



SUBJECT-COMPUTER

CHAPTER NAME- 1. NUMBER SYSTEM

TOPIC: NUMBER SYSTEM

Link- <https://youtu.be/Kr61u6y8ikQ>

( SADANAND SAM – YOUTUBE CHANNEL)

NOTE:- Any query related to link and content, text us on the given e-mail-

fpsprincipal2020@gmail.com

TUTORIALS:-

1.1. INTRODUCTION

In the early times, when there were no means of counting, people used to count with the help of fingers, stones, sticks etc. There were many limitations as therefore number systems were introduced:-

DECIMAL NUMBER SYSTEM	BINARY NUMBER SYSTEM
OCTAL NUMBER SYSTEM	HEXADECIMAL NUMBER SYSTEM

A **number system** is a set of values used to represent different quantities.

The total number of digits used in a number system is called its **Base** or **Radix**

1.2. DECIMAL NUMBER SYSTEM:-

The decimal number system consists of ten digits i.e., **0,1,2,3,4,5,6,7,8,9**. The base of the decimal number system is **10**. Eg. 89, 100, -89 etc.

1.3. BINARY NUMBER SYSTEM:-

The binary number system consists of two digits i.e., **0,1**. The base of the binary number system is **2**. Eg. 100, 10111 etc.

1.4. OCTAL NUMBER SYSTEM:-

The octal number system consists of eight digits i.e., **0,1,2,3,4,5,6,7**. The base of the octal number system is **8**. Eg. 67, 100, 56 etc.

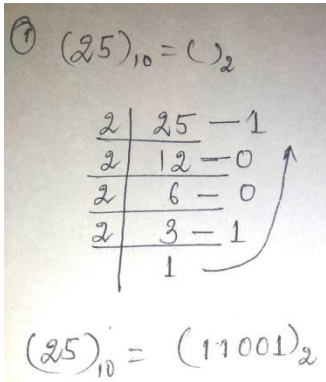
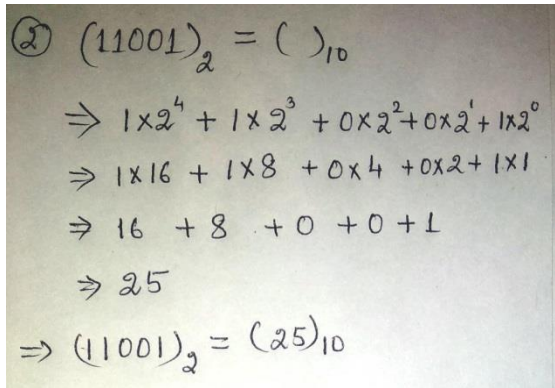
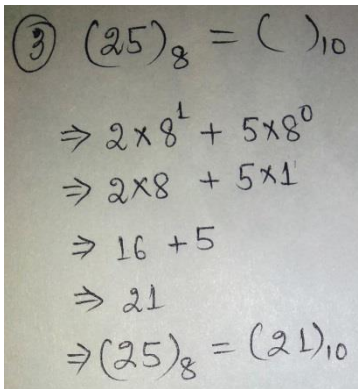
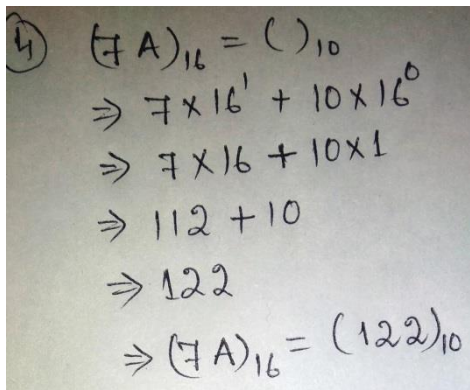
1.4. HEXADECIMAL NUMBER SYSTEM:-

The hexadecimal number system consists of 16 digits i.e., **0,1,2,3,4,5,6,7,8,9, A,B,C,D,E,F**. (**A-10, B-11, C-12, D-13, E-14, F-15**) The base of the Hexadecimal number system is **16**. Eg. 69, 100, 5B, 4D2, etc.

