

APPENDIX I

ACHIEVEMENT TEST FOR ICT IN EDUCATION

Date:

Time: 50 min

Name of the Student teacher:

Total Marks: 50

Subject Background:

Experience in ICT:

Question No.	1	2	3	4	5	Total Marks
Marks Obtained						

General Instruction:

- Read the Questions and answer accordingly
 - Figures on the right hand side indicate marks.
 - All Questions carry equal weightage.
 - The test is of 50 marks.
 - Time for the test is 50 mins.
-

Question 1 Complete the following statements with suitable word or words.
(10)

1. Google Search is a _____ and used for the _____ of Information.
2. One can do or undo with the help of _____ key combination from the Keyboard.
3. Facebook users can prevent unwanted friends with the help of _____ an option without removing them from the friend list.
4. Presentation of a project work is done effectively with the help of _____ Software of Microsoft Office.
5. Use of VBlog is to share _____ with the others on internet.
6. Microsoft Excel is used for the data entry and preparation of _____ from the selected data.

7. _____ is the widely used Blog for educational purpose.
8. One can use _____ Software for the creation of the layout of Classroom Website.
9. Skype is widely used Social Media for the _____ on the Internet.

Question 2 (A) Complete the following statements by selecting the most appropriate statement from the list of options. Indicate your choice by encircling the alphabet.

(8)

1. Main Use of Microsoft Office Excel Software is for

(A) Data entry	(C) Certificate Preparation
(B) Presentation	(D) Website Preparation
2. _____ is a type of Micro blogging.

(A) Blogs	(C) Facebook
(B) MOODLE	(D) Twitter
3. Wiki is used for...

(A) Development of Video	(C) Publishing content on Internet
(B) Development of Audio	(D) Creation of Website
4. One can change Background Style of the PowerPoint Slide with the help of _____ toolbar.

(A) Transition	(C) Animation
(B) Design	(D) View
5. One can design School Calendar by using Advertisement command from _____ group under Insert Toolbar.

(A) Illustration	(C) Links
(B) Building Block	(D) Page
6. We can use Skype ...

(A) As an Online Mode Only	(C) As an Offline Mode
(B) As an Online and Offline Mode	(D) None of Above
7. Mail merge is one of the features of

(A) Google	(C) WORD
(B) POWERPOINT	(D) PUBLISHER
8. One can mix Photos with the help of _____ option under Picasa Software.

(A) Edit	(C) Make a Poster
(B) Movie Making	(D) Collage

Question 2 (B) Go through the following statements and Judge each statement as True or False and encircle the correct answer. (3)

1. Central Alignment in Word document is done with the help of Ctrl+E. T F
2. Picasa Software is used only for Photo editing. T F
3. Slides of the Powerpoint Presentation can be converted into JPG Image Format. T F
4. Google Site is an application of Google, used for Content Development from Internet. T F
5. Cutting and Joining of Video is possible with the help of Windows Movie maker. T F
6. Blogs are exclusively made for the educational purpose only T F

Question 2(C) Match the following from Column A and Column B (3)

Column A	Column B
(A) Certificate Preparation	(A) Excel
(B) Creation of E-fieldtrip	(B) Google Site
(C) Followers	(C) Skype
(D) Video Chatting	(D) Publisher
(E) Creation of Chart from assembled Information	(E) Blogs
(F) Database Management	(F) Windows Movie Maker
(A) ---.....	(B) ---.....
(D) ---.....	(E) ---.....
	(C) ---.....
	(F) ---.....

Question 3 (A) Define the following terms and write the educational implication of the terms. (3)

1. Skype

2. Microsoft Excel:

3. Windows Moviemaker:

Question 3 (B) Answer the following in brief as directed

(2)

1. Importance of Searching Information from the Internet.

2. Utilization of Website in Classroom.

Question 3(C) List out the salient features of Facebook and write its Educational importance. (3)

Question 3 (D) Write the importance of Video in Science Teaching.

(3)

Question 4 (A) Write any two Differentiating points for each:

(4)

(1) Word and Publisher

Word	Publisher

(2) Features of Blogs and Features of Twitter

Features of Blogs	Features of Twitter

Question 4 (B) Educational use of Microsoft office Word.

