FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- VIII **Module-1/1**

SUBJECT-COMPUTER

CHAPTER NAME- 1. NETWORKING CONCEPTS
TOPIC: COMPUTER NETWORK
Link- https://youtu.be/FlXExNivzjw

(SADANAND SAM – YOUTUBE CHANNEL)

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

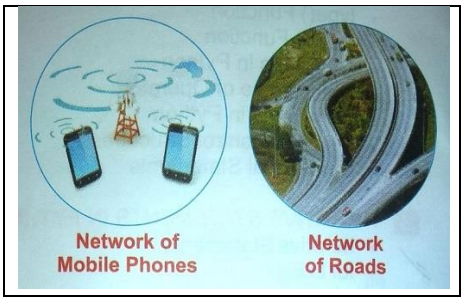
fpsprincipal2020@gmail.com

TUTORIALS:-

1.1. INTRODUCTION

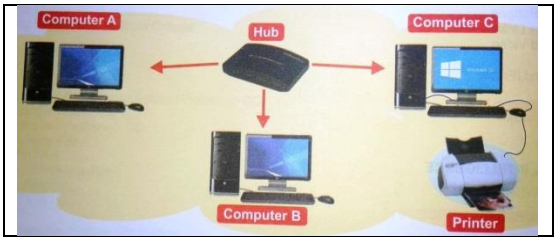
In our daily life, we come across different types of networks, such as:

- Network of roads, railways lines, canals etc.
- Network of Banks/ATM. etc.



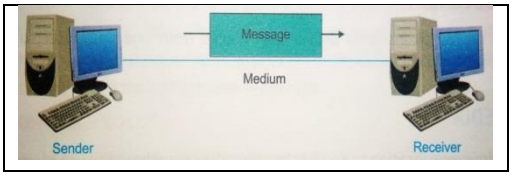
1.2.COMPUTER NETWORK AND ITS COMPONENTS

A computer Network can be defined as a group of computers and other peripheral devices that are linked together for the purpose of sharing data and hardware resources. Example: Sharing of a printer.



Note:-

- Node:- Computer in a network is called a Node.
- Message:- Information to be communicated. It contain text, pictures, audio, video etc.
- Sender:- Sender is a device i.e. computer, mobile phone, that sends the data message through web browser.
- Receiver:- Receiver is a device that receives the data messages.
- Transmission medium:- It is the physical path through which message travels. Eg.- cables, radio waves etc.



1.3.ADVANTAGES OF NETWORKING.

The advantages of Networking are:-

1. Efficient use of storage media
2. Preserving Information
3. Reduction in hardware costs
4. Efficiency
5. Redundancy
6. Quickest Document Delivery

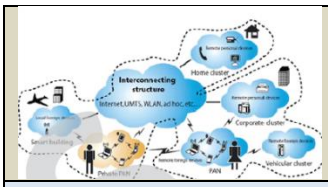
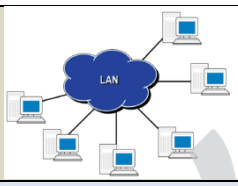
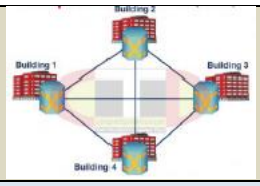
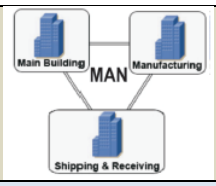
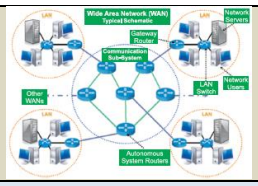
1.4. NETWORKING MEDIA.

Data can be transmitted from one location to another by using wires or without the use of wires.

WIRED TECHNOLOGY		WIRELESS TECHNOLOGY	
Ethernet cables		Bluetooth	
Coaxial cables		Infrared technology	
Optical fiber cables		Wifi	

1.5. TYPES OF NETWORKS:-

1. PERSONAL AREA NETWORK (PAN) :- PAN is a computer network that covers a small area of about 10 meters.
2. LOCAL AREA NETWORK (LAN) :- LAN is a computer network that covers a small area, such as a room or an office building.
3. CLUSTER AREA NETWORK (CAN) :- CAN is a computer network that connects a series of small LANs over a small geographical area. E.g.- College campus.
4. METROPOLITAN AREA NETWORK (MAN) :- MAN is a larger network than LAN. It is spread across a city. E.g.- Branches of local banks in a city.
5. WIDE AREANETWORK (WAN) :- WAN is the network that connects computers located at distant places. They are usually connected through telecommunication or satellite signals. E.g.- ATM facility.

				
PAN	LAN	CAN	MAN	WAN

1.6. NETWORKING DEVICES:-

Networking devices are the hardware devices used to connect computers or other electronics devices together in order to share files or resources like printers or fax maxhine.

- MODEM
- HUB
- SWITCH
- REPEATER
- ROUTER
- GATEWAY
- BRIDGE

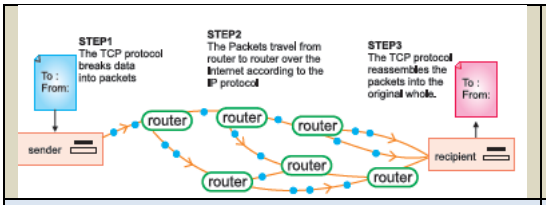
1.7. NETWORKING TERMINOLOGY :

INTERNET	WEBPORTAL	HYPERTEXT
INTRANET	WEBPAGE	HYPERMEDIA
BANDWIDTH	HOMEPAGE	URL
ISP	LINK	IP ADDRESS
WEBSITE	HYPERLINK	DOMAIN NAMING SYSTEM

