

St. Mary's College (Autonomous) Reaccredited with 'A+' Grade by NAAC (Cycle IV) Thoothukudi



Criterion: II – Teaching, Learning and Evaluation Metric: 2.6.1– Learning Outcomes Sample Lesson Plans Based on RBT - OBE Year: 2018-2023

IQAC organised a Two-Day Workshop on "Curriculum, Pedagogy and Assessment: An Integrated Design Approach for OBE as a TOTAL Teacher" on 13th & 14th July 2022. The resource person Dr. V. Evelyn Brindha, Professor, Dept. of EEE & Director, Centre for Online and Distance Education, Karunya Institute of Technology and Sciences, Coimbatore handled the hands-on training sessions on the "Need and Importance for OBE and Taxonomy Based Education, Formulation of Outcomes in the Higher Order Levels in the Cognitive, Affective and Psychomotor Domains of Learning," "Teaching-learning Strategies and Instructional Design in OBE and Preparation of Lesson Plan Based on TOTAL" (Transforming Outcomes Through Active Learning) "CO Target Fixation and Attainment, Course Articulation Matrix (CAM) with Gap Analysis," and "Direct and Indirect Attainment of Programme Outcomes and Programme Specific Outcomes with Gap Analysis."

The workshop helped the faculty gauge the importance of formulating lesson plans based on Revised Bloom's Taxonomy for the respective courses of study. The Micro- Planning of the Instructional Design encompasses, Topics for learning through Evocation: 2 minutes, Topic Introduction, General Objective, First Phase -Specific Outcome 1: 10 minutes, Specific Outcome 2: 10 minutes, Formative Assessment 1: 2 minutes (through questions/analogy/new ideas), Second Phase Specific Outcome 1: 10 minutes, Specific Outcome 2: 10 minutes, Formative Assessment 2: 2 minutes, Discussion: 10 minutes, Mind Map: 2 minutes, Summary: 2 minutes. Taxonomy of objectives, Key words, Key Diagrams, Picture book sample, Power point Presentations and video samples engage the attention of the students and validate the essence of the Outcome Based Education and help them achieve the projected course outcomes and programme outcomes.

Principal
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Criterion II

SSR Cycle V

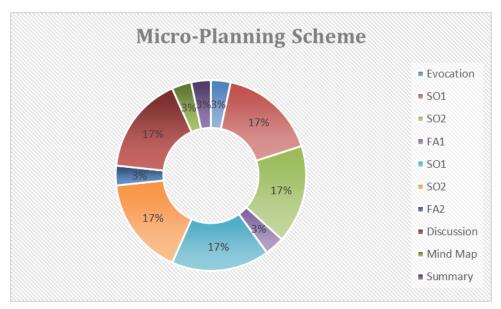
Lesson Plan

Programme	B. A. English
Semester	I
Course Title	Reading and Writing Skills- Animation Literature
Code	23UENSE1
Hours	2
Total Hours	30
Credits	2
Max Marks	50
Unit & Title	Unit I: Robert Louis Stevenson's My Shadow
Name of the	V. Dorothy Catherine
Faculty	
T-L tools	Mind Maps, Video, Art Project, Think-Pair- Share

Pre-requisite Knowledge: basic understanding of shadow in children's perspective,

simple rhyming words and personification

Micro- Planning : 60 minutes



Evocation : 2 min

SO1 : 10 min

SO2 : 10 min

FA1 : 2 min

SO1 : 10 min

SO2 : 10 min

FA2 : 2 min

Discussion : 10 min

Mind Map : 2 min

Summary : 2 min

1. Topics for learning through Evocation:

Briefly introduce shadows in everyday life and how children perceive them. Ask students to share their personal experiences with shadows.

2. Topic Introduction:

2.1: General Objective:

- To understand the literal and figurative meaning
- To learn new poetic devices

2.2: Specific Outcomes:

- Appreciate the use of poetic devices such as rhyme and personification.
- Develop an understanding of how the poem reflects childhood themes and emotions.

First Phase:

SO1 (10 minutes): Explain the literal meaning of the poem. Highlight the playful and imaginative nature of the child's relationship with the shadow.

SO2 (10 minutes): Introduce figurative language, focusing on personification and the shadow as a metaphor for self-awareness and childhood curiosity.

Second Phase:

SO1 (10 minutes): Analyze the rhyming scheme and rhythm. Discuss how these elements contribute to the poem's playful tone.

SO2 (10 minutes): Explore other poetic devices used in the poem, such as imagery and similes.

Mind Map (2 minutes)

Create a simple mind map that illustrates the key themes and devices in My Shadow (e.g., Shadow as a companion, Personification, Rhyming).

Summary (2 minutes)

Summarize the lesson, emphasizing the dual nature of the poem (literal vs. figurative meaning) and the use of poetic devices like rhyme and personification.

2.3: Taxonomy of objectives:

Taxonomy of objectives						
Knowledge		The Cognitive Process Dimension				
Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
A. Factual		1				
Knowledge						
B. Conceptual		2				
Knowledge						
C. Procedural						1
Knowledge						

D. Meta			
Cognitive			
Knowledge			

2.4: Key words:

Shadow

Personification

Rhyming scheme

Imagery

2.5: Key Diagrams (if any)

Picturebook sample

https://drive.google.com/file/d/1LImeIZGfn_fwsmRqDNiSLSr9W1IeBYp/view?usp=sharing

Powerpoint Presentation

https://docs.google.com/presentation/d/1Cd6H6Hjx6Zz0j6SUEdCP5f88P5qqTSHt/edit?usp=drive link&ouid=108991191526999366924&rtpof=true&sd=true

Video sample

https://drive.google.com/file/d/1xO3nY0cXTs9YLeQvZvsb0OAVlPIirI0f/view?usp=drive link

3. Discussion:

Engage students in a conversation about the poem's deeper themes. How does the shadow represent different aspects of childhood? What can we learn from the shadow's behavior in the poem?

4. Mind Map:

STEVENSON'S MY SHADOW

- Shadow always follows him
- •Resembles him from head to toe
- Excitement about shadow being a constant companion

Fascination with Shadow



- •Size Changes:
- •Grows tall and small unpredictably
- Presence:
- Always present except during certain times (like early morning)

Shadow's Behavior



- Shadow is lazy (doesn't appear in the morning)
- •Shadow is cowardly (always behind the boy)
- Plays tricks (jumps into bed before the boy)

Imaginative Interpretation



5. Summary:

My Shadow captures the innocent fascination and imagination of a young child as he interacts with his shadow. The child observes how the shadow is always present, mimicking his actions

but also behaving unpredictably—changing sizes and sometimes not appearing at all. This curiosity leads to imaginative thoughts, such as the shadow being lazy or cowardly, showing how children often anthropomorphize objects around them to explain what they don't fully understand.

The poem's charm lies in its simplicity, reflecting the child's sense of wonder and the playful relationship between the boy and his shadow. Through this, Stevenson highlights the innocence of childhood and how children often view the world through the lens of fantasy. This also adds a deeper layer of exploration into self-awareness and identity, as the shadow represents a constant, yet sometimes elusive, companion. The poem is a delightful expression of how children engage with the mysterious and unknown aspects of the world around them.

In conclusion, the poem celebrates childhood innocence and the joy of discovery, inviting readers to reminisce about their own youthful imaginations.

6. Assessment through questions/analogy/new ideas:

Formative Assessment 1 (FA1) (2 minutes)

Ask students to describe in their own words how Stevenson makes the shadow seem like a real character.

Formative Assessment 2 (FA2) (2 minutes)

Short quiz or oral question on identifying personification and rhyme in specific lines.

