



CHAPTER: SUPER SENSES

Grade: 5

Board: **CBSE**

Book: **NCERT**



1.

Chapter Summary and Placement

Read through the following to understand the gist of the lesson.



The students will be aware of the human senses and the uses. This chapter introduces the senses in animals and how they use it in different ways to find food, to escape from danger, to find a way etc. The students will compare the human senses with the senses of animals.





2.

LEARNING OUTCOMES

<On completion of the chapter, students will be able to:>



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1. Understand how the sense of smell works for animals.
 2. Understand the sense of sight in different birds.
 3. Explain how the sense is different from one bird to another with examples
 4. Analyse how different is the sense of sight of birds from that of humans.
 5. Understand the sleeping patterns in animals.
 6. Explain the sensing features of tigers and the threats faced by them.



3. PREVIOUS KNOWLEDGE REQUIREMENT

<The below points should be refreshed before introducing the chapter:>



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- 1) Recognize the different sense organs in human and animals.
 - 2) Recall how senses are useful to humans.



4. TEACHING PLAN

Follow this section for getting ideas on teaching the content covered in the chapter. The subtopic given in the first column with the matching learning outcome can be explained using instructions and resources listed subsequently



Subtopic and Learning Objective #1

LO: Understand how the sense of smell works for animals.

Teacher Activity

1. The teacher can introduce the chapter with the help of Activity 1 and Resource 1.
2. Ask the students whether they have seen any animal smelling things.
3. Ask them to explain their experience.
4. Then the teacher may explain that like in human, animals also have sense of smell, touch, sight.
 - Ants appear in front of food fallen on the ground with the help of their smell sense which they detect with their antennae .
 - Dogs mark their presence with their urine.
 - Mosquitoes find humans by the smell of the human body, temperature..

Check for understanding:

- a) Have you seen Police dogs? Why are they important and not other animals?

Resources Suggested

Textbook, chalkboard, Resource 1

Activity 1

Name of the activity – What happens when your Mother calls you for dinner.

Type of activity – Individual/random

Learning Objective: Recall how the senses work.

Use it for – Introduction to the senses

Materials – Nil

Teacher instructions:

1. The teacher may ask the students to recall how their senses work when the food is ready..
2. The teacher may ask the students a few questions like:
 - How can you know that the food is ready before seeing it?
 - You tell your mom that the food is yummy. Which part of your body works behind that.
 - You tell your mother that the food is too hot. How did you come to know?
3. The teacher should draw the attention of students to the different senses.
4. The intention of the activity is to highlight the role played by the senses which, most of the times, are not recognized..

Resource 1:



Different sense organs

Subtopic and Learning Objective #2

LO: Understand the sense of sight in different birds.

Explain how the sense is different from one bird to another with examples

Analyse how different is the sense of sight of birds from that of humans.

Teacher Activity

1. To introduce the topic the teacher can ask a few questions: Following are some examples:
 - Have you noticed a crow looking at the food?
 - Why is it turning its head so frequently?
 - Have you ever notice an eagle in the sky?
 - How does it identifies its prey from such a far distance?
2. The teacher can explain the sense of sight in different birds.
3. Also explain birds turn their head in different direction while looking for food.
4. Explain whether all birds are having same kind of sight. If not give examples of owl, eagle. Refer Resource 2.
5. Show the color palette provided in the resources section and ask kids whether they can name a few colors.
6. Explain how animals can see colours and how different it is from what humans see.
7. Perform Activity 2 for better understanding.

Check for understanding:

- a) Which of the following animals has eyes in front of their head?
 - Elephant
 - Dog
 - Owl

Resources Suggested

NCERT textbook, Resource 2

Activity 2

Name of the activity – Catching a ball.

Type of activity – Group of two.

Learning Objective: Understand the sense of sight in animals having eyes on the sides of their face

Use it for – Understanding the sense of sight concept

Materials – small ball

Teacher instructions:

1. The teacher should divide students into group of 2
2. Ask the students to get one ball per group.
3. Student a in a group should close his/her one eye with the palm and the student b should drop a ball from a certain height while standing in front of student a.
4. Student a should try to catch the ball with his/her one eye closed.
5. The student can analyse when it was easier for them to catch the ball.
6. The teacher may conclude by explaining that the sense of sight is different for different organism based on the habitat they live and their body structure.

