



HOLIDAY HOMEWORK 2026-27

GRADE X

Reconnect with your Inner Self

Dear Parents,

Jai Hind!

At Mayor World School, we believe that education is a blend of academics, values, and innovation.

The holiday homework has been thoughtfully designed to unleash children's creativity and keep them meaningfully engaged in the spirit of learning. Moreover, the summer guidelines are simple yet meaningful steps to nurture empathy and responsibility. By encouraging each child to pursue an artistic activity of choice, we aim to foster joy in self-expression, reflection, and sharing.

With your support, these practices will help our students grow into compassionate, responsible, and imaginative individuals.

Summer Guidelines

- ✓ Keep Water Containers.
- ✓ Place clean water container outside your homes to help stray animals and birds stay cool and hydrated during the hot weather.
- ✓ Stay hydrated.
- ✓ Drink plenty of water throughout the day. Carry a water bottle whenever you go out.

Extend empathy

- ✓ Be kind to people, animals, and the environment. Small acts of care - like feeding birds or helping neighbours - make a big difference.
- ✓ Avoid wastage
- ✓ Use resources wisely. Do not waste food, water or electricity.
- ✓ Protect yourself.
- ✓ Wear light cotton clothes, use sunscreen, and avoid going out in the scorching midday sun.

Mandatory Activity

Awaken your Inner Artist

During the summer holidays, each student is expected to engage in one creative activity of their choice - such as painting, music, singing, dance, craftwork, or any other area that interests them.

Paste a picture of yourself doing the activity chosen in your English notebook. Bring your creative work to the School to show to your Grade In charge after the vacation (if singing and dancing chosen then record and bring in a pen drive).

Warm regards,

Mayor World School

ENGLISH

Task1: A long walk to Freedom - A Creative Flip-Book/Brochure

Design a 3-panel creative travel/historical brochure or flip-book titled The Journey to Freedom, highlighting Nelson Mandela's struggle and triumph.

Guidelines

Panel 1: Cover Page

Create a striking, hand-drawn cover page with an inspiring quote on freedom.

Panel 2: The Dark Days

Write a brief description of the challenges faced during Apartheid, focusing on injustice and resilience.

Panel 3: The Dawn of Democracy

Compose a short celebratory poem or message dedicated to global peace and equality today.

Instructions:

- The brochure/flip-book must be hand-written and hand-drawn.
- Ensure neatness, creativity, and originality in presentation.

Task 2: You notice that while technology has made online learning highly accessible, it has also drastically reduced the attention span and handwriting neatness of school students. Write a formal Letter to the Editor of a national daily (100–120 words) highlighting this issue and suggesting creative solutions like mandatory screen-free reading hours.

Task 3: Personal Portfolio

Theme: "Know Yourself, Grow Yourself"

Prepare a creative Personal Portfolio File (handwritten or digital) showcasing your personality, achievements, goals, skills, and experiences.

Include the Following Sections

1. Cover Page

Name, Class, Section, Roll No., Session

2. Index

3. About Me

Self-introduction, hobbies, strengths, interests

4. My Daily Routine

Timetable/chart/creative format

5. Achievements

Academic, sports, competitions, certificates

6. My Role Model

Any one person who inspires you

7. Skills & Talents

Art, music, writing, cooking, sports, etc.

8. Reading Reflection

Review of any one book/article/story read during holidays

9. Career Goals

Your dream profession and future plans

10. Creative Corner

Poems, drawings, photography, quotes, crafts, etc.

11. Self-Reflection

- What makes you unique?
- What would you like to improve?

Guidelines:

- Use pictures, charts, and creative layouts.
- Maintain neatness and originality.
- Avoid copied content.
- Decorate the portfolio creatively.