7. FAQ's: MCQ's/ Descriptive questions:

- 1. Examine the relationship between the speaker and the shadow portrayed in Stevenson's poem, "My Shadow."
- 2. Analyze the portrayal of childhood and imagination in Stevenson's "My Shadow" and its reflection on human nature.

8. References:

Murray, John. Victorian Children's Literature: A Reader's Guide. Routledge, 2004.

Roscoe, Norman. Robert Louis Stevenson: Poet and Essayist. The Edinburgh Press, 1921.

Stevenson, Robert Louis. A Child's Garden of Verses. Longmans, Green & Co., 1885.

9. Verified by Subject Expert:

Course In-charge

V. Dorothy Catherine

A. Ardik Shula Damayarki

Approved by HoD.

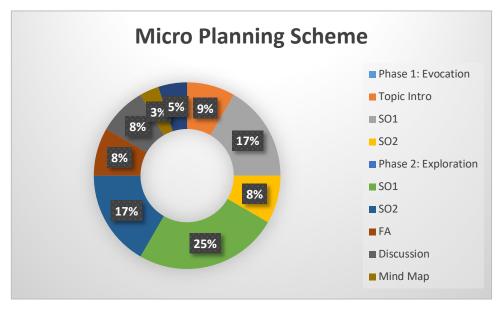
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Lesson Plan

Programme	B. A. English
Semester	I
Course Title	Reading and Writing Skills- Animation Literature
Code	23UENSE1
Hours	2
Total Hours	30
Credits	2
Max Marks	50
Unit & Title	Unit II: Brothers Grimm's Hansel and Gretel
Name of the	V. Dorothy Catherine
Faculty	
T-L tools	Reading Material: Excerpt from Hansel and Gretel.
	Visual Aids: Mind map, possible PowerPoint slides, or a short video
	summarizing the story.

Pre-requisite Knowledge: Basic understanding of fairy tales and folk stories

Micro- Planning : 60 minutes



Phase 1 Evocation

Topic Introduction : 5 min

SO1 : 10 min

SO2 : 5 min

Phase 2 Exploration

SO1 : 15 min

SO2 : 10 min

FA : 5 min

Discussion : 2 min

Mind Map : 1 min

Summary : 2 min

1. Topics for learning through Evocation: (1 minute)

Share your experience when you felt left alone in your own house.

2. Topic Introduction: (5 minutes)

- a. Provide background on the Brothers Grimm and the origins of *Hansel and Gretel*.
- b. Engage students by asking if they have heard the story before or are familiar with similar tales.

2.1: General Objective:

To introduce students to the story of Hansel and Gretel and explore its themes, characters, and moral lessons within the context of children's literature.

2.2: Specific Outcomes:

- **SO1**: Understand the structure and narrative techniques in *Hansel and Gretel*.
- SO2: Analyze the story's themes, such as survival, bravery, and family dynamics.

Phase 1: Evocation (20 minutes)

- 1. Topic Introduction: (5 minutes)
- 2. SO1 Activity (10 minutes)
 - a. Read an excerpt from Hansel and Gretel.
 - b. Brief discussion on initial thoughts and reactions to the setting, characters, and conflict.

2. SO2 Discussion (5 minutes)

a. Briefly discuss the story's fairy tale elements, such as the use of magical settings, characters (witch), and moral lessons.

Phase 2: Exploration (30 minutes)

1. **SO1** (15 minutes)

- o Conduct a guided analysis of the key themes: overcoming adversity, familial bonds, and the triumph of good over evil.
- Encourage students to connect these themes to real-life situations or other stories they know.

2. **SO2** (10 minutes)

o Develop a mind map on the board with student input to organize characters, themes, and symbols (e.g., the breadcrumbs, forest, and witch's house).

3. FA: (5 min)

Mind Map (2 minutes)

 Use the mind map as a collaborative tool for summarizing key points discussed.

Summary (3 minutes)

o Wrap up the story's moral lessons and its significance in children's literature.

2.3: Taxonomy of objectives:

Taxonomy of objectives						
Knowledge		The Cognitive Process Dimension				
Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
A. Factual		1				
Knowledge						
B. Conceptual			2			
Knowledge						
C. Procedural						
Knowledge						
D. Meta						
Cognitive						
Knowledge						

2.4: Key words:

- Survival: The siblings' resilience and quest for survival.
- Family: Exploration of family dynamics, especially with their stepmother.
- Witch: The antagonist representing danger and greed.
- Breadcrumbs: Symbolizing hope and the path to safety.
- Cunning: The cleverness displayed by Hansel and Gretel to outsmart the witch.

2.5: Key Diagrams (if any)

Audiobook sample:

https://etc.usf.edu/lit2go/175/grimms-fairy-tales/3077/hansel-and-gretel/

Picturebook sample

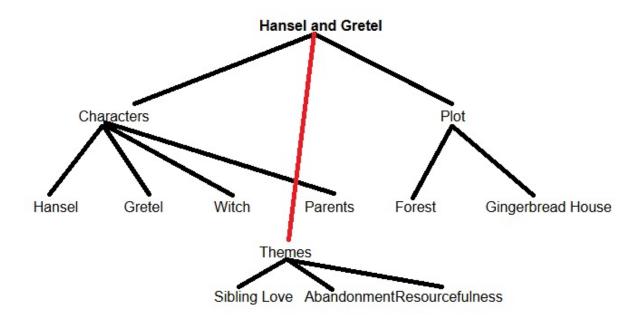
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3. Discussion:

Engage students in a Q&A on their personal takeaways and thoughts on the story's moral implications.

4. Mind Map:



5. Summary:

In Hansel and Gretel, two siblings face abandonment and danger when their stepmother convinces their father to leave them in the woods. They use breadcrumbs to try to find their way home, but their plan fails when the breadcrumbs are eaten by birds. Lost and hungry, they stumble upon a witch's house made of sweets, only to be captured. Using cleverness and bravery, the children outwit the witch and escape. This story emphasizes themes of resilience, family loyalty, and the triumph of good over evil.

6. Assessment through questions/analogy/new ideas:

- Read another fairy tale from the Brothers Grimm and identify similar themes or elements.
- Write a brief response on what they learned from "Hansel and Gretel" and how it might apply to modern storytelling.

7. FAQ's: MCQ's/ Descriptive questions:

What role does the forest play in Hansel and Gretel? How does it reflect the characters' emotional journey?

8. References:

- 1. Grimm, Jacob, and Wilhelm Grimm. *The Annotated Brothers Grimm*. Edited by Maria Tatar, W.W. Norton & Company, 2004.
- 2. Zipes, Jack. The Complete Fairy Tales of the Brothers Grimm. Bantam Books, 2003.
- 3. Darnton, Robert. *The Great Cat Massacre and Other Episodes in French Cultural History*. Basic Books, 2009. (Includes analysis of folklore and fairy tales like *Hansel and Gretel*.)

