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JOYFUL LEARNING ACTIVITIES FOR IMPROVING READING, SCIENTIFIC & MATHEMATICAL LITERACY

The Programme for International Student Assessment (PISA) is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students who are nearing the end of their compulsory education. PISA assesses how well they can apply what they learn in school to real-life situations. So far , 90 countries have participated in the assessment which began in 2000. Every three years, students are tested in the key subjects: Reading, Mathematics and Science.

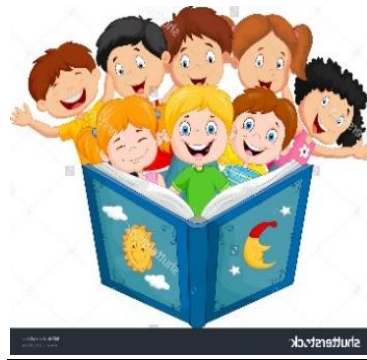
The next PISA testing will be done in 2021. As in previous cycles, students will be tested in Reading, Mathematics and Science. This time the focus will be on mathematics. In addition, students will be tested in an innovative subject - Creative Thinking.

IMPLEMENTATION

With a view to prepare students for PISA 2021, suggestive activities (I to VI) will be administered in all the concerned schools across the length and breadth of India, throughout the session 2019- 20. The activities are of one hour duration each and will be conducted on every Monday.

In case it is a holiday on Monday, the activity may be conducted on the next working day of the same week.

The month wise schedule enclosed herewith must be strictly adhered to, so as to sensitize, train and motivate the students for PISA 2020 (Field Trial) and PISA 2021.



**Schedule of Activities to be undertaken for improving Reading,
Science & Maths Literacy for PISA**

Month	Activity
August 2019	Fun with Words Level 1 Level 2 Level 3
September 2019	Puzzles & Riddles Level 1 Level 2 Level 3
October 2019	The Gift of the Gab Level 1 Level 2 Level 3
November 2019	Let's Find and Analyse Level 1 Level 2 Level 3
December 2019	Data Interpretation Level 1 Level 2 Level 3
January 2020	Reading Skills Level 1 Level 2 Level 3
February 2020	Test on PISA Like Items Week 1- PISA Test items based on proficiency levels 1& 2 Week 2- PISA Test items based on proficiency levels 3 & 4 Week 3- PISA Test items based on proficiency levels 5 & 6

TYPES OF ACTIVITIES

Activity I- Fun with Words

Types of Activities: Dictation, antonyms, homonyms, spell bee, jumbled words, one word substitution



LEVEL – 1

Types of Activities: Easy and familiar words (Words used in text books)

LEVEL – 2

Types of Activities: Words beyond text books (words from different sources like newspapers, magazines, media & other books).

LEVEL – 3

Types of Activities: Words beyond text books with difficulty level higher than level 2

Activity II- Puzzles & Riddles

Riddles improve children's logical thinking ability, comprehension and creativity. Puzzles teach children to use their own minds to figure out how to solve problems and think in an analytical way.



LEVEL – 1

Types of Activities: Sudoku, Word Search, Kakuro

The activities in this level are designed with a number of clues so that they are easy to solve. The words incorporated in the Word Search Activity are based on text books and have an interdisciplinary focus.

LEVEL – 2

Types of Activities: Sudoku, Crosswords (with a few Clues), Kakuro

The activities in this level are interdisciplinary, comparatively more difficult, and with fewer hints. The grids of Sudoku and Kakuro are slightly more complex and challenging. Word search is replaced by Crosswords at this level

LEVEL – 3

Types of Activities: Sudoku, Kakuro, Cryptic Crossword.

The grids of Sudoku and Kakuro are complex, with minimal hints. It aims at making

children adept at solving puzzles that require higher order thinking skills. Crossword also becomes more challenging at this level.

Activity III-The Gift of the Gab



LEVEL – 1

Types of Activities: Elocution (topics which require some research/ collection of facts etc.) **Topics have been listed in the booklet and have to be given to the students two days in advance.**

Elocution offers students the opportunity to not only improve speaking ability, but also develop many of the qualities and skills that build successful speakers, such as the ability to speak fluently, think critically, apply wit and humour, and use vocal inflections and intonations to emphasize important points and ideas.

LEVEL – 2

Types of Activities: Debate / Group discussion on topics related to current events, social issues, solutions etc.

Debate forces students to set aside personal bias and to look at topics and resolutions objectively. It is important for students to understand the current challenges facing the world and to be able to develop opinions in order to work towards solutions. Group discussions are required to analyse all frameworks of possible argumentation. With this mindset, students are required to research possible view points and construct their own arguments.

Students can be divided into groups to conduct Group Discussion in the class

LEVEL – 3

Types of Activities: Extempore – Just a minute (JAM)- 60 seconds to prepare & 60 seconds to present

Extempore is an impromptu speech that is delivered with little or no preparation. Even though it is spontaneous, it requires great effort to deliver an extempore successfully.

JAM can be organised in groups of four where the class size is too big. Each speaker speaks for 60 seconds. If the first speaker falters or stops before completing a minute, the second speaker takes on and so on.

Activity IV- Let's Find and Analyze



This activity expects students to conduct and report surveys. The parameters covered are – linking knowledge to life, observation & classification, prioritization, and accuracy of data collection.

LEVEL – 1

This exercise requires pair work. The class will be divided in small teams of two students each who will take up survey on water, electricity, health audit of the students in the school, etc. **The survey will be limited to the school campus.**

LEVEL – 2

This level requires students to work individually, within community and neighborhood and take up survey on areas like consumption of fuel- LPG/Petrol, Diesel etc. water, electricity, and other such topics.

LEVEL – 3

Preparing a questionnaire defining the parameters that can be taken up for audit. The students will be required to prepare their own questionnaire to conduct a real time survey. The questionnaire should be relevant to the topic chosen by the student.

Activity V- Data Interpretation

Interpretation is the process of making sense of numerical data that has been collected, analysed, and presented. It includes:

Graphic interpretation, Abstraction, Data handling



Data Interpretation

LEVEL – 1

Interpretation of **BAR GRAPHS, PIE CHARTS, OGIVES, HISTOGRAMS**

LEVEL – 2

Interpretation of data given in charts

LEVEL – 3

Students will be expected to graphically present the data given in a situation.

Activity VI- Reading Skills

The aim of this activity is to measure the students' capacity to understand, use and reflect on written texts in order to achieve goals, develop knowledge and potential, and participate in society. This activity sums up all kinds of activities that the students have practised earlier.



LEVEL 1

Level 1 aims at enabling students to process the text, understand its meaning, locate information and develop interpretational skills. Developing the ability to draw inferences from a passage, to identify the main thought of a passage and answer questions expressively and creatively are the key objectives of this level.

LEVEL 2

Level 2 aims at honing the students' intensive reading skills and developing their ability to distinguish between skimming and scanning. Students should be able to synthesize various bits of information and draw conclusions. They should be able to express the central idea of a given passage creatively and accurately. The students will gain practice

in discerning the numerous techniques of reading with a purpose, organizing headings and sub headings and integrating new knowledge with what they already know.

LEVEL 3

Level 3 enables students to enhance their reading ability and understand longer pieces of writing. It encourages the learners to take charge of their own learning. The students are forced to draw inferences, reach conclusions and present their ideas in a structured manner, using their perception and comprehension. It aims at encouraging students to expand their vocabulary, present ideas using their own experiences in correlation with the theme of a given passage.

Activity VII- Test of PISA like Items

The proficiency levels of PISA describe what students typically know and can do at given levels of proficiency. There are six levels of proficiency in PISA, level 1 being the lowest and level 6 being the highest.

I. Fun with Words

For language to be effective, an important prerequisite is, abundant vocabulary or word power. Words are the very essence of written communication. Words translate thoughts and carry the message through to the reader.

Most of the words have many shades of meaning. The appropriate word or set of words depend on the context, tone and gravity of the message and also on the relationship with the person to whom it is addressed.

Much as one would like, it is not always possible to readily recall the exact word. As a result, one may often find oneself groping for the right word. The exercises developed to enhance word power will help the students think quickly and enhance their vocabulary.



FUN WITH WORDS

Instructions for Teachers

- This assignment carries three levels of activities.
- Each level consists of activities based on spellings, synonyms, antonyms, homonyms, idioms etc.
- Level 1 includes words used in the prescribed text.
- Level 2 &3 include words beyond the text books.

GUIDELINES FOR THE CONDUCT OF ACTIVITIES-

LEVEL 1-

ACTIVITY 1- SPELL BEE

NOTE FOR THE TEACHER –The list of words given (from prescribed text books) can be used for conducting spell bee. In case more words are required, a list of words can be prepared from the prescribed text.

LEVEL 2 – CLASS VIII ACTIVITY 1 –

NOTE FOR THE TEACHER-

Divide the class into groups depending on the student strength. Prepare cards with the words written on them. Give one set to each group. Give students time to prepare the chain using each card. Then ask each group to give reasons as to how each link of chain is related. The most logical chain

The words are – cat, dog, bone, skeleton, muscles, run, race, car, driver, formula 1, victory, fame, happiness.

CLASS IX ACTIVITY 1 –

NOTE FOR THE TEACHER – Write any alphabet randomly on the board. Give students time to write down a word beginning from that alphabet for each category till any student claims to have written all words with the letter given by you. Check the responses of the student who claimed first. If all are correct give him one mark. In case any word is found incorrect no mark will be awarded. You can repeat with new letters as many times as you like. (At least 10 letters to be given by the teacher)

CLASS X ACTIVITY 1 –

NOTE FOR THE TEACHER Let us say the class is divided into two groups of 10 students each. Prepare two identical sets of slips with around 10 similar target words for each team. The sets of slips are given to the group leaders of both teams. They in turn distribute one word each to the group members. The teacher calls out a word from her copy of the words given to the students. From each team, one student who has been assigned that word, will stand up, run to the blackboard and write a sentence using that word. The student who writes the correct sentence with the right syntax and spellings is awarded marks. Likewise, the same procedure is adopted for 10 words. The team that scores the maximum marks, wins.

FUN WITH WORDS

LEVEL 1

CLASS VIII

ACTIVITY 1 – SPELL BEE



This is an oral round. The class will be divided into two or three groups, depending on the class strength. The teacher will say a word and students from each group will take turns to spell the word. If one team gets it wrong, the word will pass on to the next team. The team that will spell the passed on word correctly will get bonus points. The team that has more points is the winner.

1.SLEUTHING
2. OBEISANCE
3. DELIRIOUS
4. SOJOURN
5.ARCHITECT
6.ANNIHILATION
7.PSYCHE
8. TRAUMATISED
9. CLAUSTROPHOBIC
10. ARCHIPELAGO

11. CLICHÉ
12. EXHILARATING
13. CONSCIENCE
14. TSUNAMI
15. GRIEVANCES
16. SARCASM
17. INCANDESCENCE
18. SUBTLE
19. HANDKERCHIEF
20. TREASURE

ACTIVITY 2: GUESS WHAT?



Given below are the meanings of some words. Read the meaning and the clue and guess the word.

1. Shocked, distressed (I am an 11 letter word beginning with T)

2. A sudden or large increase (I am a 7 letter word beginning with U)

3. View of a wide area (I am an 8 letter word beginning with P)

4. Trace , shade (I am a 5 letter word beginning with T)

5. Announce or bring the news (I am a 6 letter word beginning with H)

6. Thoughtful (I am a 7 letter word beginning with P)

7. Kind , gentle (I am a 6 letter word beginning with B)

8. Threat , danger (I am a 6 letter word beginning with M)

9. Stimulating , fresh and invigorating (I am a 7 letter word beginning with B)

10. Moral corruption (I am a 9 letter word beginning with D)

ACTIVITY 3– WHAT FITS BEST?



Choose the word that best fits in the blank.

1. His other problems _____ into insignificance beside the unforeseen mishap.

- (i) Paled ii) Pailed

2. Mountains are nature at its best. _____ beauty and majesty pose a great challenge.

- i) There ii) Their

3. That was a _____ attempt. You can do better.

- i) weak ii) week

4. I'll ask her _____ she wants to go.

- i) weather (ii) whether

5. The organization will _____ donations through the first of the month.

- i) accept ii) except

ACTIVITY 4 – Antonyms



In the following select the antonyms of the words given below:

1. PROCURE

- a. acquire
- b. realize
- c. grant
- d. amass

2. ORDEAL

- a. delight
- b. tribulation
- c. distress
- d. trouble

3. DELIRIOUS

- a. excited
- b. depressed
- c. bewildered
- d. crazed

4. CEASE

- a. conclude
- b. stop
- c. depart
- d. continue

5. OBSCURE

- a. conceal
- b. bleary
- c. obvious
- d. ambiguous

6. ACQUIESCE

- a. accept
- b. accede
- c. object
- d. consent

7. VIRTUOUS

- a. decorous
- b. righteous
- c. ethical
- d. atrocious

8. SINISTER

- a. dangerous
- b. alarming
- c. propitious
- d. alarming

9. GLUM

- a. morose
- b. elated
- c. dismal
- d. sulky

10. FRENZY

- a. violent
- b. furore
- c. serene
- d. rampage

ACTIVITY 5: WHERE AM I GOING WRONG?



One fragment of the sentence is incorrect. Underline the fragment which you think is incorrect. In case you find all fragments correct, underline the last option – No error

1. A) The garden was B) as big as a park C) but Stephen Hawking covers D) every inch E) No error
2. A) No one die B) in a football match C) No children are orphaned. D) No wives become widows. E) No error
3. A) Katchall is one of B) the largest islands C) in Andaman and Nicobar islands. E) No error
4. Greatness lies in truth. B) Truth is best expressed C) in once actions D) and deeds. E) No error
5. A) Each man carry B) within himself his own mountain peak. C) He must climb on it D) to reach a fuller knowledge E) No error

FUN WITH WORDS

CLASS VIII

LEVEL 2

ACTIVITY 1 – MAKE A LINK



A student will pick a card and read it aloud to his/her group. The next group member will pick the next card with a word associated with the first word. Then the next member will choose the next word associated with the second word and this way the team that completes the chain first using all words wins. The group members will give the reason as to how each card is related in the chain.

E.g. Dog- bone- skeleton- muscles- strength- weakness- medicines- doctor- hospital- operations- physiotherapy and so on ...

ACTIVITY 2– FIT ME



Choose the relevant word from the box below and use its correct form in the blanks that follow. The first one has been underlined as an example.

society anxiety sale invitation reason

1. We studied American society last year.

I usually _____ with my friends on Saturday.

Our _____ studies class is very good.

Are you a _____ active person?

2. Her _____ worried me.

I was _____ about my final grade.

I waited for the plane _____

3. They had a big _____ at Sarojini Market.

Do they _____ books at that store?

That old car is not in _____ condition.

4. Where are all the _____ guests?

I _____ Rahul over for lunch yesterday.

Did you get a/an _____?

5. What is the _____ for your absence?

He writes _____ well.

The prices there are not _____.

We think and _____ in our maths class.

ACTIVITY 3: GUESS WHAT?



Here are the meanings of some words. Read the meaning and the clue and guess the word.

1. Science of reasoning (I am a 5 letter word beginning with L)

2. First appearance in public as a performer or player (I am a 5 Letter word beginning with D)

3. A place of residence (I am a 5 letter word beginning with A)

4. Express complete disapproval of (I am a 7 letter word beginning with C)

5. Gloomy (I am a 6 letter word beginning with M)

6. Proud (I am a 7 letter word beginning with H)

7. Leave something or someone (I am a 7 letter word beginning with A)

8. Annoy (I am a 3 letter word beginning with V)

9. Something unusual, strange ,abnormal (I am a 5 letter word beginning with W)

10. Although (I am a 6 Letter word beginning with A)

ACTIVITY 4-WHAT FITS BEST?



Choose the word that best fits in the blank.

1. Every morning my father likes to look at the _____ on the grass.
i) do ii) due iii) dew
2. Marie ordered a _____ pizza for lunch. It was the perfect size.
i) personal (ii)personnel
3. I always order my hamburger _____. It tastes best that way.
i) Plain ii) Plane
4. Their words had a negative _____ on my self-esteem.
i) affect ii) effect

5. Madrid is the _____ city of Spain.

i) capitol

ii) capital

ACTIVITY 5: WHERE AM I GOING WRONG?



One fragment of the sentences given below is incorrect. Underline the fragment which you think is incorrect. In case you find all fragments correct, underline the last option – No error.

1. Rohan was leading (a) a happy and leisurely (b) life after his retirement (c) from service (d) No error
2. I (a) have visited (b) Niagara Falls (c) last weekend (d) No error.
3. She's (a) married (b) with(c) a dentist (d) No error.
4. Although (a) it was raining, (b) but we (c) had the picnic (d) No error.
5. Please (a) explain me (b) how improve(c) my English (d) No error.

FUN WITH WORDS

CLASS VIII

LEVEL 3

ACTIVITY 1 – SPELL BEE



. This is an oral round. The class will be divided into two or three groups, depending on the class strength. The teacher will say a word and students from each group will take turns to spell the word. If one team gets it wrong, the word will pass on to the next team. The team that will spell the passed on word correctly will get bonus points. The team that has more points is the winner.

1. Psychology	11. Nuisance
2. Flabbergasted	12. Irrelevant
3. Acquaintance	13. Vengeance
4. Aesthetic	14. Handkerchief
5. Mischievous	15. Amateur
6. Pneumonia	16. Ballet
7. Gratuitous	17. Miscellaneous
8. Aficionado	18. Millennium
9. Sophisticated	19. Rhythm
10. Eloquent	20. Knowledge

ACTIVITY 2– CORRECT ME PLEASE



The words here are wrongly spelt. Write correct spellings in the space provided

1. CONCENSUS _____
2. ACOMMODATE _____
3. MATHAMATICS _____

- 4. GRAMMER _____
- 5. ACQUAINTENCE _____
- 6. ARGUMENT _____
- 7. KINDERGARTAN _____
- 8. IRRESISTABLE _____



ACTIVITY 3: HOW AM I RELATED?

Here are pairs of words that are connected by some rule or similarity. Choose the pair that best relates to the pair given.

1. Glove : Hand

Neck : Collar

A.

Tie : Shirt

B.

Socks : Feet

C.

Coat : Pocket

D.

2. Lawyer : Court

A. Chemist : Laboratory

B. Businessman : Office

C. Labour : Factory

D. Athlete : Olympics

3. Letter : Word

A. Page : Book

B. Product : Factory

C. Club : People

D. Home work : School

4. Lively : Dull

A. Employed : Jobless

B. Flower : Bud

C. Factory : Labour

D. Happy : Gay

5. Silence : Noise

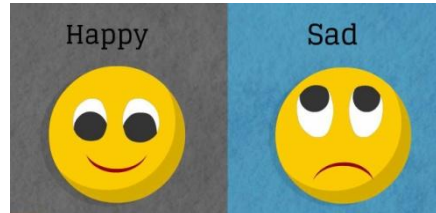
A. Quiet : Peace

B. Baldness : Hair

C. Talk : Whisper

D. Slumber: Sleep

ACTIVITY 4 – WHAT’S MY OPPOSITE



Select the antonyms of the words from the given options:

1. VACATE

A. abandon B. charter C. sever D. occupy E. Discharge

2. AMASS

A. disperse B. meld C. muster D. compile E. Infuse

3. ENAMOR

A. entice B. enlighten C. loathe D. subdue E. Fascinate

4. RENOWN

A. acclaim B. obscurity C. villainy D. infamy E. Prestige

5. AMPLIFY

A. magnify B. intensify C. allay D. withdraw E. Lessen

6. FESTIVE

A. serene B. hearty C. gruesome D. jaunty E. Dreary

7. WAN

A. pale B. drab C. anaemic D. glowing E. Kaleidoscopic

8. FORGO

A. despise B. Revere C. Indulge D. Abstain E. Waive

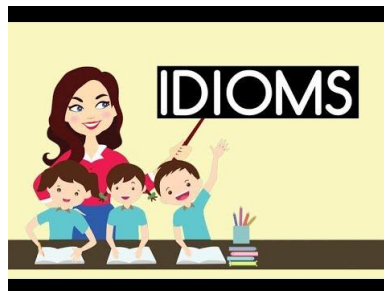
9. POROUS

A. fragile B. waterproof C. consolidated D. dense E. Spongy

10. DICTATE

A. ask B. interrogate C. demand D. inquire E. Request

Activity 5 – INCREDIBLE IDIOMS



Find the idiom according to the picture and fill in the correct blank:



1.

a) My brother and I are _____.

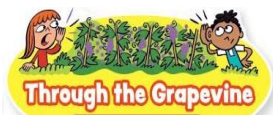
We both like the same things



2.

b) Smriti walked in _____, as if

nothing had happened



3.

c) She was sufficiently _____ to

have to pull out of the championship.



4.

d) His boss thinks he's a culprit, but I'm sure

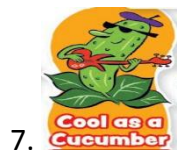
he is _____.



e) Rahul is a real _____ and
doesn't like to participate in any outdoor activity.



f) I heard _____ that the
company would be taken over by another
one, but there is no official communication.



g) Get off _____, no one likes
your bossing around



h) I have a busy day tomorrow, so I think
I'll _____.



i) She showed up for the party _____ in
her furs and jewellery.



j) It's tough to stay in the business during
these _____ when all the tourists have left

FUN WITH WORDS

CLASS IX

LEVEL 1

ACTIVITY 1 – SPELL BEE



This is an oral round. The class will be divided into two or three groups, depending on the class strength. The teacher will say a word and students from each group will take turns to spell the word. If one team gets it wrong, the word will pass on to the next team. The team that will spell the passed on word correctly will get bonus points. The team that has more points is the winner.

1. Souvenirs	2. Suave
3. Hypodermic	4. Exasperation
5. Floundering	6. Intriguing
7. Architecture	8. Catastrophes
9. Auspicious	10. Stupefied
11. Incessant	12. Jurisdiction
13. Consternation	14. Sophisticated
15. Wrenched	16. Rheumatism
17. Perplexity	18. Gratuitous
19. Austere	20. Pneumonia

ACTIVITY 2: GUESS WHAT?



Given below are the meanings of some words. Read the meaning , and the clue given and guess the word.

1. A way of speaking (I am a 4 letter word beginning with L)

2. A person concerned with looking stylish and fashionable (I am a 5 letter word beginning with D)

3. Strong opinion or belief (I am a 10 letter word beginning with C)

4. Strange and weird (I am a 7 letter word beginning with U)

5. Poke roughly or quickly, especially with something sharp or fist (I am a 3 letter word beginning with J)

6. A metal cap worn to protect finger while sewing (I am a 7 letter word beginning with T)

7. A safe place (I am a 5 letter word beginning with H)

8. Charming , elegant, dignified(especially of a man) (I am a 5 letter word beginning with S)

9. Believing strongly in a religion and obeying its laws (I am a 6 letter word beginning with D)

10. A Dull and apathetic person (I am a 6 letter word beginning with Z)

ACTIVITY 3– WHAT FITS BEST?



Choose the word that best fits in the blank.

1. A crane was needed to _____ Jessie's car out of the river.
 - i) Host
 - ii) Hoist

2. The riverbanks are a _____ for wildlife.
 - i) Haven
 - ii) Heaven

3. 10,000 people are expected to _____ to Australia in the next two years.
 - i) Immigrate
 - ii) Emigrate

4. She found their laughter and noisy games _____ and rather vulgar.
 - i) Course
 - ii) Coarse

5. The climbers made their _____ of the mountain without oxygen.
 - i) Assent
 - ii) Ascent

ACTIVITY 4– WHAT’S MY OPPOSITE



Select the antonyms of the words given below:

1. DENY

- A. corroborate
- B. commend
- C. renounce
- D. verbalize

2. AVERT

- A. abide
- B. preclude
- C. divert
- D. gaze

3. AUSTERE

- A. severe
- B. grim
- C. genial
- D. stringent

4. URBANE

- A. Suave
- B. Cultured
- C. Uncouth
- D. Refined

5. VENERABLE

- A. holy
- B. revered
- C. grand
- D. sordid

ACTIVITY 5: WHERE AM I GOING WRONG?



One fragment of the following sentences is incorrect. Underline the fragment which you think is incorrect. In case you find all fragments correct underline the last option – No error.

- A. 1. A) The crazed destruction B) wrought by the cyclone C) and the surge off the ocean D) continued for next thirty six hours. E) No error
- B. 2. A) The elephant reached B) the outskirts of the town, C) breaking the fences down D) like matchsticks .E) No error
- C. 3. A) It was the festival of spring. B) From the wintry shades C) of narrow lanes and alleys D) emerged a gaiety clad humanity. E) No error
- D. 4. A) One of the paper of 1905 B) was Einstein's Special Theory of Relativity, C) according to which time and distance D) are not absolute. E) No error
- E. 5. A) Padma Bhushan Kishori Amonkar , B) widely considered the fine female vocalist C) of her generation, was born in 1931 ,D) daughter of another great artist , Smt Mogubai Kurdikar .E) No error

FUN WITH WORDS

CLASS IX

LEVEL 2

ACTIVITY 1- FASTEST FINGERS



On a sheet of Paper ,draw a table consisting of four/five columns and multiple rows. Mention the categories Noun, Verb, Adjective, Adverb and Preposition in the first row at the top of each column. Categories are Noun, Verb, Adjective, Adverb and Preposition. Write down a word for each category, beginning with the **LETTER** written by the teacher on the board. The student who finishes writing all the words of the given categories first calls out and raises his hand .As soon as he /she calls out all others will stop writing. The teacher will check the words starting with the given letter. Each correct response will carry one mark. The student(s) who scores maximum will be the winner. Next round will be repeated in the similar manner.

Example:

Letter	Noun	Verb	Adverb	Adjective	Preposition
A	Actor	Action	Almost	Active	At

ACTIVITY 2: GUESS WHAT?



Given below are the meanings of some words. Listen to the meaning and guess the word.

1. Lucky (I am a 9 letter word beginning with F)

2. Calm, serene (I am a 8 Letter word beginning with T)

3. Risk (I am a 5 letter word beginning with D)

4. Out of date (I am a 8 letter word beginning with O)

5. Lazy , lethargic (I am a 8 letter word beginning with S)

6. Terrible (I am a 5 letter word beginning with A)

7. Plentiful, Abundant (I am a 7 letter word beginning with C)

8. Huge , gigantic (I am an 8 letter word beginning with E)

9. Confuse (I am a 6letter word beginning with B)

10. Picturesque, attractive (I am a 6 letter word beginning with Q)

ACTIVITY 3-WHAT FITS BEST?



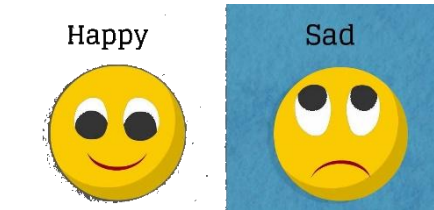
Choose the word that best fits in the blank.

1. I bought wrapping paper at the _____ store.
 - i. stationary
 - ii. stationery
2. The English _____ I took last semester was the best I've ever taken.
 - i. coarse
 - ii. course
- 3 An accident was reported on the freeway, so _____ with caution.
 - i. precede
 - ii. proceed
4. A meet and greet will _____ the concert.
 - i. precede
 - ii. proceed

5. The teenager openly defied her parents and engaged in _____ behaviour.

- i. amoral
- ii. immoral

ACTIVITY 4– WHAT’S MY OPPOSITE



Select the antonyms of the words given below:

i) ARROGANT

- 1. Friendly
- 2. Modest
- 3. Superiority
- 4. Escape

ii) COMMENCE

- 1. begin
- 2. refresh
- 3. join
- 4. stop

iii) AFAR

- 1. remote
- 2. near
- 3. distant
- 4. far removed

iv) ASSENT

- 1. Dissent
- 2. Consent
- 3. Approve
- 4. Protest

v) PALATABLE

- 1. tasteless
- 2. potable
- 3. edible
- 4. pleasant

ACTIVITY 5: WHERE AM I GOING WRONG?



One fragment of the sentences given below is incorrect. Underline the fragment which you think is incorrect. In case you find all fragments correct underline the last option – No error

- i) (a)Despite of their best efforts (b) they failed to retain (c) the contract due to(d) unwanted political interference (e) No error
- ii) (a) Literature often(b) celebrates the fact (c)that the man (d) is a mortal being .(e)No error
- iii) (a) The United Nations warns that (b) it has become very difficult (c) to send food aid for the Darfur region of Sudan (d) because of repeated truck hijacks. (e) No error
- iv) (a) Peace on the border is (b) difficult to achieve at (c) the tactical level (d) by military leaders. (e) No error
- v) (a) The government has introduced (b) a new law who forces (c) farmers to sell their produce (d) only to licensed dealers. (e) No error.

FUN WITH WORDS

CLASS IX

LEVEL 3

ACTIVITY 1 – SPELL BEE



This is an oral round. The class will be divided into two or three groups, depending on the class strength. The teacher will say a word and students from each group will take turns to spell the word. If one team gets it wrong, the word will pass on to the next team. The team that will spell the passed on word correctly will get bonus points. The team that has more points is the winner.