Submission Details:

- Date of submission : 10th July 2026
- The project is to be hand written and submitted in neatly covered hardbound file.
- Soft copy of the project to be submitted via mail ;

X A : kpreetkaur348@gmail.com

X B : mwsshikhasharma@gmail.com

X C : mws.shubhangikhosla@gmail.com

Mathematics

Q. No.	Statement
1	In a morning walk three persons step off together, their step measure 80 cm, 85 cm and 90 cm respectively. What is the minimum distance each should walk so that he can cover the distance in complete steps? Answer: 12240 cm
2	Find the greatest number of 6 digits exactly divisible by 24, 15 and 36. Answer: 999720
3	If the least prime factors of two positive integers a and b are 5 and 13 respectively, then the least prime factors of a+b is..... Answer: 2
4	If a and b are zeroes of the quadratic equation (polynomial) $f(x) = x^2 + p(x + 1) - c$, show that $(a + 1)(b + 1) = 1 - c$.
5	If the squared difference of zeroes of the quadratic equation $f(x) = x^2 + px + 45$ is equal to 144, find the value of p. Answer: ± 18 .
6	If a and b are the zeroes of the quadratic polynomial such that $a+b = 24$ and $a-b = 8$, find a quadratic polynomial having a and b as its zeroes. Answer: $f(x) = k(x^2 - 24x + 128)$
7	If 1 is the zero of the polynomial $p(x) = ax^2 - 3(a - 1)x - 1$, then find the value of a. Answer: 1
8	If $a+b+c = 0$, then the zero of the polynomial $p(x) = ax^2 + bx + c$, is Answer: 1
9	Maya is walking along the path joining (-2,3) and (2,-2), while Suresh is walking along the path joining (0,5) and (4,0). Represent this situation analytically and solve graphically.
10	The path of a train A is given by the equation $3x+4y-12=0$ and the path of train B is given by the equation $6x+8y-48=0$. On comparing the ratio's and without drawing them, find out whether the lines intersect, parallel or coincident lines.
11	Solve the following: i) $99x+101y=499$ and $101x+99y=501$ Answer: $x=3, y=2$ ii) $\frac{7x-2y}{xy} = 5$ and $\frac{8x+7y}{xy} = 15$ Answer: $x=1, y=1$

12	<p>For what value of k, will the system of equations, $x + 2y = 5$ and $3x + ky - 15 = 0$ has (i) unique solution? (ii) no solution? Answer: (i) $k \neq 6$ (ii) <i>there is no value of k in which the given system of equation has no solution</i></p>
13	<p>Find the value of a and b for which the following system of linear equations has $2x+3y=7$ and $2ax+(a+b)y=28$; <i>i) infinite many solutions ii) a unique solution iii) no solution</i> Answer: i) $a = 4, b = 8$ ii) $b \neq 2a$ iii) $a \neq 4, b \neq 8$</p>
14	<p>The sum of the numerator and denominator of a fraction is 4 more than twice the numerator. If the numerator and denominator are increased by 3, they are in the ratio 2:3. Determine the fraction. Answer: $5/9$</p>
15	<p>Solve the quadratic equation i) by factorization ii) by Shridhar Acharya Formula $\frac{2x}{x-3} + \frac{1}{2x+3} = -\frac{3x+9}{(x-3)(2x+3)}, x \neq 3, -3/2$ Answer: $x = -1$ is the only solution of the given equation.</p>
16	<p>Solve the quadratic equation, $\frac{1}{2a+b+2x} = \frac{1}{2a} + \frac{1}{b} + \frac{1}{2x}$ Answer: $-a, -b/2$</p>
17	<p>Using quadratic formula, solve the quadratic equation $9x^2 - 9(a+b)x + (2a^2 + 5ab + 2b^2) = 0$. Answer: $(2a+b)/3, (a+2b)/3$</p>
18	<p>Find the value of k for which the given equation has real and equal roots <i>i) $(k-12)x^2 + 2(k-12)x + 2 = 0$ ii) $(k+1)x^2 - 2(k-1)x + 1 = 0$</i> Answer: i) $k = 14$ ii) $k = 0, 3$</p>
19	<p>If the sum of m terms of an AP is same as the sum of its nth terms, show that the sum of its (m+n)th term is vanish (zero).</p>
20	<p>If the mth term of an AP is $\frac{1}{n}$ and the nth term is $\frac{1}{m}$, show that the sum of (mn)th term is $\frac{1}{2}(mn + 1)$.</p>

SOCIAL SCIENCE

Project Work Instructions

Topics: Consumer Rights / Social Issues / Sustainable Development

(Choose any one topic)

- 1) Project should be prepared in a proper file.
- 2) Minimum 12 pages are compulsory.
- 3) The project must be handwritten.
- 4) Use neat and clear handwriting.
- 5) Paste relevant pictures, graphs, charts, newspaper cuttings, etc.
- 6) Include recent and current data/information.
- 7) Proper covering and presentation of the file is required.
- 8) Use formal language and proper headings.

