stories of Shalini and Tenzing, we see examples of joint families. What do you think are the aspects of modern living that make some couples opt for a nuclear family (i.e., living apart from older generations or other relatives)? What could be some advantages as well as disadvantages of the two kinds of families?**

**Ans: Why modern couples choose nuclear families:**

- They move for jobs and live away from older family members.
- They want more independence in running their home.
- They prefer more privacy and control in family decisions.

**Joint Family – Advantages:**

- Shared work and childcare.
- Strong family bonds and traditions.

**Joint Family – Disadvantages:**

- Less personal space.
- Possible arguments over decisions.

**Nuclear Family – Advantages:**

- More independence and privacy.
- Easier to make decisions.

**Nuclear Family – Disadvantages:**

- Less support in hard times.
- More pressure on the couple to do everything.

### **Questions, Activities, and Projects**

- 1. What are some of the rules you follow in your family and neighbourhood? Why are they important?**

**Ans: Some common rules families and neighborhoods follow are:**

- Helping with chores to share responsibility.
- Respecting elders to keep good relationships.
- Keeping noise low at night so everyone can sleep.
- Not littering to keep the place clean.

**These rules help everyone live happily and work well together.**

- 2. Do you think some rules are unfair to a few people in the family or community? Why?**

**Ans Sometimes, rules can feel unfair, like:**

- Older siblings having more chores while younger ones get less.
- Tasks given based on gender, which isn't always fair.

**It's important to talk and make sure rules are fair for everyone.**

3. Describe several situations that you have observed where community support makes a difference.

- **Helping in disasters:** People work together to give food, shelter, and rebuild homes.
- **Neighborhood cleanup:** Locals clean up and plant trees to make the area nicer and build friendships.
- **Raising money for a family:** Neighbors collect money to help a family going through tough times.

Make the following map in your social science notebook and write hints.

### Map Work



1. The world's largest and most populated continent. (Asia)
2. The continent that lies west of Asia. (Europe)
3. The only continent through which Tropic of Cancer, Equator and Tropic of Capricorn passes, it is also the second largest continent. (Africa)
4. Third largest continent in the world. ( North America)
5. World's largest mountain range Andes lies in this continent. ( South America)
6. The continent that lies entirely in the Southern Hemisphere and is permanently covered with thick ice sheets. (Antarctica)
7. It is the smallest continent also known as island continent. ( Australia).

### Day - 3

**Instructions: Do it in your activity notebook.**

### CREATIVE WORLD MAP (Subject Enrichment Activity)

paste the cut outs of all the continents on an A4 size sheet and write about the following in your activity notebook.

- a) Physical features of the continents
- b) Major crops grown in the region.
- c) Natural vegetation of any three continents.

Q1. Name the continent which is completely frozen?

Q2. Which ocean is triangular in shape?

Q3. Name the continent from which the three important latitudes passes through.

Q4. Europe and Asia together is called as?

Q5. Which mountain range separates Europe from Asia?

Q6. Name the currencies of the following countries: Japan, China, Russia, Afghanistan, Egypt, Brazil.

#### SKILLS

\*Identification

\* Location

\* Creativity

Learning outcome: Students will be able to identify and locate the continents and oceans of the world.

#### Day- 4

**Instructions: Take a print out of this worksheet and solve the questions and paste it in your activity notebook.**

#### WORKSHEET

#### CLASS VI

#### TIMELINE AND SOURCES OF HISTORY

##### A. Multiple choice questions.

**1. What is the main purpose of studying history through different sources?**

- a. To memorize dates only
- b. To understand different perspectives of the past
- c. To focus only on written records
- d. To learn about modern events

**2. Which of these is NOT considered a primary source in history?**

- a. A diary from ancient times
- b. Tools used by early humans
- c. A modern textbook about the past
- d. Coins from an ancient civilization

**3. How do historians determine the age of ancient objects?**

- a. By asking local people
- b. Through carbon dating and scientific methods
- c. By guessing based on appearance
- d. By reading about them in books

**4. What is the main challenge when studying oral histories?**

- a. They are always accurate
- b. They are too short
- c. They can change as they are passed down
- d. They are only found in books

**5. Why do historians study artifacts from different time periods?**

- a. To sell them in museums
- b. To understand how people lived in the past
- c. To make copies of them
- d. To destroy old objects