Note:- I had taken the no. 100 as an example in all the number systems. It is very difficult to tell that the no. 100 belongs to which number system. Therefore we take the help of the **base**. Eg.-

$(100)_{10}$	Decimal Number
$(100)_2$	Binary Number
$(100)_8$	Octal Number
$(100)_{16}$	Hexadecimal Number

1.5. CONVERSION:-

1. DECIMAL TO BINARY	2. BINARY TO DECIMAL
<p>1. $(25)_{10} = ()_2$</p>  <p>$(25)_{10} = (11001)_2$</p>	<p>2. $(11001)_2 = ()_{10}$</p>  <p>$\Rightarrow 1 \times 2^4 + 1 \times 2^3 + 0 \times 2^2 + 0 \times 2^1 + 1 \times 2^0$ $\Rightarrow 1 \times 16 + 1 \times 8 + 0 \times 4 + 0 \times 2 + 1 \times 1$ $\Rightarrow 16 + 8 + 0 + 0 + 1$ $\Rightarrow 25$ $\Rightarrow (11001)_2 = (25)_{10}$</p>
3. OCTAL TO DECIMAL	4. HEXADECIMAL TO DECIMAL
<p>1. $(25)_8 = ()_{10}$</p>  <p>$\Rightarrow 2 \times 8^1 + 5 \times 8^0$ $\Rightarrow 2 \times 8 + 5 \times 1$ $\Rightarrow 16 + 5$ $\Rightarrow 21$ $\Rightarrow (25)_8 = (21)_{10}$</p>	<p>1. $(7A)_{16} = ()_{10}$</p>  <p>$\Rightarrow 7 \times 16^1 + 10 \times 16^0$ $\Rightarrow 7 \times 16 + 10 \times 1$ $\Rightarrow 112 + 10$ $\Rightarrow 122$ $\Rightarrow (7A)_{16} = (122)_{10}$</p>

1.6. COMPUTER ARITHMETIC:-

The various types of Binary Arithmetic Operations are:-

1. BINARY ADDITION:-

To perform binary addition we must know the rules:-

a	b	a + b = c
0	0	0 + 0 = 0
0	1	0 + 1 = 1
1	0	1 + 0 = 1
1	1	1+1=1 0

Q. Compute $(1000)_2 + (1111)_2$

```

1 0 0 0
+ 1 1 1 1
-----
1 0 1 1 1

```

2. BINARY SUBTRACTION:-

To perform binary subtraction we must know the rules:-

a	b	a - b = c
0	0	0 - 0 = 0
1	0	1 - 0 = 1
1	1	1 - 1 = 0
0	1	0 - 1 = 1

Q. Compute $(1111)_2 - (1010)_2$

```

1 1 1 1
- 1 0 1 0
-----
0 1 0 1

```

3. BINARY MULTIPLICATION:-

To perform binary multiplication we must know the rules:-

a	b	a * b = c
0	0	0 * 0 = 0
0	1	0 * 1 = 0
1	0	1 * 0 = 0
1	1	1 * 1 = 1

Q. Compute $(101)_2 \times (11)_2$

$$\begin{array}{r} 101 \\ \times 11 \\ \hline 101 \\ + 1010 \\ \hline 1111 \end{array}$$

4. BINARY DIVISION:-

The method to perform binary division is same as that of decimal numbers:-

Q. Compute $(110)_2 \div (10)_2$

$$\begin{array}{r} 11 \\ 10 \overline{) 110} \\ \underline{- 10} \\ 010 \\ \underline{- 10} \\ 00 \end{array}$$

QUESTIONS:-



Let's think and Answer:-

1. What is a number system?
2. What are the rules to convert a Decimal NS into a Binary NS?
3. Explain Octal Number System.
4. Write a paragraph about Aryabhat.

LEARNING OUTCOME:-

After studying these topics, students will be able to:

- Write about Number system.
- Recognize the number system of a given number.
- Convert numbers from one number system to another.
- Perform Binary operations.