(2)

Question 5 (A). What is a Digital Lesson Plan and how PowerPoint helps in preparing Digital Lesson Plan in Science teaching? (2)

Question 5 (B) As a teacher, how can you integrate social networking Sites in Science Classroom? (3)

Question 5 (C) Design layout of your Science classroom Website.

(4)

APPENDIX II

BLUE PRINT OF ACHIEVEMENT TEST

Weightage given to the Unit

Topics	Knowledge			Understanding			Application			Topic wise total	Total
	Obj	SA	LA	Obj	SA	LA	Obj	SA	LA		
M. S. Office and educational uses	1									1	16
Microsoft Word	1			0.5					2	3.5	
Microsoft Powerpoint	1			1.5	1				2	5.5	
Microsoft Excel	1	1		1.5						3.5	
Microsoft Publisher	1			0.5	1					2.5	
Creation of Video	1					3				4	7.5
PICASA	0.5			1						1.5	
Moviemaker	0.5	1		0.5						2	
Searching and Creating Website									4	4	10
Google Site	1.5	1		0.5						3	
Google	2	1								3	
Web 2.0 tools and educational Use	1								3	4	16.5
Facebook		1		1		2				4	
Blogs	1.5			0.5	1					3	
Twitter	1				1					2	
Skype	2	1		0.5						3.5	
Domain wise total	16	6		8	4	5			11		
	22			17			11				50

APPENDIX III

PERCEPTION OF THE STUDENT-TEACHERS ON USING ICT AND RELATED SKILLS

The following statements are pertaining to perception of the student-teachers towards ICT. Each statement is to be perceived against 5-point Scale- Strongly Agree, Agree, Un-decided, Disagree, Strongly Disagree. Please mark your response by putting a tick mark (✓) against your perception.

Note: Collected information is strictly keep confidential and used only for research purpose.

Name of the Student teacher:

Sr. No.	Statement	Strongly Agree	Agree	Un-decided	Disagree	Strongly Disagree
1	I use word for the preparation of assignment.					
2	I use Twitter to twit on Educational Issues.					
3	I am not in favor of creating Blog for my class.					
4	I use “ASK QUESTION” on Facebook to take opinion of others on Social Issues.					
5	I am not comfortable in using Excel for managing data.					
6	Excel presents an easy way for data processing and presentation in graphical form.					
7	I rarely use Windows Moviemaker for developing Video.					
8	I generally use Google search engine for searching Educational information.					
9	I have no idea of Educational use of Twitter.					
10	I am not familiar with Picasa software for creating Videos.					
11	Microsoft Publisher provides better options for creating e-poster and e-calendar.					
12	I like to write an article on Educational issues and share it with others online.					
13	I believe that technology has significant impact on Education.					
14	I recommend to use PowerPoint					

	Presentation for strengthening classroom teaching.					
15	I browse through educational sites to update my knowledge.					
16	I use Edublog to share information with others.					
17	I prefer Windows Moviemaker over Picasa Software for managing Videos.					
18	I like to share information with friends on Blog.					
19	I very often use Facebook for sharing information with friends.					
20	I am not aware of application of Google.					
21	I advocate the use of Technology in Classroom.					
22	I am actively involved in participating and sharing educational thoughts Online.					
23	I do not use Educational websites to interact with teachers.					
24	I use WhatsApp for connecting with like-minded people.					
25	I use Skype for video chatting.					

APPENDIX IV

REACTION OF THE STUDENT-TEACHERS TOWARDS THE DEVELOPED MULTIMEDIA LEARNING PACKAGE

The following statements are pertaining to the multimedia learning package developed for pre-service student-teachers. These statements are put under 5-point Scale- Strongly Agree (SA), Agree (A), Un Decided (UD), Disagree (D), and Strongly Agree (SD). Please mark your response by putting a tick mark (✓) against the appropriate level of your reaction.

Note: Collected information is strictly kept confidential and used only for research purpose.

