



ICT BASED LESSON PLAN

| | |
|--|--|
| Date and Time (duration) | 24/08/2022 – 10.00am to 10.50am (50min) |
| Class: | BZC (F)- I semester |
| No. of students attended | 42 |
| Name of the Class Teacher | Dr. Y Poli Naidu |
| Title: | Metamorphosis in Insects |
| Objectives | <ol style="list-style-type: none">1. Define metamorphosis and understand the concept of metamorphosis in insects.2. Classify types of Metamorphosis and Differentiate between complete and incomplete metamorphosis.3. Identify examples of insects that undergo each type of metamorphosis.4. Describe the stages of metamorphosis and their significance in an insect's life cycle.5. Appreciate the ecological importance of metamorphosis in insect populations. |
| Materials used | <ol style="list-style-type: none">1. Computer with projector2. Internet access3. Presentation software (e.g., PowerPoint or Google Slides)4. Access to a virtual insect collection or videos on metamorphosis5. Whiteboard and markers6. Printed handouts with diagrams of insect life cycles |
| Introduction (5 minutes) Begin with a captivating video or images. | <ol style="list-style-type: none">1. Did you see the butterflies earlier?2. What you observed in the butterflies?3. Butterflies belong to which phylum and class?3. Do you know, where butterflies comes from?4. Caterpillar comes form? <p>All the insects need to passage a sequence of stages to become adults Sequence of stages – Metamorphosis (Egg to an Adult)</p> |
| Virtual Insect Exploration (10 minutes) | <p>https://www.youtube.com/watch?v=G3VMI-EY2DM</p> <p>https://www.youtube.com/watch?v=ws_D5nXOAJg</p> |
| Presentation and Discussion (20 minutes) | <p>Definition: Series of changes through which an insect pass in its growth from egg through larva and pupa to the adult. Transformation of an Immature larva/Individual into a sexually mature reproducing adult of very different form structure and habit.</p> <p>PPT- Presentation</p> <p>Types of Metamorphosis: (the manner in which they develop from egg to an adult)</p> <p>Ecological Significance:</p> <ol style="list-style-type: none">1. Pollination2. Decomposition3. Resource Partitioning4. Predator-Prey Relationships: |

| | |
|--|---|
| <p>Hands-On Activity (10 minutes)</p> | <p>1.Ametabola https://images.app.goo.gl/ygzGybWBtZpttHWM https://images.app.goo.gl/sU133oumLp3dDE867</p> <p>2.Metabola A. Gradual: https://images.app.goo.gl/uhb1CW5EkYEKZWVz5 B. Hemi: https://images.app.goo.gl/JvFMZKkddF5R49Kb9 C. Holo: https://images.app.goo.gl/wAycWrFAdYb7SzCFA D. Hyper: https://images.app.goo.gl/WvVUG8Tzcl7pb5pU8</p> |
| <p>Conclusion (5 minutes)</p> | <p>Summaries key points - Definition of metamorphosis Types of metamorphosis & Examples Life cycles of exemplary insects.</p> |
| <p>Assessment:</p> | <p>Kahoot online quiz Home work: Draw the life cycles of various insects.</p> |
| <p>Additional Tips:</p> | <p>Browse the information shows difference between frog tadpole larva and adult frog.</p> |

Presentation & Activity photos





GOVERNMENT DEGREE COLLEGE (M), SRIKAKULAM



ICT BASED LESSON PLAN

| | |
|--|--|
| Date and Time (duration) | 24/08/2022 – 10.00am to 10.50am (50min) |
| Class: | MECS- III semester |
| No. of students attended | 40 |
| Name of the Class Teacher | Y.MANI KUMAR |
| Title: | Asking and giving information |
| Objectives | <ol style="list-style-type: none"> 1. To obtain clear and concise details 2. To Gain insight into a subject matter 3. To Gather necessary information 4. To acquire relevant data |
| Materials used | <ol style="list-style-type: none"> 1. Digital class room 2. Internet access 3. Access videos from YouTube 4. Whiteboard and markers |
| Introduction (5 minutes) Begin with a motivational slide | <ol style="list-style-type: none"> 1. How do you ask for some information? 2. Did you feel that the information received is clear ? 3. Have you ever given some information to others? 3. Did they satisfy with your details? |
| Virtual Insect Exploration (10 minutes) | https://www.youtube.com/watch?v=0teHrGndtpg https://www.youtube.com/watch?v=TRXS0-oxZ_M |
| Presentation and Discussion (20 minutes) | <p>In our day to-day life, we ask for information and we give information to others. We ask for time, things, places, directions, suggestions, etc., and share the information about the same, we need to be polite when we seek for or share information. We can be informal with the friends and slightly more formal with colleagues; but with strangers and in official situations we should be formal.</p> <p>PPT- Presentation</p> <p>Degree of politeness:</p> <ol style="list-style-type: none"> 1. Formal 2. Slightly formal 3. informal |
| Work sheets-On Activity (10 minutes) | <ol style="list-style-type: none"> 1. https://www.liveworksheets.com/w/en/english-second-language-esl/1961626 |
| Conclusion (5 minutes) | Summarising Key points: reminding the important phrases used to ask for information politely. And also practising to give information properly. |
| Assessment: | Google form with objective questions |

