EAST POINT SCHOOL ONLINE CLASSES WEEKLY PLAN CLASS VIII

ENGLISH

Reported Speech

Learning Outcomes

- To define direct speech and indirect speech.
- To distinguish between direct and indirect speech.
- Acquire knowledge of rules for converting direct speech to indirect speech and indirect speech to direct speech.

Reported Speech 2

There are two ways of what people have said:-

Direct Speech: We can use the actual words of the speaker to report what he has said. This is called Direct Speech. For Example- Malini said to me, "I like dancing.

Indirect Speech: We can report what people have said without using the actual words of the speaker. This is called Indirect Speech. For Ex-Malini told me that she liked dancing.

Change of Tenses

Future Tense: In Future tense, 'will is changed into 'would' and 'shall' into should. For eg-

Direct Speech-Ram said to me, 'I will have been playing cricket for two hours".

Indirect Speech- Ram told me that he would have been playing cricket for two hours.

| Direct Speech | Indirect Speech |
|--|--|
| Simple Present Tense | Simple Past Tense |
| Subject+V1+S/ES+OBJECT | |
| Ram said to me, "I play cricket." | Ram told me that he played cricket. |
| Present Continuous Tense | Past Continuous Tense |
| Subject+ is/am/are +V2+ing+object | Subject+ was/were+ V1+ing+object |
| Ram said to me, "I am playing cricket." | Ram told me that he was playing cricket. |
| Shruti said to me," I am singing a song". | |
| Present Perfect Tense | Past Perfect Tense |
| Subject+ has/have+V3+Object | Subject+had+V3+Object |
| Ram said to me, "I have played cricket." | Ram told me that he had played cricket. |
| | |
| Present Perfect Continuous Tense | Past Perfect Continuous Tense |
| S+ has/have +V1+ing+Object+since/for/+time | S+had+V1+ing+Object+since/for/time |
| Ram said to me, "I have been playing cricket | Ram told me that he had been playing since |
| since morning." | morning. |
| Simple Past Tense | Past Perfect Tense |
| Subject+V2+Object | Subject+had+V3+Object |
| Ram said to me, "I played cricket. | Ram told me that he had played cricket. |
| Ram said to me, "I sang a song". | |
| Past Continuous Tense | Past Perfect Continuous Tense |
| Subject+ was/were+V1+ing+object | Subject+ had+been+V1+ing+object |
| Ram said to me, "I was playing cricket. | |
| | Ram told me that he had been playing cricket |
| | since morning. |
| Past Perfect Tense | No Change |
| Past Perfect Continuous Tense | No Change |
| | |
| | |
| | |

| Direct Speech | Reported Speech |
|---------------|-----------------------------------|
| today | that day |
| now | then / at the moment |
| yesterday | the day before |
| days ago | days before |
| last week | the week before |
| next year | the following year |
| tomorrow | the next day the following day |
| here | there |
| this | that |
| these | those |
| ago | previously / before |
| tonight | that night |

-

TENSE CHANGE

| Direct Speech | Reported Speech |
|----------------|------------------------|
| will | would |
| can | could |
| must / have to | must or had to |
| may / might | might |
| should | should |
| ought to | ought to |

Interrogative Sentences:

Rules:-

- 1) The reporting verb is changed into 'asked' or 'enquired'.
- 2) No conjunction is used when the sentence begins with question words such as, 'What', 'Which' etc.
- 3) We use 'if' or 'whether' as a conjunction if the sentence begins with verbs like, 'is', 'am', 'do', 'were', 'will' etc.

| Direct Speech | Indirect Speech |
|---|--|
| eg-1) He said to me, "Where do you stay"? | He asked me where I stayed. |
| 2) My mother said to me, "Is it raining?" | My mother asked me whether it was raining. |
| My mother said to me, " Can I help her"? | My mother asked me if I could help her. |
| He said, I am playing football. | |

Exclamatory Sentences:

Rules:

- 1) The reporting verb is changed into, 'exclaimed', 'applauded'.
- 2) In most of the cases that is used after the reporting verb.

| Direct Speech | Indirect Speech |
|--|---|
| eg-1) I said to my friend, "What a charming site!" | I exclaimed with joy to my friends that it was a charming site. |

| 2) Raman said, "Hurrah! We won the | Raman exclaimed with joy that they had |
|------------------------------------|--|
| match." | won the match. |

Imperative Sentences:

Rules:

- 1) The reporting verb is changed into request, ordered, advised etc.
- 2) Words like, 'please' and 'kindly' are removed from indirect speech.
- 3) Put 'to' after the reporting verb.

RULE- TO + VI

| Direct Speech | Indirect Speech |
|---|---|
| eg-1) The teacher said to Dhruv, "keep quiet". | The teacher ordered Dhruv to keep quiet. |
| 2) Rahul said to his sister, "Please bring me a glass of water." | Rahul requested his sister to bring him a glass of water. |

A. Change the following sentences from direct speech to indirect speech.

 1. He said, "I have got a toothache".

 2. Manu said, "I am very busy now".

 3. "Hurry up," she said to us.