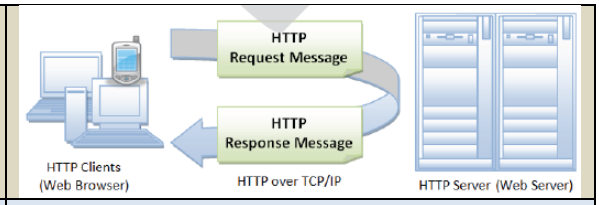
1.8. PROTOCOLS:

Protocols are the set of rules which determines how data should be transferred over any network. There are many Protocols like:-

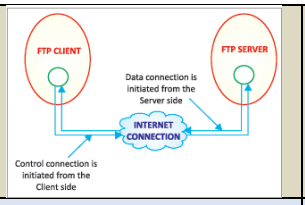
- TCP/IP
- HTTPS
- FTP
- SMTP
- IMAP AND POP



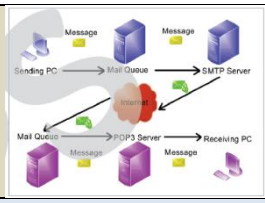
TCP/IP



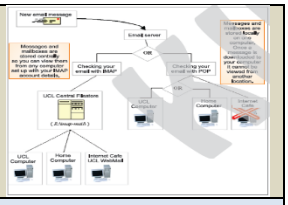
HTTPS



FTP



SMTP



IMAP AND POP

QUESTIONS:-  Let's think and Answer:-

1. What is a computer network?
2. What is the use of DNS?
3. What is the use of IP Address?
4. Differentiate between Bluetooth and Wifi.
5. Differentiate between HUB and SWITCH.

LEARNING OUTCOME:-

After studying these topics, students will be able to:

- Explain the concept of Networking.
- Differentiate between Wired and Wireless Networking Technology.
- Differentiate Networking Devices.
- Tell the Networking Terminologies.
- Understand the concept of Protocols.

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FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- VIII **Module- 1**

SUBJECT- ENGLISH GRAMMAR & COMPOSITION

CHAPTER NAME- REPORTED SPEECH / DIRECT AND INDIRECT SPEECH.

Link- https://www.youtube.com/watch?v=yML5gg26MUA

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

Direct and Indirect or Reported Speech

There are two ways of reporting what a person has said: direct and indirect.

Direct Speech

In direct speech, we repeat the original speaker's exact words, **e.g. He said," I have lost my books".**

Remarks thus repeated are placed between inverted commas and a comma is placed immediately before the remark. Direct speech is found in conversations in books, in plays and in quotations.

Indirect Speech

In indirect speech, we give the exact meaning of a remark or a speech, without necessarily using the speaker's exact words.

e.g. He said (that) he had lost his books.

There is no comma after say in indirect speech. That can usually be omitted after say and tell + object.

Parts of Narration Sentence

A narration sentence has two parts. These are ,

1. Reporting Verb
2. Reported Speech

1.Reported Speech :

The part of the narration sentence which is in the inverted called reported speech.

2. Reporting Verb :

The part which is outside the inverted commas is called reporting verb,

e.g.

She says to him, "I am going to school".

↓ Reporting Verb (RV)

↓ Reporting Speech (RS)

Expressions of Time and Place in Indirect Speech :

Direct Speech	Reported Speech
today	that day
now	then
tonight	that night
last ...	the ... before / the previous ...
yesterday	the day before
... ago	... before
last week	the week before
next year	the following year
tomorrow	the next day / the following day
here	there
this	that
these	those

Read the following sentences :

1. **Direct** He said, she's my daughter.
   Indirect He said that she was his daughter.
2. **Direct** "I saw her the day before yesterday", he said.
   Indirect He said he'd seen her two days before.
3. **Direct** "I'll do it tomorrow", he promised.
   Indirect He promised that he would do it the next day.

Change of Tense

In indirect speech, change of tense takes place if and only if the reporting verb is in past tense.

No change of tense is made if the reporting verb is in present or future tense.

1. **When the Reporting Verb is in Present or Future Tense**

e.g.

1. **Direct** Peter says, "I want to become an engineer".
   Indirect Peter says that he wants to become an engineer.

2. **Direct** The teacher will say, “Everybody has to maintain silence.
   Indirect The teacher will say that everybody has to maintain silence”.
3. **Direct** My mother says, “ God will shower his blessings on us, some day”.
   Indirect My mother says that God will shower his blessings on us some day.
4. **Direct** Tisha says to me, “TV is not working since last night.”
   Indirect Tisha tells me that TV is not working since last night.
5. **Direct** Ginnie says to her friend, “I lost my new denim jacket.”
   Indirect Ginnie tells her friend that she last her Denim Jacket.
6. **Direct** He will say, “I will reform all the system.”
   Indirect He will say that he will reform all the system.
7. **Direct** The boss will say to his staff, “We are going to throw a party on the golden jubilee, of our company.
   Indirect The boss will tell his staff that they are going to throw a party on the golden jubilee of their company.

2. When the Reporting Verb is in Past Tense

e.g.

Direct Speech	Indirect Speech
Simple Present '' I never eat egg'', she explained.	Simple Past She explained (that) she never ate egg.
Present Continuous '' I' am waiting for Sneha'', he said.	Past Continuous She said (that) she was waiting for Sneha.
Present Perfect ''I have found a key'', he said.	Past Perfect He said (that) he had found a key.

Present Perfect Continuous She said, "I' ve been waiting for Ram."	Past Perfect Continuous She said (that) she had been waiting for Ram.
Simple Past I took him to hotel with me, he said.	Past Perfect He said (that) he had taken him to hotel with him.
Future He said, "I will/shall be in London on Sunday".	Conditional He said (that) he would be in London on Sunday.
Future Continuous "I will/shall be using the car myself on the 31st", she said.	Conditional Continuous She said (that) she would be using the car herself on the 31st.
Conditional I said, "We would like to have it".	Conditional I said (that) we would like to have that.

Read the following examples.

1. **Direct** The man said to the boy, " You are not serious about your studies."
   Indirect The man told the boy that he was not serious about his studies.