Suggested sequence:

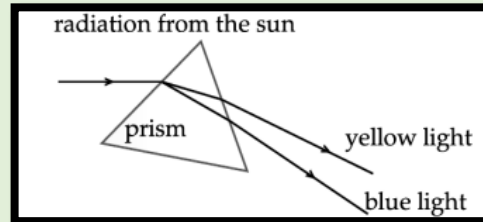
1. Cover Page
2. Acknowledgement
3. Index
4. Introduction
5. Main Content
6. Case Study/Recent Data
7. Conclusion
8. Bibliography

Note: Readymade work will lead to deduction of subject enrichment marks.

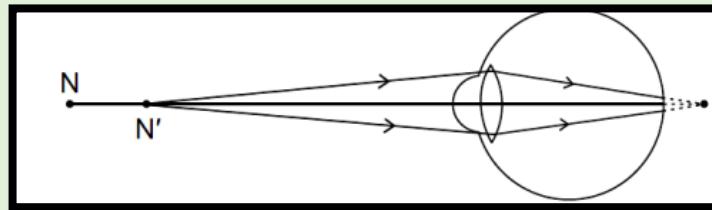
SCIENCE

PHYSICS

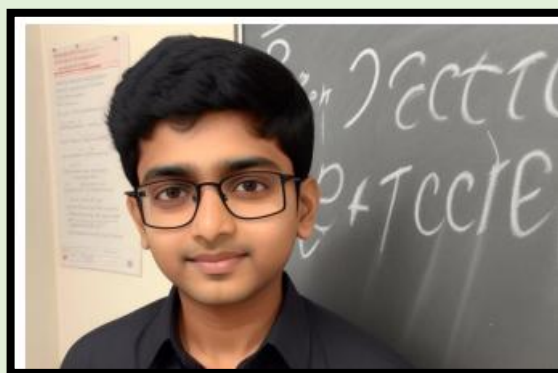
1. State the phenomena observed in the given diagram. Explain with reference to the diagram, which of the two lights mentioned above will have the higher wavelength?



2. Study the diagram given below and answer the questions that follow: (a) Name the defect of vision represented in the diagram. Give reason for your answer. (b) With the help of a diagram show how this defect of vision is corrected.



3. Aditya, who was a back bencher in class, started complaining of frequent headaches. His parents took him to the nearest clinic and the doctor referred him to the eye specialist. The eye specialist tested his vision and asked Aditya whether he was able to read whatever the teacher wrote on the black board clearly or not. He replied in the negative. The doctor told his parents about the defect of vision that Aditya was suffering from and advised corrective glasses.

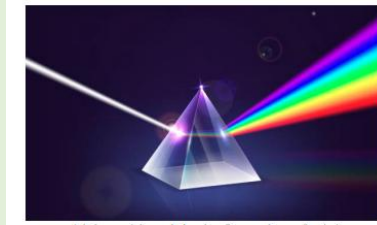


After wearing the glasses, Aditya was now able to read the black board clearly and also got rid of his headache.

- (a) What type of defect is Aditya suffering from? What are the causes of this defect?
- (b) Where is image formed in Aditya's eyes? What type of lens is required to correct this defect?

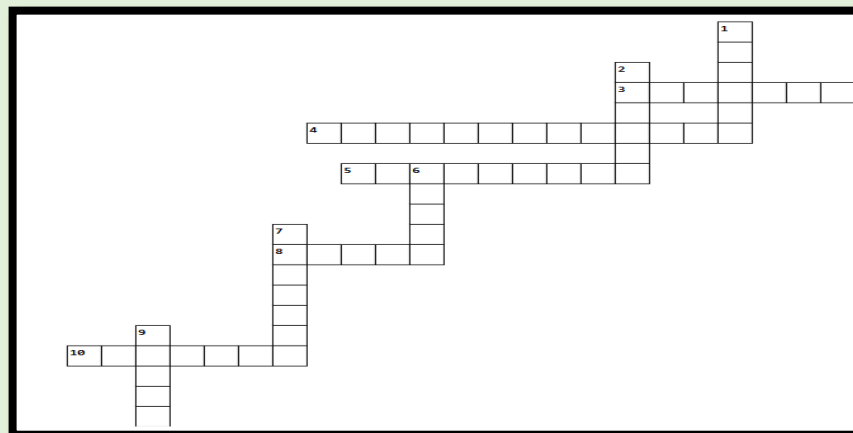
Draw the (i) defected eye of Aditya (ii) correction for this defect.

