

SHAILABALA WOMEN'S AUTONOMOUS COLLEGE, CUTTACK

TEACHING PLAN 2022-23

Department	Teacher Education	
Course Name	CPS-3	Pedagogy of Biological Science
year	1st	
No of Weeks	20	
No of Periods/week	6	
Teacher's Name	Miss. Pranati Priyadarshini	

Total No. of periods: = 80

Period	Unit	Topics	Method of Teaching	Source of Teaching Materials	Corresponding COs
1.	I	Nature of Biological science	Discussion	Text books, Reference books, ppts	CO1
2.		Scope of biological Science	Discussion/assignment	Text books, Reference books, ppts, Images of different professions	CO1
3.		Importance of Biological science	ICT/inductive/discussion	Text books, Reference books, ppts, chart of application of biology-modern agricultural equipments, vaccines, food processing	CO1

				industries	
4.		Objectives of teaching science	Demonstration/Discussion	Text books, Reference books, ppts	CO1
5.		Blooms taxonomy	Demonstration/discussion	Text books, reference books, chart of Bloom's Taxonomy, pic of B.S Bloom	CO1
6.		Revised Bloom's taxonomy	Demonstration/discussion	Text books, reference books, chart of Anderson and Krathwohl's taxonomy	CO1
7.		Importance of Biological science at Secondary level,	ICT/Discussion	Text books, Reference books, ppts	CO1
8.		Rational, objectives of teaching science	ICT/Panel discussion	Text books, Reference books, ppts,NCF-2005	CO1
9.		Principles, designs and materials in science	Discussion,assignment	Text books, reference books, model of eye, slide of leaf anatomy	CO1
10.		Recent curricular Reforms at the national and state levels (NCF 2005).	Focused group Discussion/Ict/project	Text books, reference books, ppts,NCF-2005	CO1
11.		Doubt clearing class			
12.	II	Observation method	ICT/observation	Text books, Reference books, videos of classroom activities	CO2

13.		Experimentation	LM/ICT/experiment/problem solving/heuristic	Text books, Reference books, experiment showing phototropism in plants	CO2
14.		Problem solving	Problem solving method	Text books, reference books, ppts	CO2
15.		Demonstration	ICT/project/demonstration	Text books, Reference books, ppts/demonstration video of slide preparation	CO2
16.		Project method	Project/problem solving/	Reference books,journal of science,project report	CO2
17.		Self learning strategies	Discovery, Cooperative learning	Reference books,ppt,chat room	CO2
18.		Peer learning strategies	Project/assignment/role play	Reference books,articles	CO2
19.		Collaborative strategies	Mock parliament	Reference books,ppt	CO2
20.		Use of ICT in self learning , concept mapping	Ict/instructional learning	Moodle,canva	CO2
21.		5E models	Demonstration	Text books, reference books, ppts,lesson plans	CO2
22.		Icon model	Demonstration	Text books, reference books, ppts,lesson plans	CO2
23.		Application of 5E and ICON models	ICT/Presentation	Text books, Reference books, ppts	CO2

24.		Remedial class			
25.	III	Preparation of unit Plans	Demonstration/discussion	Text books, Reference books, ppts, unit plan of class-9 Science book	CO3
26.		Preparation of Lesson Plans	Demonstration	Reference books, lesson plan on respiration	CO3
27.		Traditional approaches	Discussion /Ict/ harbartian	Text books, Reference books, ppts, lesson plan on respiration	CO3
28.		Activity and Constructivist Approaches	Self learning	Text books, Reference books, ppts	CO3
29.		Learning Activities in science	Inductive/deductive	Text books, Reference books, ppts	CO3
30.		Science laboratory activities,	Role play, inductive method	Text books, reference books, ppts, laboratory manual	CO3
31.		Field trip, science club, exhibitions	Discovery, project/field trip	Reference books, ppts, exhibition	CO3
32.		Seminar	Discussion/presentation /simulation	Text books, Reference books, ppts, seminar report	CO3
33.		Biological museum, aquarium, vivarium	Observation/exhibition/field trip	Images and videos of museum, vivarium, botanical gardens, national parks	CO3