9. Verified by Subject Expert:

Course In-charge

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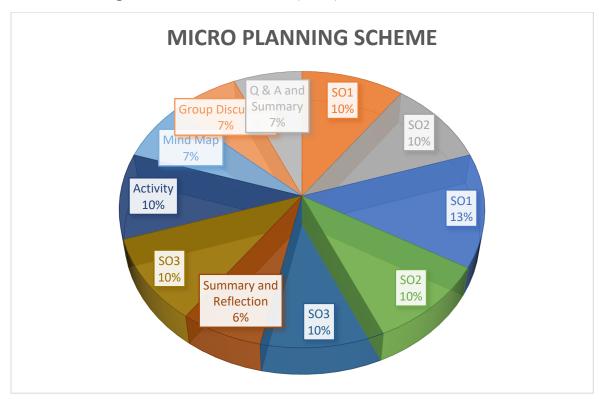
Lesson Plan

Programme	B. A. English
Semester	I
Course Title	Reading and Writing Skills- Animation Literature
Code	23UENSE1
Hours	2
Total Hours	30
Credits	2
Max Marks	50
Unit & Title	Unit III : Lewis Caroll's Alice in Wonderland (Chapter 1-3)
Name of the	V. Dorothy Catherine
Faculty	
T-L tools	Reading Material: Chapters 1-3 of Alice in Wonderland.
	Visual Aids: Mind maps, character charts, possible PowerPoint slides, or
	short video clips.
	Creative Materials: Worksheets for rewriting activities.

Pre-requisite Knowledge: Familiarity with the fairy tale genre and introductory fantasy

literature concepts.

Micro- Planning : 300 minutes (5 Hrs)



Phase 1: Evocation and Introduc	uction
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30 min
30 min

Phase 2: Exploration

SO1 40 min SO2 30 min

SO3	30 min
Summary and Reflection	20 min
Phase 3: Analysis and Application	
SO3	30 min
Activity	30 min
Phase 4: Synthesis and Review	
Mind Map	20 min
Group Discussion	20 min
Q & A and Summary	20 min

1. Topics for learning through Evocation (1 Min):

Have you ever thought of being adventurous?

What is your curiosity level?

2. Topic Introduction: (10 min)

- a. Briefly introduce *Alice in Wonderland* and discuss its historical and cultural context.
- b. Invite students to share any prior knowledge or associations with the story.

2.1: General Objective:

To analyze Lewis Carroll's Alice in Wonderland as a key work in children's literature, focusing on its narrative style, themes, and whimsical language.

2.2: Specific Outcomes:

- SO1: Understand the plot, setting, and key characters introduced in Chapters 1-3.
- SO2: Examine Carroll's use of fantasy, wordplay, and logic puzzles, identifying their impact on the story's tone and meaning.
- SO3: Discuss major themes, including curiosity, exploration, and identity.

Phase 1: Evocation and Introduction (60 minutes)

1. SO1 - Initial Reading and Overview (30 minutes)

- Read aloud selected passages from Chapters 1-3 to illustrate Carroll's playful language and whimsical tone.
- o Discuss students' initial reactions to the setting (the rabbit hole) and characters (Alice and the White Rabbit).

2. SO2 - Discussion of Key Themes (30 minutes)

- o Introduce main themes: curiosity, identity, and exploration.
- Engage students in a discussion on how curiosity drives Alice's journey and how her character resonates with a sense of wonder.

Phase 2: Exploration (120 minutes)

1. SO1 - Deep Dive into Characters and Plot (40 minutes)

- o Analyze Alice's personality traits and motivations. Discuss her interactions with other characters, such as the White Rabbit and the Dormouse.
- Develop a character map to trace Alice's evolving identity and self-reflection in her interactions.

2. SO2 - Carroll's Language and Literary Techniques (30 minutes)

- Examine Carroll's use of wordplay, puns, and nonsensical elements in dialogue and narrative structure.
- o Encourage students to identify examples of linguistic play and discuss how these elements contribute to the fantasy genre.

3. SO3 - Symbolism and Imagery (30 minutes)

- Explore the symbols in Alice's journey, such as the rabbit hole as a portal to self-discovery.
- Use visuals or a mind map to illustrate these symbols and encourage student input.

4. Summary and Reflection (20 minutes)

 Summarize key points discussed, encouraging students to reflect on how fantasy elements shape meaning.

Phase 3: Analysis and Application (60 minutes)

1. SO3 - Thematic Analysis (30 minutes)

- Discuss with students how themes in Alice in Wonderland relate to real-life experiences of questioning identity, challenging norms, and exploring the unknown.
- Allow students to share personal reflections on how curiosity has impacted their lives.

2. Activity: Creative Exercise (30 minutes)

- Ask students to rewrite a short scene from Chapters 1-3, infusing it with modern language or settings.
- o This helps students understand how language impacts tone and invites them to engage creatively with the text.

Phase 4: Synthesis and Review (60 minutes)

1. Mind Map Creation (20 minutes)

- o Create a collaborative mind map to organize key points from the lesson: characters, themes, symbols, and language techniques.
- Use student contributions to highlight connections between elements of the story.

2. Group Discussion (20 minutes)

o Conclude with a discussion on why *Alice in Wonderland* remains relevant and popular, especially in children's literature.

3. Q&A and Summary (20 minutes)

- o Summarize key takeaways from the lesson and open the floor for questions.
- o Recap major themes, character insights, and Carroll's literary techniques.

2.3: Taxonomy of objectives:

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	Taxonomy of objectives					
Knowledge		The Cognitive Process Dimension				
Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
A. Factual	1	1				
Knowledge						
B. Conceptual			3	2	2	
Knowledge						

C. Procedural			
Knowledge			
D. Meta			
Cognitive			
Knowledge			

2.4: Key words:

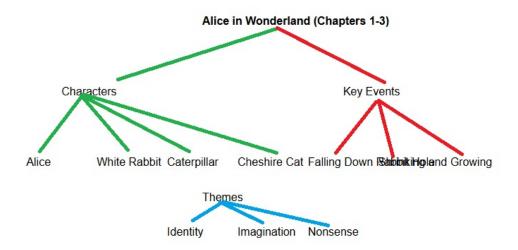
- Curiosity: Alice's insatiable curiosity leads her into Wonderland.
- Identity: Themes of self-discovery and transformation.
- Fantasy: Surreal elements that define Wonderland.
- Logic: Carroll's use of riddles, wordplay, and logic puzzles.
- Wonderland: The whimsical, unpredictable world Alice explores.

2.5: Key Diagrams (if any)

3. Discussion:

- 1. Examine the ways Alice struggle to adapt to the rules of the new world in Carroll's *Alice in Wonderland*.
- 2. Analyse "The Caucus Race" episode that parodies political process in Carroll's *Alice in Wonderland*.
- 3. Analyse how Carroll employs absurdity, paradox, and nonsense to introduce Wonderland's fantastical world in chapters 2 and 3 of *Alice in Wonderland*.

4. Mind Map:



5. Summary:

Alice in Wonderland begins with Alice following a peculiar White Rabbit down a rabbit hole, leading her into the fantastical world of Wonderland. In this strange realm, Alice encounters odd characters and experiences bizarre transformations. She struggles to make sense of the illogical events, questioning her identity and surroundings. Carroll's playful use of language

and logic adds humor and complexity to Alice's journey. These early chapters explore themes of curiosity, self-discovery, and the fluid nature of reality.

6. Assessment through questions/analogy/new ideas:

Write a short reflection on how curiosity shapes a person's identity.

Draw a scene from Chapters 1-3 or write an alternative ending.

7. FAQ's: MCQ's/ Descriptive questions:

What does the rabbit hole symbolize in Alice's journey?

8. References:

- 1. Carroll, Lewis. *The Annotated Alice: Alice's Adventures in Wonderland & Through the Looking-Glass*. Annotated by Martin Gardner, W.W. Norton & Company, 2000.
- 2. Rackin, Donald. *Alice's Adventures in Wonderland and Through the Looking-Glass: Nonsense, Sense, and Meaning.* Twayne Publishers, 1991.
- 3. Sigler, Carolyn. *Alternative Alices: Visions and Revisions of Lewis Carroll's Alice Books.* University Press of Kentucky, 1997.

