

Delhi Public School Ghaziabad
Class XI
Biology Lesson plan based on DOL
Chapter 19 – Excretory products and their elimination

Unit	Human Physiology (Chapter 19 Excretory products and their elimination)
Class Transaction	Total: 3 periods
Pre-requisite for the course	This lesson requires • Basic knowledge of human excretory system • Knowledge of urine formation • Knowledge of regulation of kidney function • Basic knowledge of role of other organs in excretion
Assessment of qualifying knowledge	• Written test • Lab activity • Oral questioning
Objective	Students would be able to understand • Human excretory system • Mechanism of urine formation • Regulation of kidney function • Micturition • Role of other organs in excretion • Disorders of the excretory system
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will know and understand</i> • All the organs of human excretory system • Mechanism of urine formation • Concept of counter current mechanism <u>SKILLS</u>- <i>Students would be able to</i> • Describe mechanism of the concentration of the filtrate • Describe role of renin angiotensin system • Understand micturition Competencies developed in students: collaborative learning, critical thinking and problem solving, character building, communication, citizenship
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: Quiz, MCQ, Peer Assessment, Case Studies, Lab Activities, Any Other
Resources	NCERT text book, Reference Book, CBSE Exemplar, DPSG Spiral www.learncbse.in/cbse-notes/ https://mycbseguide.com www.examfear.com

Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their spirals. 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	UNIT TESTS , HALF YEARLY EXAMINATION, ANNUAL EXAMINATION
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 high scoring students:</i> High order thinking questions to be done Encouragement for referring other resources <i>For low scoring students:</i> Spiral questions Peer education PCC classes <i>For differently abled students:</i> Call parents at regular intervals Provide grade-up classes Encourage and motivate them at every level.
Marks	The weightage of whole unit is 18 marks and is given by CBSE.

Day 1:
a. Students will be shown a ppt and will be made aware of the different types of organisms on the basis of nature of excretory material.
b. Students will be told about the human excretory system.
c. Students will be told about different parts of a nephron.
Guided practice: DOL 1
a. Students will be made to describe structure of nephron.
b. Students will be made to describe and discuss in groups about the excretory organs in different organisms.
Communication and brainstorming: Students develop effective communication skills and learn to put across their views.
Collaboration: Students learn to work in collaboration to achieve a common goal. They learn to manage time and divide and delegate work and responsibilities.
Summarize and check for understanding: DOL 2
a. Oral questioning based on the day's teaching.
Independent practice: DOL 3
a. Students will be asked to revise the work done in class.

Day 2:
a. Students will be shown a ppt and will be made aware of mechanism of urine formation.
b. Students will be told about the functions of renal tubules.
c. Students will be made aware of the mechanism of concentration of the filtrate.

Guided practice: DOL 1
a. Students will be made to recall mechanism of urine formation.
c. Students will be asked to describe and discuss in groups about counter current mechanism.
Critical thinking and problem solving: Helps students to think critically and solve the given problem
Communication and brainstorming: Students develop effective communication skills and learn to put across their views.
Summarize and check for understanding: DOL 2
a. Oral questioning based on the day's teaching
b. Discussion on the topic in groups – Role of interstitial gradient in urine formation.
Character and citizenship: Group discussion helps to develop interpersonal skills, respecting and valuing views of others
Independent practice: DOL 3
a. Students will be asked to revise the work done in class.
b. Students will be asked to describe diagrammatically parts of a nephron and vasa recta showing counter current mechanism.

Day 3:
a. Students will be shown a ppt and will be made aware of regulation of kidney function.
b. Students will be told about disorders of excretory system.
c. Students will be told about micturition.
Guided practice: DOL 1
a. Students will be made to describe Renin-Angiotensin mechanism.
b. Students will be asked to list all the disorders of excretory system.
c. Students will be asked to describe and discuss in groups about dialysis.
Collaboration: Students learn to work in collaboration to achieve a common goal. They learn to manage time and divide and delegate work and responsibilities.
Communication and brainstorming: Students develop effective communication skills and learn to put across their views.
Summarize and check for understanding: DOL 2
a. Oral questioning based on the day's teaching
Communication: Involves sharing of ideas and information to advance scientific understanding, processes, theories and discoveries
Independent practice: DOL 3

a. Students will be asked to revise the work done in class.
b. Students will be asked to research on disorders of excretory system.

Closure of the lesson
Summarizing the lesson by mind mapping
Giving them revision worksheets