 4. "Give me a cup of water," he told her.

 5. She said, "I am going to college".

 6. She said to me, "Thank you".

 7. Raju said, "Gautam must go tomorrow".

 8. Geetha says, "My father is an Engineer".

 9. He said, "I have passed the physical test".

 10. She said to me, "You are my only friend".

 11. 'I love you,' he told me

 12. 'Where are you going?' Pawan asked Maya

B. ACTIVITY

Make picture cards of dialogue conversation between two or more speakers showing Direct Conversation and Indirect Conversation.



VIDEO LINK

https://www.youtube.com/watch?v=pGOYlbXbN0o&ab_channel=TeacherPhilEnglish https://www.youtube.com/watch?v=ew4YHmNigRs&ab_channel=TeacherPhilEnglish

असाइनमेंट – 32 विषय - हिंदी

कक्षा – आठवीं उपलब्धकर्ता मिस रंजना

विराम चिन्ह

Please watch this videos

https://www.youtube.com/watch?v=wKuUGx10488

https://www.youtube.com/watch?v=jtFPqdx-Vm8

अधिगम बिंदु :-

- विद्यार्थी विराम चिह्न के बारे में जान पाएंगे।
- बोलते, पढ़ते या लिखते समय हमें रूकने की आवश्यकता होती है- कभी श्वास लेने के लिए तो कभी अर्थ बोध के लिए। इस रूकने को विराम कहते हैं।

विराम का अर्थ होता है विश्राम या रूकना। अथार्त वाक्य लिखते समय विराम को प्रकट करने के लिए लगाये जाने वाले चिन्ह को ही विराम चिन्ह कहते हैं।वाक्य को लिखते अथवा बोलते समय बीच में कहीं थोड़ा-बहुत रुकना पड़ता है जिससे भाषा स्पष्ट,अर्थवान हो जाती है। लिखित भाषा में इस ठहराव को दिखाने के लिए कुछ विशेष प्रकार के चिह्नों का प्रयोग करते हैं जिन्हें विराम-चिह्न कहा जाता है।

बोलते, पढ़ते या लिखते समय हमें रूकने की आवश्यकता होती है- कभी श्वास लेने के लिए तो कभी अर्थ बोध के लिए। इस रूकने को विराम कहते हैं। अर्थ बोध के लिए जहाँ हम रूकते हैं वहां विराम-चिन्हों का प्रयोग किया जाता है। विराम-चिन्हों के प्रयोग से अर्थ में स्पष्टता आती है, उच्चारण में सुविधा मिलती है। हिन्दी भाषा में इन विराम चिन्हों का प्रयोग किया जाता है।

उदहारण के लिए :

- राम स्कूल जाता है।
- मैंने खाना खा लिया है।

यदि विराम चिन्ह का वक्य में सही से प्रयोग न किया जाए तो वाक्य अर्थहीन और अस्पष्ट या फिर एक दूसरे के विपरीत हो जाता है।

उदहारण के लिए :

- रोको, मत जाने दो। अब यहाँ पर न जाने दो की बात हो रही है।
- रोको मत, जाने दो। और यहाँ पर जाने दो की बात हो रही है।

विराम चिन्ह के प्रकार

विराम चिन्ह का नाम विराम चिन्ह

| पूर्ण विराम | I |
|--------------|---------|
| अल्प विराम | , |
| उप विराम | : |
| अर्द्ध विराम | ; |
| योजक चिन्ह | - |
| कोष्ठक चिन्ह | () {}[] |
| पदलोप चिन्ह | |
| लाघव चिन्ह | 0 |
| आदेश चिन्ह | :- |

| विस्मयादिबोधक चिन्ह | ļ |
|-----------------------------------|----|
| प्रश्नवाचक चिन्ह | ? |
| अवतरण या उदहारणचिन्ह | "" |
| विस्मरण चिन्ह या त्रुटिपूरक चिन्ह | ٨ |
| निर्देशक चिन्ह | _ |

1.पूर्ण विराम- (।) :

जब वाक्य खत्म हो जाता है तब वाक्य के अंत में पूर्ण विराम (।) लगाया जाता है।

उदहारण ः

- राम खाना खाता है।
- मोहन स्कूल जाता है।
- राम जा दोस्त मोहन है।
- मैंने अपना काम पूरा कर लिया।

2. अल्प विराम- (,)

जहाँ थोड़ी सी देर रुकना पड़े, वहाँ अल्प विराम चिन्ह का प्रयोग किया जाता हैं अथार्त एक से अधिक वस्तुओं को दर्शाने के लिए अल्प विराम चिन्ह (,)लगाया जाता है।

उदहारण ः

- राम, सीता, लक्षम और हनुमान ये सभी भगवान् के रूप में पूजे जाते हैं।
- मैंने भारत में पहाड़, झरने, नदी, खेत, ईमारत आदि चीजें देखीं थी।

3. उप विराम- (:) :

जब किसी शब्द को अलग दर्शाया जाता है तो वह पर उप विराम चिन्ह (:) लगाया जाता है अथार्त जहाँ पर किसी वस्तु या विषय के बारे में बताया जाए तो वहां पर उप विराम चिन्ह (:)का प्रयोग किया जाता है।