4. Aarush is a keen observer and loved the spectacular colours in a rainbow. He also observed the same pattern when he allowed sunlight to pass through a glass prism. He guessed that it is due to the inclined refracting surfaces of a glass prism which is responsible for showing such exciting phenomenon. Whereas, no such phenomenon was observed when light passes through a glass slab.



- Name the phenomenon which could explain the formation of rainbow.
- What is the band of colours known as? Explain the cause of formation of band of colours?
- Why don't we observe similar band of colours when light passes through a glass slab?

5. CROSS WORD PUZZEL



ACROSS

3. Receives light focused from the lens, then converts the light into neural signals, and sends these on to the brain
4. adjustment of the len's curvature that allows for vision at differing distances
5. an eyelid (closes over the surface of the eye to protect it)
8. a certain cell in the retina that responds to light, has high visual acuity, functions in bright light, and responds to colors
10. the clear, anterior portion of the sclera

DOWN

1. the opening at the center of the iris.
2. the bony cavity that holds the eyeball
6. the transparent structure in the eye that helps refract light to be focused on the retina
7. the tough outermost layer of the eye; the white of the eye
9. the colored ring between the lens and the cornea; regulates amount of light that enters by changing the size of the pupil

CHEMISTRY

1. A student takes lemon juice, soap solution, vinegar, and baking soda solution in four test tubes.

- Predict which substances are acidic and which are basic.
- Suggest a natural indicator that can be used to test them.
- What colour changes would you expect?

1. Observe the following setup:

- A few drops of phenolphthalein are added to sodium hydroxide solution.
- Dilute hydrochloric acid is added slowly.

Answer the following:

- What colour appears initially?
- What happens to the colour after adding acid?
- Name the type of reaction taking place.

2. A student accidentally touched a dilute acid and immediately washed the area with plenty of water.

- Why is water used immediately?
- Which safety rule is important while handling acids?
- Name one laboratory acid commonly used in school experiments.

3. A farmer noticed that crops were not growing well in his field. On testing, the soil was found to be highly acidic.

- What should the farmer add to the soil?
- Why?
- Name one substance commonly used for this purpose.

4. A student performs an experiment by adding dilute sulphuric acid to four different substances.

Substance	Observation
Zinc granules	Bubbles produced rapidly
Copper turnings	No reaction
Magnesium ribbon	Vigorous reaction
Sulphur powder	No reaction

Answer the following:

- a) Which gas is evolved during the reaction?
- b) Which substances are metals?
- c) Why does copper not react with dilute sulphuric acid?

6. Observe the following setup:

- Iron nails are dipped in copper sulphate solution.
- After some time, the blue colour of the solution fades and a reddish-brown coating appears on the nails.

Answer the following:

- a) What is the reddish-brown coating?
- b) Which metal is more reactive — iron or copper?
- c) Write the chemical equation for the reaction.

7. A metal X reacts slowly with cold water but rapidly with steam. It also displaces copper from copper sulphate solution.

- a) Is X more reactive than copper?
- b) Suggest one possible metal X.
- c) Write the reaction with steam.

8. An iron nail is dipped in copper sulphate solution for 20 minutes.

Answer the following:

- (a) What change is observed in the color of the solution?
- (b) What is deposited on the iron nail?
- (c) Write the balanced chemical equation.
- (d) Which metal is more reactive: iron or copper?

9. Rita observed that her silver jewellery became black after a few months.

Answer the following:

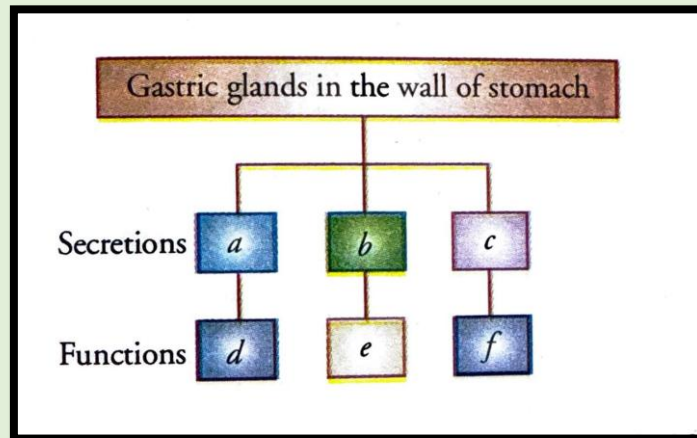
- a. What is this process called?
- b. Which compound is formed on silver?
- c. Write one method to prevent it.
- d. Is this change desirable? Why/Why not?

