

CLASS – VII
LESSON PLAN
CHAPTER-11 TRANSPORTATION IN ANIMALS AND PLANTS

Unit	Biology (Chapter 11:Transportation In Animals and Plants)
Class Transaction	Total: 10 periods (approx. 40 min each)
Pre-requisite for the course	This lesson requires 1. Basic knowledge of how transportation in animals and plants are done. 2. Basic knowledge of different systems of human body which students had already learnt in class VI.
Assessment of qualifying knowledge	1. Written test 2. Lab activity 3. Group Discussion 4. HW notebook 5. Subject Enrichment Activities
Objective	Students will be able to:- *Define the terms-Circulatory system, pulse, pulse rate, heart beat, excretory system dialysis, vascular tissue, xylem, phloem, transpiration *Explain circulatory system, excretory system * Explain Transportation In Animals and Plants.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will know and understand</i> 1.The terms Circulatory system, pulse, pulse rate, heart beat, excretory system dialysis, vascular tissue, xylem, phloem, transpiration 1. Function of different parts of circulatory system and excretory system. 2. Why transportation is an important life process? 3. The difference between arteries and veins and xylem and phloem. <u>SKILLS</u>- <i>Students would be able to</i> 1. Collaborate with each other to explain the transportation in animals and plants 2. Critically analyse ‘the importance of circulatory and excretory system’. 3. Use analytical and critical skills to find why plants also need a transport system. 4. What is the importance of transpiration?

	5. Built character amongst themselves by discussing /communicating the importance of transport in animals and plants Attitudes and beliefs- <i>Students will be able to</i> Develop citizenship by visualizing and observing the importance of transport in animals and plants and sensitize others how to take care of circulatory and excretory system.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- <i>Brain Storming</i>-The class would start with a discussion on what the students have already learnt in the previous classes and hence what is it that they would learn now. They would also be told the significance of the topic that they would be studying. <i>Introduction of the topic</i>- ppt and Digital Content would be shared <i>Guided practice followed by Independent Practice</i>- NCERT questions to be discussed in the classroom. Techniques to be used: Independent reading Quiz Drawing diagrams MCQ Peer Assessment Lab Activities Graphic Organizers Any Other Group learning- The class will be divided in the group of 5 students. <i>Circle the Sage</i>- The question will be asked by the teacher about how transportation takes place in organisms and the students who knows the answer will stand in various corners of the room. (Communication, Collaboration) Differentiation- The students in a group of 10 will be presenting a skit on what is the importance transportation for smooth functioning of the body (Character, Citizenship) Questioning- Multiple <i>level question</i>- Teacher will prepare a list of question on the topic “Why transport in animals and plant is a complex process!”. (Critical thinking, Communication)
Resources	Text Book: NCERT text book for Science. Reference Book 1. CBSE Exemplar

Self Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W notebooks as mentioned in the monthly planner by which we can assess their critical thinking and creativity HW notebooks to be marked as per the given plan: <i>Assessment Parameters:</i> The total marks for the activity is 5 marks On time submission.....1 mark Presentation/ Neatness(creativity).....1 mark Content(critical thinking and creativity).....3 marks It is also advised that the students come to the class with proper background knowledge of the topic under discussion. They can refer to the resources stated above.
Assessments	4 UNIT TESTS (25, 25, 25, 25).....100 Marks HALF YEARLY EXAMINATION.....80 Marks ANNUAL BOARD EXAMINATION.....80 Marks INTERNAL ASSESSMENTS.....40 Marks PERIODIC TEST By administering pen papertest we assess creativity and critical thinking. By administering pen papertest we assess creativity and critical thinking. Subject Enrichment 10 Marks With the help of subject enrichment activities we assess communication collaboration, character building and citizenship (Skit on importance of balanced diet in our daily life). Note Book Submission 10 Marks By writing the answers of three levels of spiral question we can assess their knowledge (Level 1 questions) critical thinking(Level 2 questions), creativity(Level 3 questions) Note Book Submission 10 Marks QUESTIONS 1. What is blood? Why is it needed by all parts of the body? 2. What are the benefits of sweating? 3. What is transpiration? How does it help the plant? 4. Explain along with a neat and well labelled diagram the human excretory system. 5. Explain along with a neat and well labelled diagram the human circulatory system.

Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: <i>For gifted students:</i> • High order thinking questions to be done • Encouragement for referring other resources <i>For weak students:</i> • Concept based questions to be completed • Buddy help to be provided • Provide grade-up classes <i>For differently abled students:</i> • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes

Topic	DAY 1-Introduction
Class Transaction	40 min
Pre-requisite for the course	This topic requires basic knowledge of how organisms transport materials and what is the basic need of transport of materials in organisms which they had already studied in lower classes.
Assessment of qualifying knowledge	Facilitator will ask few questions regarding transportation. 1. List the various things need to be transported in a living organism? 2. Why is there a need for transport of materials in living organisms?
Objective	Student will be able to understand what is the need for transport of materials in living organisms
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will know and understand</i> The importance of transport of material in living organisms. Appreciate the need of transport of materials in living organism. <u>SKILLS AND COMPETENCIES</u>- <i>Students would be able to</i> Critically analyse the role of various organ system in the process of transportation.
Transaction Methodology (The teacher can use the	Transaction would proceed in the following manner- Group learning- The class will be divided in the group of 5 students. <i>Circle the Sage</i>- T The question will be asked by the teacher about how

mentioned techniques, wherever applicable, and can use any other too.)	transportation takes place in organisms and the students who knows the answer will stand in various corners of the room. (Communication, Collaboration) <i>Guided practice followed by Independent Practice-</i> NCERT questions to be discussed in the classroom. Techniques to be used: Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table, compare- contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys
Resources	Text Book: NCERT text book for Science. Reference Book CBSE Exemplar
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self Study, Home Work, Assignments	Independent Practice: Concept based questions
Assessments	Oral quiz
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: <i>For gifted students:</i> • High order thinking questions to be done • Encouragement for referring other resources <i>For weak students:</i> • Concept based questions to be completed • Buddy help to be provided • Provide grade-up classes <i>For differently abled students:</i> • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes

Topic	DAY 2 Circulatory system
Class Transaction	40 min
Pre-requisite for the course	This topic requires Basic knowledge of different ways by which organisms transport food and related nutrients.
Assessment of qualifying knowledge	Facilitator asks the students to discuss different ways by which organisms transport food and related nutrients.
Objective	Given the content (topic) the students will be able to discuss about the circulatory system.
Learning Outcomes	KNOWLEDGE- Students will know and understand the circulatory system SKILLS AND COMPETENCIES- Students would be able to Communicate with each other about the circulatory system
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Techniques to be used: Quiz Daily Practice Problem Student -teacher interaction, silent/ loud reading, collaborative learning, Research work/surveys
Resources	Text Book: NCERT text book for Science. Reference Book
Closure	One minute test
Self Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W notebooks as mentioned in the monthly planner. HW notebooks to be marked as per the given plan: Assessment Parameters: The total marks for the activity is 5 marks On time submission..... 1 mark

	Presentation/ Neatness.....1 mark Content.....3 marks It is also advised that the students come to the class with proper background knowledge of the topic under discussion. They can refer to the resources stated above.
Assessments	Assessment of the one minute paper.
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: For gifted students: • High order thinking questions to be done • Encouragement for referring other resources For weak students: • Concept based questions to be completed • Buddy help to be provided • Provide grade-up classes For differently abled students: • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.
Topic	DAY 3 Blood
Class Transaction	40 min
Pre-requisite for the course	This topic requires Basic knowledge of the fluid which helps in transportation.
Assessment of qualifying knowledge	The class will be divided into different groups and teacher will ask the questions related to blood and its composition.
Objective	Given the content (topic) the students will be able to discuss about blood and its composition
Learning Outcomes	KNOWLEDGE- Students will know and understand Students will be able to explain plasma RBC,WBC,Platelets Understand the SKILLS AND COMPETENCIES- Students would be able to Communicate with each other about the plasma RBC, WBC, Platelets..
Transaction	Transaction would proceed in the following manner-

Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Group learning(BrainStroming)- The class will be divided into group of 4 students and then will be allowed to discuss about blood and its composition (Communication, Collaboration) Techniques to be used: Daily Practice Problem Student -teacher interaction, silent/ loud reading, collaborative learning, Research work/surveys
Resources	Text Book: NCERT text book for Science. Reference Book CBSE Exemplar
Closure	Muddiest point by the teacher
Self Study, Home Work, Assignments	Concept based questions
Assessments	After the demonstration and explanation of the activity an MCQ based work sheet will be given to students to check their understanding for the concept
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: For gifted students: • High order thinking questions to be done • Encouragement for referring other resources For weak students: • Concept based questions to be completed • Buddy help to be provided • Provide grade-up classes For differently abled students: • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.
Topic	DAY 4 Blood Vessels