उदाहरण ः

• कृष्ण के अनेक नाम : मोहन, श्याम, मुरली, कान्हा।

- उदहारण:राम खाना खाता है।
- विज्ञान:वरदान या अभिशाप।

4. विस्मयादिबोधक चिन्ह- (!) :

विस्मयादिबोधक चिन्ह (!)का प्रयोग वाक्य में हर्ष, विवाद, विस्मय, घृणा, आश्चर्य, करुणा, भय इत्यादि का बोध कराने के लिए किया जाता है अथार्त इसका प्रयोग अव्यय शब्द से पहले किया जाता है।

उदाहरण ः

- हाय !, आह !, छि !, अरे !, शाबाश !
- हाय ! वह मार गया।
- आह!कितना सुहावना मौसम है।
- वाह ! कितना सुंदर वृक्ष है।

5. अर्द्ध विराम- (;) :

पूर्ण विराम से कुछ कम, अल्पविराम से अधिक देर तक रुकने के लिए 'अर्ध विराम' का प्रयोग किया जाता है अथार्त एक वाक्य या वाक्यांश के साथ दूसरे वाक्य या वाक्यांश का संबंध बताना हो तो वहाँ अर्द्ध विराम (;)का प्रयोग होता है।

उदाहरण :

- सूर्यास्त हो गया; लालिमा का स्थान कालिमा ने ले लिया ।
- कल रविवार है; छुट्टी का दिन है; आराम मिलेगा।
- सूर्योदय हो गया; चिड़िया चहकने लगी और कमल खिल गए ।

6. प्रश्नवाचक चिन्ह- (?) :

प्रश्नवाचक वाक्य के अंत में 'प्रश्नसूचक चिन्ह' (?) का प्रयोग किया जाता है अथार्त जब किसी वाक्य में सवाल पूछे जाने का भाव उत्पन्न हो तो उस वाक्य के अंत में प्रशनवाचक चिन्ह (?) का प्रयोग किया जाता है

उदहारण ः

- वह क्या खा रहा है?
- राम बाजार से क्या लेकर आया था?
- सीता के पिता का क्या नाम था?

• शिव कौन थे**?**

7. योजक चिन्ह- (-) :

दो शब्दों में परस्पर संबंध स्पष्ट करने के लिए तथा उन्हें जोड़कर लिखने के लिए योजक-चिह्न (–) का प्रयोग किया जाता है।

उदहारण ः

- वह राम-सीता की मूर्ती है।
- सुख-दुःख जीवन में आते रहते हैं।
- रात-दिन परिश्रम करने पर ही सफलता मिलती है।
- देश के जवानों ने तन-मन-धन से देश की रक्षा के लिए प्रयत्न किया।

8. कोष्ठक चिन्ह- () :

वाक्य के बीच में आए शब्दों अथवा पदों का अर्थ स्पष्ट करने के लिए कोष्ठक का प्रयोग किया जाता है अथार्त कोष्ठक चिन्ह () का प्रयोग अर्थ को और अधिक स्पस्ट करने के लिए शब्द अथवा वाक्यांश को कोष्ठक के अन्दर लिखकर किया जाता है।

उदहारण :

- अध्यापक (चिल्लाते हुए) "निकल जाओ कक्षा से।"
- विश्वामित्र (क्रोध में काँपते हुए) ठहर जा।
- धर्मराज (युधिष्ठिर) सत्य और धर्म के संरक्षक थे।

9. पदलोप चिन्ह- (...) :

जब वाक्य या अनुच्छेद में कुछ अंश छोड़ कर लिखना हो तो लोप चिह्न (...)का प्रयोग किया जाता है।

उदहारण ः

- राम ने मोहन को गली दी...।
- मैं सामान उठा दूंगा पर...।
- में घर अवश्य चलूँगा... पर तुम्हारे साथ।

10. अवतरण या उदहारणचिन्ह-("..."):

किसी की कही हुई बात को उसी तरह प्रकट करने के लिए अवतरण चिह्न ("...") का प्रयोग किया जाता है।

उदहारण ः

- तुलसीदास ने सत्य कहा है "पराधीन सपनेहु सुख नाहीं।"
- जयशंकर प्रसाद ने कहा है "जीवन विश्र्व की सम्पत्ति है।"
- राम ने कहा, "सत्य बोलना सबसे बड़ा धर्म है।"

11. लाघव चिन्ह- (०):

किसी बड़े तथा प्रसिद्ध शब्द को संक्षेप में लिखने के लिए उस शब्द का पहला अक्षर लिखकर उसके आगे शून्य (०)लगा देते हैं। यह शून्य ही लाघव-चिह्न कहलाता है।

उदहारण :

- डॉंक्टर के लिए डॉं॰
- पंडित के लिए पं•
- इंजिनियर के लिए इंजी •
- उत्तर प्रदेश के लिए उ०प्र०

12. विवरण चिन्ह-(:-):

विवरण चिन्ह (:-)का प्रयोग वाक्यांश के विषयों में कुछ सूचक निर्देश आदि देने के लिए किया जाता है।

