

EAST POINT SCHOOL

REVISION ASSIGNMENT

ENGLISH

CLASS-VIII

LEARNING OUTCOMES

- Read and comprehend the text.
- Inculcate the habit of reading books.
- Answer extrapolatory and value-based questions.
- Develop imaginative powers and creative thinking skills among the readers.

POEM-IMAGINATION

Summary

The poet George Bernard Shaw in this poem encourages the readers to nature the joy of reading. Reading takes us to the world of imagination, where we imagine ourselves great, that does not happen in normal life. The poet presents himself as the protagonist and shares his imaginations with us.

The poet imagines himself being a pirate and sailing across the seven seas. He later becomes a cowboy and takes pleasure in doing simple things. He always wanted adventure and discover the joy of reading. He imagines to have lived with Eskimos in the land of ice and snow. He fantasies to have gone hunting and fishing with them.

Later when he read the book of Jules Verna, he imagines to have gone to the moon to have a look at it. When he read the experiences of Dr. Livingstone, he imagines to have visited Africa with Dr. Livingstone as his guide and then off to America with Huckleberry Finn. In his world of fantasy and imagination, he performed all wonderful deeds. He also goes wild to imagine himself as a hero of all nations. As he grew up his childish fantasies ended. He became serious but still cherishes the childish fantasies.

Question Bank

Q1. Answer the following questions in 30-40 words. (2 Marks)

- a) Why does the poet say ‘my fantasy was all aglow’?
- b) When did the poet go to the moon? Did he stay there?

Q2. Answer the following questions in 50-60 words. (3Marks)

- a) What is the message given by the poet in the poem?
- b) What were the advantages of world full of fantasy and imagination?

Q3. REFERENCE TO CONTEXT (1 Mark)

I. In my world of fantasy and Imagination,
I performed such wonderful deeds.
A Hero of all the Nations,
I was the one that did succeed.

- a) Where did the poet perform wonderful deeds?
- b) What were the advantages of his world?
- c) What do you mean by the word “deeds”?

THE CHOICE

SUMMARY

Sometime in the second half of the 21st Century, when the earth was almost destroyed, a spacecraft visits an abandoned city between two hills. In it are captain Starglyn and Suncon, the Celestial Geologist. They are studying the possible causes of the destruction of this city. Having studied a meteorite that broke away from the earth in 2048, Suncon has learnt that men on the earth had themselves caused their end. Even though men knew they were destroying the earth by polluting, cutting down forests and emitting dangerous gases, they didn't stop such activities. They knew what was right and what was evil, but, fools, they chose the evil way.

Q1. Answer the following questions in 30-40 words. (2 Marks)

- a) Starglyn calls people “fools”. Why does he do so? Do you agree/ disagree with him?
- b) What is the message that the poet wants to give? Do you think he does that effectively?

REFERENCE TO CONTEXT

They were landing and the great thrust
Pressed like magnetism on their bodies.
The great ship hovered then slowly
Dropped on meadow grass.

- a) Name the poem and the poet.
- b) Who were landing? Where?
- c) Identify the poetic device used in the above stanza.

POEM-HAUNTED HOUSES

SUMMARY

Longfellow begins his poem with a straightforward but surprising statement: “All houses wherein men have lived and died/ Are haunted houses.” The speaker shows the typical ghostly prerequisite of suffering, unfinished business, or malicious intent; every soul that departed this earth, he proposes, lingers in his/her former dwelling. And Longfellow’s ghosts are very different from the “ghosties” of popular imagination; they are neither unhappy nor fearsome, and they neither moan nor clank. These are domesticated ghosts, busy with errands, moving purposefully around the house as they did in life. The speaker describes them as “harmless,” “inoffensive,” and welcome to join him at table.

In the next stanza, we learn that only the speaker can see and hear these phantoms—what “has been”—which makes us question whether they exist only in his memory. Later he admits his belief in the supernatural with “the spirit world around this world of sense / Floats like an atmosphere.” All our daily activities on the material plane occur within, or beside, a medium of departed souls. The ethereal image of moonlight floating across the ocean waves is compared to a glorious “bridge of light” that descends “from the world of spirits” to earth. Our thoughts, memories, and aspirations can travel across the “trembling planks” of this bridge to connect with the spirits of loved ones who have gone before, and to rise above “the dark abyss” of the materialistic world in which we live. In this memorable image, Longfellow captures the way that moonlight “sways and bends” on the water to create the “unsteady floor” of this bridge that only spirits, not bodies, can cross.

Like most of Longfellow’s work, this poem is comforting, both in structure and in content. It assures us that, rather than being hostile, ghosts are simply the shades or vestiges of departed friends and family members—enhanced by memory and emotion—whom we are glad to have still with us in whatever form.