1. Obsequious	11. Sophomore
2. Serendipity	12. Myriad
3. Etiquette	13. Penchant
4. Conscience	14. Vociferous
5. Pronunciation	15. Flabbergasted
6. Bourgeois	16. Demure
7. Adjournment	17. Impeccable
8. Incurable	18. Eloquent
9. Lieutenant	19. Meticulous
10. Hypocrisy	20. Sceptic

ACTIVITY 2 – CORRECT ME PLEASE



The words given below are wrongly spelt. Write the correct spellings in the space provided

- I. CINNAMAN _____
- II. COINCIDANCE _____
- III. EMBARRASMENT _____
- IV. GREIVANCE _____
- V. ALCHOHOL _____
- VI. ONOMOATOPOEIA _____
- VII. IRRESISTABLE _____
- VIII. PROFFESOR _____

ACTIVITY 3: HOW AM I RELATED?



The following pairs of words are connected by some rule or similarity. Choose the pair that best relates to the pair given.

1. **Scales : Fish**
[A.](#) Bear : Fur
[B.](#) Woman : Dress
[C.](#) Skin : Man
[D.](#) Tree : Leaves

2. **Numismatist : Coins**
[A.](#) Jeweller : Jewels
[B.](#) Cartographer : Maps
[C.](#) Philatelist : Stamps
[D.](#) Geneticist : Chromosomes

3. **Sunrise : Sunset**
[A.](#) Dawn : Twilight
[B.](#) Noon : Midnight
[C.](#) Morning : Night
[D.](#) Energetic : Lazy

4. **Sound : Muffled**
[A.](#) Moisture : Humid
[B.](#) Colour : Faded
[C.](#) Despair : Anger
[D.](#) Odour : Pungent

5. **Border : Country**
[A.](#) Pen : Cap
[B.](#) Book : Cover
[C.](#) Handle : Shade
[D.](#) Frame : Picture

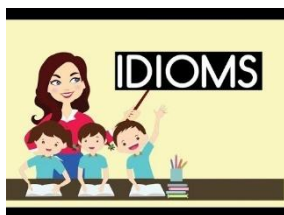
ACTIVITY 4–WHAT’S MY OPPOSITE?



Select the antonyms of the words given below:

<p>i) ARROGANT</p> <ol style="list-style-type: none">5. Friendly6. Modest7. Superiority8. Escape	<p>vi) Penury</p> <ol style="list-style-type: none">1. Poverty2. Affluence3. Indigence4. Destitution
<p>ii) COMMENCE</p> <ol style="list-style-type: none">5. Begin6. Refresh7. Join8. Stop	<p>vii) Pathos</p> <ol style="list-style-type: none">1. Tragedy2. Bathos3. Grief4. Joy
<p>iii) AFAR</p> <ol style="list-style-type: none">5. Remote6. Near7. Distant8. Far Removed	<p>viii) POROUS</p> <ol style="list-style-type: none">1. Fragile2. Waterproof3. Consolidated4. Dense
<p>iv) ASSENT</p> <ol style="list-style-type: none">5. Dissent6. Consent7. Approve8. Protest	<p>ix) AMPLIFY</p> <ol style="list-style-type: none">1. Magnify2. Intensify3. Withdraw4. Lessen
<p>v) PALATABLE</p> <ol style="list-style-type: none">1. Tasteless2. Potable3. Edible4. Pleasant	<p>x) FESTIVE</p> <ol style="list-style-type: none">1. Serene2. Hearty3. Gruesome4. Dreary

ACTIVITY 5 – INCREDIBLE IDIOMS



Match the idioms with their meanings:

IDIOMS	MEANINGS
1. Put your foot in your mouth	Start Trouble
2. Open a can of worms	To say something you shouldn't have said
3. Straight from the horse's mouth	To get the order of things backward
4. Put the cart before the horse	Stay calm ,relax
5. Keep your shirt on	Got information right from the source
6. Cold Shoulder	Zero, no score
7. Shoot the breeze	To say something embarrassing
8. Goose egg	Show off intentional unfriendliness
9. Pushing the envelope	Come to the point
10. Cut to the chase	Have a casual conversation

FUN WITH WORDS

CLASS X LEVEL 1

ACTIVITY 1 – SPELL BEE



This is an oral round. The class will be divided into two or three groups, depending on the class strength. The teacher will say a word and students from each group will take turns to spell the word. If one team gets it wrong, the word will pass on to the next team. The team that will spell the passed on word correctly will get bonus points. The team that has more points is the winner

1. CONVALESCING
2. SOPHISTICATED
3. EPISTEMOLOGY
4. EXAGGERATED
5. REMINISCING
6. NOSTALGIA
7. ENCYCLOPEDIA
8. MERCHANDISE
9. CHAMPAGNE
10. EMBEZZLEMENT

11. APARTHEID
12. RESILIENCE
13. INCORRIGIBLE
14. AVARICE
15. EXQUISITE
16. CONJECTURAL
17. MALICIOUS
18. ESPIONAGE
19. SCRIMMAGE
20. INCESSANTLY

ACTIVITY 2: GUESS WHAT



Given below are the meanings of some words. Read the meaning with the clue and guess the word.

1. Flexible and agile (I am a 5 letter word beginning with L)

2. Twisted , not in correct position (I am a 4 letter word beginning with A)

3. Study of insects (I am a 10 letter word beginning with E)

4. A stream or a minor tributary of a river (I am a 5 letter word beginning with C)

5. Move or run hurriedly (I am a 6 letter word beginning with S)

6. Lack of seriousness (I am a 6 letter word beginning with L)

7. Courage , bravery (I am a 6 letter word beginning with V)

8. Stout , plump (I am a 6 letter word beginning with P)

9. To move around in circles (I am a 6 letter word beginning with G)

10. A person new to or inexperienced in a job (I am a 6 letter word beginning with N)

ACTIVITY 3– WHAT FITS BEST?

(Fun with Heteronyms)



The same word fits in both the blanks in the following sentences. Write the word that is spelt the same but is pronounced differently for each blank:

1. The dump was so full that it had to _____ more _____
2. When shot at, the _____ _____ into the bushes
3. The bandage was _____ around the _____ .
4. The soldier decided to _____ his unit deployed in the _____.
5. A violinist in the _____ tie took a _____.

ACTIVITY 4 –WHAT’S MY OPPOSITE



Select the antonyms of the given words given below:

1. **MALICIOUS**

- A. hostile
- B. malevolent

C. benevolent

D. baleful

2. INCORRIGIBLE

- A. Reformable
- B. Hardened
- C. Hopeless
- D. Inveterate

3. CONVALESCING

- A. Recuperate
- B. Mending

C. Languishing

D. Recovering

4. INGENUITY

- A. Originality
- B. Innovation
- C. Clumsiness
- D. Aptness

5. DISCERN

- A. apprehend
- B. determine
- C. overlook
- D. recognize

ACTIVITY 5: WHERE AM I GOING WRONG?

One fragment of the sentence is incorrect. Underline the fragment which you think is incorrect. In case you find all fragments correct, underline the last option – No error

1. A) Our elders are often heard B) reminiscing nostalgically for C) those good old Portuguese days, D) the Portuguese and their loaves of breads. E) No error
2. A) We pledge ourselves to liberate B) all our people from the C) continuing bondage of poverty, D) deprivation, suffering, gender and other discrimination. E) No error.
3. A) I sat in the back of the car B) with the box besides me C) as the driver tore D) through the streets of Basra. E) No error.
4. A) A Russian wedding is very simple. B) The planning only includes C) arranging for rings, bride's dress, cars, D) and a reception. E) No error
5. A) 'Paper has more patience than people.' B) I thought of this saying C) on one of those days D) when I was feeling a little depressed. E) No error

FUN WITH WORDS

CLASS X

LEVEL 2

ACTIVITY 1 – SENTENCE RACE



Instructions for the teacher

Divide the class into two groups (of 10 students each)

Prepare two identical sets of slips with around 10 similar target words for each team. The sets of slips are given to the group leaders of both teams. They in turn distribute one word each to the group members

The teacher calls out a word from her copy of the words given to the students. From each team, one student who has been assigned that word, will stand up, run to the blackboard and write a sentence using that word.

The student who writes the correct sentence with the right syntax and spellings is awarded marks.

Likewise, the same procedure is adopted for 10 words. The team that scores the maximum marks, wins.

ACTIVITY 2: GUESS WHAT



Given below are the meanings of some words. Read the meaning with the clue given and guess the word.

1. Breakable, fragile (I am a 7 letter word beginning with B)

2. Brighten (I am a 10 letter word beginning with I)

3. Heroic , brave (I am a 10 letter word beginning with C) _____
4. Lawless (I am a 6 letter word beginning with U) _____
5. Rebellious (I am a 7 letter word beginning with D)

6. Fight for breath (I am a 4 letter word beginning with G) _____
7. Essential, necessary (I am a 9 letter word beginning with M) _____
8. Agree, permit (I am a 6 letter word beginning with P) _____
9. Dignity, renown (I am a 5 letter word beginning with G) _____
10. Unavoidable (I am a 10 letter word beginning with I) _____

ACTIVITY 3– FIT ME



Choose the word that best fits in the blank.

1. When you put out the mouse trap, add a bit of peanut butter to the trap as _____.

1. bate
2. bait

2. In the train car, the seats folded down and connected to form the lower _____ .

2. berth
3. birth

3. That medicine may _____ my ability to drive, however!

2. effect
3. affect

4. As a waitress, I was only allowed one fifteen-minute _____.

6. brake
7. break

5. After travelling often for work, the technician was hoping for a more _____ position.

1. stationary
2. stationery

ACTIVITY 4- WHAT'S MY OPPOSITE



Select the antonym of the words given below:

1. CEREMONIOUS

- A. momentous
- B. stately
- C. proper
- D. informal
- E. offensive

2. UNKNOWN

- A. celebrated
- B. secret
- C. exotic
- D. successful
- E. irrelevant

3. MINIMUM

- A. valley
- B. median
- C. apex
- D. mean
- E. floor

4. FORTIFY

- A. dispute
- B. alarm
- C. support
- D. sap
- E. intensify

5. BIASED

- A. inclined
- B. disastrous
- C. neutral
- D. unfair
- E. injurious

6. CONCEAL

- A. expose
- B. shroud
- C. recall
- D. harbour
- E. obscure

7. STERILE

- A. arid
- B. fruitful
- C. undeveloped
- D. greasy
- E. dishevelled

8. REMAIN

- A. emigrate
- B. endure
- C. abide
- D. vanish
- E. retreat

9. BUCKLE

- A. purify
- B. adulterate
- C. straighten
- D. arc
- E. droop

10. CALLOUS

- A. insolent
- B. soulless
- C. flexible
- D. tough
- E. compassionate

ACTIVITY 5: WHERE AM I GOING WRONG?



One fragment of the sentence is incorrect. Underline the fragment which you think is incorrect. In case you find all fragments correct, underline the last option – No error.

1. (a)Water from shallow (b) wells should be (c) regarded after suspicion, as it (d) may be contaminated. (e) No error
2. (a) China has justified the construction (b) of a road in the Sikkim sector, (c) claiming that the area was undoubtedly (d) located on its side of the border. (e)No error
3. (a) I have gone through (b) several exams in my (c) life but this one was (d) slight difficult. (e)No error
4. (a) South Asian religious traditions (b) have long attracted admirers (c) from the West, but none (d) have been flamboyant as Maximiani Portaz. (e)No error
5. (a) Though I had been (b) his friend for quite a long time (c) I refused to help him (d) because of his ill nature (e)No error

FUN WITH WORDS

CLASS X

LEVEL 3

ACTIVITY 1 – SPELL BEE



This is an oral round. The class will be divided into two or three groups, depending on the class strength. The teacher will say a word and students from each group will take turns to spell the word. If one team gets it wrong, the word will pass on to the next team. The team that will spell the passed on word correctly will get bonus points. The team that has more points is the winner.

- | | |
|-----------------|-----------------|
| 1. Predilection | 11. Pageant |
| 2. Allegiance | 12. Acquit |
| 3. Entrepreneur | 13. Impertinent |
| 4. Bourgeoisie | 14. Erudite |
| 5. Pseudonym | 15. Obsequious |
| 6. Clairvoyant | 16. Truculent |
| 7. Connoisseur | 17. Lithe |
| 8. Onomatopoeia | 18. Belligerent |
| 9. Luminescence | 19. Poignant |
| 10. Gourmet | 20. Anathema |

ACTIVITY 2– CORRECT ME PLEASE



The following words are wrongly spelt. Write the correct spellings in the space provided

1. ONOMOATOPOEIA _____
2. HEIRARCHICAL _____
3. ETTIQUETE _____
4. DIARHOEA _____
5. DYLEXSIA _____
6. MASACRE _____
7. SURVEILLIANCE _____
8. ECSTACY _____

ACTIVITY 3 – HOW AM I RELATED?



The following pairs of words are connected by some rule or similarity. Choose the pair that best relates to the pair given.

1. INTERSECTION : STREETS

- A. collision : automobiles
- B. crosswalk : lights
- C. corner : blocks
- D. junction : highways

2. SCURRY: MOVE

- A. chant: sing
- B. chatter: talk
- C. carry : lift
- D. sleep : drowse

3. SEETHE : ANGER

- A. chortle : distress
- B. snarl : confusion
- C. fidget : uneasiness
- D. waddle : embarrassment

4. NUANCE : SUBTLE

- A. Pun : Sarcastic
- B. Fib : Honest
- C. Inquiry : Discreet
- D. Hint : Indirect

5. PROCTOR : SUPERVISE

- A. prophet : rule
- B. prodigal : squander
- C. profiteer : consume
- D. profligate : demand



ACTIVITY 4-WHAT'S MY OPPOSITE

Select the antonyms of the words given below:

1. ACQUIESCE
 - a. accept
 - b. accede
 - c. object
 - d. consent
2. VIRTUOUS
 - a. decorous
 - b. righteous
 - c. ethical
 - d. atrocious
3. SINISTER
 - a. dangerous
 - b. alarming
 - c. propitious
 - d. dire
4. GLUM
 - a. morose
 - b. elated
 - c. dismal
 - d. sulky
5. FRENZY
 - a. violent
 - b. furore
 - c. serene
 - d. rampage

ACTIVITY 5 - INCREDIBLE IDIOMS

Complete the following sentences by filling in the blanks with the idiom depicted in the picture.



I was _____ when I had to stay with my parents when I lost my job.



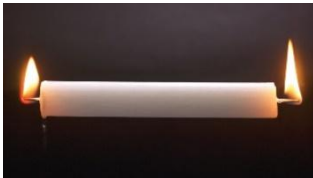
2

I have _____ with my previous supervisor by criticizing him publically.



3

More than 5000 cars sold so far .The new model is _____.



4

Rakesh is _____. He's working at two jobs, one in the evening and one in the morning,



5

I was _____ after receiving the news of my promotion.



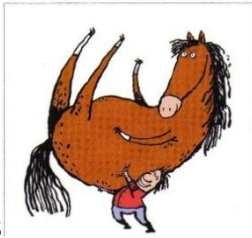
6

By refusing to help her colleague, she _____.



8

One of the main reasons for his success in business is that he _____ to know what the customers want.



8

_____ I'm not yet done with my explanation.



9

I'll _____ to finish in top 10 percentile in the exam.



10.

You're falling short on class attendance and have failed to submit the last assignment. You're _____ this year.



II. Puzzles and Riddles

Solving puzzles and riddles on a regular basis has many benefits. They boost our general knowledge, increase our vocabulary and improve logical skill. Crosswords, Sudoku, logic puzzles, etc. enhance cognition ability. Whether learning a new language, or trying to improve your own, or enhancing your logical ability, problem solving skills- puzzles and riddles are a great source.

The purpose of including puzzles and riddles in the activities is to make the students think differently and apply their brain effectively. Moreover, puzzles and riddles are usually free from cultural influences, and hence can be solved globally. Hence, the students feel themselves better equipped with a variety of knowledge.

PUZZLES AND RIDDLES

NOTES TO TEACHERS

SUDOKU

Sudoku is an easy to learn logic-based number placement puzzle. It is a 9x9 grid where the task is now to place the numbers from 1 to 9 into the empty cells in such a way that in every row, column and 3x3 region each number appears only once. The puzzle setter provides a partially completed grid, which has a single solution for a well-posed puzzle .

KAKURO

Kakuro is a kind of logic puzzle that is often referred to as a mathematical transliteration of the crossword. The Kakuro puzzle is played in a grid of filled and barred cells, "black" and "white" respectively. Apart from the top row and leftmost column which are entirely black, the grid is divided into "entries"—lines of white cells—by the black cells. The black cells contain a diagonal slash from upper-left to lower-right and a number in one or both halves, such that each horizontal entry has a number in the black half-cell to its immediate left and each vertical entry has a number in the black half-cell immediately above it. These numbers, borrowing crossword terminology, are commonly called "clues".

The objective of the puzzle is to insert a digit from 1 to 9 inclusive into each white cell such that the sum of the numbers in each entry matches the clue associated with it and that no digit is duplicated in any entry.

CROSSWORD

A crossword is a word puzzle in which the player has to guess the answers to clues and write the words into numbered squares that go across and down. The crosswords given in the activity sheets have clues from science and mathematics.

The puzzles and riddles are at three levels in ascending order of difficulty for classes VIII, IX and X.

PUZZLES AND RIDDLES

CLASS VIII

LEVEL 1

SUDOKU

QUESTION NO.1 : Fill the grid with the letters B, O, A, T in such a manner that each letter is only used once in each row, column and region (marked 2 by 2 block).

			A
	B		T
T	O	A	B
B	A	T	O

T	A		
B	O	A	
		O	
O	B		

WORDSEARCH

Search the words from the box below with the help of the clues given.

class 8																			
F	X	K	F	W	V	J	B	X	W	S	A	E	J	H	H	V	I	J	Q
Y	W	A	K	D	Q	H	N	R	G	N	I	H	T	R	A	E	P	J	O
M	O	Z	W	E	E	Y	S	C	A	Z	E	G	A	R	A	G	F	D	H
U	Q	L	H	V	R	N	E	G	T	I	L	T	S	O	A	Y	O	I	E
N	N	D	A	A	Q	U	D	C	A	Z	L	M	O	U	U	I	J	R	M
J	O	F	L	U	M	Y	C	O	N	Y	F	L	V	R	R	G	C	H	I
W	I	N	C	A	N	D	E	S	C	E	N	C	E	E	J	A	C	G	S
M	T	A	Z	V	W	N	R	M	B	R	R	B	P	J	Q	R	U	U	P
D	A	U	G	J	I	O	A	A	O	O	I	E	G	M	H	D	O	G	H
Y	Z	H	L	J	N	L	L	R	G	P	M	N	F	J	O	R	V	F	E
T	I	L	A	V	N	N	U	G	D	I	R	I	E	M	A	O	H	J	R
C	L	I	G	M	O	J	S	O	T	E	T	O	G	P	U	Z	K	N	E
J	I	D	E	E	W	U	X	L	E	T	B	E	I	D	O	C	U	E	Q
I	T	I	L	T	I	P	K	E	D	Z	C	V	E	B	I	O	R	O	T
A	R	N	L	E	N	I	H	L	E	W	O	G	A	X	B	G	H	I	S
V	E	S	I	O	G	T	T	L	C	C	Y	J	L	M	S	I	R	P	C
O	F	U	G	R	M	E	X	A	E	F	E	L	B	I	D	U	A	P	A
I	I	L	Q	S	I	R	Y	R	R	O	C	T	A	G	O	N	L	W	S
D	A	I	D	R	O	H	C	A	R	P	W	U	P	K	N	H	U	C	V
Y	X	N	J	T	T	U	F	P	V	U	S	D	N	A	L	G	G	U	B

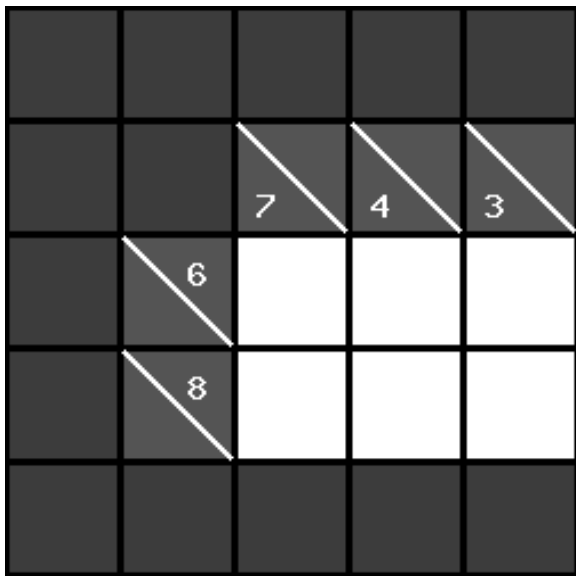
CLUES FOR WORD SEARCH

1. A process of separating grains from chaff
- 2 A shed for motor car.:
- 3 move back from where it was
- 4 Egg laying animals
- 5 a straight line connecting two points on a curve or curved surface
- 6 That which is against law
- 7 Shooting stars
- 8 Which happens once a year
- 9 the boundary of a specific area or geometric figure,
- 10 The most popular resource for visually challenged person
- 11a polygon having eight sides
- 12 Frictional force exerted by fluids
- 13a quadrilateral whose opposite sides are parallel and equal in length
- 14 The process of fusion of gametes
- 15 one half of a sphere
- 16 inner glow or light
- 17 Largest planet
- 18 a transparent polygonal solid
- 19 Transferring of charge from a charged object to the earth
- 20; Sound which can be heard
- 21 Ductless glands
- 22 Time taken by an object to complete one oscillation
- 23 not very well known
- 24 voice box
- 25 Pancreatic hormone

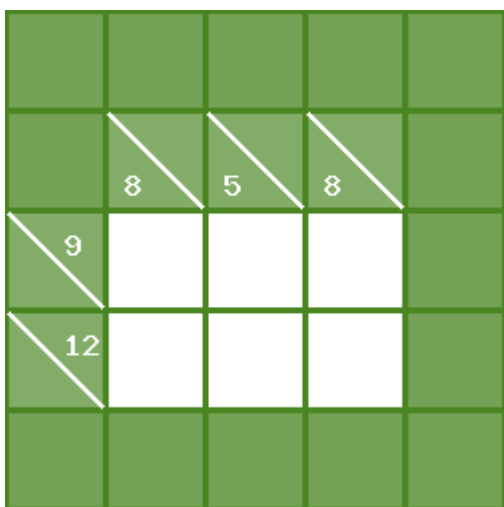
KAKURO

NOTE: The Objective is to fill all empty squares using digits 1 to 9 so that the sum of each horizontal block equals the clue on its left, and the sum of each vertical block equals the clue on its top. In addition, no digit may be used in the same block more than once.

A)



B)



PUZZLES AND RIDDLES

CLASS VIII

LEVEL 2

SUDOKU

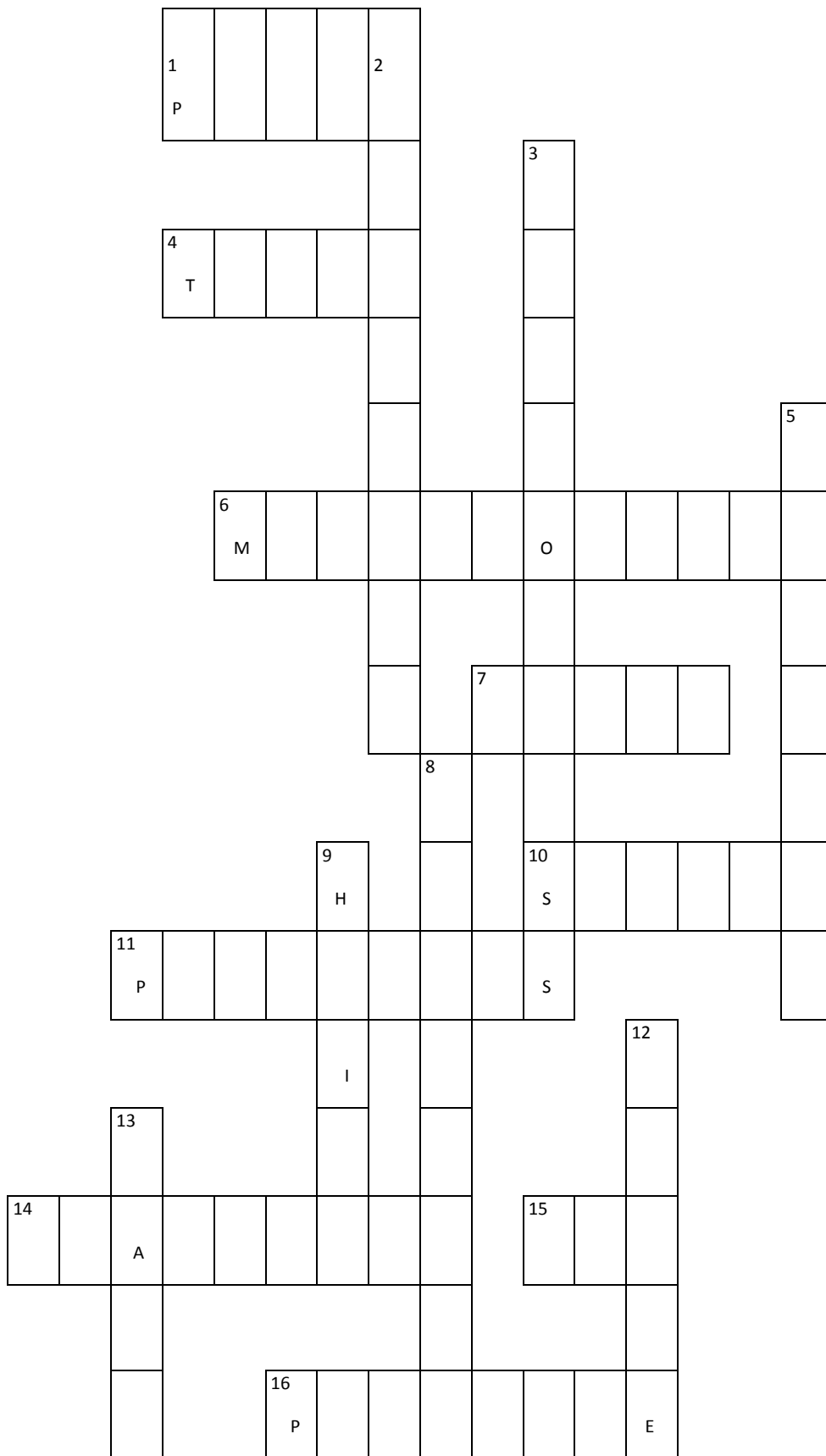
Fill in the puzzle so that every row across, every column down and every 3 by 3 box contains the numbers 1 to 9.

6	5	9		1		2	8	
1				5			3	
2			8				1	
			1	3	5		7	
8			9					2
		3		7	8	6	4	
3		2			9			4
					1	8		
		8	7	6				

Clues:

1. Seek a 2 in the centre block of squares
2. Finish the centre block of squares
3. Search for 2s everywhere

CROSSWORD



Solve the above Crossword with the help of the clues given below-

CLUES

Across

- 1. a number which has two factors
- 4. upper part of the body
- 6. powerhouse of the cell
- 7. smooth and shiny
- 10. quadrilateral whose all sides and angles are equal
- 11. microbes that cause diseases
- 14. iron nickel and cobalt are all _____
- 15. a line segment has _____ end points
- 16. force per unit area

Down

- 2. huge
- 3. so deep that the depth can't be measured
- 5. feast
- 8. narrow openings or cracks in rock or wall
- 9. pull up higher
- 12. zero is the smallest _____ number
- 13. wise man

KAKURO

NOTE: The Objective is to fill all empty squares using digits 1 to 9 so that the sum of each horizontal block equals the clue on its left, and the sum of each vertical block equals the clue on its top. In addition, No digit may be used in the same block more than once.

	13	13	11	12
12				
14				
18				
5				

PUZZLES AND RIDDLES

CLASS VIII

LEVEL 3

SUDOKU

Fill in the puzzle so that every row across, every column down and every 3 by 3 box contains the numbers 1 to 9.

8	9		7	6	4	5		
	4		3					9
3	2	7	9					
	8			5	3		1	
			6		1			
6							4	
7			4	9		8	3	
		9			8	2	7	

CROSSWORD

Find words with the help of the clues given to fill up the crossword Puzzle

The crossword puzzle grid consists of the following numbered starting points for words:

- 1: C
- 2: C
- 3: P
- 4: T
- 5:
- 6:
- 7: I
- 8: P
- 9: T
- 10: A
- 11: E
- 12: P
- 13: P
- 14: F
- 15: S

Across

1. phrase or idea used so often that it loses its meaning
3. antibiotic discovered by Alexander Fleming
4. prime numbers whose difference is two are _____prime numbers
5. that cannot be avoided
8. not very serious
9. a medicine to reduce stress and anxiety
11. triangle with all sides of equal length
12. view of a wide area
13. romp
14. renowned

Down

2. group of stars that form a recognizable shape
6. unit of force
7. probability of an _____ event is zero
10. a _____ polynomial has degree two
12. a closed figure formed by line segments
15. smallest particle of an element

KAKURO

NOTE: The Objective is to fill all empty squares using digits 1 to 9 so that the sum of each horizontal block equals the clue on its left, and the sum of each vertical block equals the clue on its top. In addition, No digit may be used in the same block more than once.

