

A hand wearing a white latex glove holds a small green plant with several leaves, which is growing out of a glass test tube. The test tube contains a dark liquid. The background is a vibrant green, featuring a large, semi-transparent DNA double helix structure on the right side. The overall scene suggests a connection between biology, genetics, and laboratory research.

**TEACHING AND LEARNING  
METHODOLOGIES**

**DEPARTMENT OF BOTANY**

## **ICT ENABLED LEARNING**

**It is the mode of education that uses information and communication technology to support , enhance and optimize the delivery of information. It leads to improved student learning and better teaching methods.**

**[https://in.docworkspace.com/d/sIMyji45lioD\\_pAY?sa=00&st=0t](https://in.docworkspace.com/d/sIMyji45lioD_pAY?sa=00&st=0t)**



## **GROUP DISCUSSION**

### **TOPIC: PLANT CELL**

**Plant cells are eukaryotic cells that vary in several fundamental factors from other eukaryotic organisms.**

**Plant cell contains cell wall, chloroplast and a large vacuole.**

**Microbodies are present in plant cell which are absent in animal cell.**

**The organelles of plant cell include plastids, nucleus, mitochondria, endoplasmic reticulum and Golgi apparatus.**

**Centrioles are absent in plant cell.**

**Plant cell is unique by the presence of chloroplast which help in photosynthesis.**

**Promote a deeper understanding of a topic and increases long-term retention.**

**It helps in increasing participant's attention and helps in maintaining their focus by involving them in the learning process.**

**It also provides feedback to instructors on participant comprehension.**

**It is used to improve communication skills.**

**Improve ability to think critically.**



## **ZOOM CLASS**

### **TOPIC:- TYPES OF DNA**

**DNA IS A GROUP OF MOLECULES THAT ARE RESPONSIBLE FOR CARRYING AND TRANSMITTING THE HERIDITY MATERIALS OR THE GENETIC INSTRUCTIONS FROM PARENT TO OFFSPRINGS.**

**It was recognized by Swiss biologist Johannes Fried rich miescher.**

**DNA is abbreviated as Deoxy ribonucleic acid.**

**Three types of DNA:-**

**A-DNA**

**B-DNA**

**Z-DNA**

**A-DNA:-**

**It is right handed double helix similar to the B-DNA.**

**Dehydrated DNA takes an A form that protects the DNA during extreme conditions such as desiccation.**

**B-DNA:-**

**This is the most common DNA confirmation and is a right handed helix.**

**The majority of DNA has a D- type conformation under normal physiological conditions.**

**Z-DNA:-**

**It is left handed DNA where the double helix winds to the left**



## **STUDENT SEMINAR**

**Discussion based courses.**

**Typically students complete readings and assignments before the class and discuss major themes or topics during class.**

**Attending a seminar has numerous benefits, including improving communication skills, gaining expert knowledge, networking with others and renewing motivation and confidence.**

**Oral communication.**

**Expert knowledge.**

**Renewed motivation.**



## **BLACKBOARDMETHODS**

**TOPIC:-Structure of chloroplast & Functions**

### **STRUCTURE:-**

**It is ovul shaped and have two members and an outer membrane and innermembrane.**

**Outer and inner membrane is havingspaceapproximately10-20nmin wide.**

**Itallowstheprocessofphotosynthesisistotakeplace.**

### **FUNCTIONS:-**

**Toabsorbcarbondioxideduringphotosynthesis.**

**Tobreakupwaterintohydrogenand oxygenduringphotosynthesis.**

**To form Protein and amino acids in thepresenceofsunlight.**




## **EXPERIMENTAL LEARNING**

**TOPIC:--Explain the Cucurbitaceae, the gourd family of flowering Plants , belonging to the order cucurbitales.**

**It containing 98 genera and about 975 species of food and ornamental plants.**

**Members of the family are annual or perennial herbs native to temperate and tropical areas and include cucumbers, gourds, melons, squashes, and pumpkins.**



 **GPS Map Came**

**Visakhapatnam, Andhra Pradesh, India**

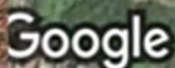
P8JP+34C, Near Laxmi Ganapathi Temple, Pedda Waltair,

Visakhapatnam, Andhra Pradesh 530017, India

Lat 17.72916°

Long 83.336262°

17/02/23 12:35 PM GMT +05:30

 **Google**

**EXPERIMENTAL LEARNING IS A  
TYPE OF EDUCATIONAL PHILOSOPHY**





## **QUIZ**

**Asking the following questions:--**

**What is APG?**

**Angiosperm phylogeny group.**

**Who proposed the revolution?**

**Vantieghan and Dauliot.**

**Which plants are insectivorous?**

**Nepenthes.**

**What is sunken stomata?**

**Deeply inside the leaf.**

**What is pure water potential?**

**0%**

**What is cell vomiting?**

**Process of exudation the waste products to outside of the cell cytoplasm.**

**What is snRNA?**

**Small nuclear ribonucleoprotein complex.**

**What is Bentham Hooker classification called?**

**Natural system of classification.**

**What is specific heat?**

**The amount of heat needed to raise the temperature of 1 gram of a substance in 1 degree Celsius (°C).**

## **WINNER TEAM**

### **GROUP-C**

**Names:--**

**G.Lalitha**

**G.Sowmya**

**G.Saiharshitha**

**G.Hemalatha**

**P.Yamini**

**P.Tejaswini**

**P.Savitri**

**P.Pavani**

**B.Renuk**