Name of the Student-teacher:

Sr. No.	Items	Strongly Agree	Agree	Un-decided	Disagree	Strongly Disagree
1	Content covered under each unit of multimedia learning package was sufficient.					
2	Concepts were clarified properly.					
3	Examples provided in the multimedia learning package were adequate for the purpose.					
4	Examples given in the multimedia learning package were helpful in conceptual clarity.					
5	Examples provided in the package were easy to understand.					
6	Teaching points given under each unit were logically sequenced.					
7	Pictures given in the multimedia learning package were relevant to the topic.					
8	Demonstrations shown in the multimedia learning package were clear.					
9	The learning material provided helped in self learning.					
10	Learning through multimedia learning package developed ICT skills.					
11	Teaching strategy given was useful in providing practical experience.					
12	Multimedia learning package helped in understanding of the concepts.					
13	The multimedia learning package covered all the relevant topics.					

14	Instructions given in the learning resources were clear.					
15	Instructional manual contained all the information about the multimedia learning package.					
16	Learning through multimedia learning package was very interesting as due to hands on experiences.					
17	Learning experience provided through multimedia learning package assisted in developing creativity.					
18	Learning through multimedia learning package was helpful in developing skills of information management.					
19	Media Exposure provided through multimedia learning package facilitated development of skills of media designing.					
20	Interaction and learning through multimedia learning package helped in developing skills of collaboration and communication.					
21	Learning environment provided through multimedia learning package aided in developing techno pedagogical skills.					
22	Learning exposure provided through multimedia learning package helped in developing skill for creating Web enhanced learning environment.					
23	Multimedia learning package was user friendly.					
24	Multimedia learning package was helpful for planning digital lesson plan.					

APPENDIX V

RUBRICS TO ASSESS DIGITAL LESSON PLAN AND POWERPOINT PRESENTATION

Rubrics for evaluating PowerPoint Presentations			
1	Title Slide	<ul style="list-style-type: none"> Title Slide given Specified Subject, Standard, School Title well structured 	3.0
2	Content Presentation	<ul style="list-style-type: none"> Relevant to the topic Adequate and Appropriate information given. Content planned as per the available time Enough examples were planned. Additional web links and task provided. Content covered as per the requirement 	6.0
3	Organisation of Content	<ul style="list-style-type: none"> Content covered & organized as per level of learner Major and Minor concepts were interlinked properly. Contents organized logically 	3.0
4	Use of Audio/Video	<ul style="list-style-type: none"> Audio/video as per the requirement of the content. Clarity in Audio/video presented Audio/video synchronized with the content. Used as per the medium of Instruction. Hyperlink provided to file/web was working properly 	5.0
5	Use of Images/charts/Smart art	<ul style="list-style-type: none"> Appropriateness of image, charts, and smart art related to the content. Clarity of the images Description of Image/chart/smart art given properly 	3.0
6	Use of Animation and Slide Design	<ul style="list-style-type: none"> Relevant to the content. Appropriateness of Sound, Graphics and Animation. Text and slide transaction as per requirement. 	3.0
7	References and sites referred	<ul style="list-style-type: none"> Mentioned References/sites related to the topic. Adequate numbers of references were cited. References/websites were suggested for further reading 	2.0
Total Marks			25

Assessment Criteria for Technology Enriched Lesson Plan		
Unit Summary	<ul style="list-style-type: none"> • Summary of the Unit given clear and precise form. • Summary is relevant to the content. • Summary as per the level of the learner. 	3.0
Instructional Objectives	<ul style="list-style-type: none"> • Instructional objectives stated in clear and precise form. • Instructional Objectives relevant to the content. • Instructional objectives as per the level of the learner. 	3.0
Instructional Strategies	<ul style="list-style-type: none"> • Appropriate Instructional strategy Chosen as per the instructional objective. • Combination of practical experience, theory as per the level of students. • Activities planned as per content. 	3.0
Materials Needed	<ul style="list-style-type: none"> • List of materials required for teaching were supplied • Use of materials as per activity designed. 	2.0
Organization and Presentation	<ul style="list-style-type: none"> • Organisation of teaching points done logically • Content covered by considering Time factor • Presentation planned as per requirement of content • Linkage of teaching points 	4.0
Technology Used	<ul style="list-style-type: none"> • Selection and application of technologies as per the requirement. • Appropriate to the learning environment • Technology selected and used was as per the level of the students and content. 	3.0
Assessment	<ul style="list-style-type: none"> • Method used for assessing were as per instructional objectives. • Different approaches used for assessment. • Scope of Self-evaluation. 	3.0
Integrating Technology in Teaching	<ul style="list-style-type: none"> • Technology integrated was synchronized with teaching. • Application of technology in teaching was relevant to the content. • Integration of technology was justified • Integrate technology as per the level and context of the student. 	4.0
Total Marks		25