Q1 Complete the statement

1. The house is haunted because _____
2. The poem deals with _____

Q2 Answer the following questions.

1. Where does the poet cross the ghosts? How does he perceive them?
2. Where is the poem set? What are the phantoms doing?
3. Who are the guests? What are they doing?

Video Links

IMAGINATION

<https://youtu.be/ZX1MBF7KuUs>

THE CHOICE

https://www.youtube.com/watch?v=USeQkjMHTfs&list=UUzdpBrWHAMTUw1_XGcLm2uQ

<https://www.youtube.com/watch?v=luY9ieAwVJA>

HAUNTED HOUSES

<https://www.youtube.com/watch?v=f6bWP0B4UfU>

<https://www.youtube.com/watch?v=4MTi4Wzw9sA>

MATHEMATICS – Revision Worksheet

Factorisation, Squares and Square Root and Exponents and Powers

Learning Outcomes:

- i) To help the students recall the concept of factorisation
- ii) To help students recall the laws of exponents and powers.
- iii) To help the students understand the method of finding square roots by prime factorisation and long division method.

Factorisation

Please watch these video:

<https://www.youtube.com/watch?v=ctqviXu-mTE>

<https://www.youtube.com/watch?v=ljsxLrfBEp>

What is Factorisation?

When we factorise an algebraic expression, we write it as a product of factors. These factors may be numbers, algebraic variables or algebraic expressions.

Method of common factors

Factorise $2x + 4$.

We shall write each term as a product of irreducible factors;

$$2x = 2 \times x$$

$$4 = 2 \times 2$$

$$\text{Hence } 2x + 4 = (2 \times x) + (2 \times 2)$$

Notice that factor 2 is common to both the terms.

Observe, by distributive law

$$2 \times (x + 2) = (2 \times x) + (2 \times 2)$$

Therefore, we can write

$$2x + 4 = 2 \times (x + 2) = 2(x + 2)$$

Thus, the expression $2x + 4$ is the same as $2(x + 2)$. Now we can read off its factors: they are 2 and $(x + 2)$. These factors are irreducible.

Factorisation by regrouping terms

Factorise: $2xy + 3 + 2y + 3x$

Rearranging the expression, as $2xy + 2y + 3x + 3$, allows us to form groups $(2xy + 2y)$ and $(3x + 3)$ leading to factorisation. This is regrouping.

we regroup the expression as: $2xy + 3x + 2y + 3$.

$$2xy + 3x + 2y + 3 = 2 \times x \times y + 3 \times x + 2 \times y + 3$$

$$= x \times (2y + 3) + 1 \times (2y + 3)$$

$$= (2y + 3)(x + 1)$$

Factorisation using identities

Algebraic Identities

$$(a + b)^2 = a^2 + 2ab + b^2$$

$$(a - b)^2 = a^2 - 2ab + b^2$$

$$(a + b)(a - b) = a^2 - b^2$$

Division of Algebraic Expressions

i. Division of a monomial by another monomial

Example:

$$\begin{aligned} 6x^3 \div 2x &= \frac{6x^3}{2x} \\ &= \frac{2 \times 3 \times x \times x \times x}{2 \times x} = 3 \times x \times x = 3x^2 \end{aligned}$$

ii. Division of a polynomial by a monomial

Example: Divide $24(x^2yz + xy^2z + xyz^2)$ by $8xyz$

$$= \frac{3 \times 8 \times xyz(x + y + z)}{8 \times x \times y \times z}$$

$$= 3(x + y + z)$$

iii. Division of Polynomial by Polynomial

Example: Divide $(7x^2 + 14x)$ by $(x+2)$

$$\begin{aligned}
&= \frac{7x^2+14x}{(x+2)} \\
&= \frac{7x(x+2)}{(x+2)} \\
&= 7x
\end{aligned}$$

Example: Divide $z(5z^2 - 80)$ by $5z(z + 4)$

Solution: Dividend = $z(5z^2 - 80)$

$$= z[(5 \times z^2) - (5 \times 16)]$$

$$= z \times 5 \times (z^2 - 16)$$

$$= 5z \times (z + 4)(z - 4) \text{ [using the identity } a^2 - b^2 = (a + b)(a - b)\text{]}$$

$$\begin{aligned}
\text{Thus, } z(5z^2 - 80) \div 5z(z + 4) &= \frac{5z \times (z + 4)(z - 4)}{5z(z + 4)} \\
&= (z - 4)
\end{aligned}$$

Solve the following Questions:

- Q-1) Find and correct the error in the statement $4(x - 5) = 4x - 5$ [1 Mark]
 Q-2) Divide $28x^4$ by $56x$ [1 Mark]
 Q-3) Find the common factor of $6a^2b^2$, $24a^2b$, $36ab^2$ [1 Mark]
 Q-4) Factorise: $-4a^2 + 4ab - 4ac$ [2 Marks]
 Q-5) Divide: $9x^2y^2(3z - 24) \div 27xy(z - 8)$ [2 Mark]
 Q-6) Divide: $39y^3(50y^2 - 98) \div 26y^2(5y + 7)$ [3 Mark]
 Q-7) Factorise: $a^4 + 2a^2b^2 + b^4$ [3 mark]

HOTS

- Q-1) Factorise: $25 - p^2 - q^2 - 2pq$
 Q-2) Factorise the given expression and divide as indicated:
 $44(p^4 - 5p^3 - 24p^2) \div 11p(p - 8)$
 Q-3) Factorise:
 $x^2 + (a + \frac{1}{a})x + 1$
 Q-4) Factorise:
 $(ax + by)^2 + (ay - bx)^2$

Exponents and Powers

Please watch these videos:

<https://www.youtube.com/watch?v=qj2wTREepaA>

<https://www.youtube.com/watch?v=N7KyotcCYRw>

Laws Of Exponents:

1. $a^{-m} = \frac{1}{a^m}$

Example: $2^{-3} = \frac{1}{2^3}$
 $= \frac{1}{8}$

2. $a^m \times a^n = a^{m+n}$

Example: $2^3 \times 2^4 = 2^{3+4}$
 $= 2^7$
 $= 128$

3. $a^m \div a^n = a^{m-n}$

Example: $3^5 \div 3^2 = 3^{5-2}$
 $= 3^3$
 $= 27$

Example: $2^3 \div 2^5 = 2^{3-5}$

$= 2^{-2}$

$= \frac{1}{2^2} \quad (a^{-m} = \frac{1}{a^m})$

$= \frac{1}{4}$

4. $(a^m)^n = a^{mn}$

Example: $(2^3)^2 = 2^{3 \times 2}$
 $= 2^6$
 $= 64$

5. $a^m \times b^m = (a \times b)^m$

Example: $2^2 \times 3^2$
 $= (2 \times 3)^2$
 $= 6^2$
 $= 36$

6. $a^m \div b^m = (a \div b)^m$

Example: $4^2 \div 2^2$
 $= (4 \div 2)^2$
 $= 2^2$
 $= 4$

7. $a^0 = 1$

Example: $3^0 = 1$

Solve the following Questions:

Q-1) Find the value of:

[1 Mark]

i) 2^{-3} ii) $\frac{1}{3^{-3}}$

Q-2) Write the following in standard form:

[1 Mark]

a. 0.0035

b. 365.05

Q-3) Write the following in usual form:

[1 Mark]

c. 4.83×10^{-7}

d. 5.6×10^4

Q-4) Express each of the following rational numbers with a positive exponent:

[2 Mark]

e. $(3/4)^{-2}$

f. $(5/4)^{-3}$

Q-5) Find the value of x for which $5^{2x} \div 5^{-3} = 5^5$

[3 Mark]

Q-6) Evaluate:

[3 mark]

i.
$$\frac{3^{-5} \times 10^{-5} \times 125}{5^{-7} \times 6^{-5}}$$

Squares and Square Roots

Please watch these video:

<https://www.youtube.com/watch?v=Rz0IOGtCkLE>

<https://www.youtube.com/watch?v=NFcOa-DBJj0>

https://www.youtube.com/watch?v=Ga1_wuLz0QM

Perfect Squares

If a natural number m can be expressed as an^2 , where n is also a natural number, then m is a square number.

4 can be expressed as $2 \times 2 = 2^2$. 9 can be expressed as $3 \times 3 = 3^2$, all such numbers can be expressed as the product of the number with itself.

Such numbers like 1, 4, 9, 16, 25, ... are known as square numbers.

Pythagorean triplets

For any natural number $m > 1$, we have $(2m)^2 + (m^2 - 1)^2 = (m^2 + 1)^2$. So, $2m, m^2 - 1$ and $m^2 + 1$ forms a Pythagorean triplet.

Square Roots

Square root is the inverse operation of square. Positive square root of a number is denoted by the symbol $\sqrt{\quad}$

The square root of a number 'a' is that number which when multiplied by itself gives that number 'a' as product.

Finding square root through repeated subtraction

We subtract successive odd number starting from 1 from the given square number till we get zero.

The number of times, we have to make subtractions, is called the square root of the given square number.