**6. What role do inscriptions play in understanding history?**

- a. They provide entertainment
- b. They are only decorative
- c. They tell us about modern life
- d. They provide written records of the past

**7. When studying timelines, why is BCE (Before Common Era) important?**

- a. It helps count years backwards from year 1
- b. It only relates to modern history
- c. It's not important for history
- d. It only applies to certain countries

**8. Which source would be most reliable for studying daily life in ancient times?**

- a. A modern movie about the period
- b. Archaeological remains of homes
- c. Stories written 1000 years later
- d. Current newspaper articles

**9. How do coins help historians understand the past?**

- a. They are only valuable for collectors
- b. They show modern currency systems
- c. They reveal information about trade and rulers
- d. They are not useful for historical study

**10. Why do historians compare multiple sources when studying history?**

- a. To make their work longer
- b. To get a more complete and accurate picture
- c. Because one source is never enough
- d. To confuse students

**11. The Gregorian calendar starts counting years from:**

- a) The birth of Buddha
- b) The birth of Jesus Christ

- c) The reign of Ashoka
- d) The beginning of the Common Era

**12. Which source gives direct written information from the past?**

- a) Oral stories
- b) Manuscripts
- c) Paintings
- d) Tools

**B. Fill in the blanks.**

1. History is the study of the \_\_\_\_\_.
2. The Indian Calendar system based on accurate calculation of the movement of Sun and moon is called as \_\_\_\_\_.
3. When we arrange the events in the order in which they happened, we call this method as \_\_\_\_\_.
4. Early humans were primarily \_\_\_\_\_ and gatherers.
5. The study of coins is called as \_\_\_\_\_.
6. \_\_\_\_\_ was the first metal used by humans for making tools.
7. The exchange of goods and services between early human communities is known as \_\_\_\_\_.

**C. Match the column.**

Column A	Column B
i. Geologists	a. A person who studies ancient inscriptions
ii. Archaeologists	b. A person who studies the physical features of the earth
iii. Anthropologists	c. A person who studies culture from the oldest time to the present
iv. Palaeontologists	d. A person who studies buried past after excavations
v. Epigraphists	e. A person who studies fossils

**D. Arrange the following historical events in chronological order (from earliest to latest) and mark them correctly on a timeline:**

1. Beginning of the Harappan Civilization -2500 BCCE
2. Establishment of the Delhi Sultanate 1206 CE
3. Reign of Emperor Ashoka 238 BCE
4. Beginning of the Gupta Empire 320 CE
5. Composition of the Rigveda 1500 BCE
6. Life of Gautama Buddha 560 BCE
7. Independence of India 1947 AD

**E. Time calculations.**

1. Calculate the total number of years between:

- 300 BCE and 200 CE
2. Calculate the time gap between:
- Composition of the **Rigveda** (c. 1500 BCE)
  - Reign of **Ashoka** (c. 250 BCE)
3. If an event happened 1500 years ago, in which approximate year did it occur (assume present year is 2026 CE)?
4. If a dynasty started in 320 CE and ended in 550 CE, how many years did it rule?
5. Find the difference in years between:
- Beginning of the **Delhi Sultanate** (1206 CE)
  - Present year (2026 CE)

### Day- 5

**Instructions: Do it in your activity notebook.**

#### Multiple Assessment Activity

**Learning Outcomes: -**

1. The students will understand the concept of B.C.E/B.C and C.E/A.D.
2. The students will be able to identify the difference between historical period marked as B.C.E or C.E.

**Details of Activity: -**

Draw a horizontal line across a paper, marking the center as year 0 (zero) marked as birth of Jesus Christ on the left side of zero label it as B.C/B.C.E and on the right hand side label it as A.D/C.E, now locate the following significant events of history in chronological order.