10. A factory releases untreated acidic waste into a lake. Predict its effects on:

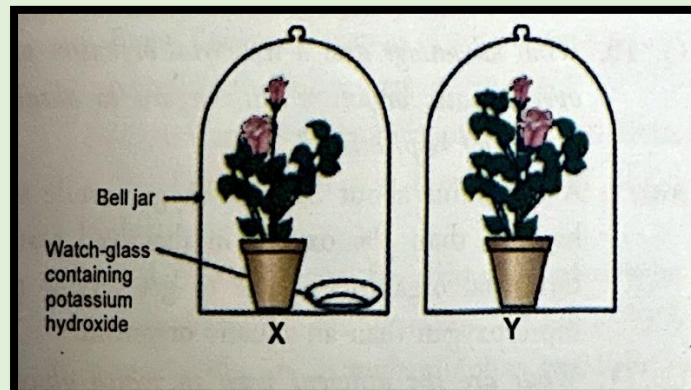
- Aquatic organisms
- Soil nearby
- Human health

BIOLOGY

1. Given below is a flowchart of gastric glands in the wall of stomach. Answer the questions that follow.



- a) Name the secretions a, b and c.
b) List the functions of above-mentioned secretions as d, e and f.
2. The Figure shown below represents an activity to prove the requirements for photosynthesis. During this activity, two healthy potted plants were kept in the dark for 72 hours. After 72 hours, KOH is kept in the watch glass in setup X and not in setup Y. Both these setups are air tight and have been kept in light for 6 hours. Then, Iodine Test is performed with one leaf from each of the two plants X and Y.



- a) This experimental set up is used to prove essentiality of which of the following requirements of photosynthesis?
- (i) Chlorophyll
 - (ii) Carbon dioxide
 - (iii) Oxygen
 - (iv) Sunlight

b) The function of KOH is to absorb

(i) Oxygen

(ii) Carbon dioxide

(iii) Moisture

(iv) Sunlight.

c) Which of the following statements shows the correct results of Iodine Test performed on the leaf from plants X and Y respectively?

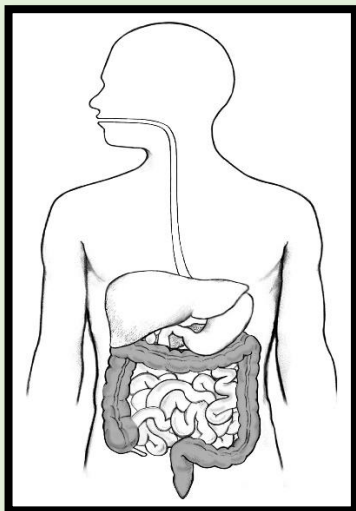
(i) Blue-black colour would be obtained on the leaf of plant X and no change in colour on leaf of plant Y.

(ii) Blue-black colour would be obtained on the leaf of plant Y and no change in colour on leaf of plant X.

(iii) Red colour would be obtained on the leaf of plant X and brown colour on the leaf of plant Y.

(iv) Red colour would be obtained on the leaf of plant Y and brown colour on the leaf of plant X.

3. Given below is the diagram of human digestive system. Answer the questions that follow.



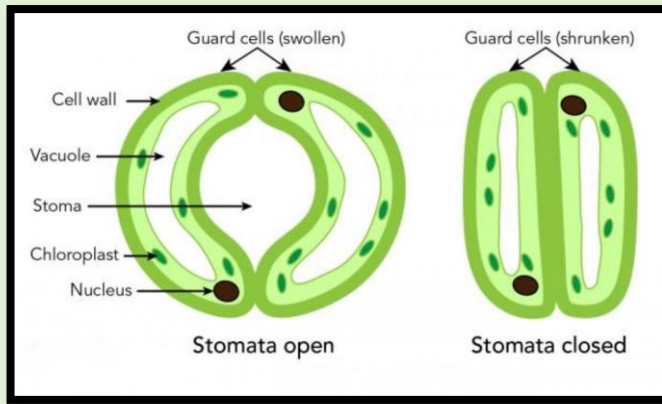
a) Identify the organ where maximum absorption of digested food occurs. Explain one structural adaptation visible in the diagram that helps this process.

b) A person's pancreas stopped releasing digestive enzymes. Which nutrients will remain incompletely digested? Why?

c) Predict what would happen if the villi become damaged due to disease.