9. Verified by Subject Expert:

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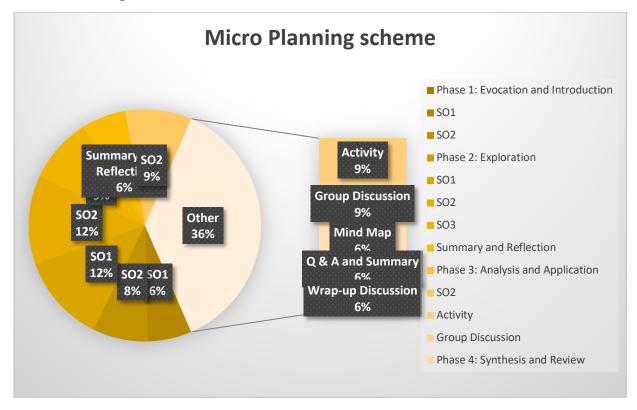
Lesson Plan

Programme	B. A. English
Semester	I
Course Title	Reading and Writing Skills- Animation Literature
Code	23UENSE1
Hours	2
Total Hours	30
Credits	2
Max Marks	50
Unit & Title	Unit IV: Mark Twain's The Adventure of Tom Sawyer (Chapter 1-5)
Name of the	V. Dorothy Catherine
Faculty	
T-L tools	Reading Material: Chapters 1-5 of The Adventures of Tom Sawyer.
	Visual Aids: Character charts, mind maps, PowerPoint slides.
	Creative Materials: Worksheets for diary entry activity, text excerpts for
	analysis.

Pre-requisite Knowledge : Understanding of 19th-century American society and basic

familiarity with adventure literature.

Micro- Planning : 300 minutes



Phase 1: Evocation and Introduction

SO1 20 min SO2 25 min

Phase 2: Exploration

SO1 40 min

SO2	40 min
SO3	30 min
Summary and Reflection	20 min
Phase 3: Analysis and Application	
SO2	30 min
Activity	30 min
Group Discussion	30 min
Phase 4: Synthesis and Review	
Mind Map	20 min
Q & A and Summary	20 min
Wrap-up Discussion	20 min

1. Topics for learning through Evocation (15 Min):

- a. Introduce Mark Twain and the historical and cultural setting of *The Adventures of Tom Sawyer*.
- b. Engage students by discussing childhood adventures or mischievous experiences, connecting these to Tom's character.

2. Topic Introduction:

2.1: General Objective:

To explore Mark Twain's The Adventures of Tom Sawyer as a foundational work in children's literature, focusing on its portrayal of childhood, friendship, and moral dilemmas.

2.2: Specific Outcomes:

SO1: Analyze the characteristics of Tom Sawyer and other main characters introduced in Chapters 1-5.

SO2: Identify and discuss major themes, including childhood freedom, moral choices, and friendship.

SO3: Examine Twain's use of humor, satire, and social commentary.

Phase 1: Evocation and Introduction (60 minutes)

1. SO1 - Character Introduction and Analysis (20 minutes)

- Read selected passages that introduce Tom Sawyer, Aunt Polly, and other key figures.
- o Brief discussion on students' first impressions of Tom as a character and how he embodies youthful curiosity and rebellion.

2. SO2 - Theme Exploration (25 minutes)

- o Introduce the themes of childhood freedom, mischief, and moral growth.
- o Discuss how Tom's behavior reflects a sense of freedom and adventure unique to his character.

Phase 2: Exploration (150 minutes)

1. SO1 - Character Development and Relationships (40 minutes)

o Dive deeper into Tom's interactions with friends like Huck Finn, analyzing how their friendship develops and what it represents.

• Create a character chart to track traits, relationships, and growth throughout the story.

2. SO2 - Theme Analysis: Moral Choices and Freedom (40 minutes)

- o Analyze the moral choices Tom faces in these chapters, such as telling the truth or tricking others.
- o Discuss with students how Twain uses these situations to show the conflicts and growth typical of childhood.

3. SO3 - Literary Techniques and Humor (30 minutes)

- Explore Twain's use of humor, dialect, and satire to create a vivid setting and memorable characters.
- o Discuss how Twain's humorous portrayal of childhood mischief serves as a form of social commentary.

4. Summary and Reflection (20 minutes)

- o Summarize key character insights, thematic points, and narrative techniques explored so far.
- Encourage students to reflect on which aspects of Tom's character they can relate to and why.

Phase 3: Analysis and Application (90 minutes)

1. SO2 - Social Commentary and Satire (30 minutes)

- o Discuss with students how Twain uses satire to highlight societal norms and values of the time.
- o Identify examples in the text where Twain critiques aspects of society, such as education or discipline.

2. Activity: Creative Writing (30 minutes)

- Ask students to write a short diary entry from Tom's perspective, describing an adventure or a conflict.
- o This exercise allows students to understand Tom's character more deeply by engaging in his perspective.

3. Group Discussion (30 minutes)

- Divide students into small groups to discuss key themes and character motivations, sharing their diary entries.
- o Conclude with a brief class discussion to synthesize insights from each group.

Phase 4: Synthesis and Review (60 minutes)

1. Mind Map Creation (20 minutes)

- o Collaboratively create a mind map with themes, characters, and significant events from Chapters 1-5.
- Use student input to highlight connections between Tom's character traits, his friendships, and his moral choices.

2. Q&A and Summary (20 minutes)

- Review major themes, character insights, and Twain's humorous narrative style.
- o Allow students to ask questions and provide final thoughts on the lesson.

3. Wrap-Up Discussion (20 minutes)

o Discuss why *The Adventures of Tom Sawyer* remains significant in children's literature and its influence on the genre.

2.3: Taxonomy of objectives:

Taxonomy of objectives						
Knowledge		The Cogni	itive Prod	ess Dimens	ion	
Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
A. Factual				1		
Knowledge						
B. Conceptual		2				
Knowledge						
C. Procedural						
Knowledge						
D. Meta					3	
Cognitive						
Knowledge						

2.4: Key words:

- Adventure: Tom's quest for excitement and new experiences.
- Friendship: The bond between Tom and Huck.
- Freedom: Childhood freedom and independence.
- Rebellion: Tom's mischievous acts and defiance.
- Satire: Twain's humorous critique of societal norms.

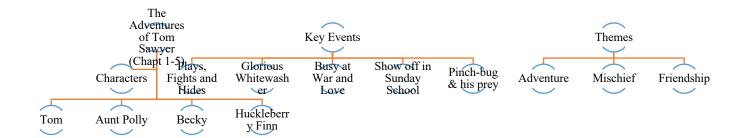
2.5: Key Diagrams (if any)

Video: https://www.youtube.com/watch?v=iRFix4HEPis

3. Discussion:

- 1. Restate how Tom acts when confronted by Aunt Polly and the ways he tries to get out of punishment in Mark Twain's *The Adventures of Tom Sawyer*.
- 2. Discuss Mark Twain's depiction of Tom's state of mind as he ventures into the graveyard at night and his reactions to what he experiences in the graveyard.
- 3. Show the dramatic nature of Aunt Polly in Mark Twain's *The Adventures of Tom Sawyer*.

4. Mind Map:



5. Summary:

In The Adventures of Tom Sawyer, young Tom is introduced as a mischievous, adventurous boy growing up along the Mississippi River. Tom often finds himself in trouble, as seen in his famous fence-painting trick, where he convinces other boys to do his work. His friendships with characters like Huck Finn highlight his longing for freedom and adventure. Twain uses humor and satire to depict Tom's playful rebellion against societal norms. The story explores childhood innocence, the joys of freedom, and the challenges of growing up.