Consider $\sqrt{81}$. Then,

(i) $81 - 1 = 80$ (ii) $80 - 3 = 77$ (iii) $77 - 5 = 72$ (iv) $72 - 7 = 65$

(v) $65 - 9 = 56$ (vi) $56 - 11 = 45$ (vii) $45 - 13 = 32$ (viii) $32 - 15 = 17$

(ix) $17 - 17 = 0$

From 81 we have subtracted successive odd numbers starting from 1 and obtained 0 at 9th step.

Therefore $\sqrt{81} = 9$.

Finding square root through prime factorization

We find the prime factors of the given perfect square and arrange in pairs. Then, we choose one factor from each pair and multiply together. The product thus obtained gives the required square root.

Note: A square number has complete pairs of its prime factors.

Example: Find the square root of 324.

Solution:

2	324
2	162
3	81
3	27
3	9
3	3
	1

We know that the prime factorisation of 324 is

$$324 = 2 \times 2 \times 3 \times 3 \times 3 \times 3$$

By pairing the prime factors, we get

$$324 = 2 \times 2 \times 3 \times 3 \times 3 \times 3 = 2^2 \times 3^2 \times 3^2 = (2 \times 3 \times 3)^2$$

$$\text{So, } \sqrt{324} = 2 \times 3 \times 3 = 18$$

Finding square root by division method

Find the square root of 42.25 using long division method.

Sol:

	6.5
6	42.25
+6	-36
125	625
	-625
	0

End of division (Remainder is 0 and next digit after decimal is 0).

$$\sqrt{42.25} = 6.5$$

Solve the Following Questions:

Q-1) What will be the unit digit of the squares of the following numbers? [1 mark]

(i) 81

(ii) 272

Q-2) Find the number of digits in the square root of 390625. (without any calculation). [1 mark]

Q-3) Find a Pythagorean triplet in which one member is 12. [2 Marks]

Q-4) Find the square roots of 144 by the method of repeated subtraction. [2 marks]

Q-5) Find the square roots of 9216 by the prime factorisation Method. [3 marks]

Q-6) Find the square roots of 5776 by long division method. [3 marks]

HOTS

Q-7) Find the least number that must be subtracted from 4000 so as to get a perfect square. Also find the square root of the perfect square.

Q-8) Find the least number which must be added to 1750 so as to get a perfect square. Also, find the square root of the obtained number.

Q-9) Find $\sqrt{4\frac{29}{49}}$

Q-10) Find the square root of 84.8241

Q-11) The area of a square playground is 3249 square meter. Find the length of one side of the playground.

Revision worksheet

Day 1 (Oral Quiz)

MCQs on “ When people Rebel 1857”

Question 1.

BakhtKfian was a soldier from

(a) Meerut

(b) Agra

(c) Bareilly

(d) Delhi

Question 2.

..... continued to fight a guerrilla war against British.

- (a) Rani Lakshmibai
- (b) Tantia Tope
- (c) Nana Saheb
- (d) Peshwa Baji Rao II

Question 3.

The Mutiny started from

- (a) Bareilly
- (b) Delhi
- (c) Agra
- (d) Meerut

Question 4.

How many sepoys were dismissed from service and sentenced to ten years in jail on 9 May, 1857?

- (a) Eighty
- (b) Eighty-five
- (c) Ninety
- (d) Ninety-five

Question 5.

The sepoys were angry with the British because

- (a) of their policy of divide and rule
- (b) of the cartridge episode
- (c) of their intolerating behaviour
- (d) none of these

Question 6.

Which emperor blessed the Mutiny?

- (a) Mir Zafar
- (b) Bahadur Shah Zafar
- (c) Bhakt Khan
- (d) None of these

Question 7.

Who was given the title of viceroy?

- (a) Chief Commissioner
- (b) Governor General
- (c) Forest Manager
- (d) None of these

Question 8.

Subsidiary Alliance was imposed on Awadh in

- (a) 1800
- (b) 1801
- (c) 1810
- (d) 1815

Question 9.

When was law making conversion to Christianity made easier?

- (a) 1810
- (b) 1815
- (c) 1850

(d) 1855

Question 10.

Which of the following is the decision taken by British to reform the Indian Society?

- (a) Law against the practice of Sati
- (b) They encouraged the remarriage of widow
- (c) English education was actively promoted
- (d) All of the above

Day 2: (class Test)

Question 1.

Mention the reasons behind the discontent of the Indian sepoy employed in the Company?

Question 2.

How did the Company plan to end the Mughal Dynasty?

Question 3.

What objections did the sepoy have to the new cartridges that they were asked to use?

Question 4.

How did the company plan to bring on end to the Mughal dynasty?