2. **Direct** Suhani said to her mother, "I learnt many new theories today."
   Indirect Suhani told her mother that she had learnt many new theories that day.

3. **Direct** Shipra said to her, "1 want to see you now at my home".
   Indirect Shipra told her that she wanted to see her then at her home.

4. **Direct** He said to me, "1 was observing you at the party".
   Indirect He told me that he had been observing me at the party.

5. **Direct** Diansa said to Salman, "I will not do anything for the house members tomorrow".
   Indirect Diansa told Salman that she would not do anything for the house members the next day.

Exception
The tense of the reported speech, is kept as it is

1. If, it is a universal truth or 'habitual action or historical fact' irrespective of the reporting verb. E.g,

1. **Direct** Our teacher says/will say /said, “The Earth is round”.
   Indirect Our teacher says/will say/said that the Earth is round.

2. **Direct** My father said to me yesterday, “God always observes our passion for our dreams”.
   Indirect My father told me yesterday that God always observes our passion for our dreams.

3. **Direct** Neha said, “India is great”.
   Indirect Neha said (that) India is great.

4. **Direct** Mr Nene said to his students, “ I am unable to hear low voices”.
   Indirect Mr Nene told his students that he is unable to hear low voices.

5. **Direct** Ravi said to his younger brother, “Salim was also called Jahangir.”
   Indirect Ravi told his younger brother that Salim was also called Jahangir.

Change of Person

First and second person pronouns are changed to third person or according to the person spoken to or spoken about we must take care that during the change of person number and case of the pronoun remains same. The number and case can be changed by the following way :

Person	Subjective Case		Objective Case		Possessive Case	
	Singular	Plural	Singular	Plural	Singular	Plural
Ist	I	we	me	us	my	our
IInd	You	you	you	you	your	your
IIIrd	He /She / It	they	him / her /it	them	his /her / its	their

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PRACTICE SESSION :

Exercises :

Question 1:

Rewrite the sentences in reported speech :

1. John said, 'I love this city.'
2. "Be nice to others", Priya said.
3. "Don't waste your money" he said to the boys.
4. She said, "everyone loves her."
5. She said, "He works in a bank."
6. Seema said, 'I don't have a laptop."
7. Kanika said, "I don't go to the gym very often."
8. "We don't travel much", she said.
9. He said, "we like working in London."
10. She said, "she never gets up early on Sunday."

Question 2:

Change the following into indirect speech :

1. I said to Astika, "How do you travel to office everyday?" .
2. Shivam said to his mother, "Where does the rain come from?"
3. "Do you know the way to the paradise?"A crazy man asked me.
4. Maria said to her daughter, "At what time will you come back?"
5. The man said to the mechanic, "By what time will you have fixed the tyre of my bike?"
6. Varun says to Tarun, "Where did you go yesterday?"
7. "Is there anything special in it?" She asked.
8. "Hark! I can smell something here" said Mr Naik to his colleagues.
9. "Alas! we have lost the game." said Shishir to his friend.
10. "How intelligent you are!" Manjiri said to her grandfather.

Question 3:

Rewrite the sentences into direct speech from indirect speech :

1. Miara said that she wrote a letter.
2. Kiran said that she was going to the temple.
3. The teacher said that the Sun rises in the East.
4. He said that he had been reading a novel.
5. Nelson said that he had been playing badminton.
6. He ordered her to be careful.
7. Raman exclaimed joyfully that she was very beautiful.
8. He asked where she was going.
9. He said that he didn't know the way and asked her if she did.
10. The Science teacher told the class that ice floats on water.

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FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- 8 **Module- 1/1**

Link- https://play.google.com/store/apps/details?id=com.Extramarks.Smartstudy

http://ncert.nic.in/textbook/textbook.htm?hhvs1=0-18

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:

हिन्दी—वसंत भाग – 3

पाठ – 1 ध्वनि

कवि – सूर्यकांत त्रिपाठी निराला

कविता

अभी न होगा मेरा अंत

अभी – अभी भी तो आया है

मेरे मन में मृदुल वसंत –

अभी न होगा मेरा अंत।

हरे- हरे ये पात,

डालियां , कलियां, कोमल गात ।

मैं ही अपना स्वप्न- मृदुल – कर

फेरूंगा निद्रित कलियों पर

जगा एक प्रत्यूष मनोहर।

पुष्प-पुष्प से तन्द्रालस लालसा खींच लूंगा मैं ,

अपने नव जीवन का अमृत सहर्ष सींच दूंगा मैं,

द्वार दिखा दूंगा फिर उनको ।

है मेरे वे जहां अनन्त—

अभी न होगा मेरा अंत ।

1. उपर्युक्त कविता को पढ़कर आपके मन में जो चित्र उभरता है उसका चित्र बना कर उसे रंगों से भरें ।

2.शब्दकोश में वसंत शब्द का अर्थ देखिए तथा वसंत से संबंधित और कई और शब्द निर्माण कर लिखें जैसे- वसंत पंचमी।

3. वसंत पर अनेक सुंदर कविताएं हैं । कुछ कविताओं का संकलन तैयार करें ।

अधिगम का उद्देश्य : --

___ कविता को पढ़कर चित्र बनाने की विधि सीखना

____ शब्द निर्माण करना

___ शब्द कोश देखना सीखना

___ कविता के प्रति जागरूक करना

FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- VIII **Module-1/2**

SUBJECT- MATHEMATICS

CHAPTER NAME- RATIONAL NUMBERS

TOPIC: - RATIONAL NUMBERS AND ITS PROPERTIES

Link- https://www.extramarks.com
http://ncert.nic.in/ebooks.html
https://www.youtube.com/watch?v=9_Ak4tgnAt4