उदहारण ः

- आम के निम्न फायदे है:-
- संज्ञा के तीन मुख्य भेद होते हैं:-
- वचन के दो भेद है:-

13. विस्मरण चिन्ह या त्रुटिपूरक चिन्ह- (^) :

विस्मरण चिन्ह (^)का प्रयोग लिखते समय किसी शब्द को भूल जाने पर किया जाता है। उदहारण :

- राम ^ जएगा।
- श्याम ^ में रहते थे।
- राम बहुत ^ लड़का है।
- मैंने तुमसे वो बात ^ थी।

14. निर्देशक चिन्ह- (–) :

निर्देशक चिन्ह (—)का प्रयोग विषय, विवाद, सम्बन्धी, प्रत्येक शीर्षक के आगे, उदाहरण के पश्चात, कथोपकथन के नाम के आगे किया जाता है।

उदहारण ः

- श्री राम ने कहा सत्य के मार्ग पर चलना चाहिए।
- जैसे फल सब्जी मसाले इत्या

<mark>अभ्यास प्रश्न</mark>

<u>निम्नलिखित वाक्यों में उचित विराम-चिह्न का प्रयोग करते हुए दोबारा लिखिए</u>

1. लोगों ने मिस्टर शर्मा को एम पी चुन लिया 2. सुभाष चंद्र बोस ने कहा तुम मुझे खून दो मैं तुम्हें आजादी दूंगा 3. क्या प्रधानाचार्य आज नहीं आए हैं 4. तुलसी ने रामचरित मानस में लिखा है परहित सरसि धर्म नहिं भाई 5. तुम कौन हो कहाँ रहते हो क्या करते हो यह सब मैं क्यों पूछ 6. बूढ़े ने डॉक्टर चड्ढा से कहा इसे एक नज़र देख लीजिए शायद बच जाए 7. कामायनी कवि जयशंकर प्रसाद की प्रसिद्ध कृति है 8. उस कवि सम्मेलन में रामधारी सिंह दिनकर, सूर्यकांत त्रिपाठी निराला जैसे कई महान कवि आए थे 9. वसंत ऋतु के त्योहार होली वसंत पंचमी वैसाखी हमें उल्लास से भर जाते हैं 10.हाय फूल सी कोमल बच्ची हुई राख की थी ढेरी 11.क्या कहा तुम अनुत्तीर्ण हो गए 12. रोहन 125 राजौरी गार्डन दिल्ली में रहता है 13.यह पत्र 25 जुलाई 2014 को लिखा गया है 14.बचो बचो सामने से साँड आ रहा है 15.सुमन तुमने कितना स्वादिष्ट खाना बनाया है। 16. सत्य अहिंसा और प्रेम जीवन के मूल आधार हैं 17.गांधी जी ने कहा परिश्रम का कोई विकल्प नहीं

18.तुम कल विद्यालय क्यों नहीं आए 19.अरे पर्स तो घर में ही छूट गया 20.वर्मा जी आप यहाँ किस होटल में ठहरे हैं

नारा लेखन

नारा या स्लोगन क्या हैं

नारे को हिंदी में उद्घोष , आह्वान वाक्य , नीतिवचन , सिद्धांत वाक्य , प्रचार वाक्य भी कहते हैं ।

नारे का शाब्दिक अर्थ है। जोर का शब्द , तेज आवाज , बुलंद की जाने वाली सामूहिक या एकल आवाज ।

नारे लेखन का उद्देश्य

नारे लिखने के निम्न उद्देश्य हो सकते हैं।

- किसी विशेष व्यक्ति, संस्था, सामाजिक राजनैतिक या किसी भी अन्य अभियान की ओर लोगों का ध्यान खींचने के लिए।
- 2. समाज को एक आदर्श संदेश देना।
- 3. लोगों को किसी कार्य विशेष के लिए प्रेरित करना।
- 4. सामाजिक अभिव्यक्ति को प्रकट करना।
- लोगों को किसी उद्देश्य के प्रति जागरूक करना। जैसे जल ही जीवन है में पानी को बचाने के लिए लोगों को जागरूक करने का उद्देश्य छुपा है।

नारे / स्लोगन की विशेषताएं

- 1. नारा ऐसा होना चाहिए जो सीधे लोगों के दिलों में उतर जाय।
- 2. नारा अगर तुक व लय के साथ लिखा गया हो तो , बहुत अच्छा होता हैं।
- नारों में सरल , लोकप्रिय व प्रचलित शब्दों का प्रयोग होना चाहिए। ताकि लोगो की जुबान पर जल्दी चढ़ जायेगा।
- 4. स्लोगन या नारा बहुत ही संक्षिप्त और प्रभावशाली होना चाहिए।
- 5. स्लोगन गंभीर अर्थ लिए हुए होना चाहिए।
- 6. नारे की शब्द सीमा अधिकतम् 10 या 12 शब्दों की होनी चाहिए।
- 7. नारों में विषय विशेषता का वर्णन सटीक होना चाहिए।
- 8. नारे में हमेशा एक आदर्श संदेश होना चाहिए , जो लोगों को प्रेरित व जागृत कर सके।