1. Birth of Buddha 560 BCE
2. First human settlement and beginning of agriculture 8000 BCE
3. Beginning of reign of Ashoka 268 BCE
4. Rise of Mughal empire 1526 AD
5. India got Independent 1947 AD
6. Battle of Plassey 1757 AD

**Rubrics: -**

- 2 marks for correct placement of events
- 2 marks for presentation
- 1 mark for viva

### Day- 6

**Instructions: Take a print out of this worksheet and solve the questions and paste it in your activity notebook.**

**Choose the correct options from the following:**

1. Which continent is often referred to as the "Island Continent" because it is surrounded by water on all sides?

- a) Antarctica
- b) Australia
- c) South America
- d) Africa

**2. Which hemisphere has a higher proportion of water compared to land?**

- a) Northern Hemisphere
- b) Southern Hemisphere
- c) Eastern Hemisphere
- d) Western Hemisphere

**3. What is unique about the polar regions during summer and winter?**

- a) They have 12-hour days and nights throughout the year
- b) They experience 6 months of continuous daylight and 6 months of darkness
- c) They are always dark
- d) They remain warm throughout the year

**4. Which of the following statement regarding continents is FALSE?**

- a) Asia is the largest continent.
- b) Australia is the smallest continent.
- c) Antarctica is located in the northernmost part of the world.
- d) Europe and Asia are sometimes called Eurasia.

**5. The deepest point on Earth, the Mariana Trench, is located in which ocean?**

- a) Atlantic Ocean
- b) Indian Ocean
- c) Arctic Ocean
- d) Pacific Ocean

**6. If all the ice on Antarctica melts, what will happen?**

- a) The ocean levels will decrease.
- b) The ocean levels will rise significantly.
- c) The size of Africa will increase.
- d) Nothing will change.

**Fill in the blanks**

1. \_\_\_\_\_ are the group of islands is located in the Bay of Bengal.
2. India's first permanent scientific research base established in Antarctica is named as \_\_\_\_\_.
3. The Great Barrier Reef, the largest coral reef system on Earth, is located off the coast of the continent of \_\_\_\_\_.
4. The marine \_\_\_\_\_ consists of thousands of species of colourful fish, dolphins, whales etc.
5. The \_\_\_\_\_ is often referred to as the "Water Hemisphere" because it contains roughly 80% water and only 20% land.
6. The \_\_\_\_\_ Mountains in South America form the world's longest mountain range.

**Match the Columns:**

Column I	Column II
i. Continent with Sahara Desert	a. Dakshin Gangotri
ii. Smaller pieces of land Surrounded by water on all sides.	b. Greenland
iii. India's first scientific base station in Antarctica.	c. Africa
iv. Largest island in the world.	d. Island



**Observe the image carefully and answer the following.**

**What does the emblem in the image represent?**

- a) Indian Air Force
- b) Indian Army
- c) Indian Navy
- d) Indian Coast Guard

**What is the meaning of the Sanskrit motto "शं नो वरुणः" (Sham No Varunah)?**

- a) Victory in battle
- b) May the ocean be calm for us
- c) Strength and honor
- d) Protect our borders

**Which animal appears on the top of the Indian Navy emblem?**

- a) Tiger
- b) Elephant
- c) Lion
- d) Horse

**The Lions in the emblem are taken from which historical structure?**

- a) Gateway of India
- b) Lion Capital of Ashoka
- c) Qutub Minar
- d) Red Fort

**What is the primary role of the Indian Navy?**

- a) Land defense
- b) Air security

- c) Protecting India's maritime borders
- d) Controlling the army

**What is the color of the background in the Indian Navy emblem?**

- a) Red
- b) Blue
- c) Green
- d) Yellow

**Which of the following is NOT a branch of the Indian Armed Forces?**

- a) Indian Army
- b) Indian Navy
- c) Indian Railways
- d) Indian Air Force



**1. Name the five inhabited continents represented by the Olympic rings.**

Ring Colours	Continents
1.Blue	Europe
2.Yellow	Asia
3.Black	Africa
4.Green	Australia
5.Red	America



**Look at the image above and answer the following questions.**

**What is the structure shown in the image?**

- a) Desert dunes
- b) Coral reef
- c) Mountain range
- d) Grassland

**Which oceanic feature is commonly associated with coral reefs?**

- a) Deep trenches
- b) Mid-ocean ridges
- c) Shallow, warm waters
- d) Ice-covered seas

**What are corals mainly made of?**

- a) Sand and rocks
- b) Bones and shells
- c) Calcium carbonate
- d) Wood and clay

**Which of the following is the largest coral reef system in the world?**

- a) Great Barrier Reef
- b) Maldives Coral Reef
- c) Andaman Reef
- d) Hawaiian Reef

**Which type of organisms form coral reefs?**

- a) Fish
- b) Algae
- c) Tiny marine animals called polyps
- d) Sea turtles

**In which type of water do coral reefs usually grow?**

- a) Cold and deep ocean water
- b) Freshwater lakes
- c) Warm and shallow ocean water
- d) Polluted rivers

**Why are coral reefs often called the "rainforests of the sea"?**

- a) They are made of trees
- b) They receive heavy rainfall
- c) They support a large variety of marine life
- d) They are found in rivers

**Day-7**

**Instruction: Do it neatly in your activity notebook**

**Temples as Centres of Science, Art, and Mathematics**

Meenakshi Amman Temple of India is not only places of worship but also exemplify scientific knowledge, artistic excellence, and mathematical precision.