Resource 2:

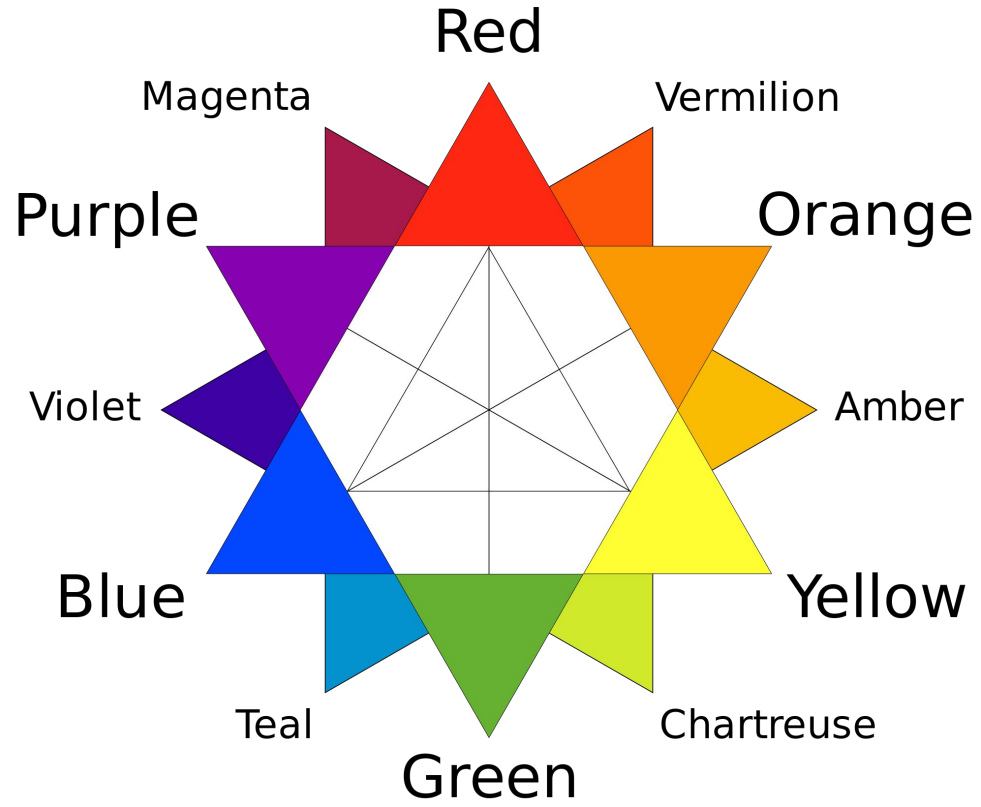


A few birds

An Owl



Colour Palette:





Ants moving in a line

Subtopic and Learning Objective #3

LO: Understand the features of leaves, their similarities and differences.

Teacher Activity

1. The teacher can display the images in Resource 3 and ask the students what is peculiar about their hearing power. A few replies may include:
 - Dog: They listen to our footsteps even when they are asleep.
 - The ears of a deer rotates to the direction from where the sound is coming.
 - Elephant has big ears and they can flap them to and fro.
2. The teacher can explain how snake, Langur, birds and fishes sense sound.
3. Perform Activity 3 for better understanding of the concept

Check for understanding:

- a) Explain how birds warn danger.

Resources Suggested

NCERT textbook, Resource 3

Activity 3

Name of the activity –Distance and Sound

Type of activity – Group

Learning Objective: Understand how the frequency of sound decreases by increasing distance.

Use it for – Understanding how distance and sound is related and animals have more capabilities than humans.

Materials – Cloth to blindfold

Teacher instructions:

1. The teacher should divide the students of the class into 4 or 5 groups based on the strength.
2. The students can decide up on who should be blindfolded
3. The other students should call the student from different distances.
4. The student who is blindfolded can explain who is near and who is far based on the sound he/she hear.
5. To add some more fun the student who is blindfolded can try to identify who is calling him/her from theri voice.