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

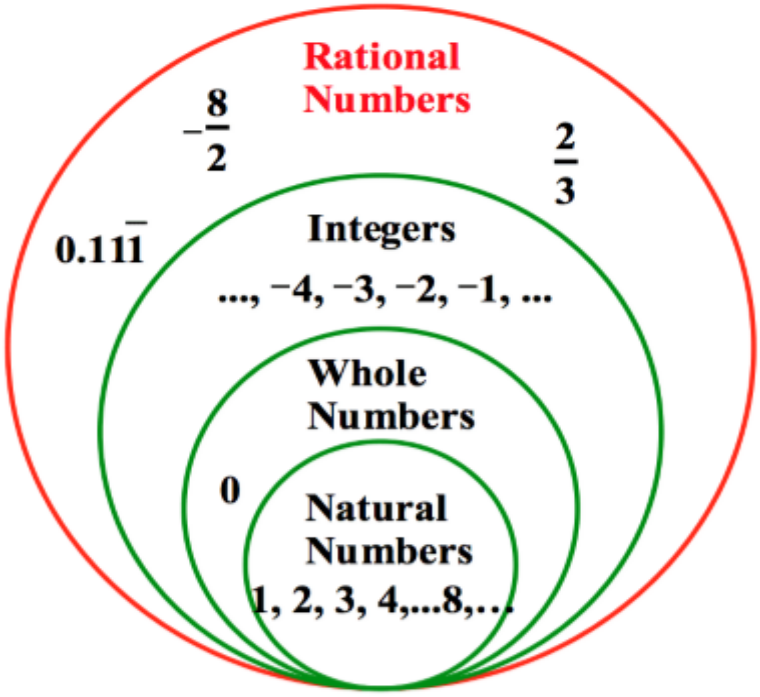
TUTORIALS:-

RATIONAL NUMBERS

INTRODUCTION

- Natural Numbers
  All counting numbers are natural numbers. It is denoted by N.
  N={ 1,2,3,4,5,6,7,8,9,…….}
- Whole Numbers
  All the natural numbers including zero are called whole numbers. It is denoted by W.
  W={ 0,1,2,3,4,5,6,……}
- **Integers**
  All positive natural numbers, negative of natural numbers including zero forms set of integers.it is denoted by I or Z.
  I or Z={ …….,-3,-2,-1,0,1,2,3,……..}

- **Rational Numbers**
  A number is called **Rational** if it can be expressed in the form p/q where p and q are integers (q > 0). It includes all natural, whole number and integers.
  Example: $\frac{1}{2}, \frac{4}{3}, \frac{5}{7}$, 1 etc.



➢ PROPERTIES OF RATIONAL NUMBERS

1) Closure property

This shows that the operation of any two same types of numbers is also the same type or not.

a) Whole numbers

If p and q are two whole numbers then

Operation	Addition	Subtraction	Multiplication	Division
Whole number	$p + q$ will also be the whole number	$p - q$ will not always be a whole number	pq will also be the whole number	$\frac{p}{q}$ will not always be a whole number
Example	$6 + 0 = 6$	$8 - 10 = -2$	$3 \times 5 = 15$	$3 \div 5 = 3/5$
Closed or not	Closed	Not Closed	Closed	Not Closed

b) Integers

If p and q are two integers then

Operation	Addition	Subtraction	Multiplication	Division
Integers	$p + q$ will also be an integer	$p - q$ will also be an integer	pq will also be an integer	$\frac{p}{q}$ will not always be an integer
Example	$-5 + 0 = -5$	$5 - 6 = -1$	$3 \times 5 = 15$	$3 \div 5 = 3/5$
Closed or not	Closed	Closed	Closed	Not Closed

c) Rational numbers

If p and q are two rational numbers then

Operation	Addition	Subtraction	Multiplication	Division
Rational numbers	$p+q$ will also be an integer	$p-q$ will also be an integer	pq will also be an integer	$\frac{p}{q}$ will not always be an integer
Example	$-\frac{4}{7}+\frac{6}{11}$ $=\frac{-44+42}{77}$ $=-\frac{2}{77}$	$\frac{3}{7}-\frac{8}{5}$ $=\frac{15-56}{35}$ $=-\frac{41}{35}$	$\left(-\frac{4}{5}\right)\times\left(-\frac{6}{11}\right)$ $=\frac{24}{55}$	$\frac{p}{0}$ $=not\ defined$
Closed or not	Closed	Closed	Closed	Not Closed

2) Commutative Property

This shows that the position of numbers does not matter i.e. if you swap the positions of the numbers then also the result will be the same.

a) Whole numbers

If p and q are two whole numbers then

Operation	Addition	Subtraction	Multiplication	Division
Whole number	$p+q=q+p$	$p-q\neq q-p$	$p\times q=q\times p$	$\frac{p}{q}\neq\frac{q}{p}$
Example	$6+3=3+6$ 9=9	$8-10\neq 10-8$ $-2\neq 2$	$3\times 5=3\times 5$ $15=15$	$3\div 5\neq 5\div 3$
Commutative	Yes	No	Yes	No

b) Integers

If p and q are two integers then

Operation	Addition	Subtraction	Multiplication	Division
Integers	$p+q=q+p$	$p-q\neq q-p$	$p\times q=q\times p$	$\frac{p}{q}\neq\frac{q}{p}$
Example	$-6+3=3+(-6)$ $-3=-3$	$5-11\neq 11-5$ $-6\neq 6$	$3\times 5=3\times 5$ $15=15$	$3\div 5\neq 5\div 3$

Commutative	Yes	No	Yes	No

c) Rational numbers

If p and q are two rational numbers then

Operation	Addition	Subtraction	Multiplication	Division
Rational numbers	$p + q = q + p$	$p - q \neq q - p$	$p \times q = q \times p$	$\frac{p}{q} \neq \frac{q}{p}$
Example	$-\frac{4}{7} + \frac{6}{11} = \frac{6}{11} + \frac{(-4)}{7}$	$\frac{3}{7} - \frac{8}{5} \neq \left(-\frac{8}{5}\right) - \frac{3}{7}$	$\left(-\frac{4}{5}\right) \times \left(-\frac{6}{11}\right) = \left(-\frac{6}{11}\right) \times \left(-\frac{4}{5}\right)$	$\left(-\frac{4}{5}\right) \times \left(-\frac{6}{11}\right) \neq \left(-\frac{6}{11}\right) \times \left(-\frac{4}{5}\right)$
Commutative	Yes	No	Yes	No