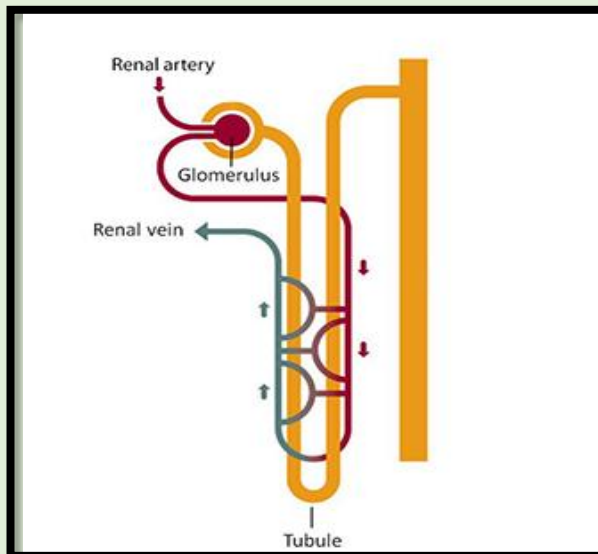
d) Explain why the stomach wall is protected from its own acid.

4. Compare the two stomata given below.



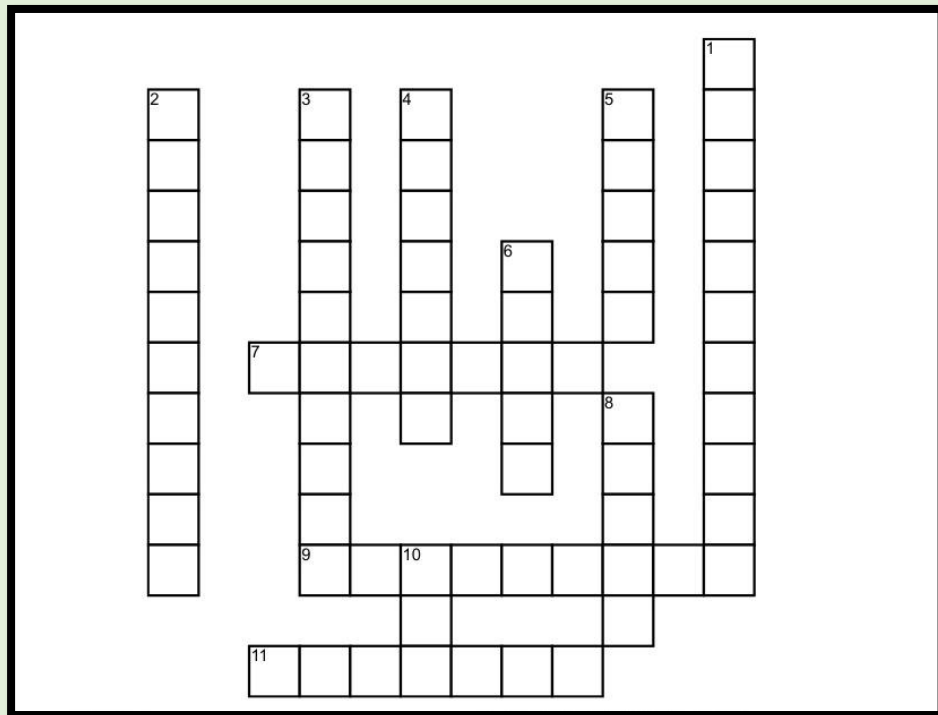
- In which condition would transpiration be higher? Give a reason.
- Why do guard cells need water to regulate stomatal opening?
- Predict what would happen to photosynthesis if stomata remain closed for a long time.
- During a hot afternoon, how does closing of stomata help the plant to survive?