6. Assessment through questions/analogy/new ideas:

- 1. How does Twain use humor to portray Tom's mischief? Provide examples from Chapters 1-5.
- 2. Assess students on their understanding of the plot, themes, and literary techniques in Twain's work.

7. FAQ's: MCQ's/ Descriptive questions:

- 1. Write a reflection on how the concept of freedom is portrayed in The Adventures of Tom Sawyer.
- 2. Draw a scene from Chapters 1-5 or illustrate an interaction between Tom and Huck.

8. References:

- 1. Twain, Mark. *The Adventures of Tom Sawyer: A Norton Critical Edition*. Edited by Beverly Lyon Clark, W.W. Norton & Company, 2007.
- 2. Cox, James M. Mark Twain: The Fate of Humor. University of Missouri Press, 2002.
- **3.** Fisher, Walter R. *American Literature, American Culture*. Oxford University Press, 1999. (Includes sections on Twain's depiction of American life.)

9. Verified by Subject Expert:

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ST. MARY'S COLLEGE (AUTONOMOUS)
THOOTHUKUDI

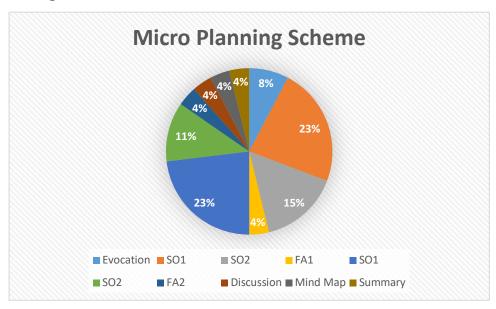
Lesson Plan

Programme	B. A. English
Semester	I
Course Title	Reading and Writing Skills- Animation Literature
Code	23UENSE1
Hours	2
Total Hours	30
Credits	2
Max Marks	50
Unit & Title	Unit V: How to create a character profile and literary scrapbook
Name of the Faculty	V. Dorothy Catherine
T-L tools	Samples & Templates
	Bulletin board
	Digital scrapbook platforms

Pre-requisite Knowledge: Basic understanding of story elements, Familiarity with

children's literature, Basic creative writing skills

Micro- Planning : 120 minutes



Evocation : 10 min

SO1 : 30 min

SO2 : 20 min

FA1 : 5 min

SO1 : 30 min

SO2 : 15 min

FA2 : 5 min

Discussion : 5 min

Mind Map : 5 min

Summary : 5 min

1. Topics for learning through Evocation (10 Min):

Show students a well-known character from children's literature (e.g., Harry Potter) and discuss what makes the character memorable.

2. Topic Introduction:

2.1: General Objective:

To develop students' analytical and creative documentation skills through character profiling and literary scrapbook creation in children's literature

2.2: Specific Outcomes:

- SO1: Create comprehensive character profiles by analyzing physical, psychological and social aspects of literary characters
- SO2: Design organized literary scrapbooks using creative documentation and visual presentation techniques

First Phase:

SO1: Students will learn the elements of a character profile (30 minutes)

SO2: Students will understand how to analyze character traits and development (25 minutes)

FA1: Create a simple character profile for a favorite literary character

Second Phase:

SO1: Students will learn the components of a literary scrapbook (30 minutes)

SO2: Students will practice creative documentation techniques (20 minutes)

FA2: Begin creating a literary scrapbook page

Discussion: Interactive session on character analysis and creative documentation

Mind Map: Visual representation of character profile elements and scrapbook components

Summary: Review of key concepts and techniques learned

1. Topics for learning through Evocation:

- What makes a character memorable?
- How do authors develop characters?
- Why is documentation important in literary analysis?

2. Topic Introduction:

2.1: General Objective:

To enable students to create detailed character profiles and maintain organized literary scrapbooks for analyzing and appreciating children's literature.

2.2: Specific Outcomes:

- SO1: Create comprehensive character profiles by analyzing physical, psychological and social aspects of literary characters
- SO2: Design organized literary scrapbooks using creative documentation and visual presentation techniques

First Phase: SO1 (30 minutes):

- Identify essential elements of a character profile
- Learn different methods of character analysis
- Understand physical, psychological, and social aspects of characters

SO2 (25 minutes):

- Analyze character development through story progression
- Identify character motivations and conflicts
- Study character relationships and interactions

Second Phase: SO1 (30 minutes):

- Learn scrapbook organization techniques
- Understand different documentation methods
- Master creative presentation skills

SO2 (20 minutes):

- Practice visual documentation
- Learn annotation techniques
- Develop creative layout skills

Mind Map (10 minutes)

Summary (5 minutes)

2.3: Taxonomy of objectives:

Taxonomy of objectives						
Knowledge		The Cogn	itive Prod	ess Dimens	ion	
Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
A. Factual						
Knowledge						
B. Conceptual						
Knowledge						
C. Procedural						1
Knowledge						

D. Meta			2
Cognitive			
Knowledge			

2.4: Key words:

- Character profile
- Literary scrapbook
- Character development
- Documentation
- Analysis
- Creative presentation
- Visual documentation
- Character traits
- Story elements

2.5: Key Diagrams: (if any)

2.6: Preparation:

Creating a Character Profile

A Character Profile is a detailed description that helps students understand a character's traits, motivations, and development throughout a story.

Steps to Create a Character Profile:

- 1. Character Details: Name, age, physical appearance, family background, etc.
- 2. **Personality Traits**: Describe the character's primary personality traits (e.g., brave, curious, mischievous).
- 3. **Goals and Motivations**: What does the character want or aim to achieve? What motivates their actions?
- 4. **Strengths and Weaknesses**: List the character's strengths (e.g., cleverness, kindness) and weaknesses (e.g., impulsiveness).
- 5. **Key Relationships**: Note the character's relationships with other characters and how these shape their personality or decisions.
- 6. **Character Arc**: Describe how the character changes or grows over the story, including any lessons they learn.

Creating a Literary Scrapbook

A Literary Scrapbook is a creative project that combines textual and visual elements to explore themes, characters, and significant moments in a literary work.

Steps to Create a Literary Scrapbook:

- 1. **Select Key Themes and Scenes**: Choose meaningful quotes, events, or themes from the text to include in the scrapbook.
- 2. **Visuals**: Add illustrations, sketches, or collages that reflect the setting, characters, or events. These can be drawn, printed, or cut from magazines.

- 3. **Character Highlights**: Dedicate sections to major characters, including images, quotes, or objects that represent their personalities and journeys.
- 4. **Personal Reflections**: Add personal reflections or responses to each theme or character to deepen engagement with the text.
- 5. **Decorative Elements**: Use decorative elements (colored papers, fonts, etc.) to make the scrapbook visually appealing and thematic, reflecting the story's tone or setting.

3. Discussion:

- Interactive analysis of sample character profiles
- Group discussion on effective documentation methods
- Sharing of creative presentation ideas
- Q&A session on technical aspects

4. Mind Map:

- Central theme: Character Profile & Literary Scrapbook
- Branch 1: Character Elements (Physical, Psychological, Social)
- Branch 2: Documentation Methods (Visual, Written, Creative)
- Branch 3: Analysis Techniques
- Branch 4: Creative Presentation

5. Summary:

Character Profile

A Character Profile is a tool to analyze and understand a character deeply by outlining their personality, motivations, relationships, and development. Start by identifying basic details like the character's name, age, and background, then describe their main traits, goals, and any unique quirks. Consider how the character interacts with others and how these relationships influence their growth. Reflect on the character's strengths and weaknesses, exploring how they shape their choices. Finally, track any changes in the character over time, noting key moments that define their journey.