Class Transaction	40 min
Pre-requisite for the course	This topic requires Basic knowledge of the blood vessels.
Assessment of qualifying knowledge	The class will be divided into different groups and teacher will be giving questions related to blood vessels
Objective	Given the content (topic) the students will be able to discuss the blood vessels
Learning Outcomes	KNOWLEDGE- Students will know and understand Students will be able to Understand the arteries and veins. SKILLS AND COMPETENCIES- Students would be able to Communicate with each other about blood vessels. Answer knowledge, understanding, application and diagrammatic skill based questions based on the topic.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Group learning- The class will be divided in the group of 5 students. <i>Circle the Sage</i>- The class will be divided into different groups and teacher will be asking question related to arteries and veins and the students who knows the answer will stand in various corners of the room. (Communication, Collaboration) Techniques to be used: Quiz Daily Practice Problem Student -teacher interaction, silent/ loud reading, collaborative learning, Research work/surveys
Resources	Text Book: NCERT text book for Science. Reference Book CBSE Exemplar
Closure	Summarisation by students with the muddiest point by the teacher
Self Study, Home Work, Assignments	Independent Practice-
Assessments	One minute test
Addressing	Due to various social backgrounds and multiple intelligences, the classroom

Classroom Diversity	might be a diverse arena. The following techniques can be used for various groups: For gifted students: • High order thinking questions to be done • Encouragement for referring other resources For weak students: • Concept based questions to be completed • Buddy help to be provided • Provide grade-up classes For differently abled students: • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.
Topic	DAY 5 - Heart
Class Transaction	40 min
Pre-requisite for the course	This topic requires Basic knowledge of the human heart
Assessment of qualifying knowledge	- The class will be divided into different groups and teacher ask questions related to human heart from day today life.
Objective	Given the content (topic) the students will be able to discuss the parts of human heart and its function.
Learning Outcomes	KNOWLEDGE- Students will know and understand Students will be able to Understand the parts of human heart and its function. SKILLS AND COMPETENCIES- Students would be able to Communicate with each other about the parts of flower. Application and diagrammatic skill based questions on the topic.
Transaction Methodology (The teacher can use the mentioned	Transaction would proceed in the following manner- Group learning- The question will be asked by the teacher about the parts of flower (Communication, Collaboration) Techniques to be used:

techniques, wherever applicable, and can use any other too.)	Wipro- G.O.s(web chart, flow chart and differentiation table, compare- contrast matrix),
Resources	Text Book: NCERT text book for Science. Reference Book CBSE Exemplar
Closure	Summarisation by students with the muddiest point by the teacher
Self Study, Home Work, Assignments	Independent Practice-Diagram of the parts of flower.
Assessments	Peer Assessment of diagram showing photosynthesis.
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: For gifted students: • High order thinking questions to be done • Encouragement for referring other resources For weak students: • Concept based questions to be completed • Buddy help to be provided • Provide grade-up classes For differently abled students: • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes
	DAY 6 - Heart Beat and heart rate
	40 min
	This topic requires Basic knowledge of heart beat.
Marks	The class will be divided into different groups and teacher will demonstrate the group to how to count the heart beat by using a stethoscope.
Topic	Given the content (topic) the students will be able to discuss about the heartbeat.
Class	40 min

Transaction	
Pre-requisite for the course	This topic requires Basic knowledge of how heart beats.
Assessment of qualifying knowledge	Count and write down the heart beat and pulse rate.
Objective	Given the content (topic) the students will be able to understand the importance of knowing the heart beat and pulse rate.
Learning Outcomes	SKILLS AND COMPETENCIES- Students would be able to collaborate and communicate with each other about the importance of knowing the heart beat and pulse rate
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Brain Storming-Students would be able to collaborate and communicate with each other about the importance of heart beat and pulse rate Techniques to be used: Student -teacher interaction, collaborative learning, Techniques to be used: Quiz Student -teacher interaction, silent/ loud reading, collaborative learning, Research work/surveys
Resources	Text Book: NCERT text book for Science. Reference Book CBSE Exemplar
Closure	One minute paper
Self Study, Home Work, Assignments	Practice of Questions of NCERT
Assessments	Real time feedback to students on the basis of an oral quiz
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: For gifted students: • High order thinking questions to be done

	• Encouragement for referring other resources For weak students: • Concept based questions to be completed • Buddy help to be provided • Provide grade-up classes For differently abled students: • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.