5. Look at the diagram given below carefully and answer the questions that follow.



- Identify the structure where filtration of blood begins.
- Why are useful substances reabsorbed back into blood?
- Predict the effect on the body if the given structure stop functioning properly.
- A patient has glucose in urine. Which part of the given structure may not be functioning efficiently?

6. Solve the crossword using clues:



ACROSS:

7- site of gaseous exchange

9- muscles that regulate the opening of stomach into small intestine

11- starch digesting enzyme

DOWN:

1- Stores bile juice

2- Muscles develop cramps after physical workout

3- Step common to both aerobic and anaerobic respiration

4- Supported by C-shaped cartilaginous rings

5- Moistens and regulate the temperature of air inhaled

6- Structures that help in absorption of digested food

8- Part where digestion begins

10- Makes the medium acidic in stomach

PUNJABI

ਪ੍ਰਸ਼ਨ੧. ਹੇਠ ਲਿਖੇ ਵਿਸ਼ਿਆਂ ਵਿਚੋਂ ਕਿਸੇ ਇੱਕ ਵਿਸ਼ੇ ਤੇ ਛੇ ਤੋਂ ਸੱਤ ਪੰਨਿਆਂ ਦੀ ਤਸਵੀਰਾਂ ਸਹਿਤ ਫ਼ਾਈਲ ਬਣਾਉ।

- ੳ. ਸੁਲੇਖ
- ਅ. ਭਾਸ਼ਣ ਮੁਕਾਬਲਾ
- ੲ. ਦਿਨ ਤਿਉਹਾਰ ਬਾਰੇ ਜਾਣਕਾਰੀ
- ਸ. ਪੁਰਾਤਨ ਸੱਭਿਆਚਾਰ ਬਾਰੇ ਜਾਣਕਾਰੀ
- ਹ. ਲੋਕ ਗੀਤ
- ਕ. ਚਲੰਤ ਘਟਨਾਵਾਂ ਦਾ ਵੇਰਵਾ

ਪ੍ਰਸ਼ਨ੨. ਹੇਠ ਲਿਖੀ ਰੂਪ ਰੇਖਾ ਵਰਤਦੇ ਹੋਏ ਅਖਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਪੱਤਰ ਲਿਖੋ ਕਿ ਤੁਹਾਡੇ ਮੁਹੱਲੇ ਵਿੱਚ ਚੋਰੀ ਦੀਆਂ ਘਟਨਾਵਾਂ ਦਿਨੋ-ਦਿਨ ਵਧ ਰਹੀਆਂ ਹਨ।

ਪ੍ਰੀਖਿਆ ਭਵਨ,

_____ਸ਼ਹਿਰ।

18.05.2026

ਸੇਵਾ ਵਿਖੇ

ਸੰਪਾਦਕ ਸਾਹਿਬ,

ਰੋਜ਼ਾਨਾ ਅਜੀਤ,

ੳ,ਅ,ਸ਼ਹਿਰ।

ਵਿਸ਼ਾ- ਦਿਨੋ-ਦਿਨ ਵਧ ਰਹੀਆਂ ਚੋਰੀ ਦੀਆਂ ਘਟਨਾਵਾਂ ਬਾਰੇ ਪੱਤਰ।

ਸ੍ਰੀ ਮਾਨ ਜੀ,

ਬੇਨਤੀ ਹੈ ਕਿ_____

ਆਪ ਜੀ ਦਾ ਵਿਸ਼ਵਾਸ ਪਾਤਰ,

ੳ,ਅ,ੲ

HINDI

1. पंजाब -उड़ीसा राज्यों की सभ्यता, संस्कृति एवं भौगोलिक स्थितियों पर आधारित कुछ संकेत बिंदुओं की द्वारा जानकारी देते हुए विवरणिका (ब्रोशर) बनाएं।
2. अपना पोर्टफोलियो तैयार कीजिए ।
3. "अगर कोई बात तुम्हें सही लगती है, तो उसे करो और किसी के आगे झुकने की जरूरत नहीं है।"-क्या आप किसी ऐसी स्थिति से गुजरे हैं जब आपको किसी सही बात पर अकेले खड़ा होना पड़ा हो कब ?और क्यों? अपने विचार कम से कम 150 शब्दों में लिखिए।

Enjoy your holidays, stay safe and keep learning!

Happy and Safe Holidays!