APPENDIX VI
CONTENT OF THE MULTIMEDIA LEARNING PACKAGE (CD)

The Developed Multimedia Package (CD) comprises of components of technology integration in classroom covering following topics

Selected Topics and Subtopics

Sr. No.	Content	Topics
1	Microsoft office 2010	Word Processors, Spread sheets, Powerpoint presentation, Publisher
2	Search Engine	Google
3	Development of Movie	Windows Movie makers, PICASA Software
4	Development of Educational Websites	Google Site
5	Web 2.0 Tools	Facebook, Twitter, Edublog, Skype

Details of the sub topics under each topic are given as below:

Microsoft Word 2010

Word 2010 Basic:

1. Basic Word
2. Text Basics
3. Formatting Text
4. Sorting and Marking Text
5. Working with a Page background
6. Inserting Cover page and Group Style
7. Modify Page layout
8. Check spelling and grammar
9. Saving
10. Printing

Common Task in Word:

11. Using Indent
12. Line and Paragraph Spacing
13. Working with Lists
14. Adding Breaks
15. Working with Columns and Lines
16. Working with Hyperlinks and Bookmarks
17. Working with Shapes
18. Text Boxes, WordArt and Drop cap
19. About Quick part
20. Inserting Picture, Clip Art, SmartArt

21. Insert Signature line, Presentations, Excel files

Doing More in Word:

22. Insert Styles and themes

23. Working with Headers and Footers

24. Reviewing Documents

25. Working with Tables

26. Working with Formula

27. Working with Watermarks

28. Create a table of contents

29. Create a bibliography

30. Create an index and Mark Citation

31. Create Envelop and Label

32. Working with mail merge

33. Using the Outline View

Microsoft Excel 2010

Excel 2010 Basic:

1. Start with Excel

2. About Cell

3. About Columns, Rows, and Cells

4. Formatting Cells

5. Saving

6. Create Simple Formula

7. About Worksheet

8. Printing

Common Task in Excel:

9. Create Complex Formulas

10. Working with Basic Functions

11. Some more Functioning

12. Outlining Data

13. Filtering Data

14. Formatting Tables

Doing More Tasks:

15. Reviewing and Sharing Workbooks

16. Using Templates

17. Working with Charts

18. Working with Sparklines

19. Using Conditioning Formatting

20. Creating Pivot Tables

Microsoft Powerpoint 2010

Powerpoint Basic:

1. Powerpoint Introduction

2. About Slide

3. About Text

4. Apply Theme

5. Insert Image

6. Apply Transitions

7. Spelling Check

8. About Slideshow
9. Saving and Printing

Common Functioning in

Powerpoint:

10. Modifying List
11. Indents and Line Spacing
12. WordArt and Shapes
13. Modify Theme
14. Formatting Images
15. Arrangement of Objects

16. Animating Text and Objects
17. Insert Videos
18. Insert Audio

More Functions with Powerpoint:

19. SmartArt
20. Hyperlinks And Action Buttons
21. Working with Tables
22. Working with Charts
24. Reviewing Presentations
25. Advanced Presentation Option

Microsoft Publisher 2010

Publisher Basic:

1. About Publisher 2010
2. Producing a Publication
3. Creating a New Publication

Common Tasks:

4. Working with Text
5. Working with Shapes and Objects
6. Working with Pictures
7. Working with Tables

PICASA Software

PICASA Software:

1. About PICASA Software
2. Main Library Screen
3. Import and Export Photos
4. Deleting Photos, Folders, and Albums
5. Saving Photos

6. Editing Pictures with Picasa
7. Create a Poster
8. Make a Photo Collage
9. Creating a Movie
10. Create a Slideshow
11. Sharing, Printing and more ways to Pictures

Windows Moviemaker

Windows Moviemaker:

1. About Windows Movie Maker
2. Understanding Windows Movie Maker Tools
3. Import Files into Movie Maker
4. Working with Transition and Effect
5. Add Titles and Credits
6. Add an Audio or Music file
7. Publish a Movie to your Computer