3) Associative property

This shows that the grouping of numbers does not matter i.e. we can use operations on any two numbers first and the result will be the same.

a) Whole numbers

If p, q and r are three whole numbers then

Operation	Addition	Subtraction	Multiplication	Division
Whole number	$p + (q + r) = (p + q) + r$	$p - (q - r) \neq (p - q) - r$	$p \times (q \times r) = (p \times q) \times r$	$p \div (q \div r) \neq (p \div q) \div r$
Example	3 + (2 + 5) = (3 + 2) + 5	8 – (10 – 2) ≠ (8 -10) – 2	3 × (5 × 2) = (3 × 5) × 2	10 ÷ (5 ÷ 1) ≠ (10 ÷ 5) ÷ 1
Associative	Yes	No	Yes	No

b) Integers

If p, q and r are three integers then

Operation	Integers	Example	Associative
Addition	p + (q + r) = (p + q) + r	(– 6) + [(– 4)+(–5)] = [(– 6) +(– 4)] + (–5)	Yes
Subtraction	p – (q – r) = (p – q) – r	5 – (7 – 3) ≠ (5 – 7) – 3	No

Multiplication	$p \times (q \times r) = (p \times q) \times r$	$(-4) \times [(-8) \times (-5)] = [(-4) \times (-8)] \times (-5)$	Yes
Division	$p \div (q \div r) \neq (p \div q) \div r$	$[(-10) \div 2] \div (-5) \neq (-10) \div [2 \div (-5)]$	No

c) Rational numbers

If p, q and r are three rational numbers then

Operation	Integers	Example	Associative
Addition	$p + (q + r) = (p + q) + r$	$-\frac{1}{2}+\left\{\frac{3}{7}+\left(-\frac{4}{3}\right)\right\}=\left\{-\frac{1}{2}+\frac{3}{7}\right\}+\left(-\frac{4}{3}\right)$ $LHS: -\frac{1}{2}+\left\{\frac{9-28}{21}\right\}=-\frac{1}{2}+\frac{19}{21}=\frac{17}{42}$ $RHS: \left\{\frac{-7+6}{14}\right\}+\left(-\frac{4}{3}\right)=-\frac{1}{14}-\frac{4}{3}=\frac{17}{42}$ Hence, LHS=RHS	YES
Subtraction	$p - (q - r) \neq (p - q) - r$	$-\frac{1}{2}-\left\{\frac{3}{7}-\left(-\frac{4}{3}\right)\right\}\neq\left\{-\frac{1}{2}-\frac{3}{7}\right\}-\left(-\frac{4}{3}\right)$ $LHS: -\frac{1}{2}-\left\{\frac{9+28}{21}\right\}=-\frac{1}{2}-\frac{37}{21}=\frac{38}{42}=\frac{19}{21}$ $RHS: \left\{\frac{-7-6}{14}\right\}+\left(-\frac{4}{3}\right)=-\frac{13}{14}-\frac{4}{3}=\frac{95}{42}$ Hence, LHS≠RHS	NO
Multiplication	$p \times (q \times r) = (p \times q) \times r$	$\frac{2}{3}\times\left\{-\frac{6}{7}\times\frac{4}{5}\right\}=\left\{\frac{2}{3}\times-\frac{6}{7}\right\}\times\frac{4}{5}$ $LHS: \frac{2}{3}\times-\frac{24}{35}=-\frac{48}{105}$ $RHS: -\frac{12}{21}\times\frac{4}{5}=-\frac{48}{105}$ Hence, LHS=RHS	YES
Division	$p \div (q \div r) \neq (p \div q) \div r$	$\frac{1}{2}\div\left\{-\frac{1}{3}\div\frac{2}{5}\right\}\neq\left\{\frac{1}{2}\div\left(-\frac{1}{3}\right)\right\}$ LHS: $\frac{1}{2}\div\left\{-\frac{1}{3}\times\frac{5}{2}\right\}=\frac{1}{2}\times-\frac{6}{5}=-\frac{3}{5}$ RHS: $\left\{\frac{1}{2}\times-3\right\}\div\frac{2}{5}=-\frac{3}{2}\times\frac{5}{2}=-\frac{15}{4}$ Hence, LHS≠ RHS	NO

4) The Role of Zero in Numbers (Additive Identity)

Zero is the additive identity for whole numbers, integers and rational numbers.

	Identity		Examples
Whole number	a + 0 = 0 + a = a	Addition of zero to whole number	2 + 0 = 0 + 2 = 2
Integer	b + 0 = 0 + b = b	Addition of zero to an integer	-2 + 0 = 0 + (-2) = -2
Rational number	c + 0 = 0 + c = c	Addition of zero to a rational number	2/5 + 0 = 0 + 2/5 = 2/5

5) The Role of one in Numbers (Multiplicative Identity)

1 is the multiplicative identity for whole numbers, integers and rational number

	Identity		Examples
Whole number	a ×1 = a	Multiplication of one to the whole number	5 × 1 = 5
Integer	b × 1= b	Multiplication of one to an integer	- 5 × 1 = – 5
Rational number	c × 1= c	Multiplication of one to a rational number	$\frac{2}{5} \times 1 = \frac{2}{5}$

6) Negative of a Number (Additive Inverse)

	Identity		Examples
Whole number	a +(- a) = 0	Where a is a whole number	5 + (-5) = 0
Integer	b +(- b) = 0	Where b is an integer	5 + (-5) = 0
Rational number	c + (-c) = 0	Where c is a rational number	$\frac{2}{5} + \left(-\frac{2}{5}\right) = 0$

7) Reciprocal (Multiplicative Inverse)

The multiplicative inverse of any rational number $\frac{p}{q}$ is $\frac{q}{p}$.