**Present the following details:**

**1. Introduction**

Name and location of the temple-

Period of construction and ruling dynasty

## **2. Scientific Aspects**

Architectural techniques (e.g., structural design, alignment with sun or directions)

## **3. Use of materials and engineering methods**

## **4. Mathematical Elements**

Symmetry, geometry, proportions, or measurements used in construction  
Patterns.

## **5. Artistic Features**

### **Learning Objective**


This task aims to help students understand how ancient Indian temples were not just religious structures but also centres of advanced knowledge and creativity.

# Chapter 2: Diversity in the Living World

## 2.1 Diversity in Plants and Animals Around Us

### What is Biodiversity?

The **variety of plants and animals** found in a particular region is called the **biodiversity** of that region. Each member of biodiversity has a different role to play — for example, trees provide food and shelter to birds, and animals help in spreading seeds after eating fruits.

 **Biodiversity** = Bio (life) + Diversity (variety). It means the wide variety of living organisms found in a region.

### Variety in Plants

#### Plants show variety in:

- Height — tall/short
- Stem — hard/soft, thick/thin, green/brown
- Leaves — different shapes, size, colour, and arrangement
- Flowers — vary in colour, shape, and scent

### Variety in Animals

#### Animals show variety in:

- Where they live — land, water, trees
- What they eat — plants, insects, other animals
- How they move — walk, fly, swim, crawl, hop
- Size, shape, colour, and structure

Example: Crow lives on trees and eats insects (flies and walks). Ant lives in soil burrows and has six legs. Fish live in water and swim using fins.

## 📌 2.2 How to Group Plants and Animals?






### Why do we group living things?

Grouping (classification) makes it **easier to understand and study** plants and animals on the basis of their similarities and differences. The method of arranging things into groups based on their common features is called **grouping**.

### 🌱 2.2.1 How to Group Plants?

Plants can be grouped in several ways based on their features:

#### Group A: Based on Height & Type of Stem

Type	Features	Example
 <b>Tree</b>	Very tall, hard & thick woody brown stem; branches start higher up from the ground	Mango, Neem
 <b>Shrub</b>	Medium height, many hard but thin woody stems branching close to the ground	Rose, Hibiscus (Gudhal)
 <b>Herb</b>	Small, soft and green stem, short height	Tomato, Tulsi, Grass
 <b>Climber</b>	Weak stem, needs support to climb and grow	Money plant, Pea
 <b>Creeper</b>	Weak stem, creeps along the ground	Watermelon, Pumpkin

#### 🍃 Group B: Based on Leaf Venation

**Vein** = Thin lines seen on leaves.

**Venation** = The pattern of veins on a leaf.

Type of Venation	Pattern	Examples
<b>Reticulate Venation</b>	Net-like pattern of veins on both sides of a thick middle vein	Hibiscus, Rose, Mango, Chickpea (chana)
<b>Parallel Venation</b>	Veins run parallel to each other	Banana, Grass, Wheat, Lemongrass

### **Group C: Based on Type of Roots**

Type of Root	Description	Examples
<b>Taproot</b>	One main root with small side roots arising from it	Mustard, Hibiscus, Chickpea, Sadabahar (periwinkle)
<b>Fibrous Root</b>	Bunch of similar-sized thin roots arising from the base of the stem	Grass, Wheat, Lemongrass, Maize

### **Group D: Based on Seeds (Dicots and Monocots)**

**Cotyledon** = Each part/leaf-like structure inside a seed. Seeds can have one or two cotyledons.

Feature	Dicot Plants	Monocot Plants
No. of Cotyledons	Two (2)	One (1)
Leaf Venation	Reticulate	Parallel
Root Type	Taproot	Fibrous Root
Examples	Chickpea, Hibiscus, Mustard, Rose, Kidney beans	Maize, Wheat, Grass, Banana, Lemongrass