Google Search Engine

Google:

1. Searching in Google
2. Google Map

Google Site

Google Site:

1. About Google Site:
2. How to Create a Site?
3. Create Pages
4. Add and Remove Pages from Navigation
5. Post an Announcement
6. Customize your Site Sidebar
7. Insert Objects into a Page
8. Replace a Calendar
9. Replace a Spreadsheet
10. Customize your Site Logo
11. Use the Sub page listing Gadget
12. Add a Recent List Gadget to another Page
13. Add and Remove List Items
14. Share your Site

Facebook

Setting Up your Profile:

1. About Facebook
2. Getting Started with Facebook
3. Understanding Facebook Privacy
4. Basic Privacy Settings
5. Ads and Additional Privacy Settings
6. Creating Your Profile

Use of Facebook:

7. Finding Friends
8. Sharing and Your Timeline
9. Understanding Your News Feed
10. Uploading Pictures and Videos
11. Chat and Video Calling
12. Messages
13. Groups
14. Facebook for Mobile Devices

Twitter

Twitter:

1. Create a Twitter Account
2. Who to Follow
3. How to Tweet
4. Twitter for Mobile Devices

Edublog

Edublog:

1. About Blog
2. About Edublogs
3. About dashboard
4. Publishing a new post
5. Edit published post
6. Differences between posts and pages
7. Publish new page
8. About Media Library
9. Working with forums on your blog
10. Introduction to comments
11. Role of a user on a blog
12. Inserting links
13. Creating Categories
14. Scheduling a post
15. Password protecting posts and pages

Skype

Skype:

1. Introduction to Skype
2. Setting Up Skype
3. Contacts and Safety Tips
4. Making Calls with Skype
5. Making Video Calls with Skype
6. Instant Messaging with Skype
7. Sending Files
8. Skype Communication Tips

(CD-ROM of Multimedia Learning Package is attached at the back of the thesis)

APPENDIX 7

PERMISSION LETTER (EXPERIMENTAL GROUP)

Date: 23-07-2014

From,
Pinkal Chaudhari,
Junior Research Fellow (JRF)
Department of Education (CASE)
The M. S. University of Baroda, Vadodara.

To,
Head of the Department,
Faculty of Education and Psychology,
The Maharaja Sayajirao University of Baroda,
Vadodara.

Subject: Permission to implement MLP as a part of Ph.D. in B.Ed. Programme (2014-15)

Respected Sir,


I am pursuing Ph. D. Study on “**Developing and Implementing Multimedia Learning Package for enhancing ICT Skills of Student teachers at Secondary level**” under the guidance of Dr. Anjali Khirwadkar. I would like to implement developed Multimedia Learning package as a part of Ph.D. work in B.Ed. Programme (2014-15). For this study purpose, I need your permission to conduct study in first semester B.Ed. (2014-15). I request you to grant me permission for the same.


Thanking You,

Your Faithfully,


Chaudhari Pinkal R

Guide:


Dr. Anjali Khirwadkar
Assistant Professor,
Department of Education,
Faculty of Education and Psychology,
The Maharaja Sayajirao University of Baroda,
Vadodara.

Permitted

23/7/14

APPENDIX 8

PERMISSION LETTER (CONTROL GROUP)

Date: 15-07-2014

From,
Pinkal Chaudhari,
Junior Research Fellow (JRF)
Department of Education (CASE)
The M. S. University of Baroda, Vadodara.

To,
Dr. P. D. Xavier,
Principal,
School of Science and Education,
Navrachna University,
Vadodara.

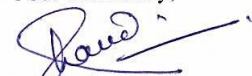
Subject: Permission to conduct Ph.D. work in B.Ed. Programme (2014-15)

Respected Sir,


I am pursuing Ph. D. Study on “**Developing and Implementing Multimedia Learning Package for enhancing ICT Skills of Student teachers at Secondary level**” under the guidance of Dr. Anjali Khirwadkar. It is an experimental study wherein I will be implementing the developed Multimedia Learning package in the Department of Education, Faculty of Education and Psychology, M. S. University of Baroda for B.Ed. Programme (2014-15) and I have choosen Navrachna University as a control group. For this study purpose, I need your permission to implement Achievement test and Attitude scale in first semester B.Ed. (2014-15) in your institute. I request you to grant me permission for the same.