Presentation & Activity photos







ICT BASED LESSON PLAN

| | |
|--|---|
| Date and Time (duration) | 22.12.2022 |
| Class: | I MPC |
| No. of students attended | 41 |
| Name of the Class Teacher | R.Ravi Kumar |
| Title: | Different modes and velocity of transverse wave along a stretched string |
| Objectives | <ol style="list-style-type: none">1. Define String?2. What is tension ?3. Is tension is force?4. What is velocity?5. Velocity of the string depends on what factors?6. Define Harmonic and overtone frequencies?7. What is the relation between Harmonic frequency and Overtone frequency?8. What is fundamental frequency? |
| Materials used | <ol style="list-style-type: none">1. Computer with projector2. Internet access3. Access videos from YouTube4. Whiteboard and markers5. Printed handouts with diagrams of Ruby and He-Ne Laser |
| Introduction (5 minutes) Begin with a captivating video or images. | <ol style="list-style-type: none">1. Did you see the strings earlier?2. Where did you see strings earlier?3. How we increase the tension of the string in lab?4. Is frequency affected with tension?5. Tell me some applications? |
| Virtual Insect Exploration (10 minutes) | Students were visualized the YouTube video and analyze the various modes of frequencies. https://www.youtube.com/watch?v=MrPTt3pv6xk https://www.youtube.com/watch?v=kIN2-bCzJb4 https://www.youtube.com/watch?v=AUBAMIMo1g https://www.youtube.com/watch?v=LNPQmna4xqQ https://www.youtube.com/watch?v=cnH2lftW48U |

**Presentation and Discussion
(20 minutes)**

The velocity of transverse waves on a stretched string is influenced by the tension and the linear mass density of the string. When you increase the tension in the string, the velocity of the wave also increases. Conversely, if you increase the linear mass density (e.g., by using a thicker or denser string), the velocity of the wave decreases.

Factors Affecting Velocity

- Tension (T): Increasing tension in the string increases the velocity of the wave. Tension is the force applied to stretch the string, and it is usually measured in newtons (N).
- Linear Mass Density (μ): Increasing the linear mass density of the string (by using a thicker or denser string) decreases the velocity of the wave. Linear mass density is the mass per unit length and is usually measured in kg/m.
- String Material: The material of the string can also affect the velocity of the wave. Different materials have different properties, such as elasticity, which can influence wave propagation.

Transverse waves on a stretched string can exist in various modes or patterns of oscillation, each with distinct characteristics. These modes are a result of the different vibrational patterns that the string can exhibit.

- Different modes of transverse waves on a stretched string correspond to different harmonics, with the fundamental mode being the simplest.
- Each mode has a unique pattern of nodes and antinodes and a specific frequency and wavelength.
- The harmonics or overtones are integer multiples of the fundamental frequency .
- The choice of mode depends on the initial conditions and the boundary conditions of the string, such as how it is plucked or anchored.

Conclusion (5 minutes)

The velocity of a transverse wave on a stretched string is determined by the tension in the string and the linear mass density of the string. By adjusting these factors, you can control the speed at which transverse waves travel along the string.

When a string is plucked or vibrated, it can support multiple modes of transverse waves simultaneously, each with its own characteristic pattern and frequency. These modes are integral to understanding the behavior of musical instruments, such as guitars and violins, where the manipulation of these modes produces different musical notes and tones.