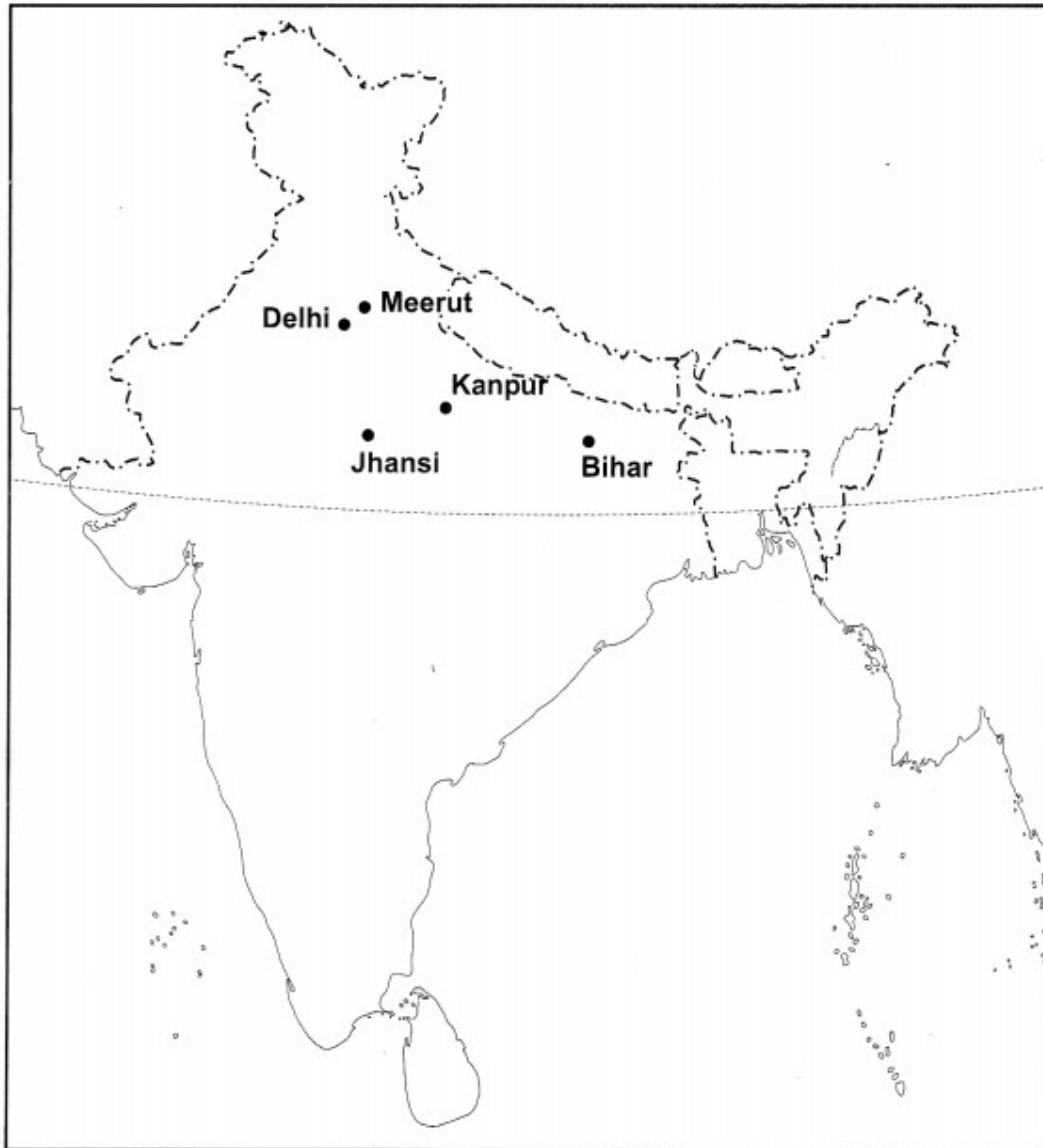
Map based:

Question 1.

On an outline map of India represent the following centers of Revolts?

- (i) Meerut
- (ii) Delhi
- (iii) Bihar
- (iv) Kanpur
- (v) Jhansi

Answer:



East point school

Class **8th** subject: social science (Geography)

Chapter 6 : Industries

Cotton Industry:

- This was based on cotton, Jute, flax and silk. India was the leading country in 18th century but could not face the competition from the mechanised weaving of western world.
- The famous Muslin, Chintz, Calico were famous all across the world.
- The textile mill in Mumbai was the first successful mill established in 1854.
- Ahmadabad comes second in terms of textile production after Mumbai and it is also known as 'Manchester of India'.
- Osaka is known as 'Manchester of Japan'.

Information Technology (IT):

- Information technology industry deals in the storage, processing and distribution of information.
- The main factors guiding the location of these industries are resource availability, cost and infrastructure.
- The major hubs of the IT industry are the Silicon Valley, California and Bengaluru in India.
- Bengaluru is known as 'Silicon Plateau'.
- IT hubs in metropolitan centres of India are Mumbai, New Delhi, Hyderabad, and Chennai.
- IT sector provides jobs to maximum population in service sector.
- Indian IT engineers and technology is considered to be best among the world.

