



# MODERN METHODS OF TEACHING *BIOLOGY*

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Teaching method (Bio 311)

# Learning Objective



BY the end of the class the students will be

1. To different method of modern teaching
  2. Criteria for selecting good method of teaching
  3. To different modern and traditional method of teaching
- Biology



# INTRODUCTION



- **'Method'** – Latin – **'Mode'** or **'Way'**

A dark, irregular ink blot with the word "DEFINITIONS" written in white, bold, sans-serif capital letters in the center. The blot has a textured, splattered appearance with some lighter areas and small droplets around the edges.

# DEFINITIONS



*In education it means the mode by which the material is communicated from the teacher to the pupil.*



***“Teaching methods are patterns of teacher behaviour that are recurrent, applicable to various subject matters, characteristic of more than one teacher and relevant to learning”***

# CRITERIA FOR SELECTING A METHOD OF TEACHING BIOLOGY SCIENCE



❖ LEVEL OF THE CLASS

❖ SIZE OF THE CLASS

❖ AVAILABILITY OF TIME

❖ AVAILABILITY OF MATERIALS AND FACILITIES

❖ NATURE OF THE TOPICS TO BE TAUGHT

# PUPIL-CENTERED TEACHING



- **According to the needs, requirements, capabilities and interests of the pupils**
- **Develop in learners skills and abilities in independent learning and problem solving**
- **Classroom climate is flexible and psychologically open**



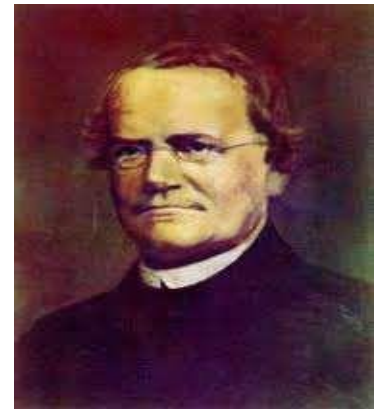
# ADVANTAGES



- **Teachers and students jointly explore**
- **Teachers' role is to assist pupil**
- **Pupil occupies a central position**



# BIOGRAPHICAL METHOD



- Associates the facts and principles of biology with the life of the scientists
- Helps the students to learn the facts and principles along with hardships undergone by the scientists, their experiments, apparatus and improvisations

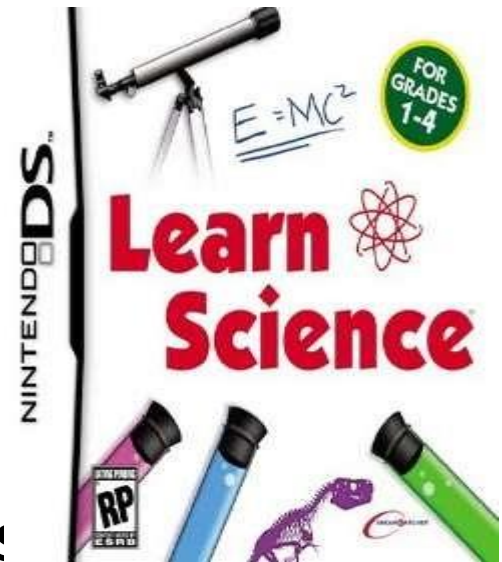


- **Students will realize the importance for hard work, perseverance, success and happiness**
- **Develop the attitude of science and scientists**

# HISTORICAL METHOD



- INVENTION
- DISCOVERY
- ADVENTURES
- LIFE HISTORIES
- EXAMPLE :



# Merits

- **Arouse interest**
- **Particularly suited for each classes**
- **Cannot be adopted as a method of teaching**
- **Made wherever it is possible**

# HEURISTIC METHOD

- **‘Heuristic’ - Greek word – ‘to discover’**
- **Pure discovery method of learning**





*“Heuristic methods of teaching are methods which involve our placing students as far as possible in the attitude of the discover-methods which involve their finding out instead of being merely told about things”*

# Role of the teacher



- **Possess curiosity, interest and a spirit of scientific investigation**
- **Art of asking questioning**
- **Guide, a working partner and a friend**
- **Provide free atmosphere**
- **Plan according to the age, ability and interest of the pupils**



# Procedure



- **Students to solve a number of problems experimentally**
- **Required to discover for himself and is to be told nothing**
- **Discover facts – experiments, apparatus and books**
- **Behaves like a research scholar**

# Merits



- **Habit of enquiry and investigation**
- **Habit of self learning and self direction**
- **Develop scientific attitudes**
- **Psychological maximum – Learning by doing**
- **Scope for individual attention**
- **Develops in the students a habit of diligency**

# Demerits



- **Long and time consuming method**
- **Expects great efficiency and hard work, experience and training**
- **Not suitable for beginners**
- **Formational rather than informational**
- **Too much stress**
- **Merely for sake of doing**
- **Evaluation is tedious**
- **Presently enough teachers are not available**

# Team Teaching



*“A combination of two or more teachers who work with variable size groups of students during an adjustable period which covers two or more regular section”*



*“An arrangement whereby two or more teachers with assistants plan, instruct and evaluate co-operatively two or more classes in order to take advantage of their respective special competencies as teachers”*

# MERITS



- *Improvement of teaching through a better utilization of a group of teachers*
- *Utilizes specialized expertise, interests, instruction skills, time and energy*
- *Ensures preparation of lessons, materials and other aids to create motivation among the students and better learning situations*



- *Increases the possibility of variety of instruction based on pooled talent to the teachers*



## References

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3. 4. Using Socio scientific Issues to Engage Biology Students By Lenz, Laura; Willcox, Maia K The American Biology Teacher, Vol. 74, No. 8, October 2012