Activity photos





GOVERNMENT DEGREE COLLEGE (M), SRIKAKULAM



ICT BASED LESSON PLAN

| | |
|--|---|
| Date and Time (duration) | 28.03.2023 |
| Class: | I MPCS |
| No. of students attended | 32 |
| Name of the Class Teacher | R.Ravi Kumar |
| Title: | He-Ne Laser and Ruby Laser |
| Objectives | <ol style="list-style-type: none">9. Define Laser and understand the concept of Pumping and population Inversion in both Ruby and He-Ne Lasers.10. Describe the stages of acquiring population inversion.11. Pulsed laser output and continuous output of laser beams.12. Applications and importance of these lasers |
| Materials used | <ol style="list-style-type: none">6. Computer with projector7. Internet access8. Access videos from Youtube9. Whiteboard and markers10. Printed handouts with diagrams of Ruby and He-Ne Laser |
| Introduction (5 minutes) Begin with a captivating video or images. | <ol style="list-style-type: none">1. Did you see the Lasers/Laser show earlier?2. What you observed in the laser show?3. Full form of LASER?11. Who Explained principle of laser first theoretically?12. Who constructed laser first?13. What is first Laser?14. Do you know the applications of Laser?15. Tell me some applications? |
| Virtual Insect Exploration (10 minutes) | <p>Students were visualized the YouTube video and analyze the various stages of population inversion process and working of the laser.</p> <p>https://www.youtube.com/watch?v=yQ0IMSNuj_o</p> <p>https://www.youtube.com/watch?v=xsg9Yqwrh2w</p> <p>https://www.youtube.com/watch?v=1LmcUaWuYao&t=18s</p> <p>https://www.youtube.com/watch?v=2Oswmij538Q</p> <p>https://www.youtube.com/watch?v=07rnnkkw9ts&t=235s</p> |

**Presentation and Discussion
(20 minutes)**

Explain Working principles and components advantages, limitations and applications of both Ruby and He-Ne Lasers are explained by using white board and neat diagram.

The Ruby laser stands as a pivotal point in the history of laser technology, showcasing the feasibility of creating coherent light using a solid-state medium. While its use in practical applications has diminished over time, its historical importance and contributions to laser science and technology remain highly regarded.

We will explain the medium, pumping ,stimulated emission, characteristics like wavelength, stability, coherence, power etc for both lasers.

Conclusion (5 minutes)

The Ruby laser is a historic milestone in laser technology, serving as a foundation for subsequent laser innovations and contributing to numerous scientific and practical applications.

The helium-neon (He-Ne) laser, with its stable and coherent red output, has played a significant role in both educational and scientific applications. While its use has declined in some areas due to advances in laser technology, it remains a noteworthy example of a gas laser and continues to find relevance in specific applications that require its unique characteristics.

Activity photos





GOVERNMENT DEGREE COLLEGE (M), SRIKAKULAM



ICT BASED LESSON PLAN

| | |
|--|--|
| Date and Time (duration) | 22.12.2022 |
| Class: | I HEP |
| No. of students attended | 42 |
| Name of the Class Teacher | S. Cheranjeeva Rao, Lecturer in Politicalscience,GDC(M),Srikakulam |
| Title: | Meaning, Definition, Classification of the Constitution |
| Objectives | <ol style="list-style-type: none"> 1. Define Constitution? 2. Meaning of the Constitution? 3. Structure of Constitution ? 4. Features of indian constitution? 5. Difference between written and unwritten constitution? 6. What is the preamble of the constitution? |
| Materials used | <ol style="list-style-type: none"> 1. Computer with projector 2. Internet access 3. Access videos from YouTube 4. Whiteboard and markers |
| Introduction (5 minutes) Begin with a captivating video or images. | <ol style="list-style-type: none"> 1. Did you see the grama panchayati ? 2 .Where did you see the grama panchayati ? 3. How to do ruling the administrstion ? 5. Tell me some examples of admistrative offices? |
| Virtual Insect Exploration (10 minutes) | <p>Students were to visualize the YouTube video and analyze the various modes of frequencies.</p> <p>https://youtu.be/3lup69Vibas?si=4kPRNeEPwTILP4IA</p> <p>https://youtu.be/3fiwAunrT5o?si=4VXlx46wc5uMbwR0</p> <p>https://youtu.be/sdreuUY9ViU?si=v-XJR-6Zv0jTYeeB</p> |
| Presentation and Discussion (20 minutes) | <ul style="list-style-type: none"> • The early idea to have our own Constitution was given by MN roy. The chairman of the Drafting Committee was Dr B. R. Ambedkar Ambedkar was also called as Father of Indian |