The image shows a 10x10 grid for a Kakuro puzzle. The grid is composed of orange squares, with some squares being blacked out. Clues are provided for horizontal and vertical blocks. The clues are as follows:

- Row 1: 7, 15, 5, 12, 15, 16
- Row 2: 6, 13
- Row 3: 4, 9, 12, 6
- Row 4: 19, 6, 12
- Row 5: 7, 4, 17, 6
- Row 6: 12, 14, 17, 34
- Row 7: 15, 18, 28, 20
- Row 8: 9, 12, 14, 4
- Row 9: 10, 11, 8, 15, 8
- Row 10: 7, 32
- Column 1: 21
- Column 2: 22

PUZZLES AND RIDDLES

CLASS IX

LEVEL 1

SUDOKU

Fill in the puzzle so that every row across, every column down and every 2 by 2 box contains the letters L, U, C, K.

	K	C	U
C			
K	D		
		K	D

	U	C	
			U
C		U	
		K	C

KAKURO

NOTE: The Objective is to fill all empty squares using digits 1 to 9 so that the sum of each horizontal block equals the clue on its left, and the sum of each vertical block equals the clue on its top. In addition, No digit may be used in the same block more than once.

	14	12			
7					
4					
6					
9					

WORD SEARCH-Find words from the box with the help of the clues given below .

class 9

M	V	E	Q	U	I	L	A	T	E	R	A	L	D	P	A	R	A	O	X
R	H	N	A	F	N	Y	N	U	A	P	Z	M	C	S	C	D	B	E	C
H	O	V	A	L	E	N	C	Y	A	L	G	E	B	R	A	C	A	S	G
I	T	Y	T	I	C	I	M	O	T	A	K	F	C	R	I	D	P	O	D
S	H	D	O	Z	O	N	E	I	R	K	R	G	H	P	T	B	G	B	B
Y	G	O	L	O	I	B	O	R	C	I	M	G	E	Y	C	O	I	F	K
U	I	A	N	E	C	D	O	T	E	K	L	K	A	G	A	K	B	J	F
L	Q	A	M	P	U	O	V	V	J	X	B	X	L	O	L	P	I	C	A
L	G	K	O	P	X	L	C	X	Q	F	F	S	T	L	L	J	O	N	T
D	E	W	J	N	S	L	W	W	W	Q	K	H	O	I	U	G	X	A	
V	E	L	O	C	I	T	Y	J	N	N	J	W	A	T	G	B	R	M	M
R	M	C	X	M	U	I	B	O	Z	I	H	R	H	S	R	I	A	J	R
E	I	T	N	X	V	E	S	U	B	M	O	H	R	I	A	K	P	C	E
L	M	C	W	A	F	L	N	V	G	D	I	S	D	H	P	P	H	O	D
G	S	V	N	P	N	L	B	A	B	A	C	U	S	E	H	G	Y	N	O
S	E	T	Y	H	P	O	D	I	R	E	T	P	Q	B	Y	J	R	S	N
Z	B	C	N	W	W	R	S	S	G	T	M	Z	O	J	P	F	I	T	I
R	V	O	P	R	Y	D	U	N	T	I	K	S	B	H	H	W	A	A	H
N	A	D	I	S	E	A	S	E	O	Z	O	P	C	C	Y	E	G	N	C
P	O	R	I	F	E	R	A	H	L	C	A	U	Z	B	I	L	S	T	E

CLUES FOR WORD SEARCH

1. The combining capacity of an element
2. Study of microscopic organisms
3. Spiny skinned animals.
4. A branch of mathematics that uses symbols or letters to represent variables, values or numbers
5. Triatomic molecule of oxygen
6. The number of atoms constituting a molecule
7. A long narrative poem telling of a hero's deeds

8. They are land plants with true vascular system
9. Mixture of gases
10. Rate of doing work
11. Nitrogen fixing bacteria
12. A form of nonfiction in which a writer tells the life story of a different person.
13. An early counting tool used for basic arithmetic
14. A state of complete physical, mental, and social well-being
15. Art of beautiful hand writing, elegant penmanship
16. A value that doesn't change.
17. A particular abnormal condition that negatively affects the structure or function of part or all of an organism
18. All sides are equal.
19. A short account of a particular incident or event, especially of an interesting or amusing nature.
20. Speed with a direction.
21. A parallelogram with four equal sides, sides are all the same length
22. Pore bearing organisms
23. A stylistic literary device identified by the repetition of identical or similar consonants in neighbouring words whose vowel sounds are different
24. A short comical sketch
25. Study of the tissues

PUZZLES AND RIDDLES

CLASS IX

LEVEL 2

SUDOKU

Fill in the puzzle so that every row across, every column down and every 3 by 3 box contains the numbers 1 to 9.

	6			7	2			1
8			1	3	6	5		
		3	4					
2			6	5			3	
		6			7		1	
			2			8	6	4
9		7		8	4			
		8			9		7	
			7	2	1		8	3

Clues:

1. Look for a 1 in the centre square block of squares
2. Look for a 4 in the centre block of squares
3. Finish the middle column (column 5)

Crossword-Solve the puzzle with the help of the clues given below-

										1	J						
										2							
					3												
4	C						5	A	6	R							
7	A	8	T						9							T	
10										11	R						
12																	
13										14	M						
15										16	F						E

Across

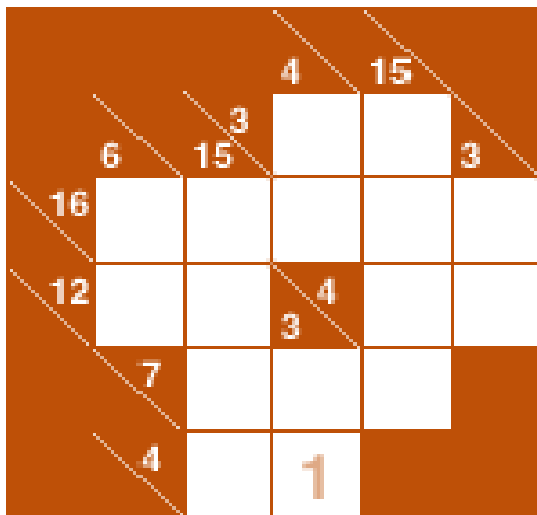
- 6. shelter or protection from danger
- 7. scholar of a branch of physics dealing with stars, planets, etc.
- 10. Earth's shakes during earthquake
- 12. identity element for addition
- 15. polygon whose each angle is less than 180 degrees
- 16. scarcity of food

Down

- 1. very happy because of success
- 2. sum of all _____ angles in a polygon is 360 degrees
- 3. refuse to obey
- 4. complete disorder and confusion
- 5. another term for teenage
- 8. material used to make nonstick cookware
- 9. metals react with acid to produce this gas
- 11. a fibre prepared by using wood pulp
- 13. quiet and humble
- 14. female gamete

KAKURO

NOTE: The Objective is to fill all empty squares using digits 1 to 9 so that the sum of each horizontal block equals the clue on its left, and the sum of each vertical block equals the clue on its top. In addition, No digit may be used in the same line more than once.



PUZZLES AND RIDDLES

CLASS IX

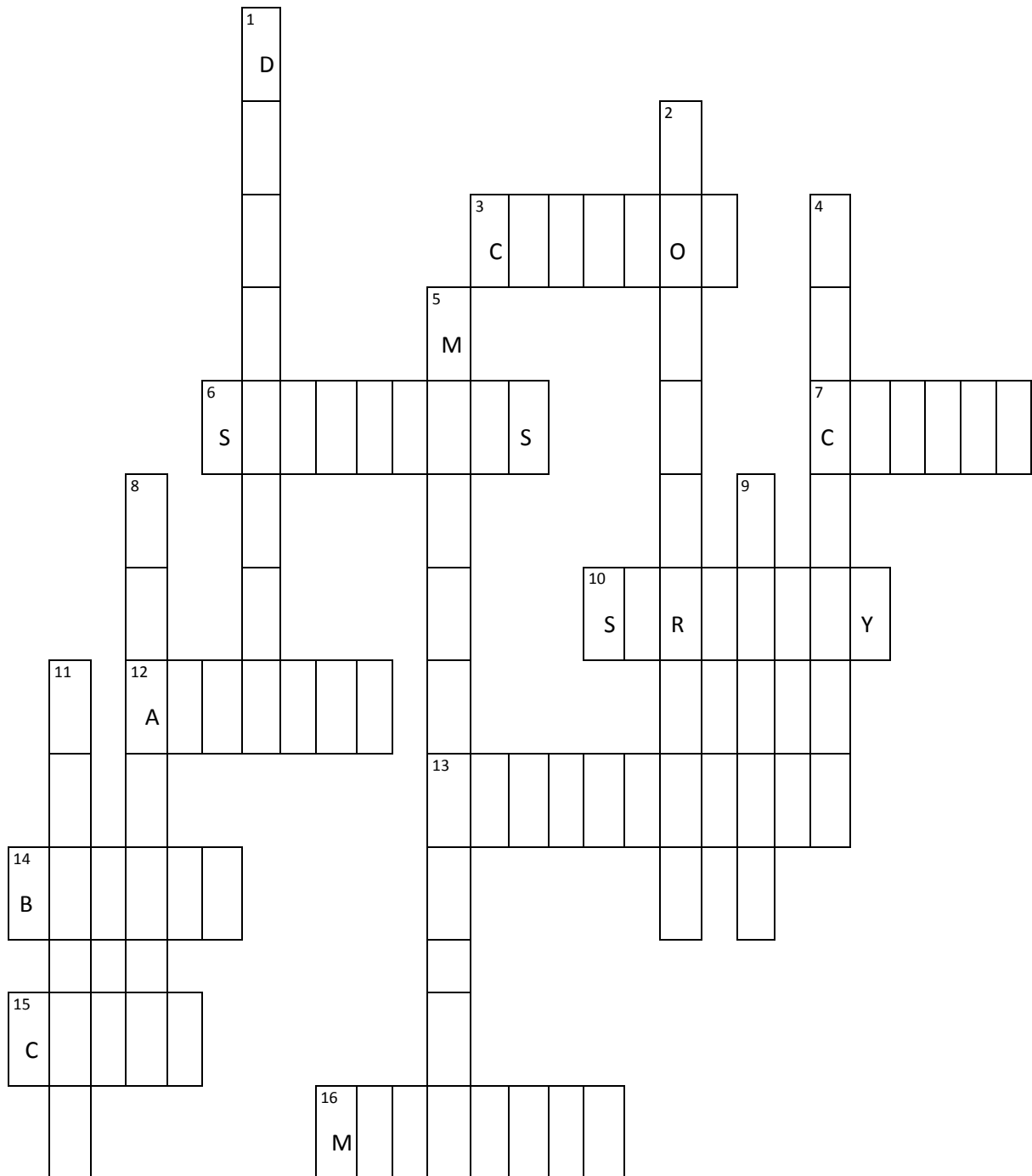
LEVEL 3

SUDOKU

Fill in the puzzle so that every row across, every column down and every 3 by 3 box contains the numbers 1 to 9.

							7	
	7			1		5	9	
	8		3		2		1	6
6	5		4		9			3
		4						
			7	6				
9	1		6					
	2	7	9				4	
4		5	1					

CROSSWORD-Solve the Crossword with the help of the clues given below



Across

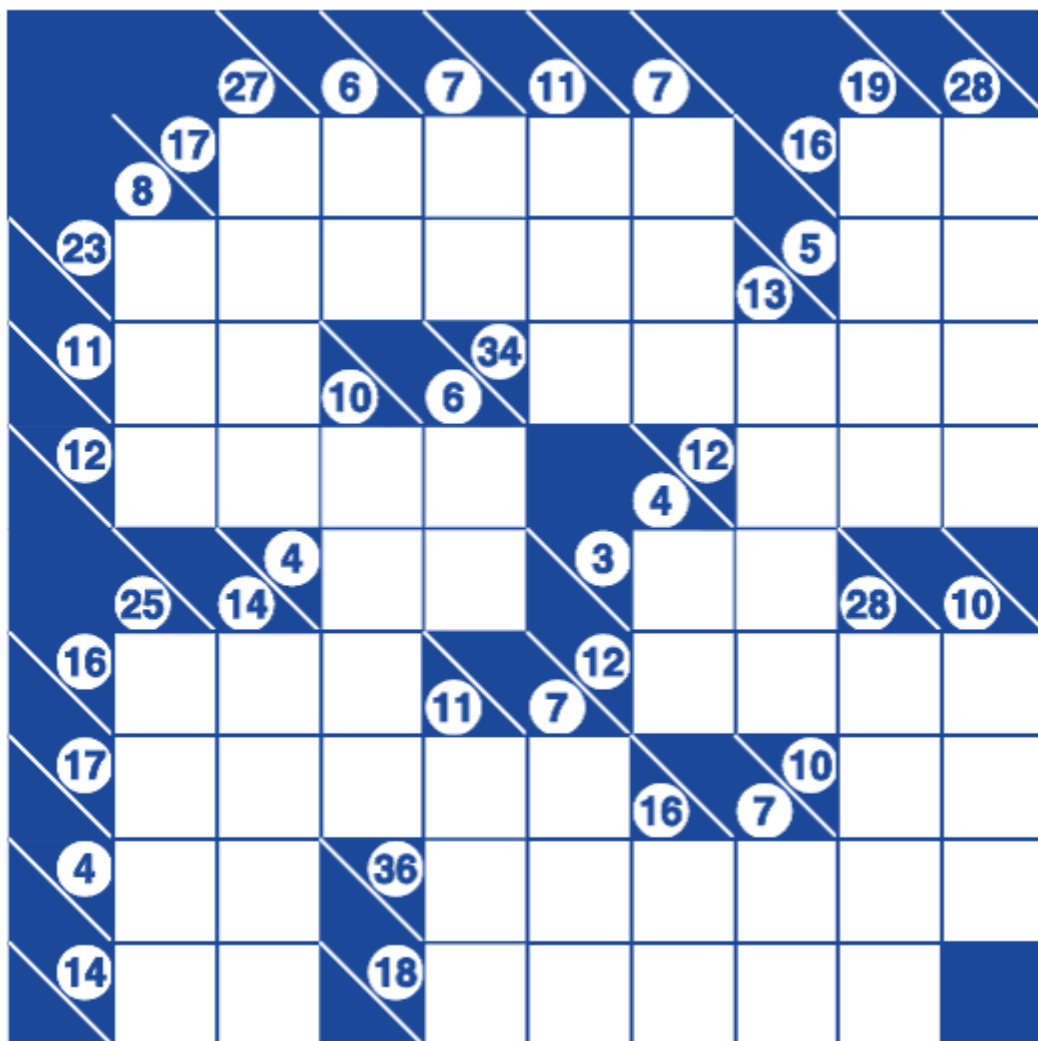
- 3.** person in charge of things in museum or zoo
- 6.** things given in memory of a place or a person
- 7.** a 3D shape with all sides made from rectangles
- 10.** an elaborate and systematic plan of action
- 12.** branch of mathematics where symbols or letters are used to represent numbers
- 13.** Change of state directly from solid to gas
- 14.** to divide an angle or shape exactly in half
- 15.** a straight line drawn from one point on the edge of a circle to another
- 16.** a group of two or more Atoms that are chemically bonded together

Down

- 1.** conversation between two people
- 2.** belonging to or active during the night
- 4.** a ten sided polygon
- 5.** tool that provides enlarged images of an object
- 8.** doing something for personal enjoyment rather than as a profession
- 9.** a space just below the roof, used as a storeroom
- 11.** force with which an object is attracted towards the earth

KAKURO

NOTE: The Objective is to fill all empty squares using digits 1 to 9 so that the sum of each horizontal block equals the clue on its left, and the sum of each vertical block equals the clue on its top. In addition, No digit may be used in the same line more than once.



PUZZLES AND RIDDLES

CLASS X

LEVEL 1

SUDOKU

Fill in the puzzle so that every row across, every column down and every 2 by 2 box contains the numbers 1 to 4.

	4		1
3		4	
1			4
	2	1	

3		2	4
	4	3	
4			3
	3	4	2

KAKURO

NOTE: The Objective is to fill all empty squares using digits 1 to 9 so that the sum of each horizontal block equals the clue on its left, and the sum of each vertical block equals the clue on its top. In addition, No digit may be used in the same block more than once.

			8	
		4		
	7			
	7			
	4			

WORD SEARCH-Search words from the box given with the help of clues given below.

CLASS X

A	F	G	A	V	W	F	Z	T	L	N	C	I	B	O	R	E	A	G	Z
C	V	L	D	E	M	Y	Z	N	E	P	B	G	Q	S	M	F	K	R	R
T	N	U	A	B	M	O	U	A	C	O	J	C	W	B	E	R	P	A	S
P	H	T	P	K	S	E	B	J	R	O	T	A	R	O	U	A	T	M	I
I	L	T	T	Q	J	A	T	O	I	R	T	A	P	E	L	S	M	M	B
R	Y	O	A	R	R	W	Q	S	G	P	I	T	T	A	I	I	H	A	Q
C	B	N	T	Q	U	J	V	G	Y	G	H	A	I	E	J	M	U	R	A
S	E	D	I	B	B	J	R	A	O	S	M	M	H	W	A	H	O	L	M
U	C	T	O	I	S	D	G	V	Q	A	O	T	X	L	M	E	C	E	M
N	N	G	N	D	N	T	V	V	U	N	A	C	L	K	T	O	P	Y	T
A	E	R	H	N	E	D	Q	D	I	J	W	E	E	M	H	M	K	P	C
M	R	E	Z	A	Q	C	I	B	J	V	A	Z	O	O	R	N	K	H	I
E	E	M	P	W	M	C	A	V	G	B	P	W	L	Q	O	I	D	O	K
D	F	B	U	I	V	I	X	H	I	V	B	I	K	Y	O	P	I	B	X
O	M	M	K	T	L	E	N	L	E	S	X	S	V	Z	D	O	L	I	T
N	U	S	N	P	A	O	I	O	P	D	I	J	G	D	N	T	M	A	Y
A	C	U	B	V	M	T	G	N	A	X	R	B	I	A	I	E	J	R	H
Q	R	L	F	V	Y	O	I	U	U	C	X	O	L	X	Z	N	F	O	J
U	I	V	F	W	V	K	U	O	E	P	I	G	N	E	B	T	C	E	M
M	C	U	E	B	X	W	R	Z	N	O	I	D	C	M	Z	L	D	C	A

CLUES FOR WORD SEARCH

1. A change that allows an organism to function better in a particular environment.
2. An organism or cell that requires oxygen to carry out its metabolic processes; a process that requires oxygen.
3. An organic compound containing a hydroxyl group
4. A mathematical expression consisting of two terms
5. One who loves own country.
6. An extreme or irrational fear of something
7. Essential basic building blocks of proteins.
8. One who eats too much
9. Art and science of languages showing how words combine to form sentences

10. A positively charged terminal in an electrical cell.
11. The complex of a community of organisms and its environment, functioning as a unit.
12. One who makes an eloquent public speech.
13. Molecules produced by living organisms that help catalyze biochemical reactions
14. The boundary of a specific area or geometric figure
15. One who does not believe in the existence of God
16. Solid can be hammered into a sheet without breaking.
17. Incapable of being divided.
18. One who does something not professionally but for pleasure
19. Something carried on within door or under cover
20. A change in gene sequences of cell DNA.
21. A speech given after conclusion of drama.
22. A solid figure having twelve plane faces.
23. Vessels conveying deoxygenated blood from various parts of the body to the heart.
24. All-powerful; possessing complete power and authority
25. Handwritten book

PUZZLES AND RIDDLES

CLASS X

LEVEL 2

SUDOKU

Fill in the puzzle so that every row across, every column down and every 3 by 3 box contains the numbers 1 to 9.

7			8	4		2		5
	3		1	5		4		
		5		6			7	
	9			3	4	5	8	
	2	8	7			9		3
5		3	9			6		
		4	5	2			9	
		9	4		8			
8					1	7		

Clues:

1. Find the 7 in row 2
2. Find the remaining 7s
3. Row 2 column 8 can only be 6

CLUES FOR CROSSWORD

Across

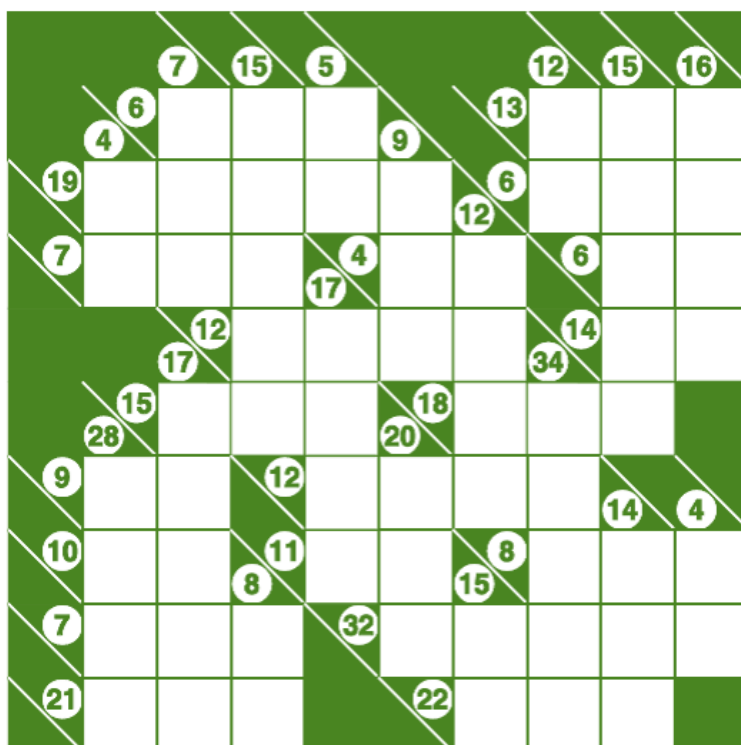
1. to attack suddenly from a hidden position
3. protein digesting enzyme
5. metal is profitably extracted from it
6. tiny pores present on surface of leaves
9. insoluble solid formed during a reaction
10. someone new at a job
12. deep
13. something that appears to be real but is not

Down

2. far sightedness
4. pleasure or sadness caused by remembering the past
7. an extremely strong wind
8. a written account of past experiences
9. a strong dislike without any good reason
11. a lustrous non metal

KAKURO

NOTE: The Objective is to fill all empty squares using digits 1 to 9 so that the sum of each horizontal block equals the clue on its left, and the sum of each vertical block equals the clue on its top. In addition, No digit may be used in the same block more than once.



PUZZLES AND RIDDLES

CLASS X

LEVEL 3

SUDOKU

Fill in the puzzle so that every row across, every column down and every 3 by 3 box contains the numbers 1 to 9.

			5	4	2		1	9
1					6			
	2	9				6		
				9			6	4
	3	2	6		7		9	8
				3				
2		7		1	8		5	
					9		3	
		3	7	6	5	9		1

CROSSWORD

Solve the Crossword with the help of the clues given below

1

2
A

3
D

4
E

5
I

6

7
E

8
D

9
H

10
S

11
D

12
O

13
I

14
C

15
C

U

Z

S

R

E

N

E

T



Clues

Across

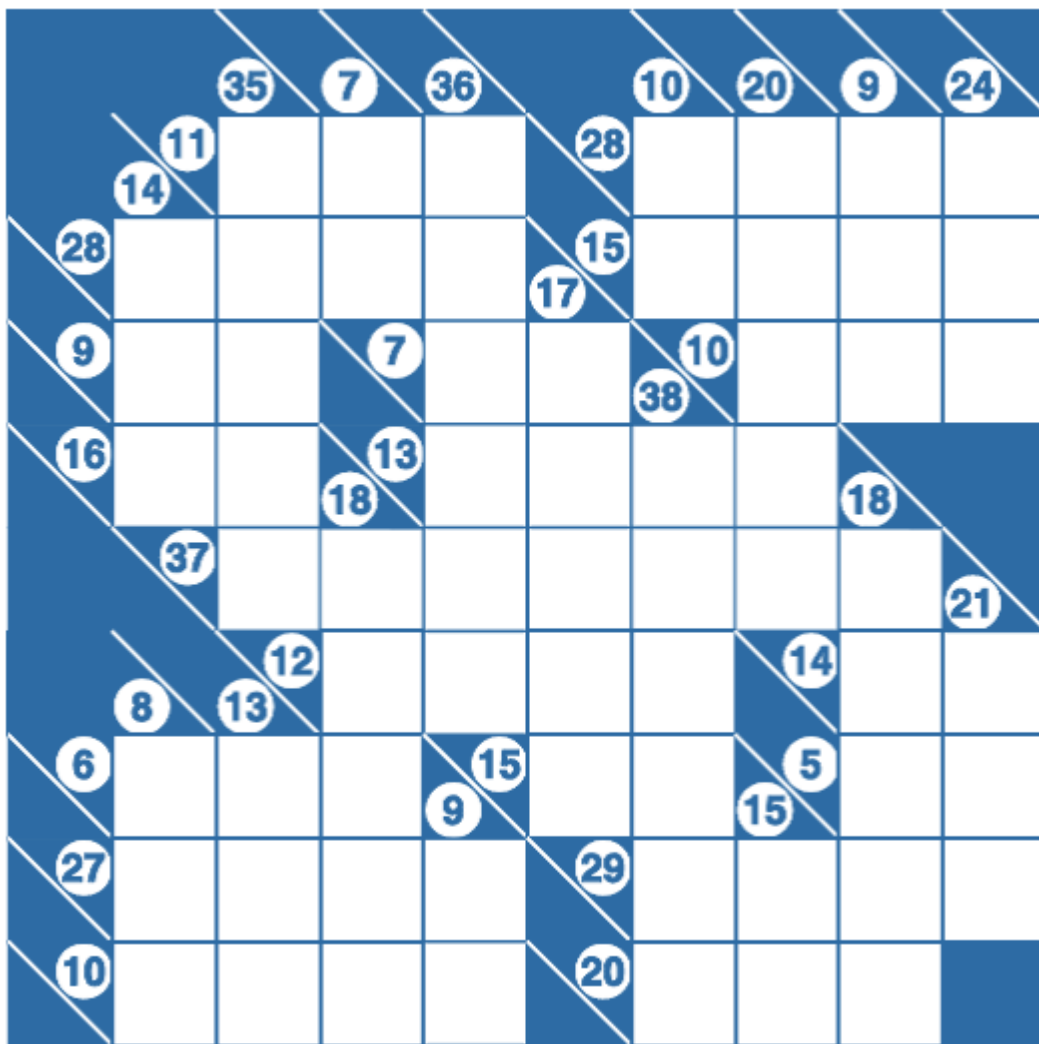
2. an early counting tool used for basic arithmetic
3. unit of power of a lens
7. biological catalysts
10. converts solar energy into electrical energy
11. the distance across a circle which passes through the centre
12. three dimensional shape with one vertex and circular base
13. finger like projections on wall of small intestine
15. an inner sense of right and wrong

Down

1. be sufficient
4. extremely beautiful and well-made
5. something that cannot be corrected
6. very sad and lonely
8. unnoticeable
9. mass slaughter of people by fire
14. a value that does not change

KAKURO

NOTE: The Objective is to fill all empty squares using digits 1 to 9 so that the sum of each horizontal block equals the clue on its left, and the sum of each vertical block equals the clue on its top. In addition, No digit may be used in the same block more than once.





III. The Gift of the Gab

Why should one have oratory skills? While a picture may be worth a thousand words, those words will no doubt come in handy if the picture is distorted or poorly understood. After all, the most effective way to communicate is through speech. Thus, speaking skills are a vitally important method of communication.

The four language skills of listening, speaking, reading, and writing are all interconnected. Proficiency in each skill is necessary to become a well-rounded communicator, but the ability to speak skilfully provides the speaker with several distinct advantages. The capacity to put words together in a meaningful way to reflect thoughts, opinions, and feelings provides the speaker with these important advantages.

The aim behind including Oratory skills in the activities is to make the students learn to think quickly, stand out from the rest, and develop their self-confidence. These skills will help the students to perform better in various fields.

THE GIFT OF THE GAB

Given below are the topics for debate. Draft and prepare your arguments in favour of or against the motion.

TOPICS FOR DEBATE (ENGLISH)

Level 1

CLASS 8

1. School should be about Learning, not sports.
2. Video Games lead to violence.

CLASS 9

1. Atomic Energy does more good than harm-yes/ no
2. Online shopping is the order of the day- a good alternative to market shopping.

CLASS 10

1. Self-learning is better than collaborative learning.
2. Wants are never satiated- agree/ disagree

Level 2

CLASS 8

1. Should circus be animal free?
2. Advertisements create artificial needs- yes/ no

CLASS 9

1. Brain Drain is not a bane for a developing country like India.
2. Homework should be abolished

CLASS 10

1. Driving age should be raised to 21 in India.
2. Boarding school system is beneficial for children.

Level 3

CLASS 8

1. Every home should have a robot to do household chores.
2. Men are much higher achievers as compared to Women .

CLASS 9

1. Reality TV shows for children do more harm than good.
2. Newspapers are a dead or dying media form.

CLASS 10

1. Technology hampers creativity in students.
2. Superheroes-Batman and Superman are the real role models for every child.