Literary Scrapbook

A Literary Scrapbook is a creative project that combines art and analysis to capture key elements of a story. To begin, select memorable quotes, scenes, or themes from the text to highlight. Enhance each selection with visuals, such as drawings, images, or collages, that bring the story's world to life. Include sections dedicated to main characters, featuring images, symbols, and brief descriptions or quotes that reflect their personalities. Add personal reflections or creative touches that express your own responses to the story, making the scrapbook both an analytical and artistic project.

6. Assessment through questions/analogy/new ideas:

- Create a character profile for an original character- Alice or Tom Sawyer
- Design a sample scrapbook page- Jaguar Poem
- Analyze a character from assigned reading- Huck
- Present creative documentation methods

7. FAQ's: MCQ's/ Descriptive questions:

- 1. What are the essential elements of a character profile?
- 2. How do you document character development effectively?
- 3. What makes a literary scrapbook successful?
- 4. How can visual elements enhance character analysis?
- 5. What are different methods of creative documentation?

8. References:

- Kirby, Dawn Latta, and Dan Kirby. Inside Out: Strategies for Teaching Writing. Heinemann, 2012. (Offers guidance on character analysis and creative projects like literary scrapbooks.)
- Leland, Christine, et al. Teaching Children's Literature: It's Critical!. Routledge, 2012. (Contains methods for engaging with characters and themes creatively.)
- Wilhelm, Jeffrey D. Engaging Readers & Writers with Inquiry: Promoting Deep Understandings in Language Arts and the Content Areas with Guiding Questions. Scholastic, 2007. (Provides strategies for creating character profiles and analytical projects.)

9. Verified by Subject Expert:

Course In-charge

V. Dorothy Catherine

A. Indik Shula Damayarki

Approved by HoD

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Lesson Plan

Programme	B. Com
Semester	V
Course Title	Modern Banking
Code	21UCOC52
Hours	5
Total Hours	75
Credits	5
Max Marks	60
Unit & Title	Unit IV: E- Delivery Channels
Name of the	Ms. T. Manuel Infany
Faculty	
T-L tools	Mind Maps, Power point, Group Discussion

Pre-requisite Knowledge : Basics about E- Banking, Benefits and opportunities of

E- Banking

Micro- Planning : 60 minutes



Evocation : 2 min

SO1 : 10 min

SO2 : 10 min

FA1 : 2 min

SO1 : 10 min

SO2 : 10 min

FA2 : 2 min

Discussion 10 min

Mind Map 2 min

Summary 2 min

1. Topics for learning through Evocation:

Brief explanation about E- banking and its usage in daily life. Ask the students to share their knowledge its usage

2. Topic Introduction:

2.1: General Objective:

- To understand the different E-Delivery Channels
- To learn to apply in life

2.2 : Specific Outcomes:

- To know about the types of E- Delivery channels
- To have a clear knowledge about the usage difference of the channels

First Phase:

SO1 (10 minutes): Explain what is E- delivery channels and its types. SO2 (10 minutes): Discuss about its usage on different circumstances.

Second Phase:

SO1 (10 minutes): Clarify that ATM, Smart Cards, Telebanking, Internet Banking, E-Cheques are the different.

SO2 (10 minutes): Explore the examples of its usage in life under different situation

Mind Map (2 minutes)

Create a simple mind map that clarifies with the differences on ATM and Smart card, Telebanking and Internet banking

Summary (2 minutes)

Summarize the Advantages and disadvantages of E-Delivery Channels by group discussion

2.3 : Taxonomy of objectives:

Taxonomy of objectives						
Knowledge				ess Dimens	ion	
Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
A. Factual		1				
Knowledge						
B. Conceptual		2				
Knowledge						
C. Procedural					1	
Knowledge						

D. Meta			1
Cognitive			
Knowledge			

2.4: Key words:

E-Delivery Channels, ATM, Smart Cards, Internet Banking

2.5 : Key Diagrams (if any)

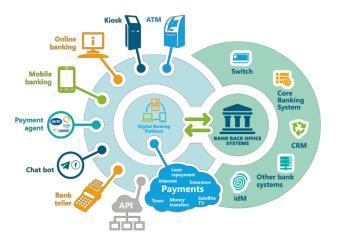
Powerpoint Presentation

 $\underline{https://gamma.app/docs/E-Delivery-Channels-in-Banking-Redefining-Customer-Experience-6rboexdjfqld7aa}$

3. Discussion:

Students were asked to discuss in detail about the channels and its usage and were asked to frame a case study on the usage of E- Delivery channels

4. Mind Map



5. Summary

Electronic banking has many names like e banking, virtual banking, online banking, or internet banking. It is simply the use of electronic and telecommunications network for delivering various banking products and services. Through e-banking, a customer can access his account and conduct many transactions using his computer or mobile phone. In India, since 1997, when the ICICI Bank first offered internet banking services, today, most new-generation banks offer the same to their customers. In fact, all major banks provide e-banking services to their customers.

Some popular Services Under E- Banking

- 1. ATM
- 2. Telephone banking

- 3. Smart Cards
- 4. Mobile banking
- 5. Internet banking

Each service is different from others in its usage.

6. Assessment

Formative Assessment 1 (FA1) (2 minutes)

Students are asked to explain the various mobile apps for banking

Formative Assessment 2 (FA2) (2 minutes)

A quick review on the advantages and disadvantages of E-Delivery channels.

7. FAQ's: MSQ's/ Descriptive questions:

- 1. What is E-Delivery channel? State its types
- 2. Compare and Contrast Internet banking and Mobile banking

8. References:

Gordon and Natrajan Banking theory Law and practice, Delhi Himalaya Publishing House, 2021 edition

Gurusamy S. Banking Theory Law and Practice. Chennai: Vijay Nicole Imprints Private Ltd, 2022 edition.

9. Verified by Subject Expert:

Mayorit

Approved by HoD

Maria Sahaya Rossyaine

Co-ordinator.

Department of Commerce (SSC).

St.Mary's College (Autonomous):

Thoothukuul-02000'l

LESSON PLAN SAMPLE FOR SCIENCE

Objective Oriented Learning Process RBT

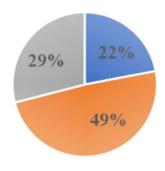
Programme	B.Sc. Zoology
Semester	V
Subject Title	Major Core: Animal Physiology
Code	21UZOC51
Hours	4
Total Hours	60
Credits	4
Max Marks	75
Unit & Title	Unit I: Malnutrition
Name of the Faculty	Dr.P.Subavathy
T-L tools	Lecture method, Audio Visual aid: video showing about malnutrition. Visual aid: Picture of Kwashiorkor, Marasmus, Obesity, multimedia approach and evaluated by oral questioning, presenting the report of group discussion and checking the observation note.

Prerequisite Knowledge:

Knowledge about nutrients and nutritional requirements of the human body is necessary.

Micro -planning

Prevalence of malnutrition



■Wellnourished ■ At risk of malnutrition ■ Malnourished

1. Topic for Learning through evocation

Food is defined as a composite mixture of various substances which sustain life activities. Energy is derived from food. Nutrition is the process of obtaining nourishment. Malnutrition is caused by a relative or absolute deficiency or excess of one or more essential nutrients.

The causes of Malnutrition include the low intake of food, Mental health problems, Lack of breastfeeding, Poverty, Lack of appetite, and Alcoholism. The symptoms are weakness of muscle, Anaemia, Increased susceptibility to infections, Delayed healing of wounds, Depression, Irregular menstruation, and Weight loss. The preventive measure is to maintain a balanced diet and include plenty of vegetables and fruits along with dairy products in the diet.