Thanking You,

Your Faithfully,


Chaudhari Pinkal R

Guide:


Dr. Anjali Khirwadkar
Assistant Professor,
Department of Education,
Faculty of Education and Psychology.
The Maharaja Sayajirao University of Baroda.
Baroda.
Vadodaara.


Prof. S. C. Panigrahi,

Head,
Department of Education,
Faculty of Education and Psychology
The Maharaja Sayajirao University of
Baroda.
Vadodaara.

APPENDIX 9

DIGITAL LESSON PLAN DEVELOPED BY THE STUDENT- TEACHERS

Students' Lesson Plan -I

Category: Very Good

DIGITAL LESSON PLAN

Teacher's Information

First and last Name	#####
Author's E-mail Address	#####
College Name	Maharaja Sayajirao University Baroda
College Address	Maharaja Sayajirao University near station,Vadodara Gujarat 390002
College Phone	#####
Course	Biology

Unit overview:

Unit plan Tittle	ANIMAL TISSUES
Essential Question	1) Which type of cellular organization is there in Animal cell? 2) What are the importance of tissues?
Unit Questions	1) What is the main difference between animal

	and plant cell? 2) How one tissue is different from the other tissues?
Content Questions	1) What is epithelial tissue? 2) What is connective Tissue? 3) What is Muscular Tissue? 4) What is Nervous Tissue? 5) What is Neuron and its Structure? 6) What is skeletal Tissue? 7) What are the main features of Blood?

Unit Summary:

This unit deals with the animal tissues. It covers various other tissues like epithelial tissue which has two different parts (1) Simple Epithelial tissue (2) Compound Epithelial Tissue. Similarly Connective tissue and nervous tissue and their main features are there. This unit covers all the tissues and their proper location in the body and their main functions and how they are important in body.

Subject area(s): Histology, Anatomy and Physiology.

Student objectives/learning outcomes

general Objectives:

- 1) Students will know various types of tissues.
- 2) Students will understand the role of each tissue.
- 3) Students will understand the location of each tissue.

- 4) Students will understand the main function of Epithelial and connective tissue.
- 5) Students will understand the main functions of Nervous tissue and its importance.

Specific Objectives:

- 1) Students will be able to describe the Epithelial Tissue.
- 2) Students will be able to describe Squamous and cuboidal epithelium.
- 3) Students will be able describe ciliated and pseudo stratified epithelium.
- 4) Students will be able to describe connective tissue.
- 5) Students will be able to describe the importance of Adipose, Areolar and White fibrous tissue.
- 6) Students will be able to describe Skeletal tissue.
- 7) Students will be able to describe Calcified cartilage.
- 8) Students will be able to describe the importance of blood.
- 9) Students will be able to describe WBC, RBC and Plasma.
- 10) Students will be able to describe Nervous Tissue.

Approximate Time Needed
6 Days
Prerequisite Skills
Computer and internet connection.
Technology software required (Software)
Internet web Browser, encyclopedia , Wikipedia, Scientific Journals.

Implementation plan

DAY 1:

Teacher will introduce the Chapter Animal Tissue and then Teacher will explain how animal and plant cell are different from each other, then teacher will explain about the each organelle of animal cell and how each single cell all together is forming a tissue and how each single tissue is working and more than one tissue are forming a Complex body system. Teacher will explain how one tissue is different than the other tissue and its working.

DAY 2:

Teacher will explain about the first tissue in the chapter i.e Epithelial tissue that tissues forms the outer covering of the body and internal free surface of the organs, the cell in this tissue are arranged very close to each other with no extracellular material and they are attached with each other with the help of cell junctions. Epithelial cells rest on the basement membrane which separates the epithelium from the underlying connective tissue, basically there is no blood vessel which supply nutrition to it but they take nutrition from the connective tissue.