TOPICS FOR GROUP DISCUSSION

FOR CLASS 8

Level 1

1. Present generation is too dependent on computers.
2. Good communication skills are important to get ahead in life.
3. Television- an idiot box or a source of knowledge?
4. T-20 cricket is killing all cricketing skills
5. Is homework important?

Level 2

1. What is wrong with the practice of child labour?
2. Are smart phones a painkiller or a pain?
3. English is our window to the world & must continue as an official language in India.
4. The power of Social media
5. Can plastics be banned entirely?

Level 3

1. India is a young nation ,
2. Defence Forces-Ideal Career Option
3. Leaders are not made but born.
4. Women are better at multitasking.
5. Loss of ethics and Values in Modern Youth-Reasons and Solutions

TOPICS FOR GROUP DISCUSSION

CLASS -9

Level 1

1. Texting while driving can be dangerous.
2. Hybrid cars are good for the environment.
3. Stop using animal products.
4. Fast foods should come with a warning.
5. Extracurricular activities at school shape a student's future.

Level-2

1. Reading books is any day better than watching television.
2. Time- management.
3. Are old age homes necessary?
4. City life or village life- which one do you prefer?
5. Cut your coat according to the cloth.

Level -3

1. Ask not what your country has done for you... say what you have done for your country.
2. Should the driving age be raised to 21?
3. Being a class or house prefect enhances decision making skills.
4. Role of women in agriculture.
5. How can brain drain affect the coming generation?

TOPICS FOR GROUP DISCUSSION

CLASS 10

LEVEL 1

1. Nuclear Family versus Joint Family.
2. Is advertising all glitter and little truth.
3. A positive attitude helps at all fronts.
4. Self-discipline is the best way to discipline oneself.
5. Online games do more harm than good.

Level -2

1. Is feminism irrelevant in 21st Century?
2. Peer pressure helps in enhancement of student performance.
3. How can India increase her medal tally at the 2024 Olympics?
4. "Tell me- I forget, teach me-I remember, involve me - I learn" — share your views.
5. Movies are corrupting the Indian youth.

Level -3

1. Guns don't kill, people do. Do you agree?
2. The hand that rocks the cradle rules the world.
3. Government schools are the forerunners of holistic education.
4. Alcohol, junk food and sugar related advertisements need to be banned.
5. Who should decide the choice of streams after class 10—parent or student?

Topics for JAM (Just a Minute)

JAM or Just a Minute session is a test of wit. Language, gestures, body language, and understanding of the topic can be assessed through this. A topic is given and the speaker has one minute to express his views.

In larger classrooms, JAM sessions can be held in groups of 4. When the first speaker falters or stammers, the second speaker has to take over. The team with no or least breaks wins.

Some of the topics for JAM are given here. The topics can be chosen according to the level and interest of the class. The teachers are also free to have their own topics.

1. What If Human Beings Had Tails!
2. You Wake Up Alone In An Island, What Will You Do?
3. What Will You Choose: Free Travel Or Free Food, Why?
4. What Do You See When You Close Your Eyes?
5. Given A Choice What Super Power You'll Choose And Why?
6. You Can Take Three People On A Holiday, Whom Will You Choose And Why?
7. Which Is Your Favourite Season, Why?
8. What Is The One Secret That You Don't Want To Share With Anybody!
9. What Is The One Thing That You Will Like To Improve About Yourself ?
10. Lie About Any Of The Following: "I've Never Cheated In An Exam"; "I Am Not An Alien".
11. Who Would You Choose-A Foolish Friend Or An Intelligent Enemy.
12. Do You Think Hard Work Guarantees Success?
13. The Fear That You Would Like To Conquer And Why?
14. If I Were An Ice Cream/ Candy/ Pencil
15. How Do I See Myself After 15 Years
16. A Walk In The Rain
17. Colours Around Us
18. A Day Without Mobile Phones
19. The Joy Of Dancing
20. My Adventure Trip
21. Home Alone For A Day

22. Living In The Year 1800
23. The Day I Couldn't Speak
24. If I Had Magical Powers
25. Recess Time In School
26. It's Cool To Cook
27. If I Were A Journalist...
28. Life In Villages
29. If I Have A Tree House
30. Circus Clowns



IV. Let's Find and Analyse

There is an old saying- 'If you want to know, just ask.' This is the purpose behind conducting surveys and writing their reports. However, conducting survey is not as simple as asking questions. First, one must determine what information is to be gathered, which leads to deciding which questions to ask; how to ask them; and of whom.

The survey exercises given here guide the students how to frame appropriate questions and how to incorporate survey results into various walks of life. This will help the students to explain behaviour or attitudes of the target Group and get first-hand information. By reporting their survey findings, the students will learn to relate their learning to real life situations.

RUBRICS FOR EVALUATION OF SURVEY

This assignment concludes with student teams sharing collected data, and preparing a report followed by analyzing their findings. The survey will be assessed using the rubric below.

Category	Rating				Score
	4	3	2	1	
Clarity of questions	Questions are crystal clear and a person would not have to ask for clarification.	Questions are very clear and a person might have to ask for clarification.	Questions are somewhat clear and a person would have to ask for clarification.	Questions are confusing and ambiguous.	
Choice of responses	Every person would be able to choose from the responses.	Most people would be able to choose from the responses.	Few people would be able to choose from the responses.	No one would be able to choose from the responses.	
Layout	The selection of graphics, line styles, and arrangement options enhances the layout and meaning of the survey.	The selection of graphics, line styles and arrangement options mostly enhances the layout of the survey.	The selection of graphics, line styles and arrangement options sometimes enhances the layout of the survey.	The selection of graphics, line styles and arrangement options do not enhance the layout of the survey.	
Content	All essential questions are properly addressed.	Most of the essential questions are properly addressed.	Some of the essential questions are properly addressed.	One or fewer essential questions are addressed.	
Utility	Easy to use and pleasant to look at.	Easy to follow.	Rough, but gets the job done.	Difficult to follow and is jumbled.	
AWARENESS ACTIVITY	Excellent	Very good	good	average	
Total Score					

LET'S FIND AND ANALYSE

CLASS VIII

LEVEL- 1

WATER DETECTIVE

Aditya woke up late today; he quickly went to the wash basin and washed his brush, applied toothpaste on it and brushed his teeth. After rinsing his mouth he closed the tap and ran towards the bathroom for taking a bath. As he was late he did not close the taps properly, all taps were leaking. After school, when he returned home his mother called him and showed a bucket half filled with water, collected by his mother from a leaking tap. Then his mother explained to him that a dripping tap can leak 20,000 litres of water in a year. It is estimated that:



One gallon=15,140drips

One litre =4000drips

Now he felt sorry about his negligence and urged his friends to carry out a survey on water leakage in their school to create awareness.

PARAMETERS

- Linking Knowledge to life
- Observation and classification
- Prioritisation
- Accuracy and data collection

Learning objective

- To identify the various water points of your school , whether and where is water getting wasted and in what ways can it be saved.

Survey: A Small group of four students will take up the survey on water.

You have been assigned the duty of a water detective in your school campus. With the help of your partner, survey the school campus and make a questionnaire based on the following

- Total number of taps in the school premises.
- Number of drinking water taps
- Number of ablution taps(taps used for washing hands only)
- Number of other water outlets(taps in the fields, sprinklers, swimming pool-if any)
- Number of taps leaking
- Do the water points have spill proof taps to check overflow?
- Amount of water wasted during leakage in a month.
- Reasons of leakage
- Corrective measures taken to overcome the problem of leakage.
- How much water would be wasted (numbers may be rounded):

Drips per day: Liters per day:
 Gallons per day: Gallons per year:

Find it out! Can you discover the answers as you look round your school?



- Ask your teacher-- does your school have a water butt for collecting rainwater?
 Yes No
- Do all the sinks have plugs?
 Yes No

Analyze the collected data and represent the information in a tabular form

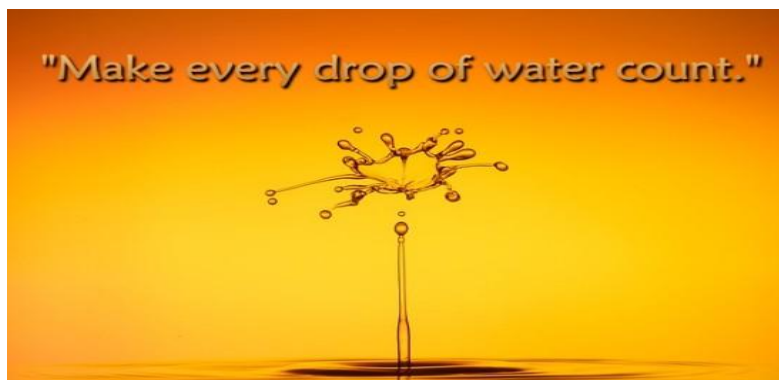
Draw bar graphs to display results of survey.

CREATE AWARENESS :

1. Suggest ways in which water could be saved in your school
2. Make posters to create awareness.

SAVING WATER IN THE HOME

INEFFICIENT USE	WHAT YOU CAN DO
<ul style="list-style-type: none"> ✗ Long showers can waste three or four buckets of clean drinking water every minute. ✗ Baths use nearly two and half times as much water as showers. 	<ul style="list-style-type: none"> ✓ Install low flow, water efficient AAA showerheads and taps. ✓ Buy a shower timer and shorten shower times to 3-4 minutes.
<ul style="list-style-type: none"> ✗ A running tap can use between 5 - 15 litres of water a minute. 	<ul style="list-style-type: none"> ✓ Only turn taps to a slow flow when washing hands and use a cup to rinse when brushing your teeth. ✓ Repair leaky taps immediately. ✓ Rinse plates and vegetables in a shallow sink of water rather than under the tap. ✓ Turn taps off completely when finished.
<ul style="list-style-type: none"> ✗ A full toilet flush can use up to 15 litres of water for every flush, whereas half flush uses less than 6 litres. 	<ul style="list-style-type: none"> ✓ Install a dual flush toilet system and always use the half flush. ✓ Put a brick in your cistern to reduce the amount of water used to flush.
<ul style="list-style-type: none"> ✗ A leaking toilet may not be seen or heard but can waste more than 16,000 litres of water in a year. 	<ul style="list-style-type: none"> ✓ To check for leaks, put a little food colouring in the toilet tank. If, without flushing, the colouring begins to appear in the bowl it should be repaired immediately.
<ul style="list-style-type: none"> ✗ Turning on a part filled dishwasher or washing machine. 	<ul style="list-style-type: none"> ✓ Only switch on your dishwasher or use your washing machine when full.



"A drop of water is worth more than a sack of gold to a thirsty man."

LET'S FIND AND ANALYSE

CLASS VIII

LEVEL- II

WATER HERO

One day when Raman, a nature lover, woke up early in the morning and went outside to hear chirping sounds of birds and to water the plants in his garden, he saw water overflowing from his neighbour's tank. When he looked around, he saw water overflowing from the tanks of other neighbours also. He knew water is precious and must be saved. He discussed this with his friends and they discovered that 60% of water worldwide is lost due to pipe leaks. They felt that there is need to create awareness that freshwater resources need to be protected and people should find some innovative solutions in water conservation.

They planned to carry out a survey in their neighbourhood to create awareness about water conservation.



Learning objective

To identify where all water is used in the community and neighbourhood and where and how could water be saved.

In a group of two, survey the community and neighbourhood to find out and identify as many places as possible where water is used and wasted. Also list the ways how water is used in each area.

Mark the places in your neighbourhood map. Visit each area marked and count the number of water using activities in those areas and record the data collected in a table.

Also survey the people in the community and neighbourhood to examine attitudes towards water conservation.

Display the results by

- Devising symbols and a key to identify areas where water is used
- Using a traffic light system on the map- red for areas where water is wasted, green for moderate water wastage areas and blue for areas of water saving.
- Using bar graphs to display the survey.

Plenary Meetings

- Show graphs and maps created
- Discuss how water is used and wasted in community and neighbourhood.
- Suggest ways to save water in community and neighbourhood.
- To install water saving fittings to the taps, urinals
- Watch out for change

Spot where citizens of your community and neighbourhood could save water

- Mark on your map all the places you find water being used.
- Ask people to check their water faucets at home -- do any of them drip? Maybe it's just a small drip -- how much water can a little drip waste? True, a single drip won't waste much water, but think about each faucet in your home dripping a little bit all day long. What if every faucet in every home on your block ... in your town ... in your state also dripped? The drips would add up to a flood of water wasted down the drain.

Looking at it this way, it seems like that drop of water down the drain is pretty insignificant. Use the form below to see how all those drops flowing in "real time" can add up to a flood.

Number of homes	Number of faucets in each home	Number of drips per minute

- Count the number of each water-using item, such as taps and toilets, and record them here

S/N	Place/area	No. of taps	No. of dripping/ running taps	No. of toilets	No. of urinals in boys toilets	No. of other items that use water
1	Residential Flats / House					
2	Parks					
3	Sports complex					
4	Shopping Complex					
5	Religious places					
6	Others					

Find it out!

Can you discover the answers as you look round your neighbourhood?

Does your locality have a water butt for collecting rainwater?	Yes/No
Do all the sinks in houses have plugs?	Yes/ No
In the kitchen/canteen are the taps left running while washing dishes?	Yes/ No
Are there pictures/posters displayed in the locality which remind you to save water? Yes /No	
Does your neighbourhood have a green club Or cleanliness maintenance club? Yes/ No	

- **Analyze the collected data and represent the information in the form of a line graph**
- **Draw bar graphs to display the results of survey**
- **CREATE AWARENESS :**
 1. Suggest ways in which water could be saved in your locality
 2. Write **SAVE WATER SLOGANS** to show the Importance of Water in everyone's life.



LET'S FIND AND ANALYSE

CLASS VIII

LEVEL- III

WATER AUDIT

In order to make access to water adequate and equitable, we must shift our focus from water sources to water resources. Both science, and community participation and cooperation, are key to addressing our water woes.

-by **DR HIMANSHU KULKARNI, UMA ASLEKAR**

.At 260 cubic km per year, our country is the highest user of groundwater in the world—we use 25 percent of all groundwater extracted globally, ahead of USA and China.

Conduct a random sample survey of your neighbourhood to evaluate citizen awareness, attitudes and willingness to act on water issues.

AIM: The goals of your survey should be to:

- Create baseline measures for new topics of concern
- Provide feedback on awareness and satisfaction with conservation services
- Help people guide conservation efforts in the future
- To evaluate citizen awareness, attitudes and willingness to act on water issues.

Prepare a questionnaire defining parameters that can be taken up for a survey to be conducted on usage of water by industrial and commercial users of your locality. The survey should also contain questions regarding various methods of water conservation that are being practised, or could be adopted by these industrial and commercial users in the future.

- Small groups of students will take up survey
- **Please list the top five commercial and industrial users** that would be economically impacted during water shortages, if water consumption in your locality was reduced to that of only water for humans and animals (i.e. cooking, sanitation and drinking).

AWARENESS ACTIVITY

Perform a **nukkad natak (street play)** to create awareness about water.



CONSERVE EVERY DROP OF WATER

LET'S FIND AND ANALYSE

CLASS IX

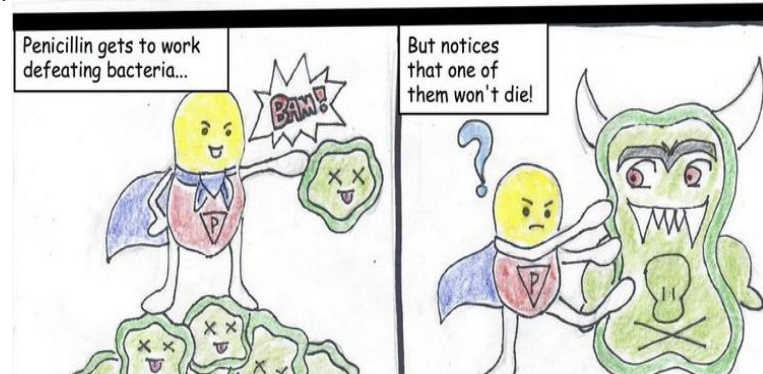
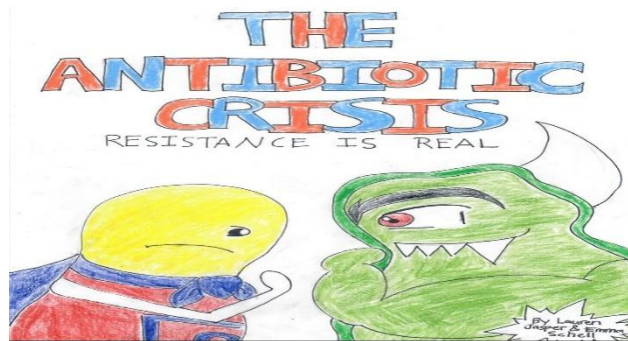
LEVEL- 1

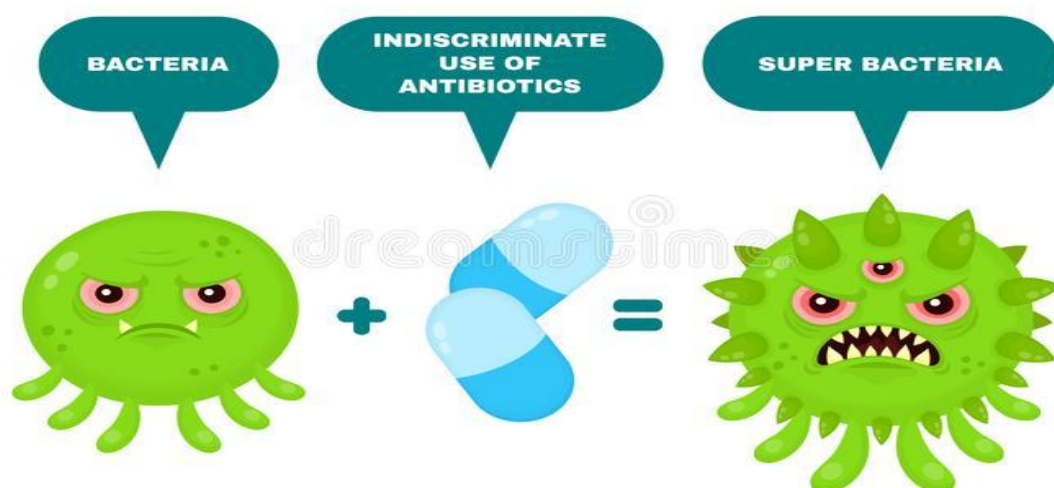
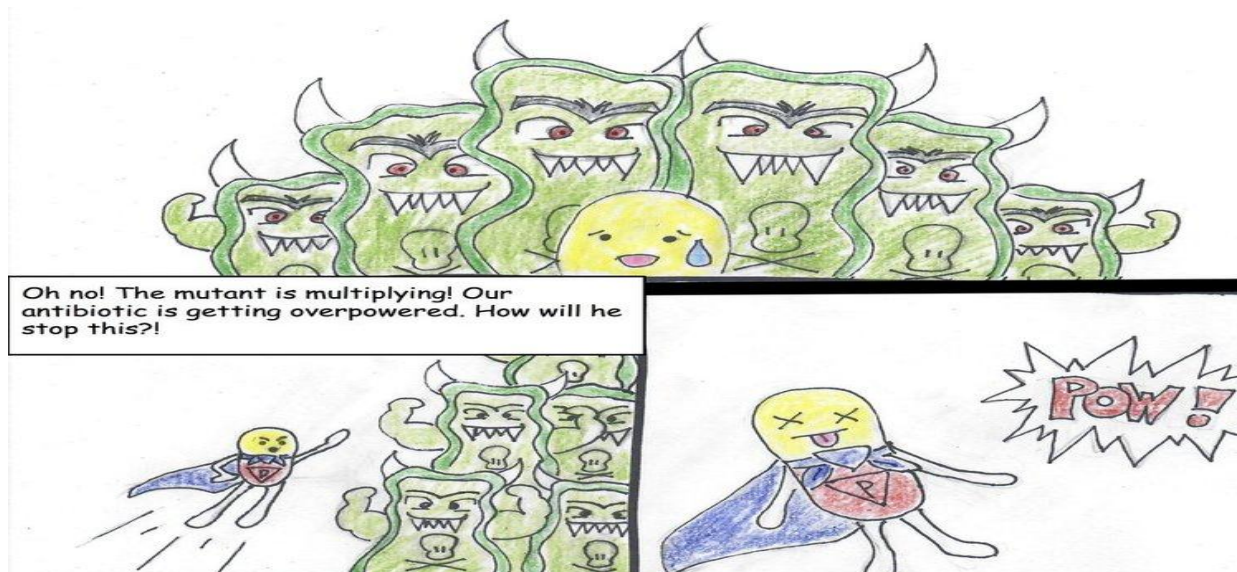
ANTIBIOTICS CHALLENGE

INTRODUCTION

One day, Shyam's father, Ram Prasad, came from office, feeling a little feverish, with a little body pain. Shyam asked him to go to see the doctor, but he refused and took some antibiotic pills himself and went to sleep.

A week later Ram Prasad was suffering from a runny nose; again he took some antibiotics himself. Shyam saw this was happening very frequently, one day while surfing on the internet, he came across the following comic.





Shyam now knew that reckless use of antibiotics is extremely dangerous. He now urges the students to take the task of assessing the situation & of spreading awareness about this issue, into their own hands.

So now, as a responsible student, your task is to conduct a survey, examine, understand and spread awareness about importance of antibiotics and the consequences of its misuse. Conduct the survey in a groups of four students.

PARAMETERS

Linking Knowledge to life
Observation and classification

Prioritisation
Accuracy and data collection

AIM

1. To understand why people use antibiotics without prescription
2. To educate people about Antibiotic Resistance
3. To spread awareness regarding why antibiotics should only be taken when they have been prescribed to a specific individual for a particular episode of illness
4. The importance of taking the full prescription as advised by the doctor.

SURVEY

The following are the questions to be asked in the survey:-

1. Number of children in the school/ class who suffered from cold/cough/ fever in the last month.
2. How long did the illness last?
3. How many of them took antibiotics?
4. How long were those who took antibiotics ill?
5. Is there any difference between these two groups?
6. Reasons behind the difference

Questionnaire on antibiotics

1. Antibiotic consumption

1.1 Name some of the antibiotics you have heard of.

1.2 Which of the following medications are antibiotics?

- | | |
|--------------------------------------|---------------------------------------|
| <input type="checkbox"/> Paracetamol | <input type="checkbox"/> penicillin |
| <input type="checkbox"/> Saridon | <input type="checkbox"/> Streptomycin |

1.3 Have you ever taken antibiotics?

- Yes
- No
- Don't know

1.4 If yes then how many times have you consumed antibiotics during the past 6 months?

- Never
- Once
- 2-5 times
- More than 5 times

1.5 How many times have you taken antibiotics during the past 1 months?

- Never
- Once
- 2-5 times
- More than 5 times

1.6 When did you last take antibiotics?

- last month
- in last 6 months
- last year
- More than a year ago

1.7. Is it okay to use antibiotics that were given to a friend or family member, as long as they were used to treat the same illness.

- True
- False

1.8. Its okay to buy the same antibiotics, or request these from a doctor, if you're sick and they helped you get better when you had the same symptoms before.

- True
- False

1.9. When did they think they should stop taking antibiotics once they had begun treatment

- when they feel better
- when they have taken all the antibiotics as directed.

2.0 Can cold & flu be treated with antibiotics?

- Yes
- No
- Don't know

3. Background information

3.1 Sex

- Female
- Male

3.2 Age

_____ years old

3.3 Education.

- Primary and secondary school (or equivalent)
- Upper secondary school (or equivalent)
- Senior secondary

3.4 Do you have a medical/healthcare-related education?

- Yes. What education? _____ from where _____
- No

4.. Awareness of key terms related to antibiotic resistance and sources of information

4.1. Have you heard of a series of terms commonly used in relation to the issue of antibiotic resistance? They include

- Antibiotic resistance
- Antibiotic-resistant bacteria
- Antimicrobial resistance
- Drug resistance
- Superbugs

CREATE AWARENESS



LET'S FIND AND ANALYSE

CLASS IX

LEVEL- II

Good quality fuel for the car....then why not for yourself?

Ram, along with his classmates, recently underwent a free health check-up organized at his school on the occasion of World Health Day. He was astonished to find out that many of his classmates were exhibiting signs of nutrient deficiencies and were overweight.



The nutrition experts present there then educated the children on healthy dietary habits and importance of nutrition, following which Ram understood how important it is to take care of one's body by adopting good dietary habits. He now urges the students to take up the task to *conduct a survey, examine, understand and spread awareness about the importance of good eating and dietary habits. Conduct the survey in a groups of two students.*



EATING AND DIETARY HABIT SURVEY

In a group of two, survey your neighbourhood to find out:

- What are the dietary habits of children between 12 to 15 years of age.
- How aware are these children about healthy dietary habits and how can they be encouraged to adopt better habits.

1. Questionnaire

1. How frequently do you eat fruits?
a) Everyday b) at least twice a week c) rarely
2. How often do you eat a good and balanced breakfast?
a) Everyday b) sometimes c) never
3. When do you eat fruits?
a) Empty stomach b) just before a meal c) just after a meal
4. How often do you eat junk foods (pizza, burger, chips, etc.)?
a) Everyday b) at least twice a week c) rarely
5. How often do you consume carbonated beverages (cold drinks)?
a) Everyday b) at least twice a week c) never
6. What percentage of your diet is raw food (uncooked) e.g.: salad, fruits, sprouts, dry fruits, etc
a) Less than 20% b) less than 40% c) 50 to 60 %
7. How many types of food grains are consumed frequently in your home (wheat, rice, bajra, ragi, jowar (sorghum), maize barley (jau)
a) Less than two b) less than four c) five and above
8. Which type of rice do you consume?
a) Polished (white) rice b) brown rice
9. Which sweeteners are used more frequently in your home?
a) Table sugar (white) b) brown sugar c) jaggery and honey
10. Around what time do you have dinner?
a) Before 8 p.m. b) Before 10 p.m. c) After 10 p.m.
11. Select the option that best describes your breakfast/morning eating habits

- a) I eat/make breakfast regularly and aim to eat healthy, unprocessed food
- b) I grab breakfast on-the-go and it's usually unhealthy
- c) My breakfast eating habits are erratic: sometimes it's healthy, sometimes it's not and sometimes I skip food in the morning
- d) I regularly skip breakfast

12. Select the option that best describes your lunch/mid-day eating habits.

- a) I make my lunch and aim to eat healthy, unprocessed food
- b) I usually eat out for lunch and aim to eat whole, unprocessed food
- c) I usually eat out and grab what's convenient (usually not healthy)
- d) My lunchtime eating habits are erratic: sometimes it's healthy, sometimes it's not and sometimes I skip lunch altogether

13. How many servings of non-fried vegetables do you eat on an average day ? (One serving= $\frac{1}{2}$ cup, about a handful)

- A. None
- B. 1
- C. 2-3
- D. 4 or more

14. What do you consider to be your biggest challenge when it comes to eating healthy?

- a) I don't know what is healthy and what isn't - it's confusing
- b) I can't seem to control my appetite and get cravings
- c) It's about convenience – I eat what I get
- d) I find unhealthy foods or portions emotionally comforting
- e) I find eating healthy to be too expensive
- f) I typically find it easy to eat healthy
- g) Other (please specify)

15. What type of bread, rolls, etc., do you usually eat?

- A. 100% whole wheat or other whole grain
- B. Whole wheat as 1st or 2nd ingredient (not true whole grain)

C. Rye, corn or oatmeal

D. French or Italia

E. White fluffy bread

16. How many servings of non-fried vegetables do you eat on an average day ? (One serving= $\frac{1}{2}$ cup, about a handful)

- A. None
- B. 1
- C. 2-3
- D. 4 or more

17. How many servings of whole grains rich in complex carbohydrates do you eat per day? (One serving = 1 slice of bread. 1 large pancake, 1 cup cold cereal, $\frac{1}{2}$ cup cooked cereal, brown rice, pasta, bulgar, wheat berries, kasha, or millet. Omit heavily sweetened cold cereals.)

- A. None
- B. 1-3
- C. 4-5
- D. 6-8
- E. 9+

18. Which of these beverages do you drink on a typical day

- A. Only water, hardly ever juices
- B. Mostly water, some juice, soda rarely
- C. Some water, a lot of soda, juices and other drinks
- D. I drink a lot of soda, juices, energy drinks...I don't like plain water

19. How many times a week do you eat dessert?

- A. Never or rarely
- B. 1-2
- C. 3-4
- D. Most days

• 20. What do you usually eat for dessert?

- A. I don't usually eat dessert
- B. Fruit
- C. Frozen yogurt or ice milk
- D. Non-fat ice cream or sorbet
- E. Ice cream
- Pastry, pie, or cake

21. The last several questions refer to your dietary habits or patterns. How would you describe your food consumption in terms of number of meals?

- A . Try to space out my meals-a lot of smaller meals throughout the day (5 or so small meals). Never too full or too hungry.
- B. I try to eat smaller meals throughout the day but it's hard based on my schedule.
- C. Try to have 3 meals a day and one is usually a lot more than others..
- D . Skip many meals and eat a ton at night or at once when I'm finally hungry

22. How often do you skip meals?

- A. Rarely or never
- B. Once in a while
- C. 1-3 times a week
- D. I end up doing this a lot

23. Which of the following best describes you and your family when it comes to nutrition and food choices. Your family has a large influence on how, when and what you eat.....hopefully you can bring some lessons home to add positive changes!