नीचे दिए गए विषयों पर नारा / उक्ति / स्लोगन लिखिए।

- 1. कोरोना पर स्लोगन /नारे
- जल है तो , जीवन है।
- <mark>3. बेटी बचाओ , बेटी पढ़ाओ।</mark>
- आत्मनिर्भर भारत , समर्थ भारत।
- 5. " पेड़ लगाओ , पेड़ बचाओ ,

MATHEMATICS – Mensuration

Please watch these video:

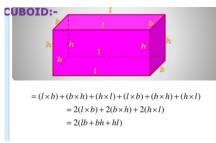
https://www.youtube.com/watch?v=DYPIIqOO4ZI

https://www.youtube.com/watch?v=gK9OgZ6eLx0 https://www.youtube.com/watch?v=4Dwdcvjdmqc

Learning Outcomes:

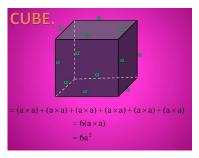
i. Students will be able to understand the concept of surface area of Cuboid, Cube and Cylinder.

Surface Area of Cuboid

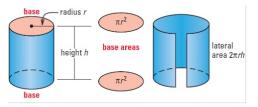


Area of 4 Walls = 2(I + b) h

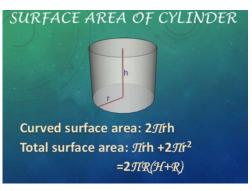
Surface Area of Cube:



Lateral Surface Area of Cylinder

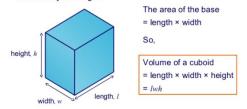


Total Surface area of cylinder



Volume Of Cuboid

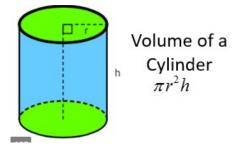
We can find the volume of a cuboid by multiplying the area of the base by the height.



Volume of Cube



Volume of Cylinder



Required area = Area of the base + area of the back face

Example: An aquarium is in the form of a cuboid whose external measures are 80 cm × 30 cm × 40 cm. The base, side faces and back face are to be covered with a coloured paper. Find the area of the paper needed? **Solution:** The length of the aquarium = I = 80 cm Width of the aquarium = b = 30 cm Height of the aquarium = h = 40 cm Area of the base = $I \times b = 80 \times 30 = 2400$ cm² Area of the side face = $b \times h = 30 \times 40 = 1200$ cm² Area of the back face = $I \times h = 80 \times 40 = 3200$ cm² + (2 × area of a side face)

= 2400 + 3200 + (2 × 1200) = 8000 cm²

Hence the area of the coloured paper required is 8000 cm².

Activities:

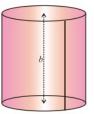
Τ.

Objective: To obtain a formula for the curved surface area of a right circular cylinder. Method:

1. Take a rectangular chart paper of length 1 units and breadth b units.



2. Fold the paper along its breadth and join the two ends usingcellotape and obtain a solid.



Demonstration:

- 1. The solid so obtained is a Cylinder.
- 2. 2. Length of the rectangular paper I = Circumference of the base of the cylinder= $2\pi r$, Where r is the radius of the cylinder.
- 3. Breadth of the rectangular paper = b= height(h) of the cylinder.
- 4. The curved surface area of the cylinder is equal to the area of the rectangle= $l x b = 2\pi r x h$ = $2\pi r h$

Observation:

On actual measurement

L = _____ b= _____

So, $2\pi r = I =$ _____, h= b= _____

Area of rectangular paper = l x b=____

Therefore, Curved Surface area of the Cylinder= = $2\pi rh$

Ш

The internal measures of a cuboidal room are $12 \text{ m} \times 8 \text{ m} \times 4 \text{ m}$. Find the total cost of whitewashing all four walls of a room, if the cost of white washing is ₹ 5 perm². What will be the cost of white washing if the ceiling of the room is also whitewashed?

Solve the Following:

| Q-1) Find the total surface area of a cube of side 6cm. | [1 mark] |
|--|-----------|
| Q-2) Find the volume of a cuboid whose | |
| length = 12 cm, breadth = 8 cm, height = 6 cm | [1 mark] |
| Q-3) Find the total surface area of a cuboid of I= 15cm , b =10cm and h= 7cm. | [2 marks] |
| Q-4) Find the curved surface area of the cylinder of radius 7m. and height 3m. | [2 marks] |

Q-5) A road roller takes 750 complete revolutions to moveonce over to level a road. Find the area of the road if the diameter of a road roller is 84 cm and length is 1 m. [3 marks]
Q-6) If each edge of a cube is doubled, [3 Marks]
(i) how many times will its surface area increase?

(ii) how many times will its volume increase?

HOTS

Q-6) A classroom is 7 m long, 6 m broad and 3.5 m high. Doors and windows occupy an area of 17 m2. What is the cost of white washing the walls at the rate of Rs 1.50 per m2?

Q-7)The volume and the curved surface area of cylinder are 1650 cm3 and 660m2 respectively. Find the radius and height of the cylinder.