Obesity is expressed by being overweight or fat, and it happens because of excessive fat accumulation and fat storage in the body. Overweight is caused by an imbalance between calories consumed as food and calories expended as energy. Food intake will increase, but energy expenditure will decrease due to decreased physical activity. Unspent calories are turned into fat and stored.

Anaemia is a condition defined by a lack of red blood cells or hemoglobin in the bloodstream. It is caused by a lack of iron, vitamin B12, and folic acid. It happens frequently in pregnant and breastfeeding mothers. The treatment involves iron supplements, blood transfusions, IV fluids, and in rare circumstances, bone marrow transplants

2. Topic Introduction:

Nutrition is a science dealing with the composition of food, food intake, and assimilation in the body. It includes food, ingestion, digestion, absorption, and egestion. Malnutrition is defined as a pathological condition resulting from a relative or absolute deficiency or excess of one or more essential nutrients.

2.1. General Objective:

Enables the students to understand malnutrition and its types

2.2. Specific Objectives:

Enables the students to:

- 1. describe the occasions in which malnutrition occurs
- 2. identifies the symptoms of malnutrition
- 3. compare Kwashiorkor and Marasmus
- 4. summarize the types of Anaemia
- 5. give an outline of the preventive measures for malnutrition

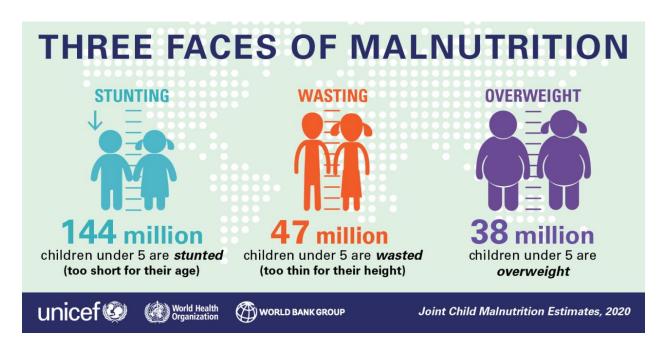
2.3: Taxonomy of objectives:

Taxonomy of Objectives						
Knowledge	Knowledge The Cognitive Process Dimension					
Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
A. Factual	1			1,2,3	4	
Knowledge						
B. Conceptual		1, 2,3,4	3,4		2,3,4	
Knowledge						
C. Procedural				4		
Knowledge						
D. Meta Cognitive					5	
Knowledge						

2.4: Key words:

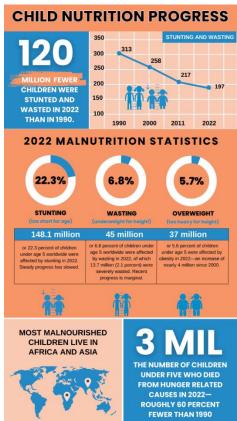
Nutrients, Malnutrition, Undernutrition, Overnutrition, Energy, Anemia, Deficiency, Children, Natal care, Overweight, Diet

2.5: Key diagrams (if any):

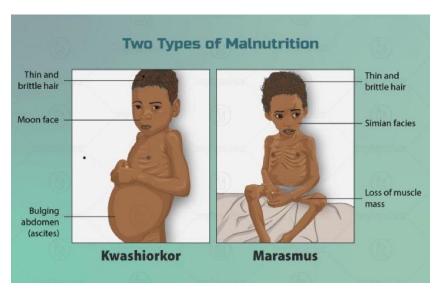


Undernutrition is depletion of energy resulting from insufficient food intake over an extended period of time. Overnutrition is the pathological state resulting from the comsumption of excessive quantity of food over an extended period of time. Imbalance is due to disproportion of nutrients in the diet.





More than Aduts childrens get easily malnutritent deficiency due to the imbalanced diet mainly the childrens living in poverty.

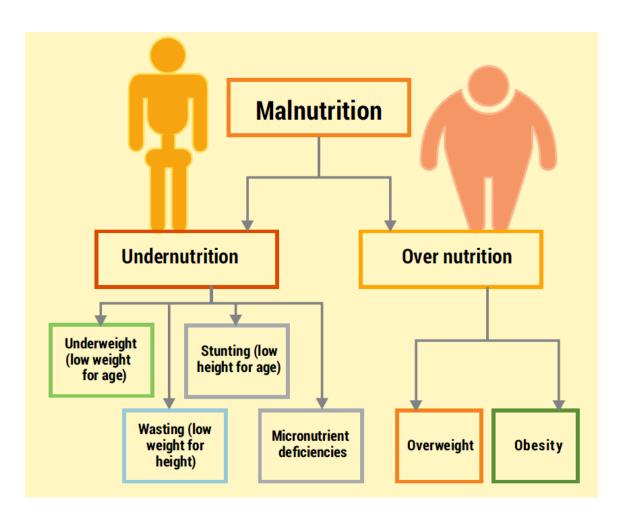


Kwashiorkor and Marasmus are mainly caused by the protein deficiency. The treatment of the Kwashiorkor includes Deworming, Ambulatory, hospital treatment and supplementary feeding programmes. Marasmausd adequate dietary therap treatment involves nutrition supplements and adequate dietary therapy.

3. Discussion:

The students will be asked to retrieve the scientific terms, facts, and concepts mentioned in the content analysis. One member will be called from each group to present the outcome of the group. The students who have not taken part will be noted, and they will be kindly asked to check on their weight and height and that of their friends. Arrange the class to visit a clinic to record the diagnosis of malnutrition by biochemical tests, anthropometric, and physiological tests.

4. Mind Map:



5. Summary: Executing the acquired knowledge by asking questions like 'How mental health problems may result in malnutrition?' Differentiating between Microcytic anaemia and Megaloblastic anaemia. How does hygienic preparation of food mainly infant food help in the prevention of malnutrition?

6. Assessment through Stimulating questions/Analogy/New ideas and Concepts:

• Generating mental ideas about creating an e-content on the occurrence of malnutrition

- Producing the e-content.
- Measuring BMI helps in understanding malnutrition
- Differentiating undernutrition, Overnutrition, Imbalance, Specific deficiency

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1. Insufficient food o	r starvation leads to		
a. Undernutrition	b. Overnutrition	c. Imbalance	d. Specific deficiency

- 2. What is not the cause of malnutrient?
- a.Poverty b. Low intake of food c. Eating only junk food d. Mental health problems
- 3. Which type of malnutrition occurs among children during the weaning and postweaning period? a.Kwashiorkor b.Marasmus c. Obesity d. Anaemia
- 4. What is one of the symptoms of marasmus
- a. Mental changes b. Monkey face c. Breathlessness d. Hepatomegaly
- 5. Obesity occurs in of adolescent population
- a. 10 to 20 percent b. 30 to 35 percent c. 10 to 15 percent d. 15 to 30 percent
- 6. Mention the name of the disease in which the bone marrow and hematopoietic stem cells are damaged.
- a. Sickle cell anaemia b. Pernicious anaemia c. Aplastic anaemia d.Hemolytic anaemia

8. References: (Books/Periodicals/Journals)

- 1. Verma P, Tyagi S. and Agarwal V.K. Animal Physiology. New Delhi: S. Chand& Company Ltd, 2002.
- 2. Goyal and Sastry. Animal Physiology. Meerut: Rastogi Publications, 7th Edition 2017.
- 3. Rastogi S.C. Essentials of Animal Physiology. Chennai: New Age International Private Limited 4th Edition 2019.
- 4. Sembulingam K. and Prema Sembulingam. Essentials of Medical Physiology. New Delhi:8 th Edition Jaypee Brothers Medical Publishers. 2019.
- 5. Maria Kuttikan A and Arumugam N. Animal Physiology. Nagercoil Kottar: Saras Publication 2014.
- 6. Nagabhushanam R. Kodarkar M.S. and Sarojini R. Text Book of Animal Physiology. New Delhi: Second Edition, Oxford and IBH Publishing Co, Pvt. Ltd. 2002.