- A. We are interested in nutrition and it is important to me/us. You could tell when you eat at our house.
- B. We don't try too hard but we eat mostly healthy.
- C. Our family or I aren't interested in nutrition but we also are not the worst
- D. My family and I could use a complete overhaul of nutrition

II Analyze the collected data and represent the information through a bar graph.

III. Awareness activity

Find out about commonly deficient nutrients in undernourished kids and identify various food sources of these nutrients. Now using those food items prepare a nutritious no fire meal and distribute it amongst undernourished kids in nearby slum area under the supervision of an adult

LET'S FIND AND ANALYSE

CLASS IX

LEVEL- III

HEALTH AUDIT

ACUTE AND CHRONIC DISEASES

One day Pratibha read the following article on acute and chronic diseases-

“Chronic, non communicable diseases such as cardiovascular diseases, diabetes and asthma impose a large and growing health burden on developing countries.

Chronic diseases are responsible for at least 50% of the deaths that occur in all World Health Organization (WHO) regions except Africa, where they still account for 25% of all deaths. While the proportion of deaths from chronic diseases is largest in high-income countries, in low- and middle-income countries chronic diseases continue to cause 39% and 72% of all deaths, respectively

The WHO Action Plan for the Global Strategy for the Prevention and Control of Non-communicable Diseases recommends addressing management in the context of overall health system strengthening.

Chronic diseases (eg, cardiovascular diseases, mental health disorders, diabetes, and cancer) and injuries are the leading causes of death and disability in India

Chronic diseases (including cardiovascular and respiratory diseases, mental disorders, diabetes, and cancers) and injuries are the leading causes of death and disability in India— their burden will continue to increase during the next 25 years as a consequence of the rapidly ageing population in India.

- Most chronic diseases are common and often occur as co-morbidities.
- Risk factors for chronic diseases are highly prevalent among the Indian population.
- Although a wide range of cost-effective prevention strategies are available, implementation is generally low, especially among people who are poor and those living in rural areas.

Cardiovascular diseases alone account for 30% of all deaths in the world, 2 80% of which occur in low- and middle-income countries.

Acute diseases are those diseases that come on abruptly and run a short, severe course, while chronic diseases last for a prolonged time and may come and go. An acute disease requires immediate medical attention due to life-threatening possibilities. Types of acute

diseases include typhoid, breathing difficulties, rapid-spreading infections and tissue death, or necrosis.

After reading the above article she was shaken and promised herself to create awareness regarding this. Next day when she came to school, talked to her friends and the group finally decided to conduct a survey to assess the health condition of people around them.

CONDUCTING HEALTH AUDIT

- I. **Student will prepare questionnaire by defining parameters** to take up a health audit on acute and chronic diseases prevailing in the school/neighbourhood.

The following points may be taken into consideration.

- How many people suffered from acute diseases (along with the name of diseases) during the last three months.
- How many people developed chronic diseases (along with the name of diseases) during this same period
- Total number of people suffering from chronic illness at present
- Total number of people suffering from acute illness at present
- Possible reasons behind these diseases
- How does it affect the general health of the population
- What is the role of diet ?
- Role of their economic condition.
- Hygiene of the place where they live.
- Is there any relation of that disease with the type of their occupation

II Analyze the collected data and represent the information through graphs.

III. Awareness activity

The students must spread awareness regarding prevention of common acute and chronic diseases via healthy lifestyle and habits.

Differences and Similarities: Acute and Chronic Illness

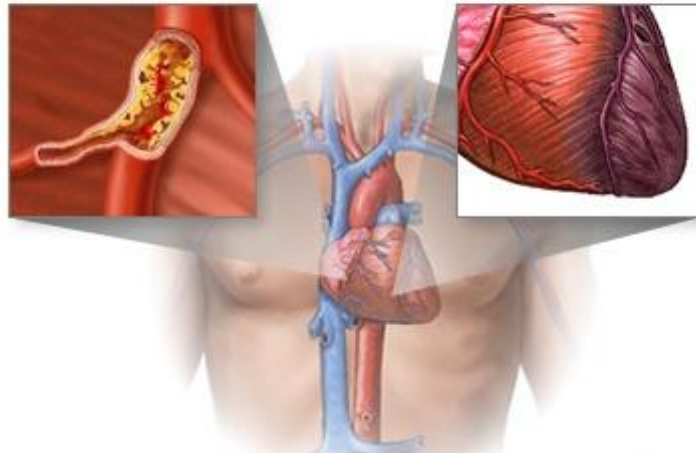
Chronic Illness	Acute Illness
Frequently involve multiple systems	Usually isolated to one bodily area
Uncertain future	Responds to treatment
Requires more care and resources to normalize lifestyle	Requires less care and resources because it is temporary
Similar "coping" style	



Acute vs. chronic conditions

A chronic condition develops and worsens over an extended period of time, as in atherosclerosis

In an acute condition symptoms appear and change or worsen rapidly, as in a heart attack



LET'S FIND AND ANALYSE!

CLASS X

LEVEL 1

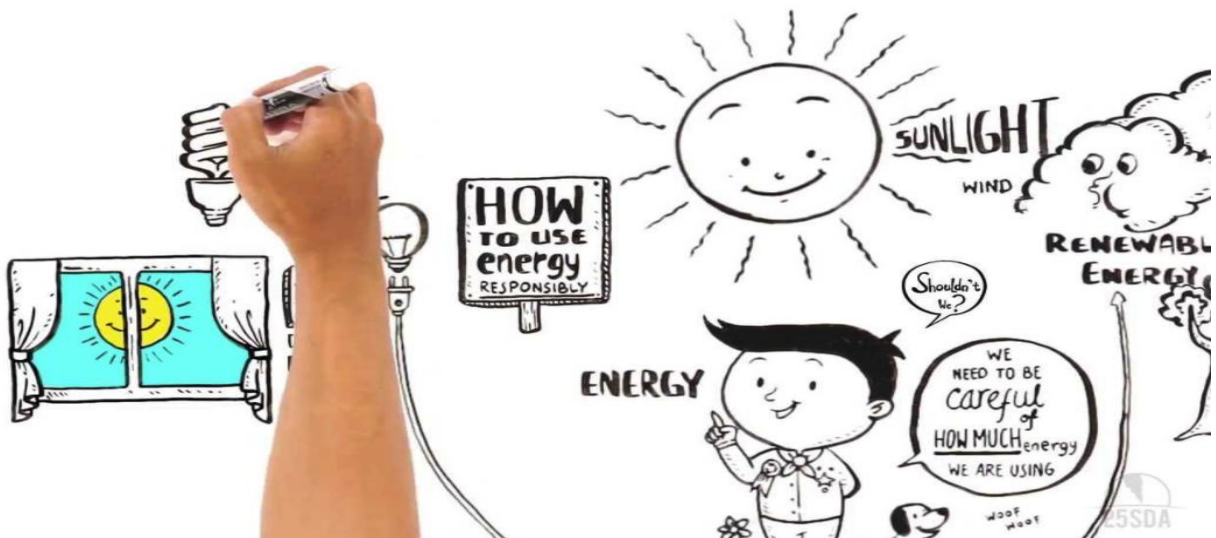
Maximum time allotted: 60 min

(To choose a team, plan the work and discuss)

PARAMETERS

- Linking Knowledge to life
- Observation and classification
- Prioritisation
- Accuracy and data collection

How much energy does your school use?



Overview

This activity teaches students how to read electric appliances in order to calculate the cost of the energy consumed and make them aware of need of energy conservation.

Background

Schools use a lot of energy to provide students with a comfortable and usable building to learn. Educational machines—such as televisions, interactive boards, DVD players, copiers, projectors and computers—use energy as well.

Many different energy sources are used to generate electricity—both renewable and non-renewable.

In schools, electricity is used to provide light, to operate the machines and appliances, to cool the buildings, and, perhaps, for heating, cooking (in canteens) and heating water.

Other fuels that schools might use are LPG and solar energy. Electricity enters the school through a distribution line that passes through a meter. The meter measures the amount of electricity consumed in kilowatt-hours.

Objective

Students will be able to describe how electricity is measured, calculated and conserved.

Survey

Students will work in teams to complete a series of data organization and conduct interviews to determine how the school is using energy. They will then develop recommendations on how energy could be used more efficiently.

Students will develop a battery of interview questions and then interview staff members on energy-related equipment and behaviours in their areas of the building.

Types of staff to be interviewed:

- Teachers constitute the largest body of employees occupying the greatest building area.
- Office staff members have different needs, hours, types of devices, and experiences.
- Maintenance and operations personnel have knowledge, understanding, and access to information on the operation of the building and energy-related issues.
- Other staff may include cafeteria personnel, athletic department personnel, and after school program leaders

S/N	Name of Appliance	BEE Star Rating of	Number of appliance	Power of appliance in watt	Energy consumption per Day	Energy consumption per Month	Type of use
1							
2							
3							
4							
5							
6							
7							

8							
9							
10							
11							

Q.1 Which device is energy efficient?

.....

Q.2 Which device is consuming more energy?

.....

Q.3 Which devices are using energy through non-renewable source?

.....

Q.4 Do you know the star ratings on electrical appliances and what is their importance ?

YES, NO if Yes.....

Q.5 Does the school has electricians to maintain electrical appliances?

YES, NO

Q.6 Do you agree that we should use non-renewable sources of energy?

Yes, of course No, it costs too much It's the waste of time

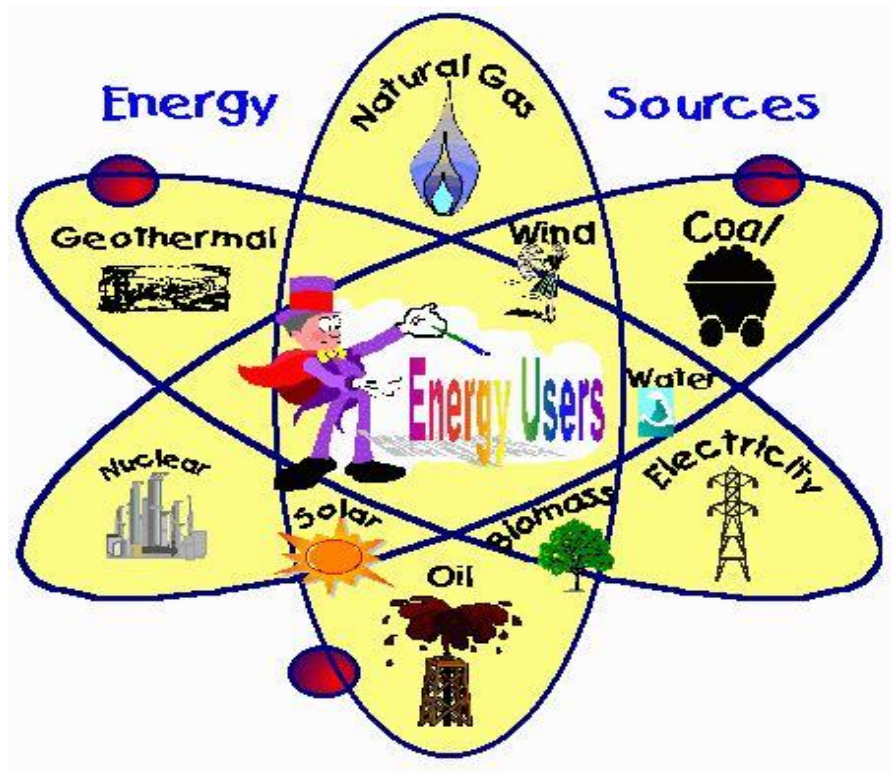
Q.7 Refer to the table above and Suggest some ways to conserve energy in school set up.



CLASS X

LEVEL 2

A community survey of the pattern and determinants of different sources of energy (renewable/Non-renewable) used by people in neighborhood.



Objective: To make the students aware of different renewable and non-renewable sources of energy available.

To make them understand the need for conserving non-renewable resources.

Abstract: The use of renewable energy sources is rapidly increasing as alternatives to conventional sources. As India having a great potential of renewable sources, the consciousness of community is a very significant issue for the development in this area. A survey of renewable and non-renewable sources energy awareness is conducted by the students. In order to determine the awareness of people in the neighbourhood, a validated questionnaire was prepared. The data obtained from the study will be analyzed later on.

This study is especially expected to be useful in determining the types of resources used by people in the community for cooking, transportation, household work, lightning, usage by appliances etc.

QUESTIONNAIRE

Q.1 Which source of energy do you use for cooking?

.....
Q.2 Why did you choose this source of energy?

.....
Q.3 Do you know any better alternative to this source?

.....
Q.4 How do you commute to your workplace ?

Public transport, private transport

Q.5 Which source of energy does this transport use?

Q.6 Do you use any of the below mentioned alternatives eco-friendly source of energy at personal or community level?

a) solar cooker b) solar water heater c)windmill d) biogas

Q.7 Do you agree that we should use non-renewable sources of energy ?

Yes, of course No, it costs too much It's the waste of time

Q.8 Refer the above table and suggest some measures to check the wastage of sources of energy.

.....

TOTAL ENERGY CONSUMED (NEIGHBOURHOOD/COMMUNITY/LOCALITY).

S/N	Sources Of Energy	Energy consumption per Day	Energy consumption per Month	Energy consumed in Megajoules	Measure adopted to check the wastage of energy Yes/ No	Type of use
1	ENERGY FROM THE BOARD(KWH)					
2	ENERGY FROM GENERATOR(LITRES)					
3	PETROL(LITRES)					
4	DIESEL(LITRES)					
5	CNG(KILOGRAMS)					
6	KEROSENE(LITRES)					
7	COAL(Kg)					
8	WOOD (Kg)					
9	ANIMAL WASTE(Kg)					
10	SOLAR (Kwh)					
11	PNG (Kg)					
12	LPG(Kg)					
13	BIOGAS					

LET'S FIND AND ANALYSE!

CLASS X

LEVEL 3



Survey on fuel efficient cooking practices

- To carry out a survey **on amount of fuel consumed for cooking and cooking practices of the people.**
- To spread awareness regarding fuel efficient cooking practices after 1st survey.
- **To collect information on saving of fuel (if any) due to improved cooking practices (due to awareness created by the surveyor).**
- **Prepare questionnaire and define parameters for above survey.**
- **Analyze data collected before and after awareness campaign.**

EVALUATION

This assignment concludes with student teams sharing collected data, determining areas of interest with regard to energy use patterns found, and preparing a report after analyzing

their findings. The results of the SURVEY can be used to prepare an Energy Action Plan outlining energy conservation practices observed and conservation practices that can be implemented in the school.

RUBRICS

AREAS	Linking knowledge to life	Observation and classification	Prioritization	Data collection and accuracy
MARKS ALLOTTED	10	10	10	10

School Energy Survey
Evaluation Form

State: _____ Grade Level: _____ Number of Students:

1. Did you conduct the entire survey?	Yes / No
2. Were the instructions clear and easy to follow?	Yes / No
3. Did the activities meet your academic objectives?	Yes / No
4. Were the activities age appropriate?	Yes /No
5. Were the allotted times sufficient to conduct the activities?	Yes / No
6. Were the activities easy to use?	Yes/ No
7. Was the preparation required acceptable for the activities?	Yes /No
8. Were the students interested and motivated?	Yes /No
9. Was the energy knowledge content age appropriate?	Yes /No
10. How would you rate the unit overall?	Excellent / good /fair/poor

V. Interpret the Data

Data analysis and interpretation have now taken centre stage with the advent of the digital age and the sheer amount of data can be frightening. Hence, it is important to learn the skill of data interpretation.



Data interpretation refers to the implementation of processes through which data is reviewed for the purpose of arriving at an informed conclusion. The interpretation of data assigns a meaning to the information analyzed and determines its signification and implications.

The data interpretation exercises included here help the students understand and analyze the information presented through the data. They will also learn to sieve the data through multiple sources and draw conclusions by interpreting them.

LET' S INTERPRET THE DATA!

General instructions for teacher

- As a facilitator, the teacher may provide guidance to students to understand the questions.
- Teacher will assist the students to understand the information given.
- Students will themselves prepare their own Bar graph/ Histogram/ ogive etc. as per the demand of the question.
- Marks allotted for each question is 5
- Total time given is One hour (60 minute).

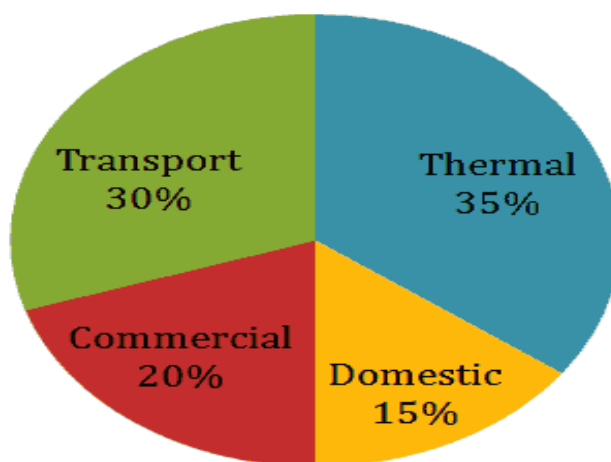
LET' S INTERPRET THE DATA!

Class VIII

LEVEL 1

QUESTION NO. 1: Pie-Chart CO₂ Emission

The total annual CO₂ emissions from various sectors are 5 mmt. In the Pie Chart given below, the percentage contribution to CO₂ emissions from various sectors is indicated.



1. Which of the following sectors together emit 2.5 mmt of CO₂ every year?

- a. Thermal and Transport
- b. Domestic and Commercial
- c. Transport and Commercial
- d. Commercial and Thermal

2. Which of the following sectors have emission difference of 1 mmt between them ?

- a. Domestic and Commercial
- b. Transport and Commercial
- c. Thermal and Domestic
- d. Thermal and Transport.

3. How much percent is the emission of Domestic sector with respect to Transport and Commercial sector?

- a. 20%
- b. 15%
- c. 30%
- d. 35%

4. In the next year, if emission from Commercial sector decreases by 20% of its current emission, while other sectors continue to emit same amount of CO₂ as earlier then what will be the new % contribution of Thermal power sector (approximately)?

- a. 31.9%
- b. 39.8%
- c. 42.7%
- d. 36.5%

LET'S INTERPRET THE DATA!

CLASS: VIII

LEVEL: 2

QUESTION NO.1: The chart given below shows the sale of books (in thousand numbers) from six branches of a publishing company during two consecutive years 2000 and 2001.

Publishing Company	Sale in Year 2000 (in thousands)	Sale in Year 2001 (in thousands)
B1	80	105
B2	75	65
B3	95	110
B4	85	95
B5	75	95
B6	70	80

(A) What is the ratio of the total sales of branch B2 for both years to the total sales of branch B4 for both years?

- A. 2 : 3
- B. 3 : 5
- C. 4 : 5
- D. 7 : 9

(B) Total sales of branch B6 for both the years are what percent of the total sales of branches B3 for both the years?

- A. 68.54%
- B. 71.11%
- C. 73.17%

D. 75.55%

(C) What percent of the average sales of branches B1, B2 and B3 in 2001 is the average sales of branches B1, B3 and B6 in 2000?

A. 75%

B. 77.5%

C. 82.5%

D. 87.5%

(D) What are the average sales of all the branches (in thousand numbers) for the year 2000?

A. 73

B. 80

C. 83

D. 88

LET'S INTERPRET THE DATA!

CLASS VIII

LEVEL: 3

Example 1: A survey of students' favourite after-school activities was conducted at a school. The table below shows the results of this survey.

Students' Favourite After-School Activities	
Activity	Number of Students
Play Sports	45
Talk on Phone	53
Visit With Friends	99
Earn Money	44
Chat Online	66
School Clubs	22
Watch TV	37

Use this data to prepare a bar graph and also frame questions related to the above data. You may use the clues given below for your reference.

1. What is the title of this bar graph?
2. What is the range of values on the (horizontal) scale?
3. How many categories are there in the graph?
4. Which after-school activity do students like the most?
5. Which after-school activity do students like the least?
6. How many students like to talk on the phone?
7. How many students like to earn money?
8. Which two activities are liked almost equally?
9. List the categories in the graph from greatest to least.

LET'S INTERPRET THE DATA!

CLASS IX

INTERPRET THE DATA

INTRODUCTION

What is Data Interpretation?

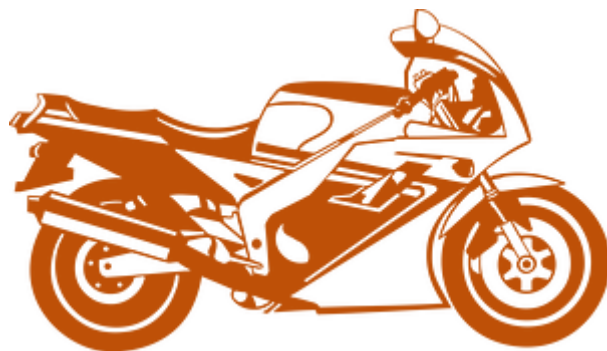
Data Interpretation refers to the implementation of procedures through which data is reviewed for the purpose of arriving at an inference. Interpreting data requires analyzing data to infer information from it in order to answer questions. Data can be provided in a number of formats viz: Bars, tables, line graphs, pie graphs.

How to solve these questions?

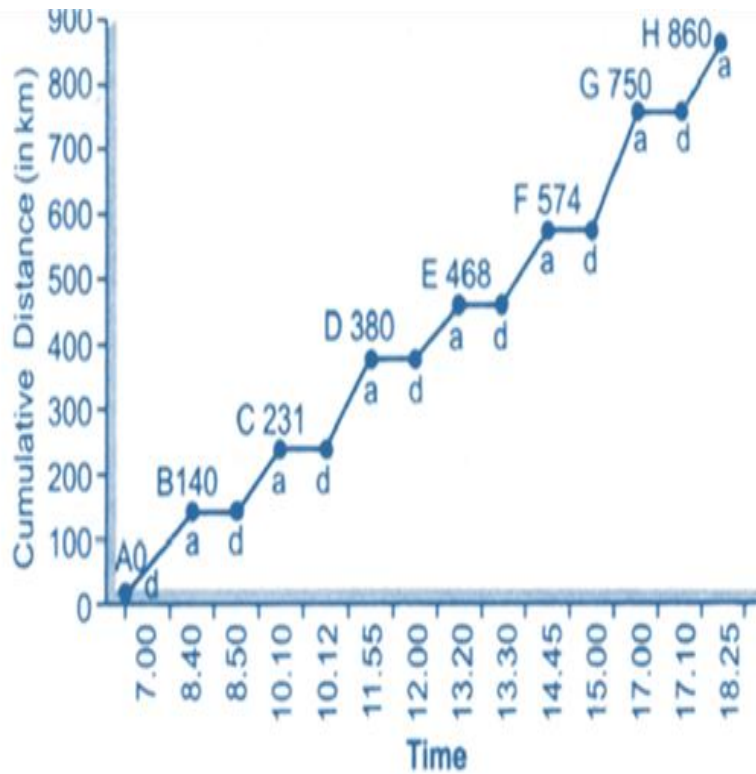
- Read the figures given closely and do not over-approximate just to simplify your task.
- DO NOT ASSUME information that is not given in the questions.
- Data Interpretation revolves around Arithmetic and calculation speed.

LEVEL- I

After joining my job when I got my first salary I purchased my dream bike as I am inexplicably thrilled about using a bicycle to explore new cities, its streets, gardens, lakes, rivers, mountains; observing various species of birds, butterflies, animals and many undiscovered places etc.



When I am on a bike, I can't help but feel completely alive and immersed in the moment. It's the most thrilling and adventurous experience for me. So I travelled through some cities on a motorbike. In the month of December I spent some time in cities while travelling. The distance travelled is represented through line graph.



Q.1 What percentage of time of the entire trip was actually spent travelling between the cities?

- (a) 53.3%
- (b) 60.8%
- (c) 40%
- (d) 92%

Q.2 The overall average speed of the bike in the entire trip excluding stoppage time is nearly

- (a) 58 km/h
- (b) 70 km/h
- (c) 81 km/h
- (d) 99 km/h

Q.3 Between how many pairs of consecutive stations does the bike run above the overall average speed of the entire trip?

- (a) 3
- (b) 5
- (c) 1
- (d) 4

Q.4 : The total stoppage time at the cities in the first half is

- (a) 35 min
- (b) 10 min
- (c) 15 min
- (d) 23 min

LET'S INTERPRET THE DATA!

CLASS IX

LEVEL-II



Abhinav is the head of an NGO which distributes books to the poor and needy kids, operating in five cities. Recently he came across an article in the newspaper related to declining reading habits of people. He was curious to know about the situation of reading habits in the five cities where his NGO operated. So he conducted a survey on the reading habits of people.

It was conducted in **five** cities namely L , M, N, O and P .The collected data was summarised and is given below in the table. The **column I** in the table gives **percentage of people** in each city who read only one book a week. The **Column II** gives the **total number of people** who read two or more books per week.

City	I (percentage of people)	II (total no of people)
L	60	24000
M	20	30000
N	85	24000
O	55	27000
P	75	80000

Q1: A city with the lowest number of book reader is:

- (1) L
- (2) M
- (3) N
- (4) O

Q 2: The total number of all readers in the five cities who read only one book in a week is

- (1) 113000
- (2) 425200
- (3) 452500
- (4) 500000

Q3: How many book readers in the city N read only one book in a week?

- (1) 24850
- (2) 36000
- (3) 136000
- (4) 160000

Q 4: The highest number of book readers in any given city is:

- (1) M
- (2) N
- (3) O
- (4) P

Q 5: Which city has the highest number of book readers who read only one book in a week?

- (1) M
- (2) N
- (3) O
- (4) P

LET'S INTERPRET THE DATA!

CLASS IX

LEVEL III

DISCOVER THE HIDDEN MEANING OF DATA

Market share represents the percentage of an industry, or a market's total sales that is earned by a particular company over a specified time period. Market share is calculated by taking the company's sales over the period and dividing it by the total sales of the industry over the same period. This metric is used to give a general idea of the size of a company in relation to its market and its competitors. Gains or losses in market share can have significant impacts on a company's stock performance, depending on industry condition.

In the following data you can see the sales of cosmetic industry between five companies

Company	% in market share
RAVONOL	22
PEARLI	33
NATURO	13
AIVONE	15
NAVA	17



1. Represent the above data through the pie chart which shows a **circle of 360 degrees** which represents 100 % of the values of the continuous variable. Thus, 3.6 degree of the pie chart will represents 1 % of the total values of the variables being represented.

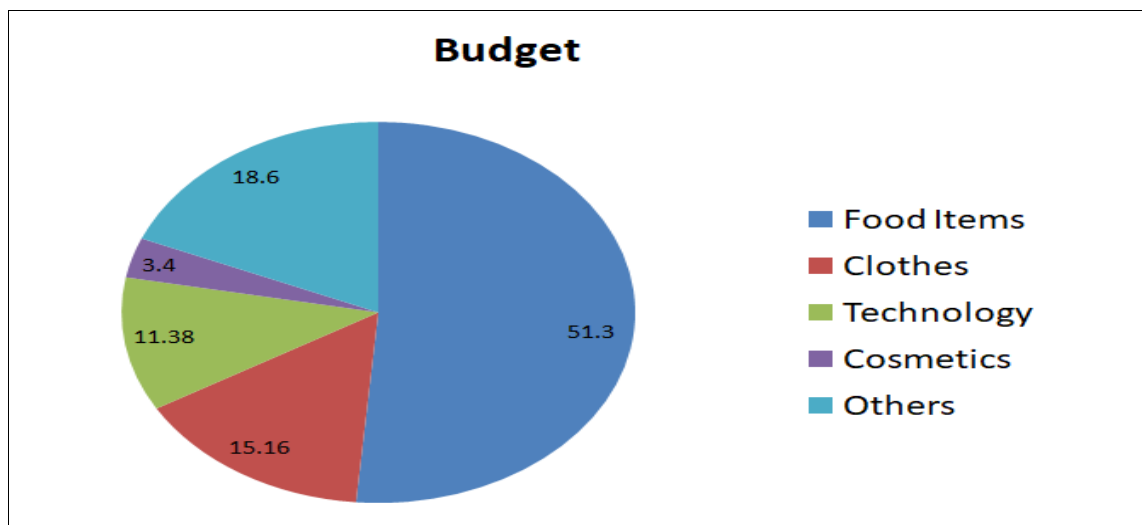
2. **Frame questions:** Study the above graph which shows the sales of cosmetic industry between five companies and frame questions to test students on their ability to make decisions and establish what would be the best recourse in a different situation.

LET'S INTERPRET THE DATA!

CLASS X

LEVEL 1

1. The following pie-chart shows the distribution of the household items used in the house throughout the year. The information given is in terms of percentage. Study the graph and answer the questions below:



Q. Which of the following items are displayed in the ratio of 1:15.

- A. Food items and cosmetics
- B. Technology and Food items
- C. Cosmetics and others
- D. Cosmetics and Food items

2. If the budget of the house is Rs. 20,000, then by what percentage is the expenditure on food items more than the rest of the expenditure?