<<<<<>>>>>



Module- I

<https://youtu.be/JmV2td0olqE>

Eg: a lecture	a platform
a one – eyed man	a <u>E</u> uropean
^ (w sound)	^ (yoo sound)

sounds:

an M.A.

an honourable job

- 1. In honest and honourable, h is not sounded. So these words begin with a vowel sound.
- 2. In M.A. M is sounded as em; so it begins with a vowel sound.

- the train by which I came
- the books I usually read

the information received
the mercy the king showed

- We use **the** when it is clear from the situation which people or things we mean:
 1. The Principal is taking a round of **the** school. (**the** Principal of our school)
 2. May I use **the** telephone?
- We use the superlatives:
 1. **the brightest** star in the sky
 2. **the most** hilarious act
- We use **the** with such phrases as immediately single out or specify a person or object:

1. the first building
2. the last day
3. the next candidate
4. the only child
5. the same pen
6. the chief aim

- We use **the** with a common noun when that noun represents the whole class:
 1. The donkey is a beast of burden. (all donkeys)
 2. The cow feeds on grass. (all cows)
- We use **the** when there is only one of something, when there is something unique- Earth, moon, sun, equator, north pole, east, west:
 1. **The equator** divides **the earth** into two hemispheres.
 2. **The sun** shines over **the north pole** for six months.

Note: The nouns we have mentioned above are often described as nouns of unique references.

- We use **the** with adjectives when those adjectives are used as nouns:
 1. Law should be fair to **the lucky** as well as **the unlucky**.
 2. There should be fair opportunities for both **the rich** and **the poor**.

ARTICLES WITH PROPER NOUNS:

1. As a rule, proper noun does not need an article:

Eg Mumbai is the biggest city of India. (**the Mumbai** is wrong)

2. However if a proper noun is used like a common noun,
it may need a, an, the with it.

1. We need **a Gandhi** to solve our problems.
2. Every team cannot have **a Kapil Dev** in it.

Omission of Articles: (we normally do not use any article)

1. When a noun is used in the general sense:

Man is mortal. (We are talking about man in a general sense)

2. with nouns that name materials:

Paper has become very expensive. (we cannot write **a paper** or **the paper**)

3. with plural nouns when they denote a class:

Children have a fertile imagination. (we cannot write the children)

4. with the names of meals: **breakfast, lunch, dinner.**

5. with the names of diseases: malaria, typhoid (but the measles the mumps)

6. With languages and branches of knowledge :(English, Hindi, Mathematics)

7. with the names of days, months and seasons:

8. with words like father, mother, uncle

9. In headlines, notices, emails, messages etc.

Questions (let's think and answer):

A. The following sentences have two errors each. Rewrite them in their correct form:

1. Travelling by the air is much faster than travelling by a train.
2. Amit is most talented student in the class but teachers do not know that.
3. The brave men do not lose the heart even when they fail.
4. Sun is flaming ball of fire.
5. At the first sight, your painting seems to be best.

B. Rewrite the following passages inserting a, an or the where necessary:

1. She is officer in local branch of State Bank of India. Her brother is associate professor in one of universities in North India.
2. It is not easy to become Newton or Einstein but all of us can develop scientific attitude necessary for progress.
3. Principal called meeting of staff to discuss date sheet. They could not arrive at unanimous decision in meeting.
4. Accident occurred at crossing. Speeding car knocked down pedestrian. Man standing nearby managed ambulance and took man to doctor. He also informed police.
5. I am writing to complain about stereo that I bought from your shop on 5th of July. Although guarantee card says piece has been inspected and tested in your factory, rewind and fast- forward controls don't appear to be functioning. Could you send mechanic at early date to carry out necessary repairs?

LEARNING OUTCOME:

The important conclusions drawn from this lesson are:

1. Articles provide the information about the nouns they precede.
2. The determinate article **the** specifies, characterizes, and identifies a noun.
3. If no article is used the noun becomes more general.
4. Absence or misuse of an article will make a sentence look/ sound very strange to an English speaker.