34.	Teaching Learning Materials in science: preparation, collection, procurement, use	ICT/assignment/simulation/demonstration	Text books, Reference books, ppts/model of Carbon, flannel board	CO3
35.	Charts, graphs, bulletin boards, model	ICT/discussion/exhibition	Text books, Reference books, ppts, bulletin board	CO3
36.	Filmstrips, slides, a-v, computer, internet	Discussion/demonstration	Images and videos of film strips, slides of OHP	CO3
37.	Preservation of biological specimen	Demonstration cum discussion	Slides, specimen, herbarium sheet	CO3
38.	Key Learning Resources in science	Lecture cum Discussion/peer teaching	Text books, Reference books, ppts, journals, magazines	CO3
39.	Preparation and Utilization of learning materials	Demonstration/discussion/ICT/collaborative learning	Text books, ppts, 3D model, cartoon models	CO3
40.	Remedial class			
41.	Assessing progress and Performances	discussion/rubrics/portfolio	Text books, Reference books, ppts, scales of measurements	CO3
42.	Monitoring and giving feedback	Discussion/peer learning	Text books, Reference books, ppts	CO3
43.	Local and community Resources	ICT/group discussion/field trips	Text books, References, chart of community resources	CO3

44.		Using pair work, Using group work	Collaboration/ cooperation	Text books, Reference books, ppts	CO3
45.		Using questioning (both By teacher and learners) to promote thinking	Demonstration /ICT/discussion	Text books, Reference books, ppts	CO3
46.		Microteaching skills	Demonstration	Videos of different teaching styles	CO3
47.		Demonstration of introduction skill, questioning	Demonstration	Videos of different teaching styles	CO3
48.		Demonstration of using different teaching aids	Demonstration	Charts, graphs, flash cards, models, specimens, a-v aids	CO3
49.		Question answer discussion			
50.		Talk for learning and Involving all	discussion/cooperative learning	Text books, Reference books, ppts	CO3
51.	IV	Construction of class room test and unit test	Demonstration	Text books, sample question paper	CO4
52.		Designing blue print	Demonstration	Text books, Reference books, ppts, blue print of question	CO4
53.		Presentation by learners			
54.		Item construction, marking schemes	Demonstration	Text books, reference books, ppts, blue print	CO4
55.		Assignments	ICT/problem solving	Text books, Reference books, ppts, articles	CO4

56.		Projects	ICT/Discussion	Text books, Reference books, ppts, project report	CO4
57.		Portfolios	Discussion/rubrics	Text books, reference books, ppts, portfolio report	CO4
58.		Group and collaborative assessment	lct/observation/portfolio	Text books, ppts	CO4
59.		Remedial class			
60.		Observation of learners Activities	lct/observation	Text books, Reference books, ppts	CO4
61.		Diagnosis of difficulties in learning	action research/focused group discussion	Text books, Reference books, ppts, action research report	CO4
62.		Remediation of the difficulties	self learning/cooperative/computer assisted instruction	Text books, Reference books, ppts	CO4
63.		Remedial class			
64.		Enrichment programmes	Collaborative, co-operative approach	Text books, ppts	CO4
65.	V	Pedagogical analysis of contents	Lecture cum discussion/ICT	Text books, ppts	CO5
66.		Improvement of Food Production,	Activity ,panel discussion,	Reference books	CO5

			project/portfolio		
67.		Cell and its Organization	Demonstration cum discussion, project	Chart of cell, image of Robert Hook	CO5
68.		Nutrition	Analysis, synthesis	Table of balance diet	CO5
69.		Respiration	Discovery/discussion/brain storming	Model of lungs, chart of respiration	CO5
70.		Excretion	Demonstration, experimentation	Chart of excretory system	CO5
71.		Reproduction	Project/Portfolio/discussion	Images of different types of reproduction, videos of asexual reproduction in plants	CO5
72.		Biodiversities	Assignment/brainstorming	Text book ,reference books	CO5
73.		Natural Resources and its Pollution	Demonstration, discovery, problem solving	Textbook, video of smog in Delhi, images of water pollution	CO5
74.		Ecosystem,	Peer learning, problem solving, discovery	Chart of pond ecosystem, forest ecosystem	CO5
75.		Ecological System flow of energy	DEDUCTIVE, PROBLEM SOLVING,PROJECT	Text book ,reference books, chart of energy flow	CO5
76.		Bio-geochemical cycles in Nature,	Problem solving,	Text books, reference books, chart of nitrogen	CO5

			collaborative learning	cycle	
77.		Environmental Degradation.	Experimentation, demonstration/a-v aids	image and videos of natural calamities, landslides	CO5
78.		REMEDIAL CLASS			
79.		QUESTION ANSWER DISCUSSION			
80.		TEST			