- A. Less than 10 %
- B. 10 – 15 %
- C. 15 – 20 %
- D. More than 20 %

3. If the value of the next budget is twice that of the current one with the break-up of the items being the same, then the ratio of the expenditure on clothes to that of others will be near to...

A. 3: 4

B. 4: 5

C. 5: 6

D. 6: 7

4. If the budget value is Rs. 14,400, then the expenditure on clothes will be near to?

A. Rs. 1800

B. Rs. 2000

C. Rs. 2100

D. Rs. 2200

5. Suppose that the budget value increases to Rs. 36,000 then the expenditure of which of the following sectors equals to the expenditure on other?

A. Clothes and technology

B. Clothes and technology and cosmetics

C. Clothes and cosmetics

D. None of the above

LET'S INTERPRET THE DATA!

CLASS X

Level II

Abstraction of the data used

A Teacher brings the time table of two different trains in the class and asks students to study the given chart carefully and answer the questions

TRAIN – A



STATION	ARRIVAL TIME	DEPARTURE TIME	DISTANCE TRAVELLED FROM ORIGIN (KM)	NUMBER OF PASSENGERS BOARDING AT EACH STATION	FARE (Rs)
Ahmedabad	Starting	5.00 pm	-----	400	-----
Vadodara	6.30 pm	6.35 pm	100	100	50
Bharuch	8.50 pm	9.00 pm	250	90	120
Mumbai	4.00 am	4.10 am	800	300	400
Pune	7.30 am	7.45 am	1050	150	500
Sholapur	10.20 am	Terminates	1280	-----	620

TRAIN – B



STATION	ARRIVAL TIME	DEPARTURE TIME	DISTANCE TRAVELLED FROM ORIGIN (KM)	NUMBER OF PASSENGERS BOARDING AT EACH STATION	FARE (Rs)
Sholapur	Starting	6.00 pm	-----	300	-----
Pune	7.40 pm	7.45 pm	230	150	120
Mumbai	9.30 pm	9.35 pm	480	270	220
Bharuch	5.40 am	5.55 am	1030	50	500
Vadodara	9.00 am	9.10 am	1080	100	570
Ahmedabad	12.00 noon	Terminates	1280	-----	620

a) The number of passengers boarding train A at Vadodara is what percentage of number of passengers boarding train B at Mumbai?

b) What is the difference between the speed of train A and speed of train B?

c) Find the ratio of total passengers of train A to that of train B _____

d) The total income of train A is what percentage of train B ?

e) If the average speed of the train is increased by 10%, then when will it reach its destination?

LET'S INTERPRET THE DATA!

CLASS X

Level 3

Students will create items based on pie chart, histograms, bar-graphs on their own and abstract and analyse data as well.

Example 1-

A nutritionist is interested in knowing the percentage of calories from fat which Indians intake on a daily basis.



To study this, the nutritionist randomly selects 25 Indians and evaluates the percentage of calories from fat consumed in a typical day. The results of the study are as follows

34%, 18% ,33%, 25% ,30%

42% ,40% ,33% ,39% ,40%

45% ,35%, 45% ,25% ,27%

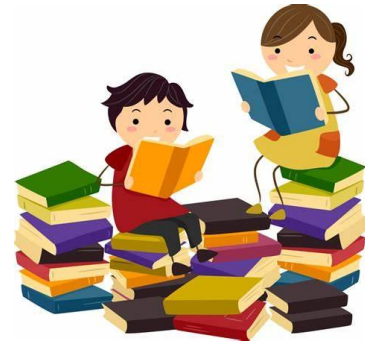
23%, 32% ,33% ,47%, 23%

27%,, 32% ,30%, 28% ,36%

Construct a frequency distribution and the corresponding histogram

VI. Reading Skills

Reading has pervaded human life for centuries, but the set of skills required for successful reading keeps changing continuously. A skilled reader is someone who “locates, understands, and interprets written information in prose and documents – including manuals, graphs, and schedules – to perform tasks; learns from text by determining the main idea or essential message; identifies relevant details, facts, and specifications; infers or locates the meaning of unknown or technical vocabulary; and judges the accuracy, appropriateness, style, and plausibility of reports, proposals, or theories of other writers.



Reading literacy as measured in PISA requires students to demonstrate their skills in dealing with a wide range of texts, drawn from different situations and approached from a number of perspectives. These particularly aim at measuring the reading abilities which 15 year olds will require in order to function as future citizens, workers and life-long learners.

The passages chosen here do not start from an interpretation of reading as a simple one-dimensional skill. The students have to apply various techniques like skimming, scanning, intensive reading, processing the text, interpreting data, locating information, drawing inferences, etc. The aim is to make the students feel challenged and inquisitive so that they learn to compete at International levels.

READING SKILLS

Note to teachers

Reading literacy includes the ability to extract the relevant information from texts and also to understand, use and reflect on written texts. The ability and incentive to engage with texts and address their content is also examined.

Text formats:

- continuous texts like newspaper articles, essays, novels and letters
- non-continuous texts like tables, charts, diagrams, timetables, schedules

Processes:

- seeking and extracting information
- combining and interpreting
- reflecting and assessing

The Reading Skill activities are for three classes- VII, IX, and X and each divided into three levels. The difficulty level increases from level 1 through level 3. The questions are in the form of multiple choice, gap filling, matching, flowcharts, crosswords, analysing charts, graphs, yes/no answers, short answers, drawing conclusions and comparison.

All the activity-sheets are timed. The time-limit should be strictly adhered to as to maintain the spirit of competition. Split-up of marks can be decided according to the level of the class.

READING SKILLS

CLASS VIII

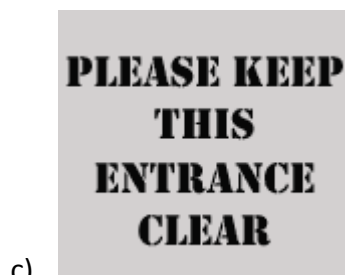
LEVEL 1

TIME: 50 MINUTES

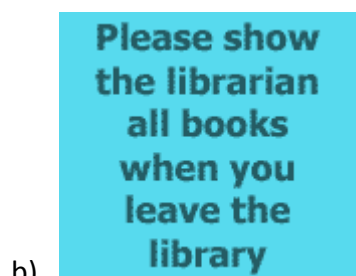
1. There are some signs you commonly find around you. Choose the correct option that the sign could mean:



- i. Lock the room when it is not being used.
- ii. Keep the key to this door in the room.
- iii. This room cannot be used at present.
- iv. This door must always be kept locked.



- i. Always keep this door open.
- ii. Do not park in front of this entrance.
- iii. Permission is needed to park here.
- iv. Use this entrance in emergency only.



- i. Make sure you take all your books with you.
- ii. The librarian will show you where to put all your books.
- iii. Return your books before you leave the library.
- iv. The librarian needs to see your books before you go.



- i. This machine is not working at the moment.
- ii. We do not accept any more orders.
- iii. Use this machine when the counter is closed.
- iv. There is another machine in the premises.

**Supersaver
Tickets Cannot
be used on
Fridays**

- e)
- i. You need a special ticket to travel on a Friday.
 - ii. Supersaver tickets cannot be bought before the weekend.
 - iii. Supersaver tickets can be used every day except Friday.
 - iv. You can save money by travelling on a Friday.

2. Read the following text and then look at the questions.



Dear Mr Juneja,

I run 'Snips' hairdressing shop above Mr Shah's chemist's shop at 24 High Street. I started the business 20 years ago and it is now very successful. My customers have to walk through the chemist's to the stairs at the back which lead to the hairdresser's. This has never been a problem.

Mr Shah plans to retire later this year, and I have heard from a business acquaintance that you intend to rent the shop space to a snacks bar. I have thought about trying to rent it myself and make my shop bigger but I cannot persuade anyone to lend me that much money. I don't know what to do. My customers come to the hairdresser's to relax and the noise and smells of a snacks bar will surely drive them away. Also, they won't like having to walk through a hot, smelly snacks bar to reach the stairs.

I have always paid my rent on time. You have told me in the past that you wish me to continue with my business for as long as possible. I believe you own another empty shop in the High Street. Could the snacks bar not go there, where it would not affect other people's businesses?

I hope you think carefully about this.

- a) What is the writer's main aim in the letter?
- i. To show why her business is successful.
 - ii. To explain why her customers are feeling unhappy.
 - iii. To avoid problems for her business.
 - iv. To complain about the chemist downstairs.
- b) Who was the letter sent to?
- i. The writer's landlord
 - ii. The writer's bank manager
 - iii. The owner of the snacks bar
 - iv. The local newspaper

- c) What does the writer think about the snacks bar?
- It will make her lose money
 - It will not be successful
 - The High Street is not the place for it
 - Other shopkeepers will complain about it too.
- d) Why is the writer worried about her customers?
- They do not like eating snacks.
 - They may not be allowed to use the stairs.
 - The smells will not be pleasant.
 - The hairdresser's will get too crowded.
- e) Which of the following is a part of a reply to the letter?
- Thank you for your letter. I am sorry your shop had to close down because of a lack of business.
 - Thank you for your letter. I understand your problem. I will ask them to look at the other shop but I can make no promises at the moment.
 - Thank you for your letter asking me to rent the ground floor shop to you. I will think about it and let you know.
 - Thank you for your letter. I am sorry that I am not able to lend you the money you had asked for.
3. Given below are 8 notices offering different types of accommodation .There are five people looking for accommodation. Choose one notice for each person that best matches their requirement. Choose 'NONE' if there isn't any match.



People looking for accommodation	Notices of accommodation	Name of the person best matched
<p>Anita is 19 and wants to share with other girls of her age. She works unusual hours and needs to get to the city easily at all times on public transport.</p> <p>Amit and Reena live in the city centre with their children. They want to move to the countryside and are happy to drive into the city every day in exchange for peace and quiet.</p> <p>Saida, a student, wants a room in the city centre so she can walk to museums and art galleries. She doesn't have much money so she is looking for part-time work.</p> <p>Teena wants to live with a local family and join family life. She doesn't want to cook for herself. She needs to get to the city centre easily.</p> <p>Martin and three friends are looking for a house to share. They have transport so they don't mind where it is. They can afford up to ₹ 6,000 per month.</p>	Room above restaurant on edge of city available free for person able to work in restaurant at weekends. Area has shops, library, etc. Buses to city centre every half an hour.	
	House to rent on a farm ten km from city centre, four bedrooms and garden. Beautiful countryside. Lovely walks. Two km to nearest village with shop and post office. No public transport. ₹ 2000 per month.	
	Fourth girl wanted to share house with three others aged 19-25. Two km from city centre but 10 minutes by metro, 24-hour service (we are 5 minutes' walk from station). Near shops. ₹ 1000 per week including bills.	
	Would you like to live with a family right in the middle of the city? We are in South Street with shops, theatres, art galleries, museums, etc. just a ten-minute walk away. Room available in five-bedroom house for ₹ 3000 per month - this can be reduced if you help in the house and with the children. Cook your own meals in our kitchen.	
	Cottage to rent ten km from city centre but only a ten-minute walk to local station (journey to city centre takes 15 minutes). One large bedroom. Would suit a couple or two friends.	
	Two female students are looking for third girl to share flat in village near city. One bedroom, share kitchen and bathroom. We have a car so can offer shared lifts to the centre in the morning and evening. ₹ 2500 per month including bills.	
	House for rent in a small village five km from city centre. Very peaceful. Hourly bus service during day to city. No children allowed. ₹ 5000 per month to be paid in advance	
	Room available in family house - ₹ 4000 per month with breakfast and evening meal included. Own room - share living room, meals, bathroom with family (three children). One km from city centre. Bus every 15 minutes into city centre.	

Reading Skill

Class VIII

Level 2

Maximum Time: 45 minutes

1. Read the following conversation between Kitty and her Mother.

a) Can it get Geographically punnier than this?

Kitty: I'm Hungary.

Mum: Why don't you Czech the fridge.

Kitty: Ok, I'm Russian to the kitchen.

Mum: Hmm... Maybe you'll find some Turkey.

Kitty: Yeah, but it's all covered in Greece. Yuck!

Mum: There is Norway you can eat that.

Kitty: I know, I guess I'll just have a can of Chile.

Mum: Denmark your name on the can.

Kitty: Kenya do it for me?

Mum: Ok , I'm Ghana do it.

Kitty: Thanks, I'm so tired. Iran for an hour today.

Mum: It Tokyo long enough.

Kitty: Yeah, it Israelly hard sometimes!

Now rewrite the conversation correctly:

Kitty: _____

Mum: _____

Kitty: _____

Mum: _____

Kitty: _____

Mum: _____

Kitty: _____

Mum: _____

Kitty: _____

Mum: _____

Kitty: _____

Mum: _____

Kitty: _____

b) How many countries do you find in the conversation? Name them.

2. Mix and Match Story

Who?	Where?	What?
Pirates	Cave	Cast a spell
Wizard	Jungle	Find a treasure
Alien	Island	Play a trick
Sports star	Spaceship	Have a party
Pink elephant	Playground	Win a game



Using the clues given above, complete the following story. Use as many clues as possible. Circle the clues that you use. You can change the forms of the verbs/nouns and wherever necessary, add suitable articles too.

Once upon a time, there was a _____ . He lived in/on _____ .

He was a happy soul and used to spend his day _____ . One

day, _____ came there and wanted to be friends with the
_____. He was very happy to get a friend. He invited his old friend
_____ who lived on/in _____. The friend also brought
_____ and _____ with him to _____. They
all _____ and _____. The
_____ wanted help from _____ to
_____ to which he readily agreed. Thereafter, they all
_____ and celebrated.

3. Look at the following invitation card and do what is asked.



a) Who is giving this invitation? How old is s/he?

b) What changes will be there in this invitation card if the same person is sending the invitation after ten years?

c) The invitation card begins with a poem. Why has it been done so?

d) Write all the important components of an invitation card.

Reading Skills

Class VIII

Level 3

Time Allowed- 50 Minutes

1. Did you know that India has one of the oldest art galleries?

Enter India's oldest art gallery

22.9395° N, 77.6124° E

Amazing Bhimbetka

LEGEND SAYS BHIMBETKA IS DERIVED FROM 'BHIMBAITHKA' MEANING 'THE SITTING PLACE OF BHIMA', FROM MAHABHARATA

OUT OF THE 760 ROCK SHELTERS, 500 ARE ADORNED WITH PAINTINGS

THE PAINTING OF AN ENORMOUS RED BISON ATTACKING A MAN IS VISIBLE ONLY WHEN THE SUN IS JUST RIGHT

THOUSANDS YEARS OLD ART GALLERY HIDES AMONGST THE MASSIVE, BLACK BOULDERS OF BHIMBETKA

THESE ROCK SHELTERS WERE DISCOVERED AND REVEALED TO THE WORLD BY V.S. WAKANKAR IN 1957

WHO GAVE BHIMBETKA

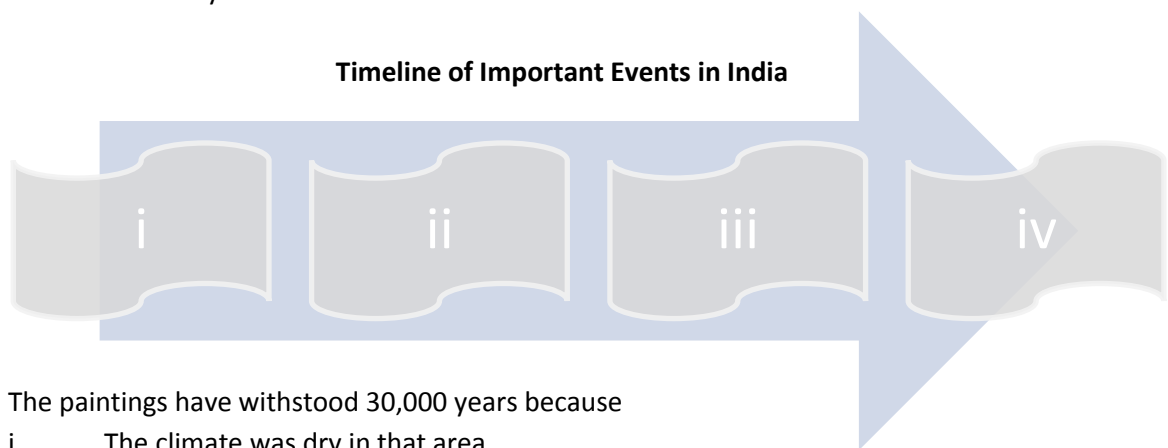
Cave paintings dating back to approximately 30,000 years. Rock shelters that were home to humans, millennia ago, and a rich flora and fauna surrounding these, indeed, make Bhimbetka a gift to us from our earliest ancestors.

An archaeological treasure, Bhimbetka has around 243 rock shelters. The paintings found in the rock shelters here have a striking resemblance to the ones discovered in Kakadu National Park in Australia; to the cave paintings of Bushmen in Kalahari Desert and Upper Palaeolithic Lascaux cave paintings in France.

A walkthrough these ancient naturally carved rocks surrounded by dense forests of Bhimbetka will bring alive child-like wonder in you.

After knowing about Bhimbetka, answer the following:

- a) The figures of animals drawn in Bhimbetka show that
- The animals in the rock art were present in the area at the time they were drawn
 - The artists who drew the animals were highly skilled
 - The artists who drew the animals were able to travel widely
 - There was no attempt to domesticate the animals that were depicted in the rock art
- b) The following timeline shows a few important events in the Indian history. Fill them in the given timeline starting with the event that happened earlier..
- Drawing Bhimbetka paintings
 - Independence of India
 - Arrival of East India Company
 - Discovery of Bhimbetka



- c) The paintings have withstood 30,000 years because
- The climate was dry in that area.
 - They were made on the inner walls of the caves.
 - The quality of paint was waterproof.
 - There is no population around.
- d) The society at the time of Bhimbetka paintings was of
- Farmers who had domesticated animals
 - Adivasis who lived in villages
 - Hunters and gatherers
 - City dwellers

2. Population Pyramid

A population pyramid illustrates the age and sex structure of a country's population and may provide insights about political and social stability, as well as economic development. The population is distributed along the horizontal axis, with males shown on the left and females on the right. The male and female populations are broken down into 5-year age groups represented as horizontal bars along the vertical axis, with the youngest age groups at the bottom and the oldest at the top. The shape of the population pyramid gradually evolves over time based on fertility, mortality, and international migration trends.

Following is the population pyramid of *Swapnlok*. Male population is denoted by blue and female by pink. Study the pyramid and answer what is asked.

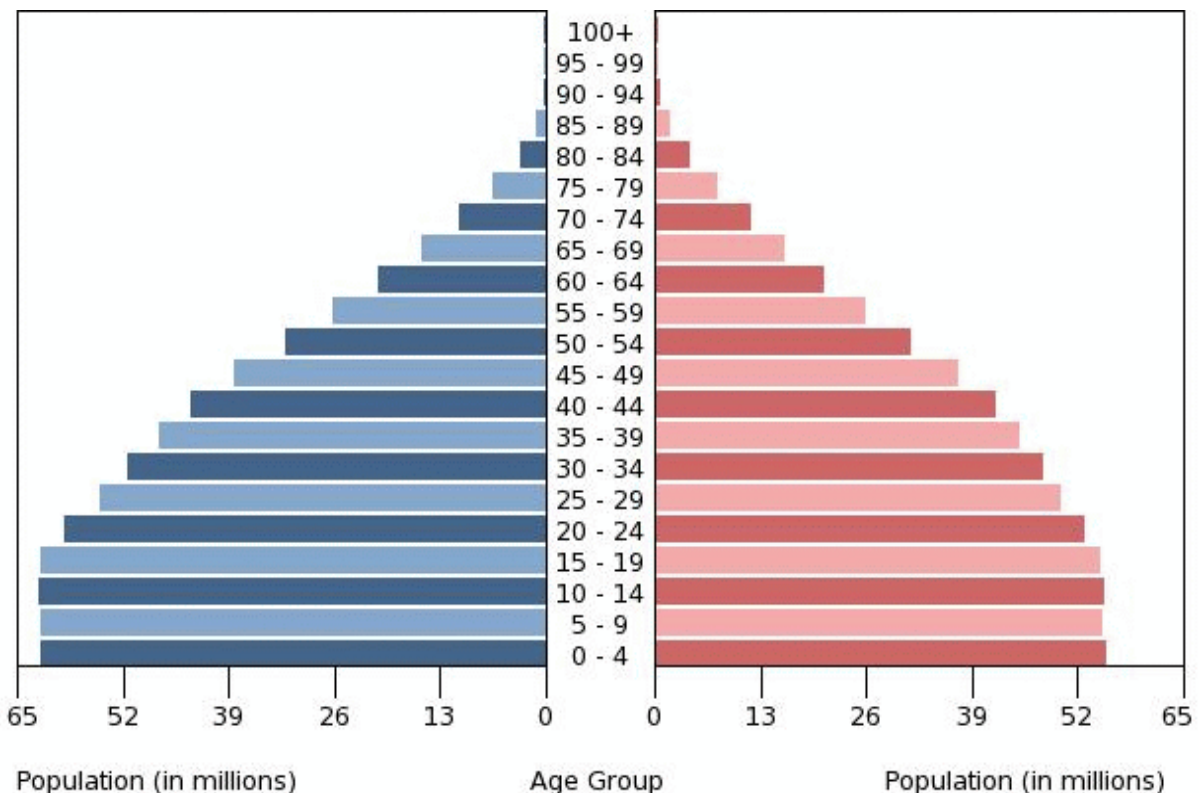


Figure: Population Pyramid of *Swapnlok*

Say 'Yes' or 'No' for the following statements.

	Statement	Yes/No
i.	In <i>Swapnlok</i> , more girls are born than the boys.	
ii.	Birth rate is higher than death rate in <i>Swapnlok</i> .	
iii.	There are almost equal numbers of male and female in the age group of 40-44.	

iv.	<i>If Swapnlok</i> wants to start a labour intensive industry, it will not be very successful.	
v.	The country has to invest too much in the healthcare of the elderly.	

3. At Eat Well Restaurant

Mr. Mohan's family has five members- Mr. Mohan himself, his wife, a son, a daughter, and his mother. Every weekend they go out to eat at 8 pm at 'Eat Well' restaurant which is close to their house. The following is the menu card of the restaurant where they usually go. Read the menu card and help the family members in ordering their food.

Beverages - 250 ml.

Fresh Fruit Juice (Seasonal)

Water Melon	80.00
Grape	95.00
Mango	90.00
Musumbi	90.00
Orange	90.00
Mix Juice	90.00
Fresh Lime	40.00
Mineral Water	35.00

Milk Shakes - 250 ml.

Vanilla	100.00
Strawberry	100.00
Mango	100.00
Apple	100.00
Pineapple	100.00
Chickoo	100.00
Banana	100.00
Dry Fruits	125.00

Cold Beverages - 250 ml.

Badam Milk	120.00
Masala Butter Milk	50.00
Lassi (Sweet/Salt)	60.00
Cold Coffee	80.00
Cold Coffee with Ice cream	100.00
Mid Night Beauty	95.00
Jal Jeera	55.00
Ginger Ale	60.00
Aam Panna	70.00

Hot Beverages

Indian Filter Coffee	45.00
Hot Chocolate	50.00
Tea	35.00
Nescafe	50.00
Rasam with Papad	70.00

Sweets

Rava Kesari	75.00
Gulab Jamun	60.00
Basundi	100.00

South Indian Snacks

Upma	80.00
Rice Idli	80.00
Rava Idli	105.00
Rasam Idli	100.00
Dahi Idli	105.00
Vada	100.00
Dahi Vada (Plate)	110.00

Dahi Vada (single)	60.00
Rasam Vada	105.00
Masala Vada	105.00
Onion Vada	105.00
Aloo Bonda	100.00
Poori Bhaji	110.00

Uthapams

Plain	105.00
Onion	120.00
Tomato	125.00
Vegetable	125.00
Coconut	135.00
Mixed	135.00
Tomato Onion	135.00
Tomato Coconut	135.00
Paneer	158.00

Dosas

Plain	100.00
Masala	120.00
Butter Plain	125.00
Butter Masala	135.00
Rava Plain	120.00
Rava Masala	130.00
Onion Rava Plain	130.00
Onion Rava Masala	142.00
Coconut Rava Plain	135.00
Coconut Rava Masala	148.00
Veg Rava Plain	135.00
Veg Rava Masala	148.00
Paper Plain	125.00
Paper Masala	135.00
Onion Dosa Plain	125.00
Onion Dosa Masala	135.00
Mysore Plain	125.00
Mysore Masala	148.00
Set Dosa	135.00
Ghee Roast Plain	135.00
Ghee Roast Masala	148.00
Paneer Dosa	160.00

Vegetarian Fixed Thali

(4 Pooris, Rice, Flavoured Rice, Dal, Two Vegetables, Sambar, Rasam, Curd, Butter Milk, Sweet, Papad, Pickle)	220.00
Lunch (11.00 a.m. To 3.00 p.m.)	
Dinner (7.00 p.m. To 11.00 p.m.)	

Other

Timings : 11 a.m. To 3 p.m. and 7 p.m. To 11 p.m.	
Coconut Rice	110.00
Lemon Rice	110.00
Pullyogare (Tamarind Rice)	110.00
Curd Rice	110.00

North Indian Snacks

Veg. Pakora	110.00
Cheese Pakora	120.00
Assorted Pakora	110.00

i. Mrs. Mohan wants to have one dish of fruits and one hot beverage. How much would it cost?

ii. Mr. Mohan wants to have a dosa (any type) and a hot beverage. How much minimum will he have to pay?

iii. His mother wants to have a full meal. What should she order?

iv. The daughter doesn't want any south Indian dish. What all options does she have?

v. His son feels hungry at midnight too. How can he solve this issue?

READING SKILLS

CLASS IX

LEVEL 1

Timed Activity

Maximum Time Allotted: 45 minutes

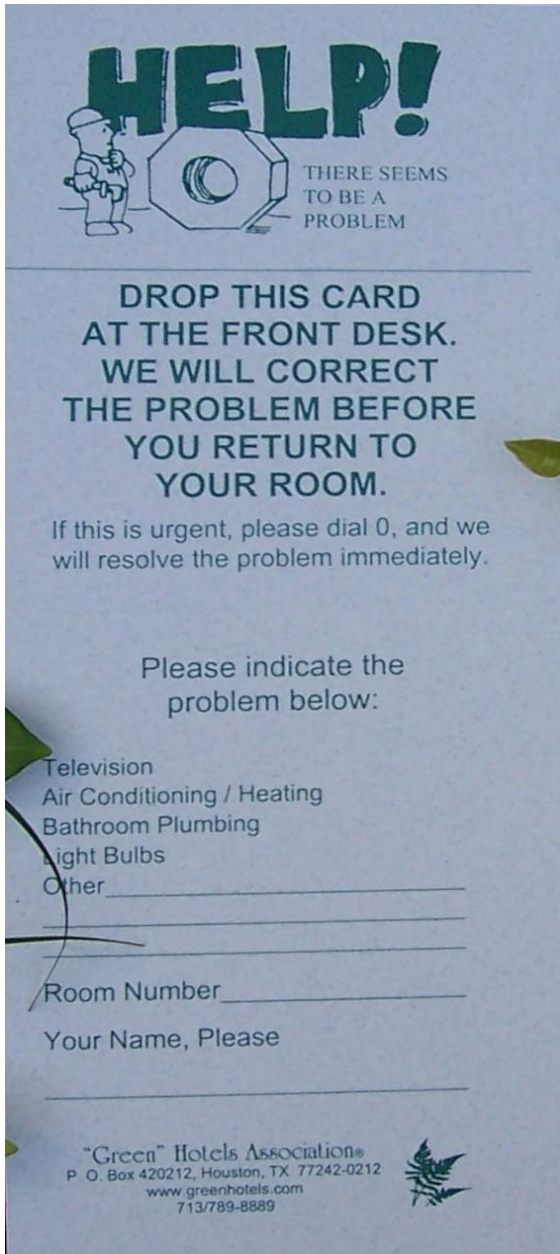
INSIDE A HOTEL

Manav is on a road trip.. To spend a night, he checks-in in a roadside hotel. Here are some of the cards that he finds in his hotel room.

EVACUATION MAP

● Dial "0" for hotel operator, or dial 911
● If you detect fire or smoke Touch door to feel if hot. If not, open cautiously and proceed calmly to the EXIT
● Take your Room Key and activate fire alarm in hallway.
● If you cannot leave, remain in your room and seal door with wet towels until assistance arrives.