Teacher will explain the two different types of Epithelial tissues. (WITH THE HELP OF CHART)

(1) SIMPLE EPITHELIAL TISSUE:

- (A) SQUAMOUS
- (B) CUBOIDAL
- (C) COLUMNAR

(D) CILIATED

(E) PSEUDO STRATIFIED

(2) COMPOUND EPITHELIUM

(A) STRATIFIED

(B) TRANSITIONAL

Teacher will explain about each of them in detail.

⇒ <https://www.google.co.in/#q=epithelial%20tissue>

⇒ <http://faculty.stcc.edu/AandP/AP/AP1pages/Units1to4/epithelial/epitheli.htm>

DAY 3:

Teacher will explain about the connective tissue its main function and its location. Different kinds of cells are there in connective tissue for example Fibroblastic cells, phagocytic cells, mast cell and macrophages.

Tendon, cartilage and bone are also there which are also the main parts of connective tissue.

Students will surf on internet about these connective tissues.

Students will participate in the discussion.

⇒ <http://www.sophia.org/tutorials/specialized-connective-tissue-cartilage-bone-blood>

DAY 4:

Teacher will explain about the skeletal tissue its main function and its proper location.

Three different types of Skeletal tissues are there.

(1) Hyaline cartilage

(2) White fibro cartilage

(3) Yellow elastic cartilage

(4) Calcified cartilage

Teacher will explain about the Bone and its function and its structure in detail.

Teacher will probe and students will give answers to the teacher.

⇒ <http://www.lab.anhb.uwa.edu.au/mb140/corepages/bone/bone.htm>

DAY 5:

Teacher will explain about the importance of Blood. Different kinds of blood cells are there like WBC and RBC.

Two different types WBC are there

(1) Granulocytes

(2) Agranulocytes

Teacher will explain about the platelets and their main role in fighting with the infection.

Teacher will explain about the composition of the blood with the help of Power Point Presentation.

⇒ <http://www.webmd.com/heart/anatomy-picture-of-blood>

⇒ <http://bloodjournal.hematologylibrary.org/>

DAY 6:

Teacher will describe about the Nervous Tissue and its importance.

Teacher will explain about the Neuron and its structure, there are 3 different types of Neuron are there (1) UNIPOLAR (2) BIPOLAR (3) MULTIPOLAR.

Teacher will explain about the synapse and its importance in signal

transmission.

Teacher will discuss with the students about the whole topic, and teacher will ask students to make power point presentation on the topic.

⇒ <http://www.ask.com/question/what-is-the-function-of-nervous-tissue>

PRINTED MATERIAL	<p>Invertebrate zoology Author: Jordan and Verma</p> <p>Histology of Animal tissue Author: Singh and Singh</p> <p>Animal and Plant Physiology By: Verma and Verma</p>
OTHERS	<p>⇒ http://www.ask.com/question/what-is-the-function-of-nervous-tissue</p> <p>⇒ http://bloodjournal.hematologylibrary.org/</p> <p>⇒ http://faculty.stcc.edu/AandP/AP/AP1pages/Units1to4/epitissmol/epitheli.htm</p>

ACCOMMODATIONS TO SUPPORT DIFFERENT LEVELS OF LEARNERS IN CLASSROOM	
Resource Student	Will collect information from the various sources and will prepare Power Point presentation and will present individually in front of the whole class.
Gifted Students	They collect information from the internet.

Student Assessment
Students will be assessed for power point presentation as well as they will be evaluated on the basis of information collected by them from the internet.

Students' Lesson Plan -I

Category: Average

DIGITAL LESSON PLAN

Unit Author	
First and Last Name	#####
E-mail Address	#####
Collage Name	M.S.University Baroda.
Address	M.S.University Baroda.
Course	B.Ed

Unit Overview	
Unit Plan Title	Environmental Chemistry
Essential Question	What is Pollution? Are we living in Healthy environment?
Unit Question	Why we know about Pollution?
Content Question	What is Pollution? Which type of Pollution? How we protect our Earth?