THANK YOU



FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- VII

Module-1/1

SUBJECT- HINDI

CHAPTER 1- भाषा ,लिपि और व्याकरण

TOPIC: भाषा ,लिपि और व्याकरण

Link- - <https://www.extramarks.com>

<http://ncert.nic.in/ebooks.html>

<https://youtu.be/3NDEA2F1U04>

Please find herewith the web links of the chapters along with the written assignment we wish you to cover up by the end of this break. The entire assignment will form a part of your subject enrichment assessment and needs to be done in home-work copy. This assignment will be a part of subject enrichment. In case of any clarification please feel free to get in touch with your subject teachers, once the school reopens or else mail it to principal@firayalalpublicschool.com

TUTORIALS:-



#. भाषा-- भाव और विचारों के आदान-प्रदान का साधन है।

#. भाषा के रूप-- भाषा के दो रूप हैं-- मौखिक भाषा और लिखित भाषा।

(क) मौखिक भाषा-- मुख से उच्चारित भाषा मौखिक भाषा कहलाती है। भाषा का मूल रूप मौखिक है।

(ख) लिखित भाषा-- व्यक्ति के मन के भावों या विचारों को लिखकर व्यक्त करना लिखित भाषा कहलाती है।

#.भारत में अनेक भाषाएं बोली जाती हैं।

#.भारत के संविधान में 22 भाषाओं को मान्यता दी गई है।

#.लिपि--वर्णों को लिखने की विधि लिपि कहलाती है।

#. हिंदी की लिपि देवनागरी है।

#.देवनागरी लिपि की उत्पत्ति ब्राह्मी लिपि से हुई है।

बोली--भाषा के क्षेत्रीय रूप को बोली कहा जाता है।

हिंदी को भारत के संविधान में राष्ट्रभाषा और राजभाषा के रूप में स्वीकार किया गया है।

व्याकरण—भाषा के शुद्ध रूप का ज्ञान हमें व्याकरण कराता है।

#व्याकरण के मुख्य रूप से तीन अंग हैं:

(क) वर्ण—विन्यास

(ख) शब्द—रचना

(ग) वाक्य—रचना

Let's Examine:

क. संसार भर में लगभग कितनी भाषाएं बोली जाती हैं?

ख. भाषा का मूल रूप कौन सा है?

ग. मलयालम किस राज्य की भाषा है?

घ. सभ्यता के प्रारंभ में मनुष्य अपने विचारों का आदान-प्रदान कैसे करता था?

ङ. आंध्र प्रदेश की भाषा क्या है?

च. देवनागरी लिपि का विकास किस लिपि से हुआ है?

छ. "रामचरितमानस" की भाषा क्या है?

ज. हिंदी को कब राजभाषा के रूप में मान्यता दी गई?

झ. भाषा के लिए व्याकरण क्यों आवश्यक है?

LEARNING OUTCOME:-

क. बच्चे भाषा और उसकी परिभाषा को समझे।

ख. भाषा के कितने रूप हैं।

ग. भारत में कितनी भाषाएं बोली जाती हैं।

घ. लिपि क्या है।

ङ. व्याकरण किसे कहते हैं और इसकी क्या आवश्यकता है।



SUBJECT- MATHEMATICS

CHAPTER NO. & NAME:-1) INTEGERS

TOPIC- INTEGERS AND ITS PROPERTIES FOR ADDITION AND SUBTRACTION

Link-<https://www.extramarks.com>

<http://ncert.nic.in/ebooks.html>

<https://www.youtube.com/watch?v=w-pCV3dLr7c>

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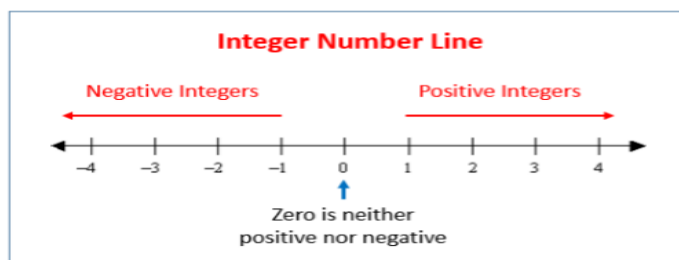
TUTORIALS:

➤ Integers:

All positive natural numbers, negative of natural numbers including zero forms set of integers. It is denoted by letter I or Z. i.e., $I/Z = \{ \dots -3, -2, -1, 0, 1, 2, 3, \dots \}$

➤ Integers on Number Line

On the number line, for positive integers we move to the right from zero and for negative integers move to the left of zero.



➤ Properties of Addition and Subtraction of Integers

1) Closure under Addition

For any two integers **a** and **b**, **a + b** must be an integer.

For example:

a) $5+3=8$, which is an integer

b) $(-2) + (-3) = -5$, which is an integer.

Since the addition of two integers will always be an integer hence, **integers are closed under addition.**

2) Closure under Subtraction

For any two integers **a** and **b**, **$a - b$** must be an integer.

For example:

a)

b) $-6 - 2 = -8$, which is an integer.

Since the subtraction of two integers will always be an integer, hence, **integers are closed under subtraction.**

3) Commutative Property

a) **Addition is commutative for integers.**

For any two integers *a* and *b*,

$$a + b = b + a$$

Example:

$$20 + (-15) = 5$$

$$(-15) + 20 = 5$$

Hence, **$a + b = b + a$** . i.e., There is no difference in answer after changing the order of the numbers.

b) **Subtraction is not commutative for integers.**

For any two integers **p** and **q**

$p - q \neq q - p$ will not always equal

Example

$$23 - (-30) = 53$$

$$(-30) - 23 = -53$$

The answer is different after changing the order of the numbers.

Hence, subtraction is not commutative for integers

4) Associative Property

For any three integers *a*, *b* and *c*

$$a + (b + c) = (a + b) + c$$

Example

If 3, 4 and 5 are three integers then,

$$a + (b + c) = (a + b) + c$$

$$3 + (4 + 5) = (3 + 4) + 5$$

$$3 + 9 = 7 + 5$$

$$12 = 12$$

Hence, addition is associative for integers

5) Additive Identity

For any integer *a*,

$$a + 0 = 0 + a = a$$

0 is an additive identity for integers.

Example

$$2 + 0 = 2$$

$$(-7) + 0 = (-7)$$

6) Additive inverse

For every integer *a*,

$$a + (-a) = 0 = (-a) + a$$

Here, **-a** is additive inverse of *a* and *a* is the additive inverse of -a.

Example :

$$2 + (-2) = 0$$

$$(-2) + 2 = 0$$

Hence, -2 is additive inverse of 2 and 2 is additive inverse of -2.

➤ **Home assignment:**

1) Fill in the Blanks.

- a)
- b)
- c)
- d)
- e)
- f)

2) Write:

- a) A positive integer and a negative integer whose sum is a positive integer.
 - b) A positive integer and a negative integer whose sum is a negative integer
 - c) A positive integer and a negative integer whose difference is a positive integer.
 - d) A positive integer and a negative integer whose difference is a negative integer
 - e) Two negative integers whose sum is -8
 - f) Two positive integers whose difference is -5
 - g) Two integers which are smaller than -6 but their difference is greater than -6
 - h) Two integers which are greater than -4 but their difference is smaller than -4
- 3) Verify commutative property for the following pairs of integers
- a)
 - b)
- 4) Write the additive identity and additive inverse for the following integers.
- a) -5 b) 15 c) -12 d) 1
- 5) Other important questions.
- a) In a quiz, team A scored -40, 10, 0 and team B scored 10, 0, -40 in three successive rounds. Which team scored more?
 - b) Height of a place A is 1800 m above the sea level. Another place B is 700m below the sea level. What is the difference between the levels of these two places?