Card 1

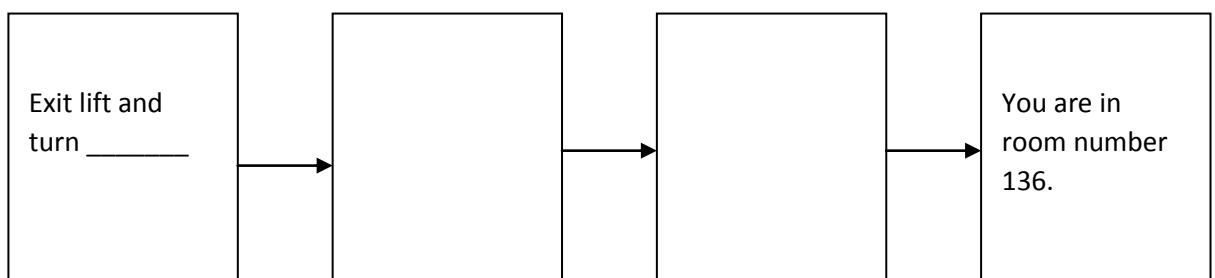


Card 2



Card 3

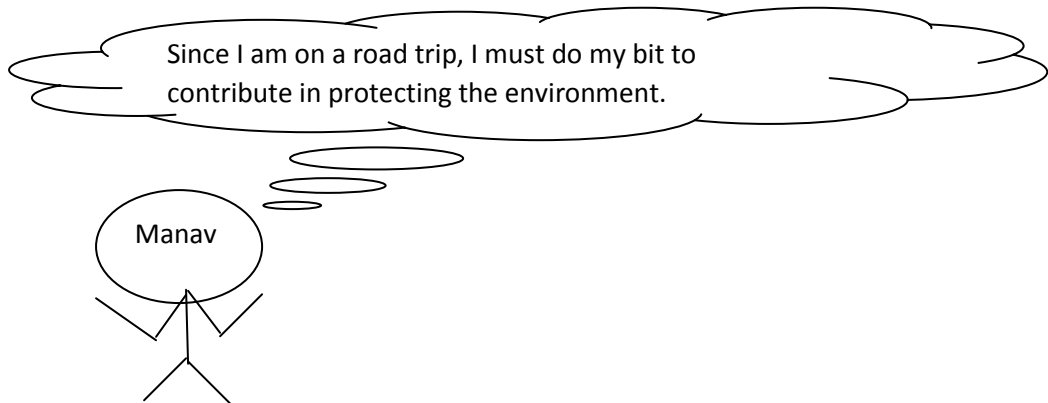
- a) Card 1 is the evacuation plan of the hotel. The lift lobby/ elevator is marked as 'E'. Manav is occupying room number 136. Complete the following route map to reach his room.



b) On entering his room, he finds water dripping from the tap. What all he should he do?

- i) Call the manager
- ii) Fill in Card 3 and drop it at the front desk
- iii) Fill in card 2 and drop it at the front desk
- iv) Fill in card 2 and give it to the waiter

c)



In a hurry, Manav forgets to put his towel on the rack. In what way is this simple act harming the environment?

d) Arrange the following in the order of how Manav must have checked-in in the hotel.

- i) Enter the room.
- ii) Greet the guard at the foyer of the hotel.
- iii) Unlock the room with the key card.
- iv) Take the elevator and press the button of your floor.
- v) Go to the front desk.
- vi) Fill in your details in the form given by the receptionist.

Correct sequence: _____

e) Fill in the following crossword with the words found in the above cards.

Inside the Hotel

ACROSS

- 2 Giving one thing and receiving another
- 3 Save
- 4 Place for keeping luggage or things
- 6 Pipelines and taps
- 7 Dries you
- 8 Emit light

DOWN

- 1 Used for washing clothes
- 5 Measure of liquid

Reading Skills

Class IX

Level 2

Time: 50 Minutes

1. Why is it Important to Wear Good Walking Shoes?



Wearing proper walking shoes is a fundamental element in maintaining the correct walking technique, as well as preventing injury. Shoes are tools. Without the correct tools, you are likely to hurt yourself, making you more prone to suffer further and more severe injuries in the future. Selecting the right shoe for your foot type may be a basic concept to some, yet walkers often overlook this simple step, and as a result, suffer from preventable injuries.

Shoe and Your Body

Biomechanics refers to the internal and external forces of the human body, and the manner in which these forces affect the human body. This means every movement that your foot makes in the act of walking affects other parts of your body. If your shoes don't provide the necessary support for the arches and heels, they prevent essential range of motion in the foot. When your feet are not able to function properly, other parts of your body must overcompensate. When your body overcompensates, it is common to suffer from pain in the heels, ankles, knees, hips and lower back. The pain in these joints can then lead to weakness and further injury.

Shoes and Endurance

Being comfortable while you walk affects your distance, speed and endurance. Continuing your routine of walking depends greatly on the benefits you gain; no one wants to walk any distance, speed or amount of time while you are uncomfortable or in pain. You need to find a shoe that fits your individual foot. If you have the correct shoes, you can preserve a healthy and injury-free walking schedule.

The Right Shoes

Finding the right shoes is surprisingly easy. Most shoe stores offer a free foot analysis by staff that are trained to advise you of the best type of shoe for you. Another option for determining which shoe is most suitable for you is to have a podiatrist or a sports medicine expert evaluate your foot type and the specific needs of shoes for your foot type. Generally, these professionals assess your feet by determining the needs for your arch and heel support.

Replacing your shoes on regular basis is also very important for staying free from injury or pain. You should replace your shoes every six months.



Use the above article to answer the following:

- a) What does the author intend to show in this text?
- i. The quality of shoes affects our whole body.
 - ii. Older people suffer more shoe related problems.
 - iii. One should walk only with shoes on.
 - iv. The staff at the shoe store can give medical advice about foot pain.

- b) According to the article, why is selecting the right shoe very important?

- c) Match the following types of shoes with the occasions they are worn at-

Shoes	Occasion
Sandals	Bathroom
Boots	Strolling at market place
Stiletto	Morning walk
Flip-flops	Army parade
Joggers	Party

- d) A podiatrist is a sports medicine specialist—a physician and surgeon who treats the foot, ankle and related structures of leg. What do we call the doctors who specialise in the following organs-

- i. Eyes _____
- ii. Bones _____
- iii. Delivering babies _____
- iv. Teeth _____
- v. Skin _____

e) Look at this sentence from the first paragraph. It is presented here in two parts:

'Selecting the right shoe for your foot type may be a basic concept to some,...' (*first part*)

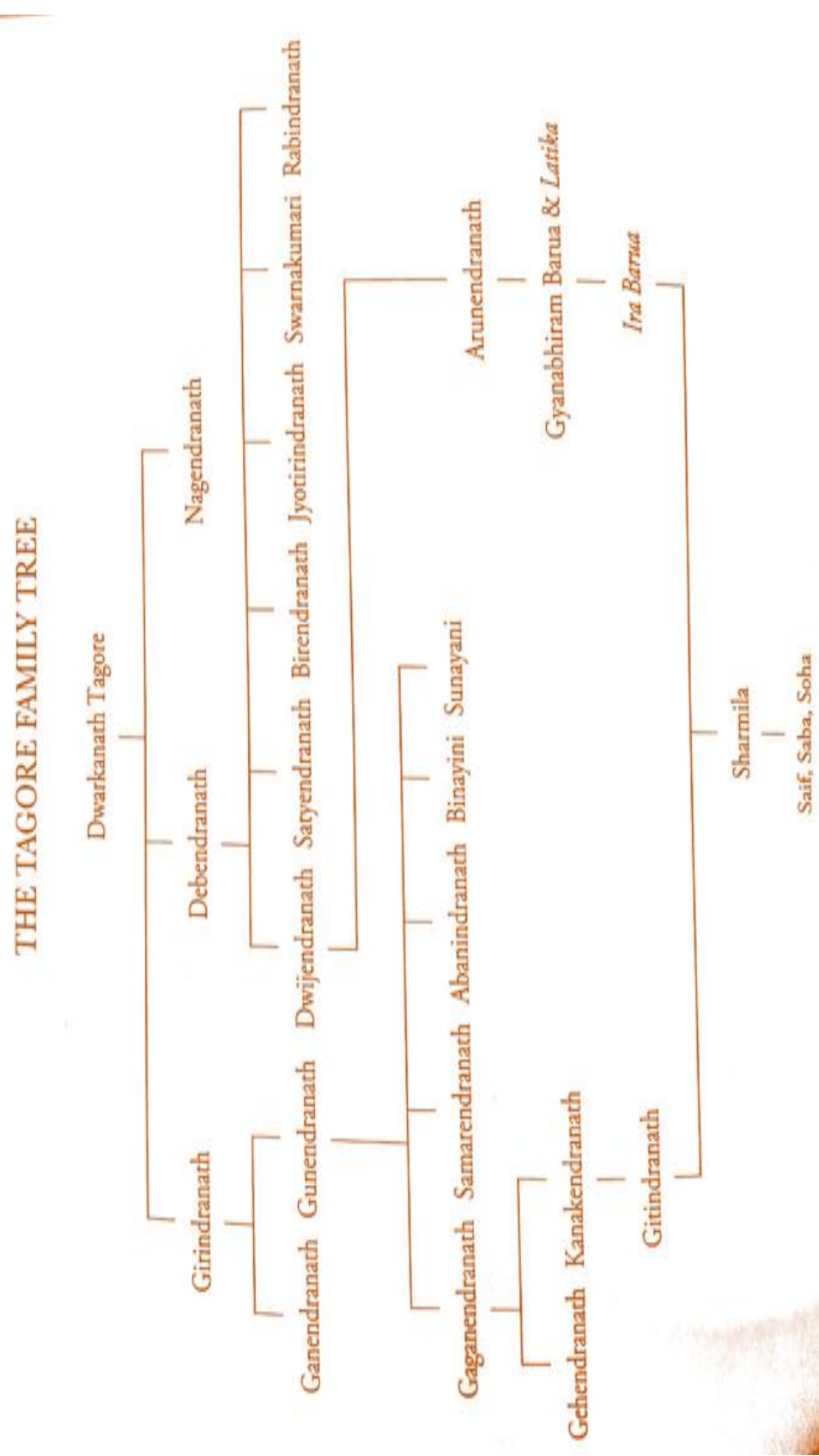
'... yet walkers often overlook this simple step.' (*second part*)

What is the relationship between the first and second parts of the sentence?

The second part

- i. contradicts the first part
 - ii. repeats the first part
 - iii. illustrates the problem described in the first part
 - iv. gives the solution to the situation described in the first part
2. The following is the family tree of the Tagore family, that has famous personalities like the renowned poet Rabindranath Tagore and the famous actors Sharmila Tagore and Saif Ali Khan.

3. Family Tree



a) How is Sharmila Tagore related to the poet Rabindranath Tagore?

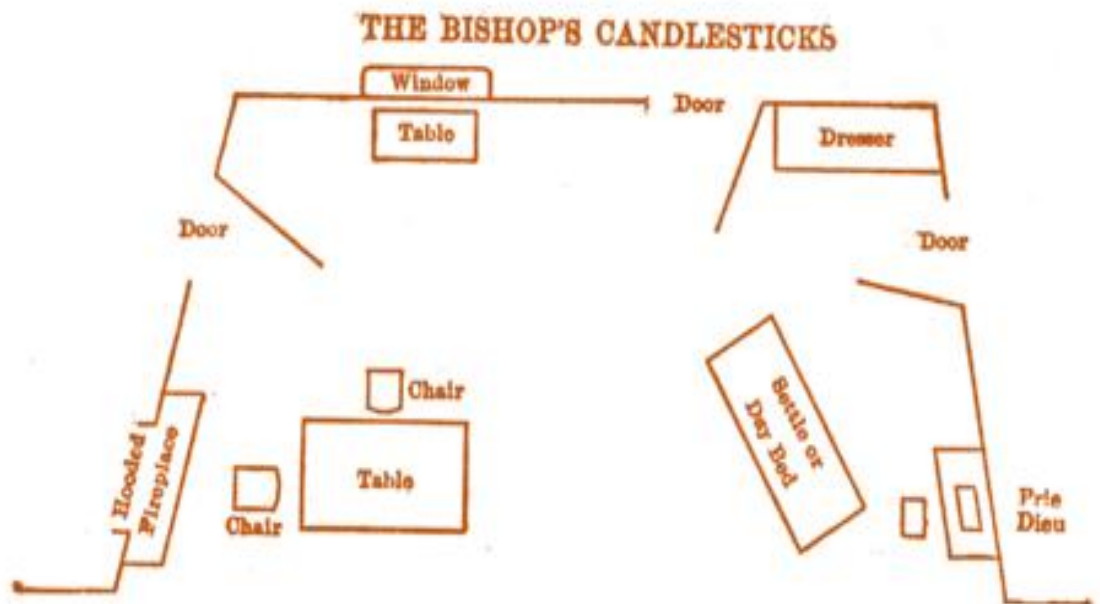
b) What is the relationship between Rabindranath and Dwarkanath Tagore?

c) Who is the mother of Sharmila Tagore?

d) How many uncles did Rabindranath have?

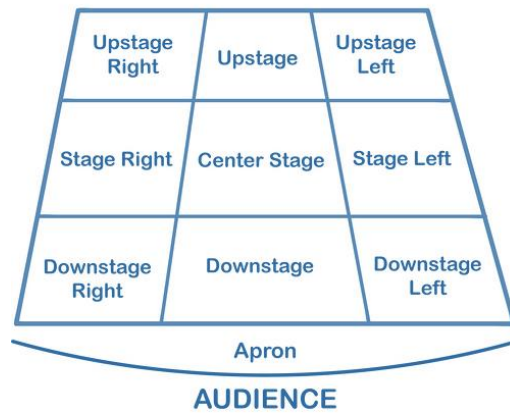
e) Who is the sister of Rabindranath?

4. Stage Directions- The Bishop's Candlesticks



Above is the stage setting of the play 'The Bishop's Candlesticks' and below are the names of the directions on stage.

STAGE DIRECTIONS



Now, write the stage direction of the following items for the play 'The Bishop's Candlesticks'.

- i. Drawer _____
- ii. Settee _____
- iii. Chairs _____
- iv. Fireplace _____
- v. Window _____

READING SKILLS

CLASS IX

LEVEL 3

Time: 50 Minutes

4. Should India have two time zones?

Read two views on the issue of India having two time zones.



Favour:

So Yes, we really need a different **Time Zone** for North-East Indian states. A time zone which should be an hour ahead of the rest of India, i.e. GMT+6:30. Currently the entire India follows GMT+5:30 time zone, which is not at all efficient for a country that extends 2933 km from east to west. The “**Dong**” village of **Arunachal Pradesh** sees sunrise 2 hours before “**Guhar Moti**” village of **Gujarat**. The actual time zone of North east is about an hour ahead of the GMT+5:30 which in turn results in wastage of a lot of daylight, thus affecting the productivity. Many government and private offices are forced to open even when the daylight gets low, which results in unnecessary power wastage. By changing the time zone, they will be able to make most of the natural daylight.

Countries like United States, Australia already have multiple time-zones. Moreover, the concept of “**Daylight savings**” is used in United States in which they reset the clocks for different seasons.

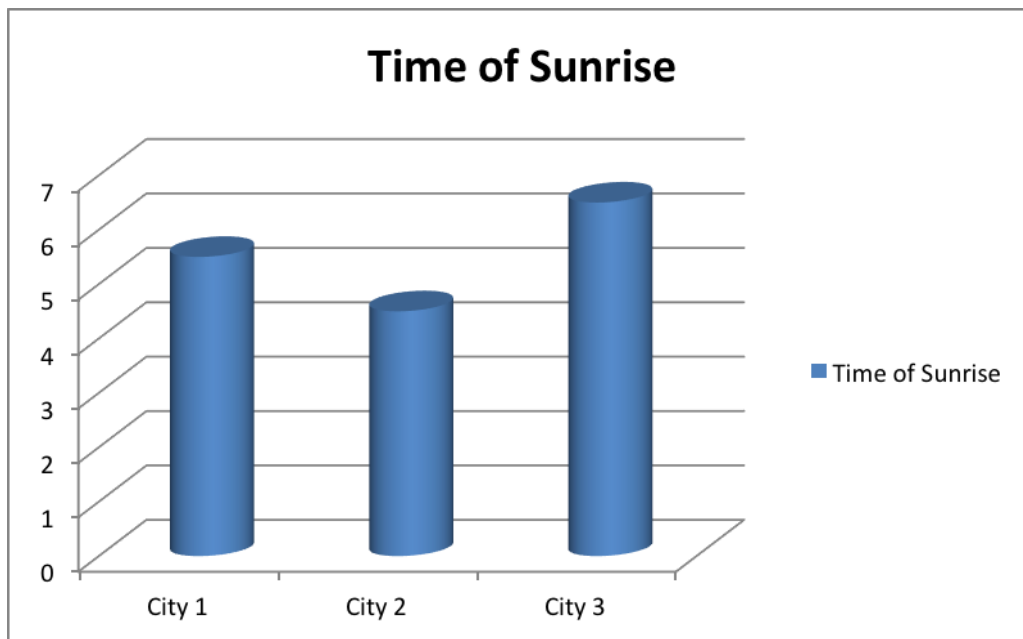
Against:

India has a huge population; if the country were divided into two time zones, there would be chaos at the border between the two zones. It would mean resetting clocks with each crossing of the time zone. There is scope for more dangerous kinds of confusion. Railway signals are not fully automated and many routes have single tracks. Trains may meet with major accidents owing to human errors. Just one such accident would wipe out any benefits resulting from different time zones in the country.

Partitioning the already divided country further into time zones may also have undesirable political consequences. Moreover, our research shows that the energy saving from creating two time zones is not particularly large.

Educational backwardness in India is also not very conducive to the idea of two time zones.

- a) Below is a graph showing the time of sunrise in three cities on a particular day. These cities are Kohima, Rajkot and Lucknow. Identify which is city 1, which is city2 and which city 3.



City 1: _____

City 2: _____

City 3: _____

Critically analysing the two views, answer the following by choosing the correct option:

- b) The solution to increase productivity without having multiple time zones can be:
- Having better lighting in the offices and homes.

- ii. Starting the working hours earlier in the North-eastern parts of the country.
 - iii. Making the people work in shifts.
 - iv. Not depending on daylight for work.
- c) Those who are against having two time-zones say that it will increase railway accidents. How?
- i. Train timetables will have to add or reduce the time of arrival and departure.
 - ii. People living in the borders of two time zone will not know about the arrival and departure of trains.
 - iii. Many railway signals are operated by men and they would get confused about time.
 - iv. Train drivers will have to reset their clocks while crossing the time lines.
- d) How will two time zones further divide the country?
- i. People will have separate banking and commerce hours, thus having separate economies.
 - ii. People will feel more alienated when they move to different time zones.
 - iii. There will be lesser common hours of work.
 - iv. All of the above.

5. **Read the following text about a student hostel.**

HOSTEL RULES

To make life in this student hostel as comfortable and safe as possible for everyone, please remember these rules.

Security You have a special card which operates the electronic lock on your room door and a key for the main door of the hostel. These are your responsibility and should never be lent to anyone, including your fellow students. If you lose them you will be charged ₹200 for a replacement. Do not leave your room unlocked even for short periods (for example, when making yourself a coffee). Unfortunately, theft from student hostels is very common and the hostel authorities will not pay for stolen goods unless you can prove that your room was broken into by force.

Visitors There are rarely any rooms available for visitors, except at the end of the summer term. Mr. Saurabh Gupta, the hostel manager, will be able to tell you and can handle the booking. A small charge is made. Mr. Saurabh Gupta also keeps a list of local guesthouses, with some information about what they're like, prices, etc. You

are also allowed to use empty beds for up to three nights, with the owner's permission (for example, if the person who shares your room is away for the weekend), but you must inform Mr. Saurabh Gupta before your guest arrives, so that he has an exact record of who's in the building if a fire breaks out. Students are not allowed to charge each other for this.

Kitchens There is a kitchen on each floor where light meals, tea, coffee, etc. may be prepared. Each has a large fridge and a food cupboard. Do not take any food to bedrooms. The cleaners have instructions to remove any food found in them. After using the kitchen, please be sure you do all your washing-up immediately and leave it tidy. If you use it late in the evening, please also take care that you do so quietly in order to avoid disturbing people in nearby bedrooms.

Music If you like your music loud, please use a Walkman! Remember that your neighbours may not share your tastes. Breaking this rule can result in being asked to leave the hostel. Musicians can use the practice rooms in the basement. Book through Mr. Saurabh Gupta.

Health Any serious problems should be taken to the local doctor. The number to ring for an appointment is on the 'Help' list beside the phone on each floor. For first aid, contact Mr. Saurabh Gupta or one of the students whose names you will find on that list, who also have some first aid training.

On basis of the above text, decide if the following statements are correct or incorrect.

Sl. No	Statement	Correct/ Incorrect
1	Every student has a key to the main door.	
2	You can borrow your friend's main door card.	
3	The hostel authorities will pay if someone steals your card and takes things from your room.	
4	Spare rooms are least likely to be available in summer.	
5	Your brother can stay free of charge if he uses the other bed in your room.	
6	Guests must report to Mr. Saurabh Gupta when they arrive.	
7	The cleaners take away the food they find in bedrooms.	

8	If you cook late night, you should leave the washing-up until morning.	
9	Students who play loud music may have to leave the hostel.	
10	You should ask Mr. Saurabh Gupta to call a doctor if you are ill.	

6. Use words from the list on the right and fill all the gaps.

Sl. No	Passage	Words/ Phrases
1	<p>Around the age of sixteen you must make one of the biggest decisions (0) <input type="text"/> your life. Do I stay on at school and hopefully go on to university (1) <input type="text"/>? Do I leave and start work or begin a training (2) <input type="text"/>? The decision is yours, but it may be (3) <input type="text"/> remembering two things: there's more unemployment (4) <input type="text"/> people who haven't been to university, and people who have the right (5) <input type="text"/> will have a big advantage in the competition for jobs.</p> <p>If you decide to go (6) <input type="text"/> into a job, there are many opportunities for training. Getting qualifications will (7) <input type="text"/> you get on more quickly in many careers, and evening classes allow you to learn (8) <input type="text"/> you earn. Starting work and taking a break to study when you're older is (9) <input type="text"/> possibility. This way, you can save up money for your student days, as well as (10) <input type="text"/> practical work experience.</p> <p>Bottom of Form</p>	<p>(0) of /to / with / for</p> <p>(1) after/ later/ then/ past</p> <p>(2) school/ class/ course/ term</p> <p>(3) worth/ necessary/ important/ useful</p> <p>(4) between/ among/ with/ through</p> <p>(5) notes/ papers/ arts/ skills</p> <p>(6) straight/ just/ direct/ rather</p> <p>(7) make/ help/ let/ give</p> <p>(8) where/ while/ when/ what</p> <p>(9) also/ again/ another/ always</p> <p>(10) getting /making/ taking/ doing</p>
2.	<p>Running is now very popular (0) <input type="text"/> as a sport and as a way of keeping fit. Even if you only run a short (1) <input type="text"/> once or twice a week, you (2) <input type="text"/> to make sure you wear good shoes. (3) <input type="text"/> is a lot of choice nowadays in running</p>	<p>(0) both /neither/ also/ yet</p> <p>(1) distance/ path/ line/ length</p> <p>(2) would /should/ need/ must</p> <p>(3) It /There/ This/ That</p>

<p>shoes. First of all, decide how (4) <input type="text"/> you want to (5) <input type="text"/> on your shoes. Then find a pair that fits you well. Be prepared to (6) <input type="text"/> different sizes in different types of shoe. Women's shoes are made narrower (7) <input type="text"/> men's and, although most women will find a woman's shoe which suits them, there is no (8) <input type="text"/> why a woman can't wear a man's shoe. The same is true for a man - (9) <input type="text"/> a woman's shoe fits you better, then wear it. Take youe time in the shop. If you (10) <input type="text"/> a mistake and buy the wrong shoes, your feet will let you know.</p>	<p>(4) far/ long/ many/ much (5) spend/ buy /charge/ pay (6) look /ask/ try/ experiment (7) as /like/ than/ from (8) fact/ reason/ knowledge/ choice (9) since /because/ so/ if (10) do make cause decide</p>
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Reading Skills

Class X

Level 1


Timed Activity

Max. Time: 45 Minutes

1. Here is an excerpt from a newspaper-

'I'm happy I failed my entrance test'

Jacin S



I had no idea what to do after finishing Class XII. According to my parents, the only course that guaranteed a "good" future was MBBS. So I joined a prestigious coaching institute a week after my results. I had to stay in a hostel with hundreds of others, all hoping to crack the exam. It was indeed a 'rat race.'

After 10 months of work and sleepless nights, I thought I was ready. But on the day I wrote the entrance test, I knew I had got it all wrong.

I clearly remember the day the results were out. Even the neighbour, with whom I had never had a conversation, wanted to know if I would be a doctor, or not. I got calls from every relative I know, and with every call, I felt like I had failed in life. The next couple of weeks were very difficult. I had to explain why I couldn't clear the entrance exam to every person I met. I felt I had let my parents down; I started believing I wasn't good enough; and that it was the end of my career. I did want to try again but had lost all my confidence.

After some consolation, I gathered energy and applied for geology at Fergusson College, Pune. I got through. My life changed gears. New faces, new campus, new language, new culture, and most importantly, new friends. I even joined the college's film society and started travelling. Things started to change and because of all that time outdoors, I soon realised my true calling — the environment.

I then applied for a masters in environment management at the Forest Research Institute, Dehradun, and also applied for entrance examinations for all Central universities. Because I loved everything about the environment, I prepared well. This time, instead of mugging up for 12 hours a day — as I had done during my MBBS preparation — I started enjoying what I was reading. I studied about three hours every day and surfed the Web for matter.

Finally, the results were out. I had topped the entrance examination to Central universities and secured 12th rank in the entrance exam for the Forest Research Institute. I chose FRI because my best friend too had been selected for the same college.

Coming to FRI opened up a whole range of opportunities for me. I was introduced to ways in which the environment was actually being managed — like the restoration of barren lands, concepts of waste management, conservation, etc. I got to be closer to nature than I ever was. I realised I could choose any direction of my interest here.

So, all in all, I got to travel; make friends for life; got to do much more than study inside a room; and discovered my interest.

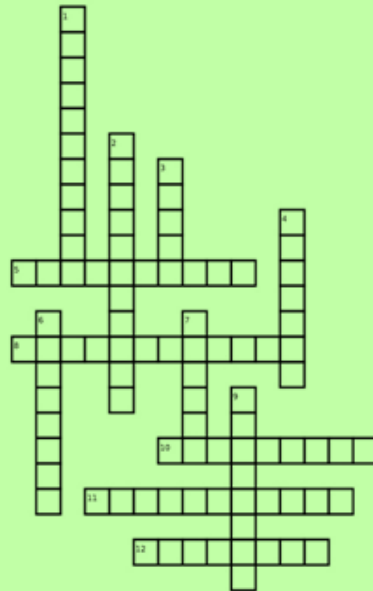
Today, I'm glad I failed that medical entrance. It wasn't the end, but the beginning of me.

The writer is a final-year student at Forest Research Institute, Dehradun

April 3, 2018, Times of India

Fill in the following crossword with the words from the above passage. The clues are given to help you.

I am happy I failed my entrance test



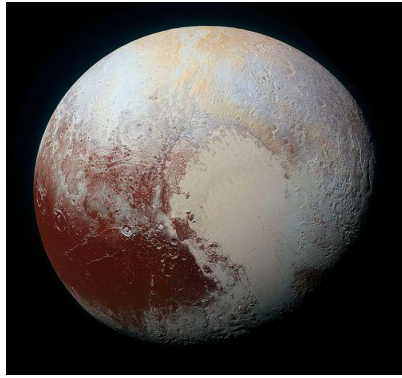
Down:

1. inspiring respect and admiration
2. surroundings
3. a set of different things of the same general type
4. to learn or revise a subject in a short time
6. to give (someone) extra teaching
7. too poor to have any vegetation
9. an opening

Across:

5. found unexpectedly
8. an informal talk
10. an organisation having a particular purpose
11. the comfort received after disappointment
12. chosen

2. Read the following information about Pluto.



Poor Pluto!

It's bad enough to be the smallest of the group, but to be told after 75 years that you're not even a member of the club - what an insult!

Pluto was first discovered in 1930. Until 2006, students were taught that it was the ninth and smallest planet in the solar system. Smaller than Earth's moon, it is not even as wide as the United States.

Pluto is made up almost entirely of rock and ice. It is so far away that it took the NASA New Horizons spacecraft over 11 years to get there from Earth. Pluto's full orbit around the sun lasts almost 250 Earth years!

But as small as it is, as cold as it is, as far from the sun as it is, for all those years it was considered the ninth planet of the solar system... until Eris came around. Eris was discovered in 2005. It is about the same size as Pluto. And like Pluto, it is part of the Kuiper Belt, a ring of objects that circle the outer edge of the solar system. After Eris was discovered, scientists had to make a decision. Either Eris was the 10th planet in the solar system or it was not a planet at all! And if Eris weren't a planet, could Pluto be considered one? Scientists made new rules for what is counted as a planet, and decided that neither Pluto nor Eris qualified. A new category was created: dwarf planet. The official list of planets in the solar system went from nine to eight, and Pluto and Eris became members of the dwarf planet club. So long for Planet Pluto—but at least it no longer has to be the littlest guy in the club. In fact, Pluto is one of the bigger dwarf planets! Maybe Pluto doesn't have it so bad after all.