Example×: Write the multiplicative inverse of $\frac{2}{5}$.

Solution: Multiplicative inverse of $\frac{2}{5} is \frac{5}{2}$

- Distributivity of Multiplication over Addition and Subtraction for Rational Numbers

This shows that for all rational numbers p, q and r

1. $p(q + r) = pq + pr$
2. $p(q - r) = pq - pr$

Example: Check the distributive property of the three rational numbers $\frac{4}{7}, -\frac{2}{3}$ and $\frac{1}{2}$.

Solution: LHS: $p(q + r)$

$= \frac{4}{7} \times \left\{\left(-\frac{2}{3}\right) + \frac{1}{2}\right\}$

$= \frac{4}{7} \times \frac{-4+3}{6}$

$= \frac{4}{7} \times -\frac{1}{6}$

$= -\frac{2}{21}$

RHS: $pq + pr$

$= \left\{\frac{4}{7} \times \left(-\frac{2}{3}\right)\right\} + \left\{\frac{4}{7} \times \frac{1}{2}\right\}$

$= -\frac{8}{21} + \frac{2}{7}$

$= -\frac{2}{21}$

Hence, LHS = RHS.

This shows that distributive property of multiplication over addition holds for rational numbers.

HOME ASSIGNMENT

1) Write the additive inverse of the following
   a) $\frac{2}{7}$ $b) -\frac{5}{9}$ $c) 8/17$ $d) 1/7$
2) Write the multiplicative inverse of the following
   $a) \frac{2}{7}$ $b) -\frac{5}{9}$ $c) 8/17$ $d) 1/7$
3) Verify associative law over addition and multiplication for the following rational numbers
   i) $a = \frac{1}{3}, b = \frac{1}{5}\ and\ c = \frac{2}{3}$
   ii) $a = -\frac{1}{5}, b = -\frac{2}{7}\ and\ c = \frac{1}{2}$
4) Verify distributive law of multiplication over addition for the following rational numbers
   i) $a = \frac{1}{3}, b = \frac{1}{5}\ and\ c = \frac{2}{3}$
   ii) $a = -\frac{1}{5}, b = -\frac{2}{7}\ and\ c = \frac{1}{2}$
5) Fill in the blanks:
   a) The product of a number and its product is _____.
   b) The rational number _____ has no reciprocal.
   c) The reciprocal of the reciprocal of a number is _____.
   d) The rational number _____ is neither positive nor negative.
   e) _____ is the only rational number which is equal its additive inverse.

LEARNING OUTCOME: -

After studying this topic, students will be able to:

- Define rational number.
- Describe the properties of rational numbers.
- Use the properties of rational numbers to solve the problems.
- Define identity element and inverse element
- Verify the various properties for rational numbers.

FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- VIII **Module-1/1**

SUBJECT- SANSKRIT (GRAMMAR)

CHAPTER NAME- Chapter-1

TOPIC: संधि

Link- https://youtu.be/aZpvpzcm5R4

Link- https://www.extramarks.com

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:- संधि

- संधि का साधारण अर्थ है- मेल।
- दो वर्णो के निकट आने से उनमें जो विकार होता है, उसे संधि कहते हैं ।
- दूरवर्ती शब्दों या वर्णो में संधि नहीं होती है ।
- संधि के प्रकार---
  - स्वर संधि
  - व्यंजन संधि
  - विसर्ग संधि

1) स्वर संधि—दो स्वरों के मेल से होने वाले विकार को स्वर संधि कहते हैं ।जैसे- हिम +आलय = हिमालय ।
   - स्वर संधि के प्रकार—**1)** दीर्घ संधि 2) गुण संधि 3) वृधि संधि 4) यण संधि 5) अयादि संधि ।

   1) दीर्घ संधि—अ,आ,इ,ई,उ,ऊ,ऋ वर्णो के बीच होने वाली संधि दीर्घ संधि कहलाती है । जैसे- अ+अ=आ धर्म +अर्थ = धर्मार्थ ।
   अ+आ=आ हिम +आलय =हिमालय ।
   इ+इ=ई कवि +इच्छा = कवीच्छा ।

2) गुण संधि --जब अ,आ वर्ण के आगे अगर इ,ई वर्ण जोड़ा जाए तो ए वर्ण बनता है ।जब अ,आ वर्ण के आगे अगर उ,ऊ वर्ण जोड़ा जाए तो ओ वर्ण बनता है । इसी तरह अ,आ वर्ण के आगे अगर ऋ वर्ण जोड़ा जाए तो अर् बनता है ।इसे गुण संधि कहते हैं ।
जैसे—अ+इ=ए नर+इंद्र = नरेन्द्र
अ+ऊ= ओ जल+ऊर्मि = जलोर्मि

3)वृद्धि संधि—अ,आ वर्ण का ए,ऐ,औ से मेल होने पर ऐ,औ बनता है । इसे वृद्धि संधि कहते हैं । जैसे - अ+ए=ऐ एक+एक= एकैक।
आ+ओ= औ महा +औषधि = महौषधि ।

4) यण संधि जब इ,ई,उ,ऊ,ऋ,ल के आगे कोई स्वर आता है तो ये क्रमशः य्, व्, र्, ल् में बदल जाता है । जैसे - इ+अ=य् अति +अल्प =अत्यल्प ।
ऋ+आ= र् पितृ + आज्ञा = पित्राज्ञा ।

5) अयादि संधि - ए,ऐ,ओ,औ के बाद कोई स्वर आता है तो ए का अय, ऐ का आय और औ का आव् हो जाता है । जैसे - ए+अ= अय् ने + अयन = नयन।
ऐ+अ= आय् नै +अक = नायक ।