Resource 3:



Deer: Deer have a great sense of hearing. They have a lot of muscles attached to their ears which allow them to turn their ears in any direction, without moving their heads. They can hear higher frequencies of sound than humans.



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Elephant: One thing is that they can cool themselves down when they are hot. The blood flowing through the ears is close to the outside of the elephant body, and heat can be released as they flap them about. Elephants can also use their big ears to make threats.



Rabbit: A rabbit's ears serve two key functions. Rabbits can pick up sounds over considerable distances, perhaps up to 3km. Their ears can be rotated 270 degrees to help detect the source of a sound, and can revolve independently to monitor different noises.

Subtopic and Learning Objective #4

LO: Understand the sleeping patterns in animals.

Teacher Activity

1. The teacher can start the topic by asking students whether they like to wake up early during a winter morning.
2. Based on the answers the teacher can explain that many animals go on continuous sleep during winters. Display the images in Resource 4

Check for understanding:

- a) How long does a sloth sleep in a day?

Resources Suggested

NCERT textbook, Resource 4

Resource 4: Winter sleeping animals



Bat



Sloth



Hedgehog

Subtopic and Learning Objective #5

LO: Explain the sensing features of tigers and the threats faced by them

Teacher Activity

1. The teacher can display the image in Resource 5 and ask the students what they know about the animal. A few answers will be:
 - It is very dangerous animal.
 - It is seen in forest
 - It eats flesh of other animals etc
2. The teacher should draw the attention of students to the senses.
3. Explain the features of a tiger, i.e its eye sight, hearing and its shelter.
 - Tiger can see six times better at night.
 - Its whiskers are very sensitive and sense vibrations
 - A tiger's sense of hearing is very sharp
 - It can make different sound for different purpose.
 - Each tiger has its own area. Tigers wont explore each others areas.
4. Explain the threats faced by tigers and the need for conservation.
 - Hunting, poaching, forest fires, destruction of habitat are reasons
 - National parks, Wildlife reserve are steps taken for conservations. Examples are Jim Corbett National Park, Kaziranga National Park etc.

Check for understanding:

- a) How does a tiger mark its presence?

Resources Suggested

NCERT textbook, Resource 5

Resource 5:



Tiger



5. WORKSHEETS

Print or copy the worksheet questions on the blackboard and ask the students to attempt them. They can be given as homework or a class test as well.

Worksheet 2

Use it like: A class test, home assignment, revision

Choose the right answer:

1. The tiger is one of the most ____ animals.
 - a. Alert
 - b. Slow
2. Musk deer are killed just to make a little ____ from its musk
 - a. Sense
 - b. Scent
3. Most of the birds move their _____ very often.
 - a. eyes
 - b. neck
4. Animals have their own ____ to communicate.
 - a. language
 - b. code
5. Tiger's roar can be heard up to ____ away.
 - a. 3 kms
 - b. 5 kms



6. SOLUTIONS

This section gives you sample answers for activities and questions listed above.



Worksheet 1

1. As the ants move, they leave a smell on the ground. The other ants follow the smell to find the way.
2. Dogs mark out their own area on the road. They can make out if another dog has come into their area by the smell of its urine.
3. Snakes don't have ears and cannot hear but they can feel the vibrations on the ground.
4. The tiger's whiskers are very sensitive and can sense the movements or vibrations in air. They help the tiger to move in the dark and find its prey.
5. A tiger's sense of hearing is so sharp that it can make out the difference between the rustling of leaves and the sound of an animal moving on the grass. The ears of the tiger can move in different directions and this helps to catch the sounds from all around.

Worksheet 2

1. Alert
2. Scent
3. neck
4. language
5. 3 kms



7. EXTRA RESOURCES

Carry out the following suggested activities/ tasks if you have the time and resources to do them



1. Reference Video links:

The students can be suggested to watch the following videos/ shown in class:

<https://www.youtube.com/watch?v=gnRvzQ89gSQ>

<https://www.youtube.com/watch?v=F1MR2gQ3AC0>

2. Extension activity 1:

Carry out the following suggested activities/ tasks if you have the time and resources to do them

Purpose: Class discussion

Animals are used by humans in various areas like security, farms, transport. Can their usage be related with their sense organs? Elaborate.