Use the above passage to answer the questions below-

- a) The tone of the passage is-
 - i) Sarcastic

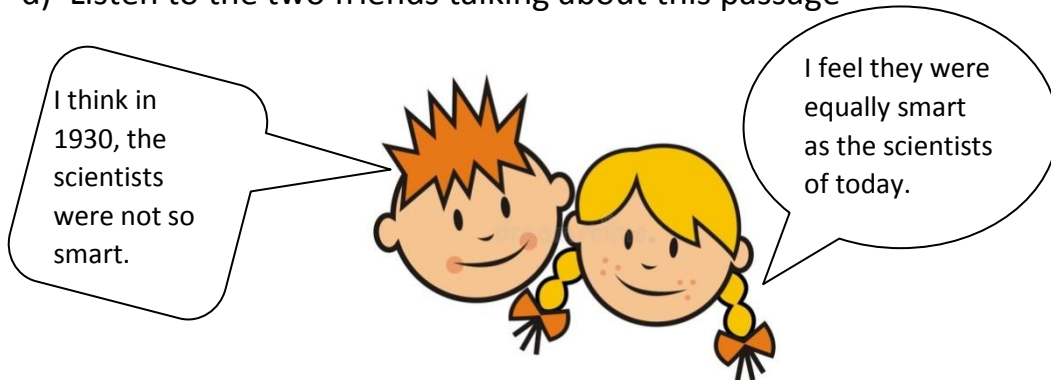
- ii) Humorous
- iii) Distressing
- iv) Consoling

b) What is the passage about?

- i) Discovery of Eris
- ii) Size of Pluto
- iii) Why Pluto is not a planet
- iv) Pluto is the smallest planet

c) Why is Kuiper Belt mentioned in the passage?

d) Listen to the two friends talking about this passage-



With whom do you agree- the boy or the girl? Give reasons.

3. Read the following:

About Tales of Panchatantra



The legend goes that King Amarashakti, who used to rule Mahilaropya in southern India, had three dull-headed sons. The king appointed scholar Vishnu Sharma to educate them.

After realizing that conventional tools and techniques of teaching will not work with his new students, Vishnu Sharma decided to write a collection of more than 50 stories that focused on five strategies:

- i) **Mitra labha or gaining of friends** features stories that talk about how to win friends.
- ii) **Mitra bheda or losing of friends** features stories about how one can lose friends.
- iii) **Aparīksitakāarakam or imprudence or acting without thinking** tells us how we can lose what is important to us when we act without thinking.
- iv) **Labdhapranāsam or Loss of gains** tells us that it is always possible to get out of a difficult situation without losing anything.
- v) **Kākolūkiyam or of crows and owls** features stories that talk about the strategies and rules of war and peace.

After reading the above passages, answer the following:

- a) What is Panchatantra not about?
- Politics
 - Symbolism
 - Life skills
 - Dreams
- b) Which is not a conventional tool of teaching?
- Lectures
 - Flash Cards
 - Projects
 - Flip cards
- c) How will you describe King Amarashakti?
- A good king
 - A just king
 - A concerned father
 - A good human being
- d) There are some proverbs in column A and the strategies of Panchatantra in column B. Match the proverb with the strategy it best fits in:

Idioms	Strategies in Panchatantra
Better to be alone than in a bad company.	<i>Mitra labha</i>
Haste makes waste.	<i>Kákolùkiyam</i>
Everything is fair in war.	<i>Labdhapranásam</i>
One misfortune brings on another.	<i>Aparíksitakáarakam</i>
A friend in need is a friend indeed.	<i>Mitra bheda</i>

Reading Skills

Class X

Level 2

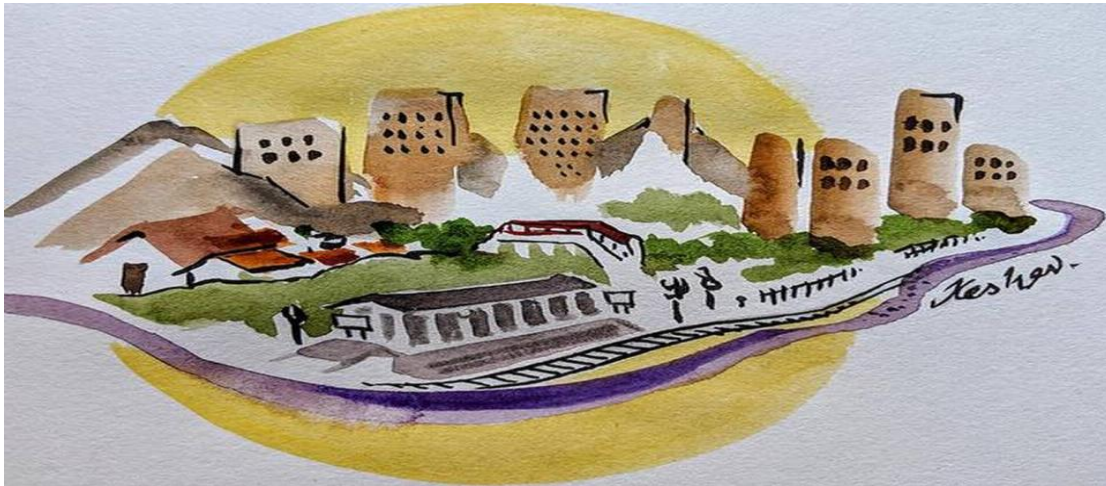
Time: 50 Minutes

1. Here is an article that was published in 'The Hindu' on 20 January 2019.

The Millennial Urban India

Anukriti Pathak

20 minutes



When I was a child, my father was posted somewhere on the western border of India and every summer we used to travel from there to the Nepalese border to visit my grandparents. The most exciting part of the vacation used to be the train journeys, 18 to 20 hours long, crossing cities interconnected by huge patches of open land. My parents used to algorithmically calculate the food required for the journey, store enough water to last between major cities. The train, crossing a cross-section of India, covered around 1,000 km and crossed two or three cities, so the calculation was done so that food lasted between these major stations where a refill could be made.

Recently I took the same route, this time for the sake of nostalgia. The landscapes that had seemed barren once, almost across Rajasthan, were now built up, and the fringes of the major cities seemed bigger. The distance between major cities also seemed to be less and the big stations which were two or three back in the 1990s now seemed to be almost double in number.

What is behind this change of picture for every 1990s kid like me is the rise in the millennial Urban India. In Census 2001 there were 35 million-plus cities, which number boomed to 53 in 2011 and is set to rise to around 75 in 2021. The urban which seemed an alien concept in the early planning years of India, understood as a negative spill-over of villages, is now a way of life in millennial India, responsible for a major part of the government of

India's expenditure. As in the rest of the world, the millennial urban India speaks the language of efficiency, downsizing, sub-contracting of services, Public Private Partnerships and new models of public management, leading the state to re-scale itself and recreate social and geographical boundaries to participate in the race to match escalating GDP numbers.

Every million-plus city in India boasts of a history that spans 500 years on an average. The forms of the cities have seen more than historians could ever document fully or completely. Indian cities have witnessed social struggles, changing governance systems and powers, disasters, economic booms and recessions for centuries before attaining their current shape and form. What makes them different from one another are the embedded historical struggles, the organic evolution, the vernacular growth, the social sciences that reside within the cities. In scenarios where urban spaces appear cyclical, dynamic, and alterable, informed by technological modifications more than historical changes, setting a prototype definition of 'global cities', the cities lose their individuality.

What we get in processes like these are mass-produced, factory-made products where one formula fits all. The millennial urban India aspires for cities made up of repetitive patterns of grids, glazed windows, and the business consultancy a white-collar workforce, existing as an island within the local city, exhibiting the pressures of Indian

urbanisation. A denial of the existing urban paradox demonstrated happy, thriving, prosperous spaces blooming in the most unsanitary, inhuman and degrading working and living places.

A city without the narration of its pressures, struggles and essentially its social sciences would be a space but not a place, wherein the beautiful heterogeneity of romanticised urban chaos will get reduced to the homogeneity of urban order.

Even a set of theories remaining relevant only to the social sciences and ignoring other governing

aspects such as environment, resources, economics and technological developments would also not be fully justified. If social lenses are required to understand a city or an urbanscape from a humane perspective, then other things such as resources and environment are equally relevant and are required to keep the system going.

Is there then scope for a model where social sciences are formed as a derivative of the scientific process, where both the lenses can act interchangeably rather than challenging the authenticity of one another?

- a) The purpose of writing this passage is:
- i. To describe the preparations done for a journey by train
 - ii. To describe how India has urbanised rapidly
 - iii. To describe how cities are losing individuality
 - iv. To describe how urbanisation has distorted villages
- b) Based on the information given in the passage, cities are becoming homogeneous because:
- i. Train journey takes lesser time now.
 - ii. There is a sudden boom in the number of cities after 2001.
 - iii. All the cities have started following the same prototype/model.
 - iv. The cities have a rich cultural heritage.
- c) 'Urbanscape' means the appearance or layout of an urban area. It is made of the root word 'urban' and '-scape' as suffix. Can you think of five more words with '-scape' as suffix?
- _____
- _____
- d) The following are a few sentences that tell the gist of paragraphs. They are not in correct order.

Historically speaking, every Indian city has its own story.

The cities are losing their identity.

Social sciences and environment have an impact on each other.

There is a sudden increase in number of cities.

Earlier, there was a clear divide between urban and rural.

Arrange the above sentences in the correct order in the pyramid given below.

i. _____

ii. _____

iii. _____

iv. _____

v. _____

- e) Read this sentence from the 4th paragraph- 'What makes them different from one another are the embedded historical struggles, the organic evolution, the vernacular growth, the social sciences that reside within the cities.'

This sentence means-

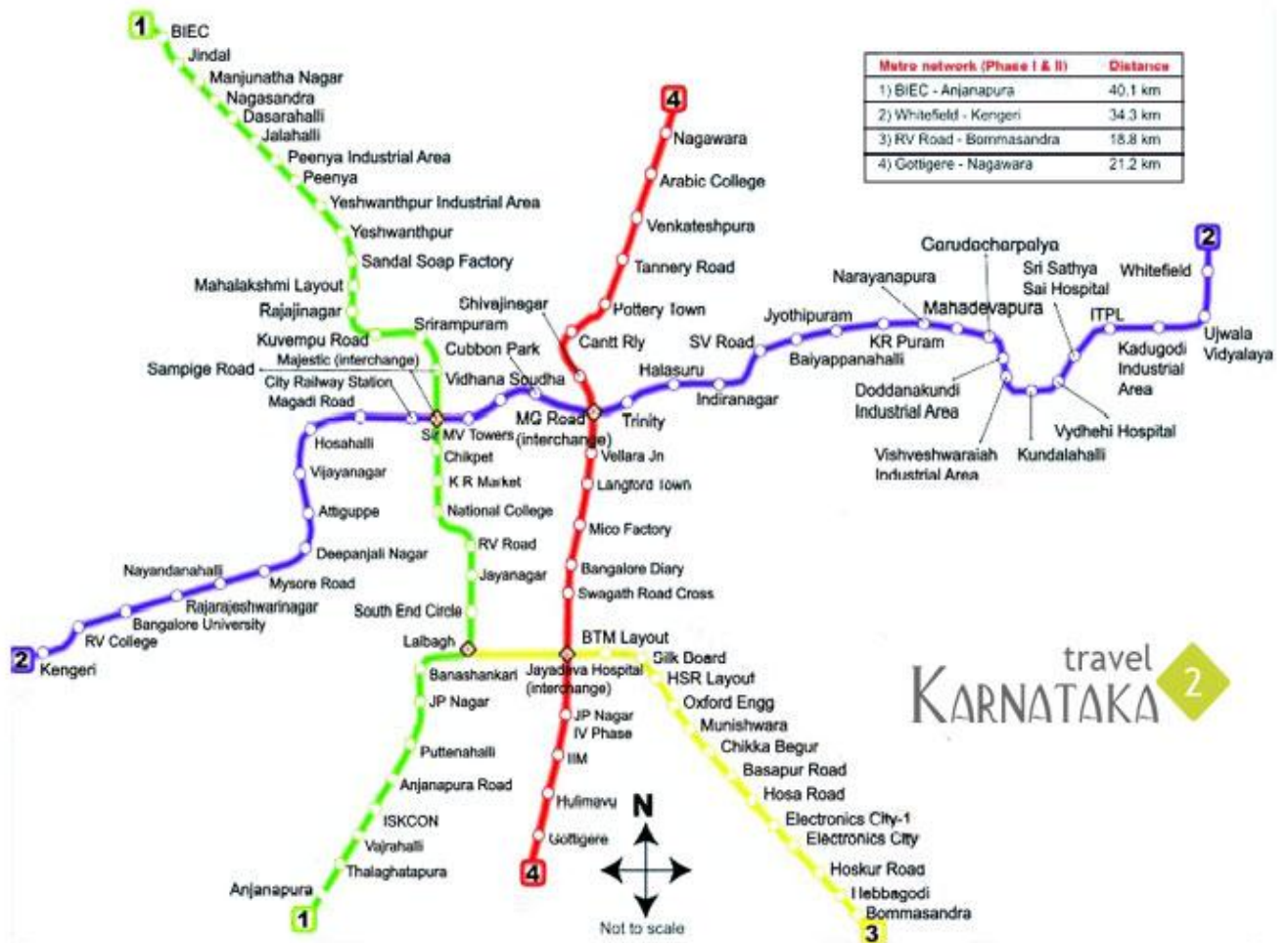
- i. Every city has the same struggles.
- ii. Organic evolution took place in selective cities.
- iii. Social sciences depend on vernacular growth.

iv. Every city has a different story.

2. Namma Metro

10 minutes

Karan and Kitty are on their visit to Bengaluru and they have decided to use public transport there. Guide them about what routes they should take while roaming in the city. Here is the route map of metro in Bengaluru.



a) Karan wants to go from Ujjwala Vidyalaya to Arabic College. What route should he take?

b) Kitty is very tired and wants to take a nap while going from Lalbagh to ISKCON. Does she have enough time to sleep?

- c) Kitty wants to do shopping at MG Road and she is staying on Mysore Road. How many stations will she have to cross?

- d) From Arabic college, Karan has to go to Kendriya Vidyalaya situated at Jalahalli. Where should he get down?

- e) Karan and Kitty have preferred to use public transport. Do you approve their step?

3. How we made money in India

20 minutes

'Rupee' comes from the Sanskrit word rupyakam which means a silver coin. The word "rupaalu" means wrought silver or a coin of silver in Sanskrit. Another word 'rupaalu' is an adjective and means 'shapely', and was used for a piece of silver that was 'stamped or impressed' like a coin is or was. This word 'rupaalu' comes from the noun 'rūpa' which means "shape, likeness, image". The word *rūpa* itself may have Vedic or Dravidian roots. The origins are more likely to be Vedic as the Sanskrit word *rūpa* is a noun, means a form, beauty (Rigveda). The word *rūpaka* is an adjective and means a particular coin. *Rūpya* and *rūpiya* are adjectives and mean something beautiful and bearing a stamp (Pāṇini).

The present Indian rupee owes its origin to Sher Shah Suri in 1540-45. He minted a substantial number of coins, introducing the 11 gm silver rupee coin. He also issued copper coins. These copper coins, which were used by the masses, were known as *Paisa*. The term *paisa* too is used in India today for money.

Here is a biography of Indian currency- from then to now.



a) The passage says-

'Rūpya and rūpiya are adjectives and mean something beautiful and bearing a stamp (Pāṇini).'

Hence, rupee has its origin in beauty. What does this show about our attitude towards money?

i. Money is a sacred thing for us.

- ii. We are passionate about having beautiful names.
 - iii. Ancient Indians found beauty in everything.
 - iv. The coins were designed beautifully.
- a) What could be the reason that the earliest coins were made of gold or silver?
- i. The coins were only for the royal people.
 - ii. Common public believed in barter system and didn't need coins.
 - iii. Gold and silver are more resistant to corrosion.
 - iv. These metals were available in abundance then.
- b) As you see in the picture, the script of the inscription on the coins kept changing with time. It was Brahmi sometimes, Persian, or Devnagri the other time. What does this change in script indicate?
- i. The script varied as the rulers changed.
 - ii. The script changed as per the aesthetics of the coins.
 - iii. The script showed the religion of those times.
 - iv. The rulers wanted to spread literacy through these coins.
- c) Why did the trend of using paper money begin?
- i. There was shortage of metals.
 - ii. Metal coins made a lot of noise.
 - iii. Metal coins were difficult to carry over long journeys.
 - iv. People began using gold and silver for jewellery.
- d) Arrange the following rulers in order of the time they ruled-

Muhamamad Bin Tuglaq, Chandragupta II, Akbar, Sher Shah Suri, the British

Write your answer in the flowchart below:



Reading Skills
Class X
Level 3

Time: 50 Minutes

4. If Mahatma Gandhi had to write his resume, it would look something like this:

Name: MOHANDAS KARAMCHAND GANDHI	
WORK EXPERIENCE	
India	Father of the Nation July 1914-Jan 1948
Roles and Responsibilities	<ul style="list-style-type: none"> ☐ Fighting Colonial forces in order to emancipate the nation from the evil clutches of imperialism ☐ Spearheaded the country of 350 million population in banishing the Britishers ☐ Synergizing all nationalistic voices; Instrumental in instilling patriotic feelings among millions ☐ Inculcating the ideals of Honesty, Integrity, Tolerance, Peace & 'Ahimsa' among compatriots ☐ Keeping all communal and divisive forces at bay by fostering amity between 4 major religions
Key Projects	<ul style="list-style-type: none"> ☐ Beacon of hope for all oppressed people; inspiration for a legion of global leaders like Martin Luther Junior ☐ Dandi March- Led 50,000 people in the 23 day, 390 km march; Instrumental in irking the rulers ☐ Non Cooperation Movement – Led Tens of thousands of people for 2 years (1920-22) ☐ Civil Disobedience Movement- Defied Britishers and their laws by stalling the government ☐ Quit India Movement- Intensified the fight against British through sustained communications ☐ Secured Independence for 650 million people; Expedited the exodus of British officials ☐ Principles of 'Ahimsa' were lauded 'As Inescapable as Law of Gravitation' by Martin Luther
Accomplishments	<ul style="list-style-type: none"> ☐ Popularized nonviolent concepts like Satyagraha, Boycotts, Marches and Jail Filling ☐ Stopped the seemingly uncontrollable postindependence communal riots of Bengal in just 1 day ☐ Key figure in weaving the social fabric of India; contributed immensely to western cultures as well ☐ Never bought British goods, picketed liquor shops and influenced people adopt local handicrafts ☐ Inspired Selma Montgomery marches of 1965 which were the manifestations of Black rebellion ☐ 'He ended up doing so much and changed the world just by the power of his ethics' – Obama
PART TIME WORK EXPERIENCE	
Civil Rights Movement, South Africa	<ul style="list-style-type: none"> ☐ Ignited the rebellious attitude among the natives after the legendary Pietermaritzburg train incident ☐ Assisted Indians in opposing a bill that had the potential of denying them the voting rights
Satyagraha	<ul style="list-style-type: none"> ☐ After the black majority came to power, Gandhi was proclaimed a national hero with numerous monuments ☐ Successfully urged Indians to defy the new law and to suffer the punishments for doing so

ACADEMIC QUALIFICATIONS			
Examination	Year	Board/University	% / CGPA
Barrister at Law	1890	University College, London	N.A.
Matriculation Exam	1887	Rajkot	40%
POSITIONS OF RESPONSIBILITY			
Founding Secretary, Natal Indian Congress	<ul style="list-style-type: none"> ☑ Founded National Indian Congress, 1894; moulded Indian community into a homogenous entity ☑ Spearheaded a team of over 100members; drafted its constitution, recruited members ☑ Introduced many early petitions for changes opposing proposed discriminatory legislations ☑ Organized Volunteered Ambulance corps of Indians to serve wounded BlackSouth Africans 		
President, Indian National Congress	<ul style="list-style-type: none"> ☑ Elected as the president of the Indian National Congress in 1921; introduced a slew of reforms ☑ Increased party's reach among masses who resided in the remote corners to eradicate elitist status ☑ Reduced membership fee, restructured party hierarchy & opened branches in various provinces ☑ Worked endlessly in eliminating caste and religious discriminations, especially in villages ☑ Civil Disobedience movement led the British authorities to cower down under pressure ☑ Resultedn the initiation of the first round table conference leading to the Gandhi - Irwin pact 		
OTHER INFORMATION			
Timothy Roemer on Mahatma	<ul style="list-style-type: none"> ☑ The value and belief in democracy is one of Gandhiji's greatest gifts and lasting legacy to India ☑ Without his influence on Indian society to accept all religions, it's democracy wouldn't have been vibrant ☑ Shared values b/ w the US & Indiahuman rights, religious freedom, open society, education & rule of law ☑ Gandhiji's legacy will live on into the future as his teachings are both timeless and enduring ☑ Noble winners Dr. King, Archbishop Desmond Tutu, the Dalai lama, Aung San Suu Ky & Obama ☑ Obama invoked the words of Mahatma Gandhi in his address to the UN General Assembly. 		
Mahatma's Influence outside India	<ul style="list-style-type: none"> ☑ "This halfnaked man without a gun had conquered the might of the British Empire" – Chavez ☑ Inspired movements that toppled dictators from Ferdinand Marcos & Augusto Pinochet ☑ Nonviolent protests of Tunisia and Egypt were largely derived from Gandhian school of thought 		

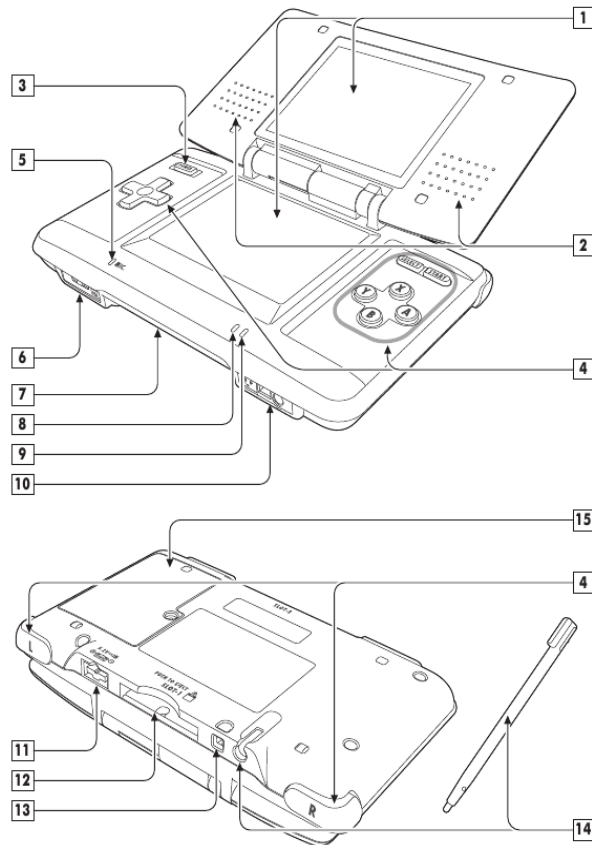
On basis of the above resume, answer the following:

- a) The resume begins with work experience mentioning responsibilities and accomplishments because:
 - i. Gandhi had achieved a lot and he felt good about it.
 - ii. It creates a positive statement about him and shows how he made the difference.

- iii. His academic performance was not so good. So, he didn't want to begin with it.
 - iv. Everyone knew about his background. So, he didn't want to waste time mentioning about it.
- b) The action words used in the resume show that:
- i. Gandhi possessed great leadership qualities.
 - ii. He was persuasive in nature.
 - iii. He possessed good interpersonal skills.
 - iv. He wanted to threaten the British.
- c) The 'Position of Responsibility' section indicates:
- i. How skilled Gandhi was.
 - ii. How dependable Gandhi was.
 - iii. How he would perform in future.
 - iv. All of the above.
- d) The section on 'Other Information' shows how Gandhi had influenced others. The purpose of having this section in the resume is:
- i. It testifies the view of other people.
 - ii. It tells about the areas that are not covered in other heads.
 - iii. It gives details of co-curricular activities.
 - iv. It is an appendix to the resume.
- e) What is the purpose of writing a resume?

5. Following is a page from the user manual of Nintendo, a range of video games played on a game console.

Nintendo DS Components



Nintendo DS Components

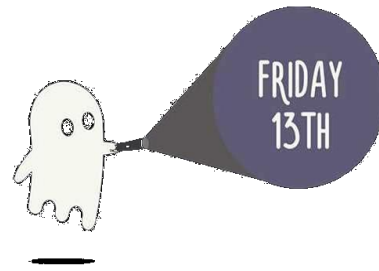
1. **LCD Screens** – Twin backlit color liquid crystal displays. The lower display (the Touch Screen) is touch sensitive and should only be operated with a Nintendo-licensed stylus.
2. **Stereo Speakers.**
3. **Power Button (POWER)** – Turns system on or off. To prevent turning the system off accidentally during game play, you must hold the Power Button down for a moment before it will turn off.
4. **Control Buttons** – The +Control Pad, A, B, X, and Y Buttons, L and R Buttons, and START and SELECT. Used for game play control. See the instruction booklet for the game you are playing for specific game control information.
5. **Microphone (MIC.)** – Used with specially designed games that include the microphone feature.
6. **Volume Control (VOL.)** – Slide to the right to increase volume.
7. **Game Pak Slot (SLOT-2)** – For Game Boy Advance Game Paks or Nintendo DS accessories (sold separately).
Not compatible with Game Boy or Game Boy Color Game Paks.
8. **Recharge Indicator LED** – Lights orange while the battery is being recharged and turns off when charging is complete.
9. **Power Indicator LED** – Indicates power is on or off and battery life. Green color will change to red when battery charge becomes low. When LED turns red, save your game and recharge the battery to prevent loss of game data.
 - Rapid blinking shows that wireless communication is in progress.
 - Slow blinking shows that the Nintendo DS is in Sleep Mode.
 NOTE: If you close the DS while the power is on, it will automatically switch to power-saving Sleep Mode. It will resume normal mode when opened again.
10. **Headphone/Microphone Connectors** – For connection of stereo headphones, external microphone or headset (sold separately).
11. **External Extension Connector (5.2V IN)** – Allows connection of Nintendo DS AC Adapter (included) for recharging the battery or operation of the DS using household power. The Game Boy Advance Headphone adapter (sold separately) can also be connected.
12. **DS Game Card Slot (SLOT-1)** - For loading a Nintendo DS Game Card (sold separately).
13. **Wrist Strap Attachment** – For attachment of wrist strap (included). See pages 8-9 for more information.
14. **Stylus and Stylus Holder** – Always replace the stylus into the stylus holder after use.
15. **Battery Cover** – Can be removed to replace the rechargeable battery pack. See page 7 for more information on battery replacement.

The above section shows various components of Nintendo. You will see that many of the components shown here are used in other gadgets too. Write down where else you can find these components:

- a) Headphones: _____
- b) Recharge indicator: _____
- c) Wrist strap attachment: _____
- d) Stylus and stylus holder: _____
- e) Card slot: _____

6. Read the following extract which is a part of a longer passage:

Although it may seem trivial, triskaidekaphobia is an issue that affects western societies economically. Because of the superstition, some people delay doing business on the 13th of any month, while statistically there are more people who do not go to work on the 13th day of any month because of this superstition. Friday is also considered unlucky in western culture. The term for the fear of Friday the 13th is triskaidekaphobia.



Although there is no 100% sure shot method to treat triskaidekaphobia, if you feel it affects your life, it is a good idea to talk to your doctor who could recommend you a therapist. You will probably be exposed to your fear and make you understand your phobia. In many instances the treatment is successful, although it may be challenging to find a good therapist if you don't live in an urbanized area.

If you don't have access to a therapist, it is a good idea to talk about your fear and try to understand it yourself. At the end of the day, even with a therapist involved, you are the only one who can cure your phobia.

On basis of the passage, answer the following:

- a) This passage is more likely an excerpt from
 - i. The case study of a patient suffering from triskaidekaphobia
 - ii. The introduction to an article on triskaidekaphobia
 - iii. The conclusion of an article on triskaidekaphobia
 - iv. Middle part of a loner article on triskaidekaphobia

- b) Based on the information in the passage, it can be inferred that an earlier section of this passage is likely to have
 - i. a personal anecdote about why the author believes that Friday the 13th is unlucky.
 - ii. examples of mishappenings that took place on Friday the 13th.
 - iii. Introduction to the term triskaidekaphobia.

- iv. none of the above
- c) Which of the following pieces of evidence, if true, would best support the author's argument in paragraph 1?
- i. In ancient Egypt, the number 13 was actually considered lucky by the pharaohs.
 - ii. Major airlines report that there is no significant drop in the number of passengers who fly on Friday the 13th.
 - iii. Studies performed in the United Kingdom reveal that significantly fewer people choose to drive their cars to work on Friday the 13th.
 - iv. More traffic accidents occur on Fridays than on any other day of the week.
- d) 'Fallacy' means a mistaken belief that is based on unsound arguments. If someone has lost his wallet on Friday the 13th and blames it on the date, which of the following fallacies is he committing:
- i. *Appeal to probability*, characterized by the assumption that because an event could happen, it is inevitable that it will happen.
 - ii. *Appeal to ignorance*, characterized by the supposition that, due to a lack of conclusive evidence, the conclusion of an argument should be accepted.
 - iii. *Hasty generalization*, characterized by making assumptions about a whole group or range of cases based on a sample that is inadequate (usually because it is atypical or too small).
 - iv. *Weak analogy*, characterized by an argument that relies on an analogy between two or more objects, ideas, or situations which aren't really alike in the relevant respects.
- e) As used in paragraph 2, the best antonym of phobia could be:
- i. Terror
 - ii. Boldness
 - iii. Obsession
 - iv. Affection