#### **Important Relationship to Remember**

- Plants with **reticulate venation** → have **taproots** → are **Dicots** (2 cotyledons)
- Plants with **parallel venation** → have **fibrous roots** → are **Monocots** (1 cotyledon)

## 2.2.2 How to Group Animals?

### Criteria for Grouping Animals

- What they eat (eating habits)
- Where they live (habitat)
- How they move (type of movement)
- Colour, size, shape, structure

Animal	Type of Movement	Body Parts Used
Ant	Walks / crawls	Legs (6 legs)
Goat	Walks and jumps	Legs
Pigeon	Walks and flies	Legs and wings
Housefly	Walks and flies	Legs and wings
Fish	Swims	Fins
Snake	Crawls / slithers	Whole body
Frog	Hops / swims	Legs

## 2.3 Plants and Animals in Different Surroundings

### Why does biodiversity vary from region to region?

The biodiversity of a region varies because of **diverse environmental conditions** such as temperature, rainfall, soil type, and availability of food and water.

### Key Concepts

**Adaptation:** The special features that enable plants and animals to survive in a particular region are called adaptations.

**Habitat:** The place where plants and animals live is called their habitat. The habitat provides them

food, water, air, shelter, and other needs for their survival.

**Amphibians:** Animals that can live both in water and on land. Example: Frog.

## Adaptations in Different Regions

### Plants in Desert vs Mountains

Feature	Desert Plant (Cactus)	Mountain Plant (Deodar)
Place	Rajasthan (Hot Desert)	Himachal Pradesh (Cold Mountains)
Adaptation	Thick stem stores water	Conical shape, sloping branches
Reason	Very little water	Snow slides off easily

### Camels in Hot vs Cold Desert

Feature	Hot Desert Camel (1 hump)	Cold Desert Camel (2 humps)
Place	Rajasthan	Ladakh
Body	Long legs, wide feet	Short legs
Special Feature	One hump	Two humps, thick hair
Reason	Walk on sand, survive without water	Survive cold, walk on mountains

### Rhododendron in Different Mountains

Feature	Nilgiris (Shola Forest)	Sikkim
Plant Type	Rhododendron	Rhododendron
Size	Short, small leaves	Tall plants
Reason	Strong winds	Different climate

## Water vs Grassland Animals

Feature	Water Animal (Fish)	Grassland Animal (Goat)
Movement	Swim	Walk
Body Feature	Streamlined body, fins	Strong legs
Reason	Move easily in water	Move and graze on land

## Desert Camel vs Mountain Camel

Feature	Hot Desert Camel (Dromedary - One Hump)	Cold Desert Camel (Bactrian - Two Humps)
Habitat & Climate	Hot deserts, sandy plains, extreme heat, drought	Cold deserts, high altitudes, snowy winters, rocky terrain
Humps	One hump; stores fat for energy and water	Two humps; store fat for long-term energy in cold conditions
Coat/Fur	Short, thin coat; light color reflects sunlight	Thick, shaggy coat; provides insulation in cold
Feet/Hooves	Soft, wide pads to prevent sinking in sand	Tough, narrow pads for rocky and icy terrain

## Desert Plants vs Mountain Plants

Feature	Desert Plants	Mountain Plants
Leaves	Reduced to spines or absent to prevent water loss	Small, needle-like or leathery to reduce transpiration
Stem & Storage	Thick, fleshy stems store water	Flexible or rigid stems; no water storage
Root System	Deep and spreading to reach groundwater	Shallow and fibrous for strong anchorage
Surface Feature	Waxy coating to retain moisture	Hairy/fuzzy surface to trap heat

Growth Habits	Succulent, slow-growing	Evergreen, conical or low-growing plants
Examples	Cactus, Aloe Vera, Creosote Bush	Pine, Fir, Mosses, Alpine flowers

### What happens when habitats are damaged?

- Plants and animals lose their homes, food, and other resources
- This leads to **loss of biodiversity**
- Species may become **endangered or extinct**

### Sacred Groves

Sacred Groves are undisturbed patches of forests, found all over India. They are home to many plants and animals, including medicinal plants. These forests are **protected by local communities** — no one is allowed to harm animals, cut trees, or disturb the area. They are a community-protected treasure of biodiversity.

---