Q-8)The circumference of the base of a cylinder is 88 cm and its height is 15 cm. Find its curved surface area and total surface area.

Q-9) The sum of the radius of the base and height of a solid cylinder is 37 m. If the total surface area of the solid cylinder is 1628 m^2 , find the circumference of its base.

Value Based question:

Q-10) Pulkit painted four walls and roof of a rectangular room of size 10m × 12m × 12m. He got ₹10 per m² for his work. How much money did he earn? He always gives one-fourth of his income to an orphanage. Find how much money he gave to the orphanage? What values are being promoted?

CLASS VIII SUBJECT-SCIENCE

CHAPTER -LIGHT

LINK- https://youtu.be/zc3xvH4ihTY

Learning outcome –students will be able to know the structure of eye, defects of eye and correction of eye defects.

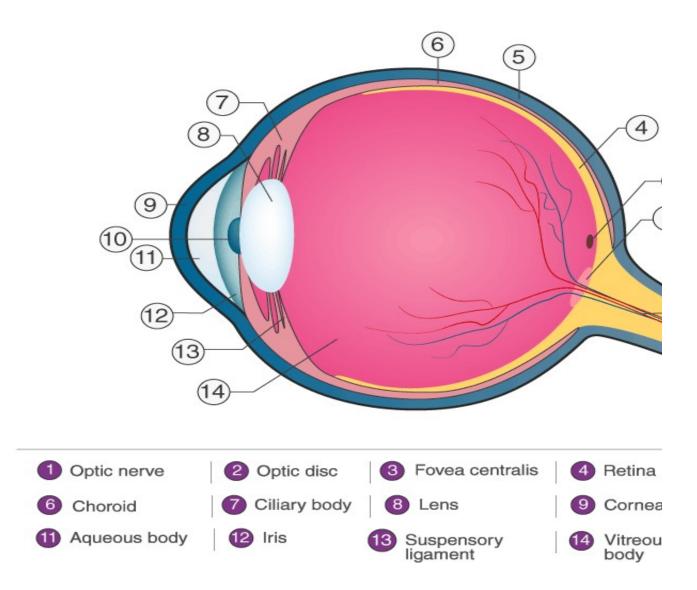
Human Eye

The human eye is a spherically shaped sense organ(diameter about 2.3 cm) that gives the sense of sight and helps us perceive colours and depth.

Functions of different organs in the human eye

- Light enters the eye through a thin membrane that forms a transparent bulge on the front of the eye, called as the **cornea**.
- Iris is a dark muscular diaphragm that controls the size of the pupil.
- The pupil is the small opening in the centre of the iris.

- The **lens** which is behind the pupil helps to adjust the focal length required to clearly focus on objects at various distances.
- The **retina** is the screen where the images get formed. It is a delicate membrane with a large number of photosensitive cells called rods and cones.
- Cones are sensitive to bright light and rods are sensitive to dim light.
- The optic nerve transmits the electrical signals from the eye to the brain.



Visual defects

- Visual defects include the inability to see near objects, or the inability to see far objects.
- In old people the lens becomes cloudy, a condition called cataract that impairs vision.

Seeing Sans Eyes

Braille system

- Braille is a system to read and write for visually impaired people.
- Consists of 63 dot patterns or characters.
- These patterns are embossed in braille sheets that can be recognized on touch.
- The dots are raised in order to make it easier to touch.

Eye Defects: Myopia

Introduction to Eye Defects

Like you may have noticed, the human eyes gradually lose their power of accommodation. In such cases, the person cannot see distinctly and comfortably. There are three common eye defects, and they are(i) *myopia or near-sightedness*, (ii) *Hypermetropia or far-sightedness*, and (iii) *Presbyopia*. These defects are corrected by the use of suitable spherical lenses. In the article, we focus on myopia and its correction.

What is Myopia?

Myopia is also known as near-sightedness or short-sightedness. What happens here is that light rays do not focus on the surface of the retina but in front of it. This results in images being blurry when perceived. In such a case, distant images appear out of focus but objects nearby are seen clearly. This is why myopia is also called near or short-sightedness.

It can occur if the eyeball is elongated leading to image formation in front of the retina. It can also occur if the refracting <u>power of the lens</u> is affected due to the cornea or lens being too curved. This effect can be more pronounced with age. A combination of these effects will also lead to myopia.

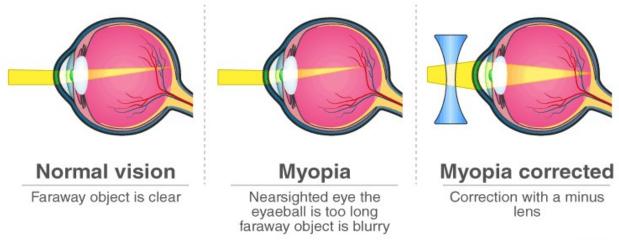
Similar Articles

- <u>Hyperopia</u>
- <u>Astigmatism</u>
- Presbyopia

Correcting Myopia

It is important to remember that Myopia is an eye defect and not an eye disease. Therefore, it can be corrected. Since the image is formed in front of the retina, correcting this problem can counter the effects produced due to this.