- व्यंजन संधि—व्यंजन का स्वर या व्यंजन के साथ मेल होने पर जो परिवर्तन होता है, उसे व्यंजन संधि कहते हैं । जैसे—उत + उल्लास = उल्लास।
  अप + ज= अब्ज ।

- विसर्ग संधि -- जब संधि करते समय विसर्ग के बाद स्वर या व्यंजन वर्ण के आने से जो विकार उत्पन्न होता है, उसे विसर्ग संधि कहते हैं ।
  जैसे-- अंतः + करण = अन्तकरण ।
  निः +चल = निश्चल ।
  निः +संदेह = निस्संदेह ।

- पठित पाठ के आधार पर कुछ अभ्यास कार्य—
- संधि करें—
  - क) सप्त +ऋषि =
  - ख) मम +एव =
  - ग) सर्व +उपरि =
  - घ) पितृ +आदेश =
  - ङ) यदि +अपि =

संधि विच्छेद करें –

क) महर्षि = _____+_____।

ख) चापि =_____+_____।

ग) ममेच्छा = _____+_____।

घ) अध्ययनाभिलाषा =_____+_____।

ङ) भवति =_____+_____।

LEARNING OUTCOME:-

After studying this topic, students will be able to:

क) इस पाठ के द्वारा छात्र संधि की परिभाषा जानें ।

ख) छात्र संधि के भेद जानेंगे ।

ग) छात्र स्वर संधि की परिभाषा तथा उसके भेद को विस्तार में जानेंगे ।

घ) छात्र व्यंजन संधि तथा विसर्ग संधि के विषय में विस्तार में जानेंगे ।

FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- VIII **Module-1/1**

SUBJECT-SCIENCE

CHAPTER NAME- CROP PRODUCTION AND MANAGEMENT

TOPIC: CROPS AND ITS TYPES, PREPARATION OF SOIL

Link- 1) http://ncert.nic.in/textbook/pdf/hesc101.pdf

2) https://www.extramarks.com/ncert-solutions/cbse-class-8/science-crop-production-and-management

3) https://www.youtube.com/watch?v=khXPo_QY0B8

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TUTORIALS:

INTRODUCTION:

The science that deals with the cultivation of plants and rearing of animals for human use is called **agriculture**.

When plants of the same kind are grown on a large scale, they are called **crops**.

The crops are divided on the basis of the seasons in which they grow:

Kharif Crops- The crops which are sown in the rainy season (june-september)



PADDY COTTON MAIZE

Rabi Crops- These are grown in the winter season in the month of October, and harvested in the month of March.



PEA MUSTARD WHEAT

Zaid Crops- These are summer season **crops** grown on the sub-continent on dry lands which do not have to wait for monsoons. They grow in the long duration between Rabi and Kharif **crop** season, mainly from March to June.



WATERMELON CUCUMBER MUSKMELON

Basic practices of crop production:

- Preparation of soil
- Sowing
- Manure And Fertilizers

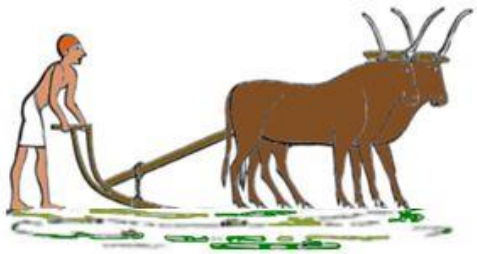
- Irrigation
- Protection From Weeds
- Harvesting
- Storage

1.Preparation of Soil

The soil is loosened and tilted before the seeds are sown. Ploughs are used for the purpose. If the soil contains big lumps, they are broken with the help of a hoe. This process aerates the soil so that the roots breathe easily. The nutrients and minerals get properly mixed with the soil and come at the top. Thus, the fertility of the soil increases and is fit for plantation. The process of loosening and turning of soil is called tilling or ploughing.

Agricultural Implements:

PLOUGH- Plough contains a strong iron strip called plough share and a long log of wood called plough shaft. There is a handle on one end and another handle is attached to a beam placed on bull's neck. This can easily be operated by a pair of bulls or man.



HOE-It consists of long rod of wood. A strong broad plate of iron is fixed to one of its end and works like blade.It is also pulled by animals. It is used for removing weeds and for loosening soil.

CULTIVATOR- When plough is attached to a tractor is called as cultivator.It saves time and labour.

2.Sowing of Seeds

The good quality, infection-free seeds are collected and sown on the prepared land. The seeds should be sown at proper depths and proper distances.

Seeds are sown through –Traditional tools and seed drill.

3.Adding Manure and Fertilizers

The substances which are added to the soil in the form of nutrients for the healthy growth of plants are called manure and fertilizers.

Fertilizer	**Manure**
It may be artificial or natural substance.	It is a natural substance.
These are chemicals that are added to the soil to increase its fertility and productivity.	These are obtained by dead and decaying plants and animals.
Prepared in factories	Prepared in fields.
Does not provide humus to the soil.	Provides humus to the soil
Costly	Cost-effective
Rich in plant nutrients	Less rich in plant nutrients

It harms the organisms present in the soil and also causes health issues in people consuming the crop.	It causes no harm to the organisms and improves soil quality.

QUESTIONS:-  Let's think and Answer

1. Name 3 Kharif, rabi, zaid crops.
2. Define crops.
3. List the various agricultural practices.
4. Explain how the loosening of soil is done. And why it is important?
5. What are the agricultural implements used in preparation of soil.
6. What are the points one should keep in mind while choosing a healthy seed for sowing?

LEARNING OUTCOME:-

After studying this topic, students will be able to:

- Describe agriculture and crop.
- Develop critical thinking about the usage of agricultural implements.
- Understand the agricultural practices involved in farming.
- Define some important terms like ploughing, tilling etc.