QUIZ

1. Seafood industry is an example of ___ based industries.

- A) agro
- B) mining
- C) marine
- D) forest

2. Food processing is an example of ___ based industry.

- A) marine

- B) agro
- C) mineral
- D) forest

3. Industry owned by one individual is _____.

- A) private sector industry
- B) joint sector industry
- C) co-operative industry
- D) public sector industry

4. ____ is an example of a co-operative industry.

- A) Steel Authority of India Ltd
- B) Hindustan Aeronautical Ltd
- C) Sudha Dairy
- D) Indian Army

5. Market is one of the ____ factors for setting up of industries.

- A) locational
- B) Sizeable
- C) natural
- D) systematic

6. Setting up ____ leads to development of towns.

- A) forests
- B) buildings
- C) industries
- D) schools

7. - Maruti Udyog Ltd is an example of ____ sector industry.

- A) cooperative
- B) private
- C) joint
- D) private

8. ____ has been called the backbone of industry.

- A) diamond
- B) iron
- C) Steel
- D) Petroleum

9. ____ is one of the major steel producing centres.

- A) Bhilai
- B) Jammu
- C) Chandigarh
- D) Delhi

10. Jamshedpur lies on the banks of _____ river

- A) Subarnarekha
- B) Ganga
- C) Jhelum
- D) Mahi

SHORT ANSWER TYPE QUESTIONS

1. Describe the challenges before the cotton textile industry at Ahmedabad.
2. Where are hubs of IT industry are located?
3. Why is cotton textile industry decentralized now?
4. Why did the production of hand woven industry declined?

LONG ANSWER TYPE QUESTIONS

1. Describe Osaka as Manchester of Japan.
2. Explain with the help of an example hoe people acrss the continents can use the IT technology to work together.
3. Describe Bengaluru as silicon plateau of India.

ACTIVITY: Bangalore has some important public sector industries and research institutions . Find out the full form of the organizations listed below.

BHEL, HAL, ISRO, ITI, NCBS, NAL

ACTIVITY 2: On the political map of INDIA locate the following the following:

- Cotton textile industries: Ahmedabad, Indore, Nagpur, Mumbai, Kolkata, Chennai, Coimbatore
- Software technology parks: Gandhinagar, Noida, Jaipur, Kanpur, Bengaluru, Mumbai, Pune

Video link:

https://youtu.be/T24roIL_X78

<https://youtu.be/7mcGabU1iL4>

हिंदी असाइनमेंट – 40
कक्षा 8
पुनरावृत्ति अभ्यास कार्य

PLEASE WATCH THIS VIDEOS

https://www.youtube.com/watch?v=nu6vq9jeb_U

अधिगम बिंदु

विद्यार्थी उपसर्ग /प्रत्यय के बारे में जान पाएंगे
विद्यार्थी उपसर्ग /प्रत्यय को अलग कर सकेंगे।

Q1. निर्वाह में प्रयुक्त उपसर्ग है

A.नि

B.निः

C.निर

D.निरि

Q2. हिंदी में कृत प्रत्ययों की संख्या कितनी है

A.28

B.30

C.42

D.50

Q3. कृदन्त प्रत्यय किन शब्दों के साथ जुड़ते हैं

A.संज्ञा

B.सर्वनाम

C.विशेषण

D.क्रिया

Q4. निम्न पद इक प्रत्यय लगने से बने हैं इनमें से कौन सा पद गलत है

A.दैविक

B.सामाजिक

C.भौमिक

D.प्रक्षिक

Q5. किस शब्द की रचना प्रत्यय से हुई है

A.अभियोग

B.व्यायाम

C.अपमान

D.इनमें से कोई नहीं

Q6. बेइंसाफी में प्रयुक्त उपसर्ग है

A.बे

B.इन

C.बेइ

D.बेइन

Q7. निम्न में से उपसर्ग रहित शब्द है

A.सुयोग

B.विदेश

C.अत्यधिक

D.सुरेश

Q8. बहाव शब्द में प्रयुक्त प्रत्यय कौन सा है

A.बह

B.हाव

C.आव

D.आवा

Q9. विज्ञान शब्द में प्रयुक्त उपसर्ग है

A.विज्ञ

B.ज्ञान

C.वि

D.अन

Q10. चिरायु शब्द में प्रयुक्त उपसर्ग है

A.चि

B.चिर

C.यु

D.आयु

प्रश्न 1 निम्नलिखित समस्त पदों का समास विग्रह करके उनका भेद का नाम भी लिखिए।

1. पीतांबर

2. प्रतिदिन

3. सुबह शाम
4. देशभक्त
5. गुल्ली डंडा
6. घुड़सवार
7. विचार मग्न
8. असंभव
9. लाभ हानि
10. बेसहारा
11. महात्मा
12. बंधन मुक्त
13. नमक मिर्च
14. अनपढ़
15. दुःख दर्द