NORMAL VISION AND MYOPIA



© Byjus.com

The above image depicts how the disease can be countered theoretically. It can be done in the following ways.

The treatment of myopia consists of managing both the visual acuity loss and the complications that may arise. Treatment of the blurred vision in myopia has had a long and checkered history. Everything from physical exercise to palming the eyes to having myopic students study in green rooms has been advocated at one time or another.

Sight-saving classes, exercises, under-correction, cycloplegic therapy, contact lenses, pinhole glasses, and many other therapies have been aimed at preventing or slowing the progression of myopia. Surgery has been advocated to retard the progression of staphylomas in pathological myopia. A few of these therapies deserve mention.

Did you know that reading books at close range or watching television at close range can lead to Myopia? This is because the eye gets used to a near focus and adapts to that. If your vision is perfect now, avoid such kinds of habits so that it doesn't lead to acquired disease. Although this is a defect that can be countered, severe myopia (power above -6) can lead to the detachment of retina which could result in loss of vision.

Seeing Sans Eyes

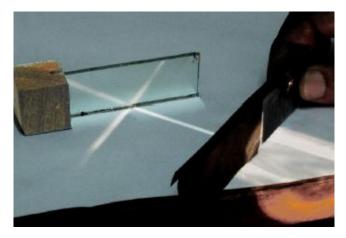
Braille system

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- The dots are raised in order to make it easier to touch.

Activity-15

AIM-To confirm the laws of reflection.

Fix a white sheet of paper on a drawing board or a table. Take a comb and close all its openings except one in the middle. You can use a strip of black paper for this purpose. Hold the comb perpendicular to the sheet of paper. Throw light from a torch through the opening of the comb from one side . With slight adjustment of the torch and the comb you will see a ray of light along the paper on the other side of the comb. Keep the comb and the torch steady. Place a strip of plane mirror in the path of the light ray . What do you observe?



Let us understand a little more about the formation of image by a plane mirror in the following way:

Activity-16

AIM-To show the way of rays of light.

A source of light O is placed in front of a plane mirror PQ. Two rays OA and OC are incident on it. Can you find out the direction of the reflected rays?

Draw normals to the surface of the mirror PQ, at the points A and C. Then draw the reflected rays at the points A and C. How would you draw these rays? Call the reflectedrays AB and CD, respectively. Extend them further. Do they meet? Extend them backwards. Do they meet now? If they meet, mark this point as I. For a viewer's eye at E, do the reflected rays appear to come from the point I. Since the reflected rays do not actually meet at I, but only appear to do so, we say that a virtual image of the point O is formed at I.

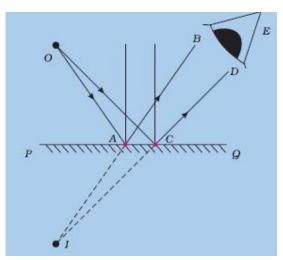


Fig.5 : Image formation in a plane mirror

You may recall that in an image formed by a mirror the left of the object appears on the right and the right appears on the left. This is known as **lateral inversion**.

Activity-1

Aim- To find the number of images, formed between two plane mirror.

Take two plane mirrors. Set them at right angles to each other with their edges touching (Fig.10). To hinge them you can use adhesive tape. Place a coin in between the mirrors. How many images of the coin do you see (Fig.10)?



Fig.10 : Images in plane mirror at right angle to each other

Activity -2

Aim- To show the dispersion of light.

Get a plane mirror of suitable size. Place it in a bowl (Katori) . Fill the bowl with water. Put this arrangement near a window such that direct sunlight falls on the mirror. Adjust the position of the bowl such that the reflected light from the mirror falls on a wall. If the wall is not white, fix a sheet

of white paper on it. Reflected light will be seen to have many colours. How can you explain this? The mirror and water form a prism. This breaks up the light into its colours, as you learnt in Class VII. Splitting of light into its colours is known as **dispersion** of light. Rainbow is a natural phenomenon showing dispersion.



Question 1. Name the spot inside the human eye where the image is not visible.1

Question 2. Name the liquid found between the cornea and lens.

Question 3. Name the cells found in retina.1

Question 4. Define the incident ray.1

Question 8. List the characteristics of an image formed in a plane mirror.3

Question 9. What is lateral inversion?2 Question 10. What is the far point and near point of the human eye with normal vision?2 Question 11. What is aqueous humour?1 HOTS-

Question 1.

Express the mathematical formula to calculate the number of images formed when two mirrors are inclined at θ angle. 1

Question 2. Name the scientist who studied that if a white light is passed through a prism, it splits into different colours.1 Question 3. What is power of accommodation? 2 Question 4. How does large cornea and a large pupil in the eyes of the nocturnal birds help them?2 Question 5.

What kind of lens is there in our eyes? Where does it form the image of an object?2



subject: social science (Geography)

Chapter 4: AGRICULTURE

Study material

Learning outcomes: students will be able to learn geographical

conditions and distribution of tea and coffee.