Unit Summary
<p>Pollution is the addition to the ecosystem of something which has a detrimental effect on it. One of the most important causes of pollution is the high rate of energy usage by modern, growing populations. Different kinds of pollution are found. In this section we will discuss:</p> <p>1. Air Pollution. 2. Water Pollution. 3. Land Pollution.</p> <p>.Air Pollution</p> <p>Air pollution is the accumulation in the atmosphere of substances that, in sufficient concentrations, endanger human health or produce other measured effects on living matter and other materials. Among the major sources of pollution are power and heat generation, the burning of solid wastes, industrial processes, and, especially, transportation. The six major types of pollutants are carbon monoxide, hydrocarbons, nitrogen oxides, particulates, sulfur dioxide, and photochemical oxidants.</p> <p>Water Pollution</p> <p>Water pollution is the introduction into fresh or ocean waters of chemical, physical, or biological material that degrades the quality of the water and affects the organisms living in it. This process ranges from simple addition of</p>

dissolved or suspended solids to discharge of the most insidious and persistent toxic pollutants (such as pesticides, heavy metals, and nondegradable, bioaccumulative, chemical compounds).

General Objective

- Students will know about pollution
- Students will know about various types of pollutants.
- Students will know what the effect of pollution on earth is.
- Students will aware to protect our earth to become polluted.

Specific Objective

- Students will be able to explain the pollution.
- Students will be able to give examples of pollution.
- Students will be able to explain air and water pollution with examples.

Approximate Time Needed

- 5 Days

Prerequisite Skills

- Basic knowledge of computer
- Familiarity for working on internet
- Email

Material resources required(hardware)

- Computer
- Internet connection
- Printer

Technology software required(software)

- Internet web browser
- Email software
- Microsoft office

Implementation Plan

Day 1

Teacher introduces the topic with picture and discussions and they we be know about types of pollution like Air, Water and Soil pollution.

Day 2 & 3

Atmospheric Pollution

Tropospheric Pollution

Global warming

Stratospheric Pollution

Day 4

Water Pollution

Power point presentation of water pollution & its causes and purification methods.

Day 5**Soil Pollution**

Causes of Soil Pollution

Controls of Soil Pollution

Printed material	Text book
Others	http://www.bcb.uwc.ac.za http://www.slideshare.com http://www.cpcb.nic.in http://en.wikipedia.org
Accommodation to support different levels of learners in class	
Resource student	Will collect information from the various sources and prepare power point presentation.
Gifted student	They will collect information to protect pollution and prepare news letter.
Student Assessment	
Student will be assessed for power point presentation and awareness program as per the checklist provided in the evaluation criteria.	

(Developed Lesson Plan and PowerPoint Presentation of the student-teachers of experiment group are given in the CD named "Students' Activity")

APPENDIX 10

COURSE WORK CERTIFICATE



THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA CERTIFICATE

[As per O.Ph.D. 2 under UGC (Minimum Standards and Procedure for Awards of M.Phil./Ph.D. Degree) Regulation, 2009 for 15 Credits to be earned by Ph.D. Scholars]

This is to certify that **Chaudhari Pinkal Rajubhai**, Research Scholar, registered under UGC (Minimum Standards and Procedure for Awards of M.Phil./Ph.D. Degree) Regulation, 2009, vide Registration Certificate Number **184** dated **19/02/2012**, for pursuing Ph.D. on has undertaken and completed the course work with the Grade A.

STATEMENT OF CREDITS EARNED

Name of Research Scholar: **Chaudhari Pinkal Rajubhai**

Faculty/Institution: Faculty of Education And Psychology

Department: Department of Education

Paper Number	Course Title	Course Credits	Grade Earned
Core Courses – 09 Credits [Offered At University Level]			
I.	Introduction To Research & Research Writings	3	B
II.	Introduction To Basic Computer Functions & Application For Research Purposes	3	O
III.	Quantitative Research Techniques & Data Analysis	3	B
Departmental Courses – 06 Credits [Offered at Departmental Level]			
IV.	Review of Related Literature	3	A
V.	Conceptual Framework	3	A
Overall Grade			A

Date of Issue: 11-02-2015

Place: Vadodara

Registrar (OSD)

Grade Conversion Table and Grade Calculation Formula

Grade	Grade Points	Range
O	10	Above 9.01
A	9	8.01 – 9.00
B	8	7.01 – 8.00
C	7	6.01 – 7.00
D	6	5.01 – 6.00
E	5	4.01 – 5.00
F	4	Below 4.00

$$\text{Overall Grade} = \frac{\sum (\text{Grade Point} \times \text{Credits})}{\sum \text{Credits}}$$