LEARNING OUTCOMES:

After studying this topic, students will be able to:

- Define integers and its properties.
- Understand the properties of addition and subtraction of integers.
- Solve the problems related to the properties of integers over addition & subtraction.
- Apply the properties of integers over addition & subtraction to solve problems related it.



FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- VII

Module-1/1

SUBJECT- SANSKRIT

CHAPTER NAME- Chapter-1

TOPIC: सुभाषितानी

Link- <https://youtu.be/EwXPxuOy19w>

Link- <https://youtu.be/2FPxFEmTDmQ>

Link- <https://www.extramarks.com>

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TUTORIALS:- सुभाषितानी

- ❖ सुभाषित शब्द “सु” और “भाषित” के मेल से बना है, जिसका अर्थ है “सुन्दर भाषा में कहा गया”।
- ❖ संस्कृत के सुभाषित जीवन के दीर्घकालीन अनुभवों के भंडार हैं।

श्लोक—

1) पृथिव्यां त्रीणि रत्नानि जलंअन्नं सुभाषितम्।

मुद्गेः पाषाणखण्डेषु रत्नसंज्ञा विधीयते ॥

अर्थ:- पानी, अन्न और सुभाषित पृथ्वी पर ये तीन ही सत्य हैं। परन्तु मूर्खों के द्वारा पत्थर के टुकड़ों को रत्न कहा जाता है।

2) सत्येन धार्यते पृथ्वी सत्येन तपते रविः।

सत्येन वाति वायुश्च सर्व सत्ये प्रतिष्ठितम् ॥

अर्थ:- सत्य से (के द्वारा) पृथ्वी धारण की जा रही है। सत्य से सूर्य तप रहा है और सत्य के द्वारा ही हवा बह रही है। सत्य में सबकुछ समाहित है।

3) दाने तपसि शौर्यं च विज्ञाने विनये नये च।

विस्मयो न हि कर्तव्यो बहुरत्ना वसुंधरा ॥

अर्थ:- दान, तपस्या, वीरता, विज्ञान, विनय और नीति के विषय में हिरान नहीं होना चाहिए ।
। क्योंकि पृथ्वी बहुत प्रकार के रत्नों से भरी है ।

- 4) सभिदरेव सहासीतः सभिदः कुर्वीत सङ्गतिम् ।
सभिदविर्वादं मैत्रीं च नासभिदः किञ्चिदाचरेत् ॥

अर्थ:- मनुष्य को सज्जनों के साथ ही बैठना चाहिए । सज्जनों के साथ ही संगति करनी चाहिए ।
सज्जन के साथ ही झगड़ा तथा मित्रता करनी चाहिए । असज्जनों के साथ तो कोई भी व्यवहार
नहीं करना चाहिए ।

- 5) धनधान्य प्रयोगेषु विधायाः संग्रहेषु च ।

आहारे व्यवहारे च त्यक्तलज्जः सुखी भवेत् ॥

अर्थ:- धन और अनाज को खर्च करने में, विधा की कमाई करने में, भोजन और आपसी
व्यवहार में संकोच का त्याग करने वाला ही सुखी होता है ।

- 6) क्षमावशी कृतिलोके क्षमया किं न साध्यते ।

शान्ति खड्गः करे यस्य किं करिष्यति दुर्जनः ॥

अर्थ:- संसार में क्षमा (दूसरों को) वश में कर लेती है, ऐसा कौन सा कार्य है ? जो क्षमा से नहीं हो
सकता है । जो हाथ में शान्ति रूपी तलवार धारण करता है, दुर्जन उसका क्या बिगाड़ सकता है
?

❖ पाठ के आधार पर एक शब्द में उत्तर दें—

- क) पृथिव्या कति रत्नानि ?
ख) मुटै कुत्र रत्नसंज्ञा विधीयते ?
ग) पृथिव्या केन धार्यते ?
घ) कैः सङ्गतिम् कुर्वीत ?
ङ) लोके वंशीकृतिः का ?