Coffee-

- It requires a warm and wet climate and well-drained loamy soil
- Hill slopes are more suitable for the growth of crop-•
- Leading producers are Brazil followed by Columbia and India.

Tea-

- a beverage crop grown on plantations-
- Itrequires cool climate and well-distributed high rainfall throughout the year for the growth of its tender leaves-
- It needs well-drained loamy soils and gentle slopes
- -Kenya, India, China, Sri Lanka produce the best quality tea in the world.

VIDEO LINK:

https://youtu.be/wzL_DW-Mao4 https://youtu.be/AqY7AxZIcTI

ASSIGNMENT

MULTIPLE CHOICE QUESTIONS

- 1. Type of farming to meet family needs is known as
 - a. Subsistence
 - b. Mixed
 - c. Organic
 - d. None of these
- 2. Which of these is not commercial farming?
 - a. Commercial grain
 - b. Mixed
 - c. Organic
 - d. Plantation
- 3. Which of the following countries usually practice commercial agriculture?
 - a. USA
 - b. Bangladesh
 - c. India
 - d. Bhutan
- 4. Which type of soil is good for growing wheat?
 - a. Desert
 - b. Loamy
 - c. Sandy
 - d. None of these
- 5. Rubber plantation is famous famous in -----
 - a. Sri lanka

- b. Brazil
- c. Malaysia
- d. USA

FILL IN THE BLANKS

- 1. Jute is grown intensely in ----- and -----
- 2. Coarse grains are also called------
- 3. Shifting agriculture is also known as ------
- 4. ----- soil and climate are vital factors for agricultural activities.

GIVE REASONS (3 marks each)

- 1. In India, agriculture is a primary activity
- 2. Different crops are grown in different regions.

LONG ANSWER TYPE QUESTIONS(5 marks each)

- 1. Describe tea production in the world with regard of the following
 - Types
 - Geographical requirements
 - Major producing countries.

ACTIVITY:

On the world political map show the distribution of tea and coffee.

LESSON PLAN / Assignment (December)3 week

Subject-civics

Sub teacher-Poonam Pathak

Topic:- Chapter 9- public facilities

Sub Topic :- Water and the People of Chennai, Water as Part of the Fundamental Rights to Life Learning Objectives:- To make Students acknowledge about the water crisis and how Water became a part of fundamental rights.

Methodology:-PPT, Video and word file

You tube link : https://youtu.be/hfll9jMz3S4

Activity 1:- List the cities where people arefacing Water crisis in India.

Activity 2:- Map work: locate the cities of India where people are facing Water crisis

Public facilities are the facilities provided to the people by the government. They are important to sustain and lead a comfortable life.

Water and the People of Chennai:

- Mr. Ramgopal lives in Anna Nagar, Chennai. This area looks lush and green with lawns maintained by generous spraying of water.
- Likewise, in an apartment where Mr.Subramaniam lives water supply is inadequate. They have to spend Rs 500-600 per month to buy water.
- Siva lives in Madipakkam, Chennai. She gets water once in 4 days. For drinking, she buys bottled water.
- Water as a public utility is available in different quantity to different people.
- Safe drinking water comes under the fundamental right of an individual and it is the responsibility of government ot avail it to its citizens.

Water as Part of the Fundamental Rights to Life:

- Water is essential for life and for good health.
- India has one of the largest numbers of causes of water-related diseases such as diarrhea, dysentery, cholera. More than 1600 Indians, mostly children below the age of five die every day because of water-related diseases.
- The Constitution of India recognizes the right to water as being a part of the Right to Life under Article 21. That means there should be "universal access" to water.
- The High Courts and Supreme Court have held that the right to safe drinking water is a Fundamental Right.
- Verdicts given by courts make it as the responsibility of government to ensure the supply of fresh drinking water.

Assignments:-

<mark>1mark</mark>

1. Where are Anu and Kumar travelling through?

(a) Delhi

(b) Chennai

- (c) Mumbai
- (d) China

2. Which areas in Chennai faces severe water shortages?

- (a) Madipakkam
- (b) Mtylapore
- (c) Slums near Saidapet
- (d) All these areas

3. Which of the following is a water related disease?

- (a) Plague
- (b) Eye flu
- (c) Cholera
- (d) All of these

4. How can we prevent water related diseases?

- (a) By using pond water
- (b) By using clean and safe water
- (c) By using boring water
- (d) All of these

4.What are Public facilities?

- (a) Essential facilities
- (b) Non Essential facilities
- (c) Both (a) and (b)
- (d) None of these
- 5. Who carries the responsibility of providing public facility to the people?
- (a) Government
- (b) Public
- (c) Private organisation
- (d) None of these

<mark>3 marks</mark>:-

- **1.** Mention some public facilities that only the government can provide and maintain.
- **2.** How does the government raise fund to provide public facilities?
- **3.** What are public facilities and Under which article does the Constitution of India recognize the Right to water?

5 marks:-

1.What are the alternatives that can be used in Chennai for equal water distribution among its citizens?

(**Critical thinking based question/HOTS**)

1.Why it is noticed that there are great inequalities in water use?