प्रश्न 2 दिए गए समास विग्रहों से समस्त पद बनाकर , समास का नाम भी लिखिए ।

1. पाठ के शाला
2. ध्यान में मग्न
3. भूख से मरा
4. देश निकाला
5. आनंद में मग्न
6. गायों के लिए शाला
7. आज्ञा के अनुसार
8. राजनीति का ज्ञाता
9. रोग से मुक्त
10. जेब के लिएघड़ी
11. प्रेम से आतुर
12. जन्म से अँधा
13. पर्ण की बनी कुटी
14. बैल की गाड़ी
15. विद्या से हीन

प्रश्न 3) बहुविकल्पीयप्रश्न

i) दो यो दो से अधिक शब्दों या पदों का मेल है-

- क. संधि
- ख. समास
- ग. अव्ययघ. विलोम

ii) अव्ययीभाव समास में पहला पद होता है-

- क. संज्ञा
- ख. सर्वनाम
- ग. अव्यय
- घ. विशेषण

iii) तत्पुरुष समास के भेद किस पर आधारित है-

- क. संज्ञा
- ख. क्रिया
- ग. विशेषण
- घ. सर्वनाम

iv) 'रसोईघर' का समास-विग्रह है-

- क. रसोईवाला घर
- ख. रसोई में घर
- ग. रसोई के लिए घर
- घ. रसोई और घर

v) 'चतुरानन' में कौन-सा समास है?

- क. बहुब्रीहि
- ख. द्वंद्व
- ग. कर्मधारय
- घ. तत्पुरुष

प्रश्न 4 दिए गए चित्र को देखकर अपने मन में आए विचारों को 25-30 शब्दों में लिखिए।



SUBJECT SCIENCE

CHAPTER -REACHING THE AGE OF ADOLSCENCE

[LINK-https://youtu.be/Nw2yHKxrj7o](https://youtu.be/Nw2yHKxrj7o)

Mental and Physical Changes at Puberty

Reproductive health

- The physical and mental well being of an individual is regarded as an individual's health.
- During adolescence, the reproductive organs develop and become functional.
- Reproductive health means proper growth and well being of the reproductive organs.

Our Great Glands

Endocrine glands

An endocrine system is a group of **ductless glands** that regulate body processes and functioning of many systems by secreting chemical substances called **hormones**.

- They release their secretions directly into the bloodstream.
- The origin and site of action are usually distant for hormones

Hormones

Hormones are chemical messengers secreted by the endocrine glands.

- They control body functioning, physiology and behavior.

Pituitary gland

- The pituitary gland is situated in the brain and is called as a master endocrine gland.
- It produces hormones that instruct other glands to secrete their hormones.
- The pituitary gland secretes growth hormone which controls the overall growth of a person.
- Secretion of growth hormone is maximum in adolescence period.

Testosterone

- Testosterone is the primary male sex hormone.
- It is responsible for the development of the male reproductive organs, production of male gamete i.e. sperms and development of secondary sexual characteristics too.
- Testes start secreting testosterone only after puberty.

Oestrogen

- Estrogen/oestrogen is the primary female sex hormone.
- It is responsible for the development of the female reproductive organs, production of female gamete i.e. ova and development of secondary sexual characteristics and menstrual cycle.
- Ovaries secrete this hormone after puberty.

Thyroid gland

- It is a butterfly-shaped gland situated in the throat.
- It secretes a hormone called thyroxin.
- This hormone is important as it maintains the balance of all metabolic activities.

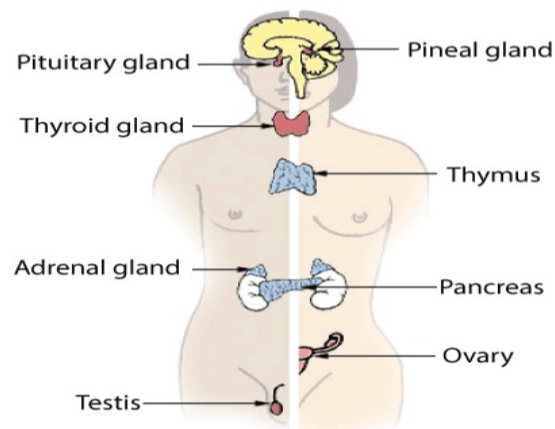
- The deficiency of this hormone can cause swelling of the thyroid gland, leading to goitre.