Topic	DAY 7 Excretory System
Class	40 min
Transaction	
Pre-requisite for the course	This topic requires Basic knowledge of how excretion takes place in a human being.
Assessment of qualifying knowledge	Facilitator will ask the students to write down the major waste products of human body and how are they excreted.
Objective	Given the content (topic) the students will be able to understand the function of the excretory system
Learning Outcomes	KNOWLEDGE- Students will know and understand the function of the excretory system
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner Techniques to be used: Quiz Daily Practice Problem Student -teacher interaction, silent/ loud reading, collaborative learning, Research work/surveys
Resources	Text Book: NCERT text book for Science. Reference Book
Closure	Summarisation by students.

Self Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W notebooks as mentioned in the monthly planner.
Assessments	Real time feedback to students on the basis of an oral quiz
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: For gifted students: • High order thinking questions to be done • Encouragement for referring other resources For weak students: • Concept based questions to be completed • Buddy help to be provided • Provide grade-up classes For differently abled students: • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.

Topic	DAY 8 Transport of water and minerals in plants
Class Transaction	40 min
Pre-requisite for the course	This topic requires Basic knowledge of transportation in plants.
Assessment of qualifying knowledge	Facilitator will ask the students to explain how the transportation in plants is done.
Objective	Given the content (topic) the students will be able to understand how is the transportation in plants done
Learning Outcomes	KNOWLEDGE- Students will know and understand what the roles of xylem and phloem in plants are.
Transaction Methodology (The teacher can use the	Transaction would proceed in the following manner Differentiation- The students in a group of 5 will discuss how is the fruit formed Techniques to be used:

mentioned techniques, wherever applicable, and can use any other too.)	Quiz Student -teacher interaction, silent/ loud reading, collaborative learning, Research work/surveys
Resources	Text Book: NCERT text book for Science. Reference Book
Closure	Summarisation by students with the muddiest point by the teacher.
Self Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W notebooks as mentioned in the monthly planner.
Assessments	Real time feedback to students on the basis of an oral quiz
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: For gifted students: • High order thinking questions to be done • Encouragement for referring other resources For weak students: • Concept based questions to be completed • Buddy help to be provided • Provide grade-up classes For differently abled students: • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.

Topic	DAY 9 Vascular tissue
Class Transaction	40 min
Pre-requisite for the course	This topic requires understanding of the xylem and phloem.
Assessment of	Facilitator will ask the students to think what happens if xylem and phloem

qualifying knowledge	don't do its work?
Objective	Given the content (topic) the students will be able to understand the vascular tissue.
Learning Outcomes	Student will be able to critically analyse the need of vascular tissue.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner Differentiation- The students in a group of 5 will be discussing the importance of vascular tissue.(Character, Citizenship) - Techniques to be used: Wipro- G.O.s(web chart, flow chart and differentiation table, compare- contrast matrix), Student -teacher interaction, silent/ loud reading, collaborative learning, Research work/surveys
Resources	Text Book: NCERT text book for Science. Reference Book
Closure	Summarisation by students with a one minute paper by the teacher
Self Study, Home Work, Assignments	High order thinking questions Question
Assessments	One minute test
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: For gifted students: • High order thinking questions to be done • Encouragement for referring other resources For weak students: • Concept based questions to be completed • Buddy help to be provided • Provide grade-up classes For differently abled students: • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.

Topic	DAY 10 Transpiration
Class Transaction	40 min
Pre-requisite for the course	This topic requires Basic knowledge of how excess water is removed from plants.
Assessment of qualifying knowledge	Facilitator will ask the students to explain how the plants remove excess water.
Objective	Given the content (topic) the students will be able to understand the process of transpiration.
Learning Outcomes	Student will be able to critically analyse the process of transpiration.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner Differentiation- The students in a group of 5 will be discussing the impact of transpiration in plants how is it contributing for the maintenance of balance in nature. (Character, Citizenship) Techniques to be used: Wipro- G.O.s(web chart, flow chart and differentiation table, compare- contrast matrix), Student -teacher interaction, silent/ loud reading, collaborative learning, Research work/surveys
Resources	Text Book: NCERT text book for Science. Reference Book
Closure	Summarisation by students with the muddiest point by the teacher
Self Study, Home Work, Assignments	Question as per the monthly planner
Assessments	Peer assessment of oral quiz
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: For gifted students: • High order thinking questions to be done • Encouragement for referring other resources For weak students: • Concept based questions to be completed

	• Buddy help to be provided • Provide grade-up classes For differently abled students: • Ignore spelling mistakes. • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.