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FIRAYALAL PUBLIC SCHOOL, RANCHI

Grade- VIII

Subject – SST(Geography)

Topic - Resources **Module- 1/1**

Link- https://www.extramarks.com

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

https://youtu.be/01giR60nEcw

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TUTORIALS:

RESOURCES

There are many things that we use in our day to day life, example – water, electricity, text book etc. They all are being used because they have utility. Utility or usability is what makes an object a resource. Things become resource only when they have value. Value means worth some resource have economic value and some may not have for example metal have economic value but a a beautiful landscape may not.

MEANING OF RESOURCE

Anything that can be used to satisfy a need or has value can be called a resource. All resources have utility and value. The two substances change the resources are time and technology.

Note:- Technology- It is the application of latest knowledge and skill in doing for making things.

TYPES OF RESOURCES

Resources are of three kinds -natural, human made and human.

1. NATURAL RESOURCES :- resources that are drawn from nature and use without modification are called natural resources.
   Natural resources are classified into different group depending upon their level of development and use ; Origin ; stock & distribution.
   a) On basis software development and use

ACTUAL RESOURCES	POTENTIAL RESOURCES
They are those resources whose quantity is known. These resources are used in the present. For example :- the rich deposits of coal in in Ruhr region of Germany and petroleum in west Asia, the dark soils of the Deccan Plateau in Maharashtra.	Potential resources are those resources whose entire quantity may not be known and these are not being used at present. These resources could be used in the future. For example:- Uranium found in Ladakh that could be used in future.

b) On the basis of origin

BIOTIC	**ABIOTIC**
These resources are obtained from living world. For example, plants and animals.	These resources are obtained from non living world. For example, mineral,rock,water solar and wind energy etc.

C) on the basis of stock and distribution:

stock

RENEWABLE	NON-RENEWABLE
These are those which get renewed for replenished quickly. Some of these are unlimited and or not affected by human activity, such as solar and wind energy. Yet they have to be used properly.	These are those resources which have limited stock once the stocks are exhausted it may thousands of years to be renewed are replenished. For example, coal ok, petroleum, natural gas.

distribution

UBIQUITOUS	LOCALISED
Resources that are found everywhere example – air.	Resources that are found at certain place , example copper and iron ore.

NOTE:- the distribution of natural resources depends upon number of physical factors like terrain, climate and altitude. Distribution of resources is unequal because these factors defer from place to place.

2. HUMAN MADE RESOURCES:- At times, natural substances becomes resources only after their original form have changed. People make use of natural resources to manufacture human made resources like buildings , bridges, roads, machinery and vehicles. Another example is technology.

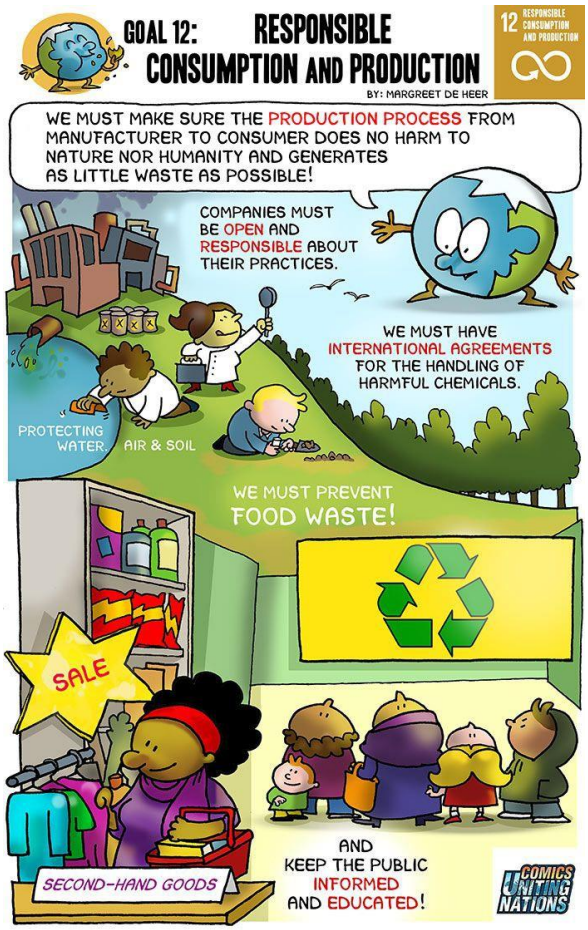
3. HUMAN RESOURCES:- Thisis refers to the number (quantity) and abilities (mental & physical) of the people. That is why human beings are special resource. People as a resource uses their knowledge, skill and technology to make things better. Education and health in making people valuable resources.

CONSERVATION OF RESOURCES

Imagine a situation where all the water on the earth had dried up and all the trees were cut down. There is no shade and nothing to eat or drink. If we are not careful then even renewable resources can become scarce and the non-renewable once can definitely get exhausted. Using resources carefully and giving them time to get renewed is called resource conservation. Carefully utilising resources so that besides meeting the requirements of the present , it also takes care of future generations is called sustainable development. There are ways to conserve resources. Each person can contribute by a reducing consumption, recycling and reusing things.

The future of our planet and the people is dependent on our ability to maintain and preserve the life support system that nature provide. Therefore we are are required to ensure that-

- All uses of renewable resources are sustainable.
- The diversity of life on the earth is conserved.
- The damage to natural environmental system is minimised.



Let Examine- Answer the following questions:-

1)Why are resources distributed unequally over the earth?
2) What do you mean by resources?
3) Differentiate between actual and potential Resources with examples.
4) Differentiate between ubiquitous and localised resources with examples.
5) Briefly classify resources on the basis of their stock content.
6) what do you mean by human-like made resources?

7) What is Human resources? Which two factors make it valuable.
8) what is resource conservation?
9) what is sustainable development?
10) what are the three duties all people have to do to support nature?

Learning outcome:-
1. Students will know meaning of resources and classify the usable resources.
2. Students will know different kinds of resources and were they available.
3. They will understand the need to converse resources and how practically all human beings can contribute to it.