Pancreas

- The pancreas secretes a hormone called insulin, which regulates the blood sugar level in the body.
- Deficiency of insulin leads to diabetes.

Adrenal glands

- The adrenal glands are situated right above the kidneys.
- They change their shape throughout life and shrink as a person grows older.
- They secrete a hormone adrenaline and also maintain the salt and pH balance.
- Hormone adrenaline is also called 'fight or flight' hormone as it functions in emergency situations.



Endocrine Glands of Human

ACTIVITY 1.

The following chart gives the average rate of growth in height of boys and girls with age. The figures in columns 2 and 3, give the percentage of the height a person has reached at the age given in column 1. For example, by the age 11, a boy has reached 81% of his probable full height, while a girl has reached 88% of her full height. These figures are only representative and there may be individual variations. Use the Table for your friends and work out how tall they are likely to be. Find out who is likely to be the tallest and who might be the shortest in your class.

Table 1 Calculation for full height (cm)

Age in year	Boys	Girls
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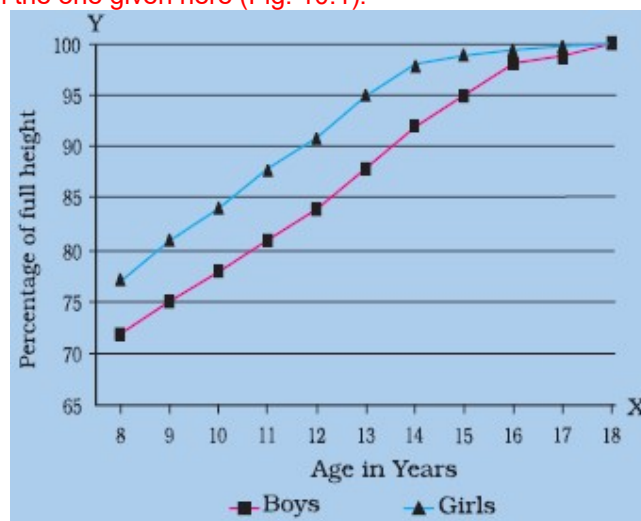
8	72%	77%
9	75%	81%
10	78%	84%
11	81%	88%
12	84%	91%
13	88%	95%
14	92%	98%
15	95%	99%
16	98%	99.5%
17	99%	100%
18	100%	100%

Example 1

Present height(cm)/% of full height in age *100

A boy is 9 years old and 120 cm tall. At the end of the growth period he is likely to be ?
Activity -2

Use the data given in Activity to draw a graph. Take age on the X axis and per cent growth in height on the Y-axis. Highlight the point representing your age on the graph. Find out the percentage of height you have already reached. Calculate the height you might eventually reach. Tally your graph with the one given here (Fig. 10.1).



Graph showing percentage of height with age

- Question 1.(6)
Prepare a table having two columns depicting names of endocrine glands and hormones secreted by them.

Answer:

Endocrine glands	Hormones
1. Pituitary gland	(i) Growth hormones
2. Ovaries	(ii) Estrogen
3. Testes	(iii) Testosterone
4. Thyroid	(iv) Thyroxine
5. Pancreas	(v) Insulin
6. Adrenal glands	(vi) Adrenaline

- Question 2.(4)
What are sex hormones? Why are they named so? State their function.
- Question 3.
Choose the correct option.
(a) Adolescents should be careful about what they eat, because:
(i) proper diet develops their brains.
(ii) proper diet is needed for the rapid growth taking place in their body.
(iii) adolescents feel hungry all the time.
(iv) taste buds are well developed in teenagers.
- (b) Reproductive age in women starts when their:
(i) menstruation starts.
(ii) breasts start developing.

- (iii) body weight increases.
- (iv) height increases.
- (c) The right meal for adolescents consists of:
 - (i) chips, noodles, coke.
 - (ii) chapati, dal, vegetables.
 - (iii) rice, noodles and burger.
 - (iv) vegetable cutlets, chips and lemon drink.

Answer:

- (a) (ii)
- (b) (i)
- (c) (ii)
- Question 4. (3)
Write notes on:
 - (a) Adam's apple
 - (b) Secondary sexual characters.
 - (c) Sex determination in the unborn baby.

HOTS

1. Salma had very soft and smooth skin during her childhood, as she entered adolescence, she developed pimples, the skin specialist advised her to wash her face at regular intervals. Can you explain the reason of pimples appearance and suggest ways to prevent them. (3)

It is believed that height of child depends on genes inherited from parents. However it has been seen that tall parents have short child and vice-versa. Can there be other causes than genes for this type of variation. (3)