❖ पाठ के आधार पर पूर्ण वाक्य में उत्तर दें -

- क) कुत्र विस्मयः न कर्तव्यः ?
ख) पृथिव्या त्रीणि रत्नानि कानि ?
ग) त्यक्तलज्जः कुत्र सुखी भवेत् ?

LEARNING OUTCOME-

After studying this topic, students will be able to:

- 1) छात्र सुभाषितानी के अर्थ के विषय में जान गए।
- 2) छात्र सभी श्लोको को अर्थ सहित जान गए।
- 3) छात्र जीवन में प्रयोग होने वाली बातों के विषय में जानेंगे ।



FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- VII

Module-1/1

SUBJECT- SCIENCE

CHAPTER NAME- NUTRITION IN PLANTS

TOPIC- NUTRITION AND ITS TYPES, PHOTOSYNTHESIS

Link-<https://youtu.be/aBghNAghCYY>

Please find herewith the web links of the chapters along with the written assignment we wish you to cover up by the end of this break. The entire assignment will form a part of your subject enrichment assessment and needs to be done in home-work copy. This assignment will be a part of subject enrichment. In case of any clarification please feel free to get in touch with your subject teachers, once the school reopens or else mail it to principal@firayalalpublicschool.com

TUTORIALS: **NUTRITION IN PLANTS**

All life processes require energy. Energy is locked in the form of chemical energy in food. To unlock this energy, the food must be converted into smaller and soluble molecules. This happens during the process of nutrition.

Types of nutrition

the organisms in the living world show two kinds of nutrition

Autotrophic and Heterotrophic

Autotrophic nutrition : (*auto = self ; trophos= nourishment*) the mode of nutrition in which organisms make food themselves from simple substances. **Eg**: green plants

Heterotrophic nutrition : (*heteros = other*) the mode of nutrition in which organisms depend upon plants or other organisms for their food. **Eg** : animals and non green plants such as fungi.

Autotrophic Nutrition

Green plants are able to make their food from simple raw materials around them- **CO₂** from the air , and **water** from the soil .The energy for preparing food is obtained from **sunlight**. The sun's energy is trapped by a green pigment called **chlorophyll** present in the chloroplast of green leaves. Since the synthesis of food occurs in the presence of sunlight , it is called **Photosynthesis** (*photo = light ;synthesis = to combine*) . So, we find that the raw materials required for photosynthesis are -

sunlight , carbon dioxide and water .

Thus, we find that the sun is the ultimate source of energy for all living organisms.

During photosynthesis the chlorophyll containing cells of leaves synthesise carbohydrate(glucose) .

Carbon dioxide + water Sunlight
 chlorophyll -----> Carbohydrate + oxygen

Besides leaves photosynthesis also takes place in other green parts – **in green stems and green branches**

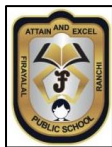
Like in **cactus** leaves are reduced to spines to reduce water loss by transpiration. They have **greenstems** which carry out photosynthesis.

Now answer the following

- 1) In what form is energy stored in the food?
- 2) Differentiate between autotrophs and heterotrophs giving examples.
- 3) Name some organisms other than green plants that can prepare their own food .
- 4) What are the structures in the cells that contain chlorophyll called ?
- 5) What are the raw materials required for photosynthesis? How are they obtained by a plant?
- 6) Can photosynthesis occur without oxygen?
- 7) the sun is the ultimate source of energy . Discuss.
- 8) All animals – herbivores , carnivores or omnivores depend on plants for their food . Discuss.
- 9) Write the chemical formula for glucose synthesised during photosynthesis.
- 10) List some other adaptations of cactus other than that mentioned above.

Learning outcome

- * Green plants are autotrophs .
- * Green plants use water , carbon dioxide and sunlight for the process of photosynthesis to prepare their food.
- * Energy for photosynthesis is obtained sunlight trapped by chlorophyll.
- * All non green plants and animals are heterotrophs.



FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- VII

Subject- Sst (geography)

Chapter-1 Environment

Topic- Environment and it's components

Module- 1/1

Link- <https://www.extramarks.com>

<https://ncert.nic.in/ebooks.html>

<https://youtu.be/6U-PiLVSHq4>

<https://youtu.be/h4p-ki2LIVk>

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TUTORIALS:

#Environment: It is our basic life support system. Everything around us is environment. It's come from a French word Environer/Environment meaning 'neighbourhood'.

#Components of Environment

Their are two components of environment:

1)Natural Environment- Land ,water, air,plants and animals comprise the natural environment.

It is divided into four:

lithosphere- the solid crust or hard top layer of the Earth.

Hydrosphere- the domain of water.

Atmosphere- thin layer of air that surrounds the earth

Biosphere- plants and animals together make biosphere or living world.

***Note-** the gravitational force of the Earth holds the atmosphere around it.

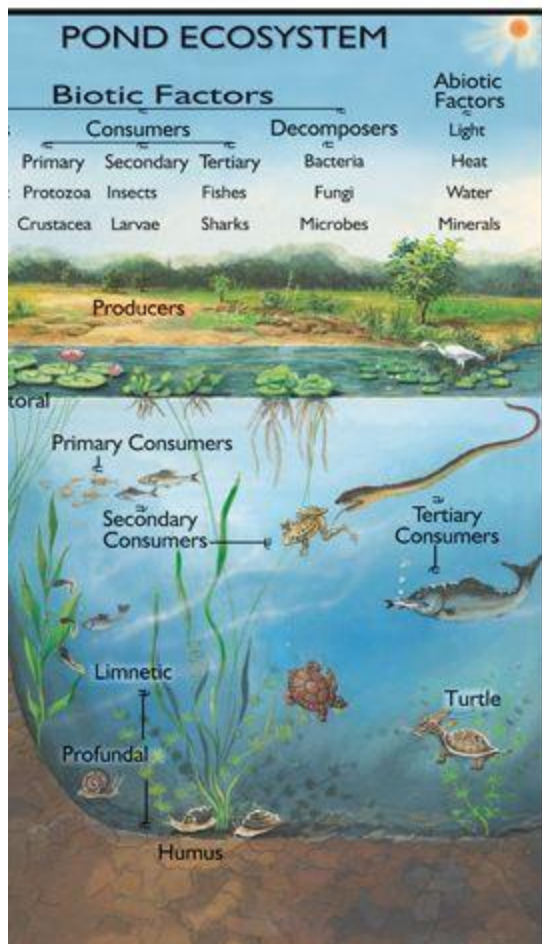
*** Note-** natural environment consist of biotic and abiotic components.

Biotic- living beings; abiotic- non-living elements

Domains of environment



Ecosystem- the interaction of all living organisms with each other and their surroundings form an ecosystem. Eg- rain forest.



II) Human Environment- Human beings interact with the environment and modify it according to their needs. Earlier, humans adapted themselves according to their natural surroundings and fulfilled their requirements from the nature around them. Slowly and gradually it changed to modern technology and life was made much easier with coming development.

This consists of two parts- human and human-made.

i) human - it consists of human being himself as an individual, family, community, religious, educational, economic, political group.

ii) human - made - the things made by humans eg buildings, parks, bridges, transportation, industries.etc

Let's examine :

- 1) why environment is so important for us?
- 2) when is world environment day is celebrated?
- 3) when is Earth day celebrated?
- 4) why there should be an interaction between different components of environment.
- 5) Give reasons why man modifies his environment.
- 6) differentiate between biotic and abiotic components with examples.
- 7) Differentiate between natural environment and human environment.
- 8) Draw a neat and label diagram of domains of the environment.(Ref to NCERT book).
- 9) What is an ecosystem?
- 10) Describe the impact of human activity on the natural environment.
- 11) Define-a) lithosphere b) hydrosphere c) atmosphere d) biosphere
- 12) Do plants take nitrogen directly from the air?

Learning outcome:

- * Students will understand the meaning of environment.
- * It will point out the different components of environment.
- * Students can figure out importance of interaction in the environment.
- * They will understand about natural and human environment.