9. Verified by Subject Expert

Dr. P. Subavathy

P. Subalto

Approved by HOD

Dr. N. AROKIYA MARY M.Sc.,M.Phil.,Ph.D. Associate Professor & Head PG & Research Department of Zoology St. Mary's College (Autonomous) Thoothukudi - 628 001.

LESSON PLAN

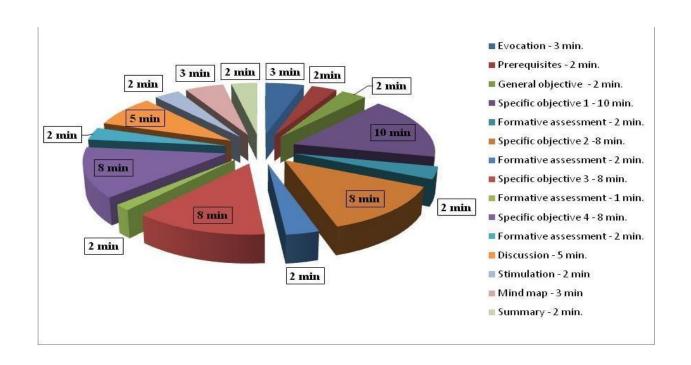
Objective Oriented Learning Process RBT

Programme	B.Sc. Botany					
Semester	III					
Subject Title	Major Core: Bryophytes, Pteridophytes and Gymnosperms					
Code	23UBOC31					
Hours	5					
Total Hours	75					
Credits	5					
Max Marks	100					
Unit & Title	Unit: 1I – Stelar Evolution					
Name of the Faculty	Ms. S. Pauline Jenifer					
T-L tools	Lecture method, Visual aid: PPT, Picture showing the evolution of					
	stele					

Prerequisite Knowledge:

Knowledge of vascular bundle and its function

Micro-planning



1. Topic for Learning through evocation

Pteridophytes were among the first plants to make the transition from water to land a long time ago. Another name for them is snakes of the plant kingdom. They act as the earth's explorers, opening the path for other plants to flourish. Similar to snakes, pteridophytes underwent modifications of their own to adjust to the environment on land. They shaped the land and provided habitat for various life forms when they were a part of vast forests millions of years ago. They were the first plants with veins, which facilitated the movement of nutrients and water. They were able to grow taller and stronger as a result. Like plant seeds, their microscopic spores propagated life everywhere they went.

Students were asked to recite about the components of vascular bundle and its functions. Also they are given with a types of steles

2. Topic Introduction:

- 1. The term stele has been derived from a Greek word meaning pillar.
- 2. According to the older botanists, the vascular bundle is the fundamental unit in the vascular system of pteridophytes and higher plants.
- 3. According to Van Tieghem and Douliot (1886), the stele is defined as a central vascular cylinder, with or without pith and delimited the cortex by endodermis.

3.1. General Objective:

Enables the students to understand the evolution of stele in pteridophytes.

3.2. Specific Objectives:

Enables the students to:

- 1. describe the components of stele.
- 2. compare the types of stele
- 3. show the evolution of stele
- 4. distinguish the various types of steles in plants

2.3: Taxonomy of objectives:

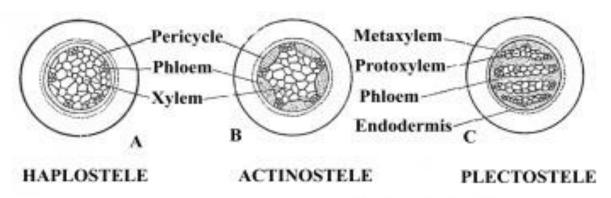
Taxonomy of Objectives									
Knowledge	The Cognitive Process Dimension								
Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create			

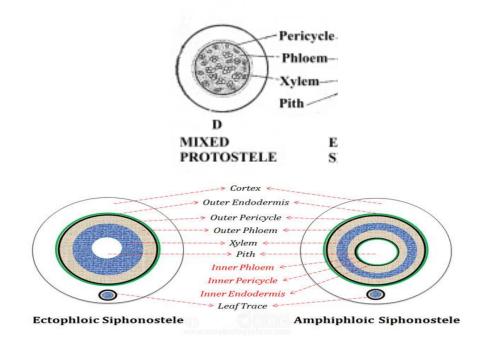
A. Factual	1				
Knowledge					
B. Conceptual		1,2			
Knowledge					
C. Procedural			3,4		
Knowledge					
D. Meta Cognitive				2,3,4	
Knowledge					

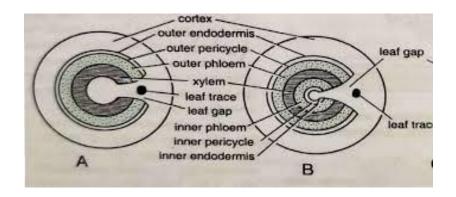
2.4: Key words:

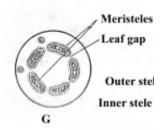
Stele, Protostele, Siphonostele, Solenostele, Dictyostele and Eustele

2.5: Key diagrams (if any):









DICTYOSTELE

Discussion:

The students will be asked questions regarding the types of stele. One of the students will be asked to draw any type of stele studied during the class.

4. Mind Map:

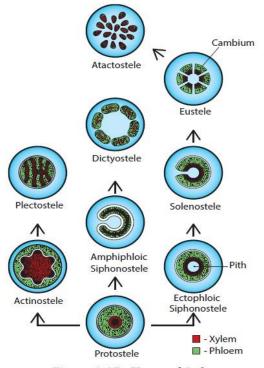


Figure 2.37: Types of Stele

5. Summary:

Students will be asked to identify how evolution takes place in the types of stele studied by using the mind map..

6. Assessment through Stimulating questions/Analogy/New ideas and Concepts:

- Generating mental idea about creating an e-content of working of Stelar evolution
- Producing the e-content.
- Provided with plant specimens with different stele and asked to identify using taking sections

7. FAQ's:

- 1. Find out the incorrect statement pertinent to stele
- (a) protostele is the most advanced stele (b) medulated protostele is siphonostele

individual unit of dictyostele is meristele (d) protostele with star shaped xylem is

Actinostele

- 2. Identify the primitive type of stele
- (a) protostele (b) dictyostele (c) amphiphloeic siphnostele (d) solenostele.
- 3. Recall that amphiphloeic siphonostele has
- (a) phloem towards innerside of xylem (b) phloem surrounded by xylem (c) xylem on both sides surrounded by phloem (d) phloem outside the xylem.
- 4. Mention a stele without pith

a)solenostele (b) siphonostele (c) haplostele (d) amphiphloic siphonostele

8. References

- 1. Vashishta, B. R., Sinha, A. K., & Kumar, A. (2022). Botany for Degree Students: Pteridophytes. New Delhi: S. Chand Publishing.
- 2. Johri, R. M., Lata, S., & Sharma, S. (2012). A Textbook of Pteridophyta. New Delhi: Wisdom Press.
- 3. Yadav, R. S. (2019). *Textbook of Pteridophytes*. New Delhi: Seva Books.

