

Delhi Public School Ghaziabad
Class XII
Biology - Lesson plan based on DOL
Chapter 14 – Ecosystem

Unit	Ecology and environment (Chapter 14: Ecosystem)
Class Transaction	Total: 3 periods
Pre-requisite for the course	This lesson requires • Basic knowledge of ecosystem. • Knowledge of components of ecosystem. • Knowledge of energy flow. • Knowledge of ecological pyramids
Assessment of qualifying knowledge	Written test Lab activity Oral questioning
Objective	Students would be able to understand terrestrial and aquatic ecosystem, different types of ecosystem and energy flow, ecological pyramids, ecological succession, nutrient cycling,
Learning Outcomes	KNOWLEDGE- <i>Students will know and understand</i> Waste management. Greenhouse effect. Ozone depletion. SKILLS- <i>Students would be able to</i> Understand ways to control pollution. Understand ways to manage waste. Understand improper resource utilization and maintenance. 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, Daily Practice Problem, MCQ, Peer Assessment, Case Studies, Lab Activities, Any Other
Resources	NCERT text book, Reference Book, CBSE Exemplar, DPSG Spiral Weblinks: www.learncbse.in/cbse-notes/ https://mycbseguide.com www.examfear.com
Self Study, Home	Independent Practice: Students would do the given questions in their

Work, Assignments	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 BOARD EXAMINATION, INTERNAL ASSESSMENT - Practical – 30 marks
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 would be given by CBSE.

Day 1:
Students will be shown a ppt and will be made aware of biotic and abiotic components of ecosystem.
Students will be told about the ecosystem functions.
Students will be told about the primary and secondary productivity.
Guided practice: DOL 1
Students will be made to draw diagrams to show a pond ecosystem.
Students will be made to list all biotic and abiotic components of an ecosystem.
Students will be asked to describe and discuss in groups the primary and secondary productivity and the cause of difference in primary and secondary productivity.
Communication and brainstorming: Students develop effective communication skills and learn to put across their views.
Critical thinking and problem solving: Helps students to think critically and solve the given problem
Creativity and innovation: Students use the knowledge given in class and create projects and models and perform research to give innovative solutions to the problem studied.
Summarize and check for understanding: DOL 2
Oral questioning based on the day's teaching.
Independent practice: DOL 3
Students will be asked to revise the work done in class.
Students will be asked to show pond ecosystem diagrammatically.

Day 2:
Students will be shown a ppt and will be made aware of grazing and detritus food chains.
Students will be told about the formation of food web.
Students will be made aware of energy flow and types of ecological pyramids.
Guided practice: DOL 1
a. Students will be made to recall grazing and detritus food chains.
b. Students will be asked to make a flow chart to show a food web.
c. Students will be asked to show different types of ecological pyramids.
Summarize and check for understanding: DOL 2
a. Oral questioning based on the day's teaching
b. Discussion on the topic – upright and inverted pyramids.
Independent practice: DOL 3
a. Students will be asked to revise the work done in class.
b. Students will be asked to discuss in groups limitations of ecological pyramids.
c. Students will be asked to investigate pyramids formed in different ecosystems.
Creativity and innovation: Students use the knowledge given in class and create projects and models and perform research to give innovative solutions to the problem studied.
Collaboration: Students learn to work in collaboration to achieve a common goal. They learn to manage time and divide and delegate work and responsibilities.

Day 3:
a. Students will be shown a ppt and will be made aware of ecological succession.
b. Students will be told about the process of nutrient cycling.
c. Students will be made aware of biogeochemical cycling.
Guided practice: DOL 1
a. Students will be made to draw a diagram to show hydrarch succession.
b. Students will be asked to diagrammatically explain carbon cycle.
c. Students will be asked to diagrammatically explain phosphorus cycle.
Summarize and check for understanding: DOL 2
a. Oral questioning based on the day's teaching
b. Discussion on the topic in groups – primary and secondary succession.
Creativity and innovation: Students use the knowledge given in class and create projects and models and perform research to give innovative solutions to the problem studied.
Collaboration: Students learn to work in collaboration to achieve a common goal. They learn to manage time and divide and delegate work and responsibilities.
Independent practice: DOL 3
a. Students will be asked to revise the work done in class.
b. Students will be asked to explain xerarch succession.

c. Students will be asked to list differences between gaseous and sedimentary cycles.
d. Students will be asked to investigate imbalances in nutrient cycles in groups.
Collaboration: Students learn to work in collaboration to achieve a common goal. They learn to manage time and divide and delegate work and responsibilities.

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