| | |
|--------------------------------------|---|
| | <p>Constitution. Dr Rajendra Prasad was elected as the President of the Constituent Assembly. B. R. Rao was appointed as the Constitutional Advisor.</p> <p>Features of Indian Constitution</p> <p>The lengthiest Constitution in the world The Indian Constitution is the lengthiest and the most detailed of all the written constitutions. 468 articles, 25 parts, 12 schedules.</p> <ul style="list-style-type: none"> • Parliamentary form of Government : The Constitution of India establishes a parliamentary form of government both at the Centre and the State. • Fundamental Rights : The incorporation of a formal declaration of Fundamental Rights in part III of the Constitution is deemed to be a distinguishing feature of a democratic State. |
| <p>Conclusion (5 minutes)</p> | <p>The Constitution of India is the Supreme Law of India. It is a living document which makes the Government system work. The Constitution is a set of basic essential and important rules useful for governing the politics of a nation. The Constitution lays down the structure and framework for principal organs of government.</p> <p>Indian Constitution is the product of various discussions of a body of eminent people who pursued to improve the existing conditions prevailing in India and other countries.</p> |

Activity photos





GOVERNMENT DEGREE COLLEGE (M), SRIKAKULAM



DEPARTMENT OF ECONOMICS

ICT BASED LESSON PLAN

| | |
|--|--|
| Date and Time (duration) | 19/08/2022 - 10.50am to 11.40am (50min) |
| Class: | BA (HEP)- IV - semester |
| No. of students attended | 44 |
| Name of the Class Teacher | Sri. Ch. Ramamurthy |
| Title: | Indian Five Years Planning |
| Objectives | <ol style="list-style-type: none">1. Economic Growth2. Economic Equity and Social Justice3. Full Employment4. Economic Self-Reliance5. Modernisation |
| Materials used | <ol style="list-style-type: none">1. Computer with projector2. Internet access3. Presentation software (e.g., PowerPoint or Google Slides)4. Whiteboard and markers |
| Introduction (5 minutes) Begin with a captivating video or images. | <ol style="list-style-type: none">1. Who gives the final approval to the five-year plans of India?2. When was the first five-year plan of India started?3. The very first five-year plan of India was based on the model of?4. What as the prime target of the first five-year plan of India?5. Which programme given the slogan of Garibi Hatao? |
| Virtual Insect Exploration (10 minutes) | https://www.youtube.com/watch?v=xtoE-s7RctQ |
| Presentation and Discussion (20 minutes) | <p>Definition: Five-Year Plans (FYPs) are centralized and integrated national economic programs. Joseph Stalin implemented the first Five-Year Plan in the Soviet Union in 1928. Most communist states and several capitalist countries subsequently have adopted them. China continues to use FYPs, although China renamed its Eleventh FYP, from 2006 to 2010, a guideline (<i>guihua</i>), rather than a plan (<i>jihua</i>), to signify the central government's more hands-off approach to development. India launched its First FYP in 1951, immediately after independence, under the socialist influence of India's first prime minister, Jawaharlal Nehru.^[3]</p> <p>PPT- Presentation</p> <p>Indian Five Years Planning :</p> <p>First Plan (1951–1956)</p> |

| | |
|---------------------------------------|--|
| | <p>Second Plan (1956–1961)</p> <p>Third Plan (1961–1966)</p> <p>Plan Holidays (1966–1969)</p> <p>Fourth Plan (1969–1974)</p> <p>Fifth Plan (1974–1978)</p> <p>Rolling Plan (1978–1980)</p> <p>Sixth Plan (1980–1985)</p> <p>Seventh Plan (1985–1990)</p> <p>Annual Plans (1990–1992)</p> <p>Eighth Plan (1992–1997)</p> <p>Ninth Plan (1997–2002)</p> <p>Tenth Plan (2002–2007)</p> <p>Eleventh Plan (2007–2012)</p> <p>Twelfth Plan (2012–2017)</p> |
| Hands-On Activity (10 minutes) | <ol style="list-style-type: none"> 1. https://lotusarise.com/wp-content/uploads/2021/08/five-year-plan-upsc-709x1024.png 2. https://in.pinterest.com/pin/indian-gkpoint-knowledge-campus2015--369506344406980792/ |
| Conclusion (5 minutes) | Summaries key points – Definition of Planning , Priorities Of Indian Planning ,Types of Economic Planning, Achievements of Indian Planning System. |
| Assessment: | online quiz Home work: Assignment Regarding Objectives Of Indian Planning System |
| Additional Tips: | Browse the information Regarding Role Of NITI Aayog in Economics Planning |

Presentation & Activity photos

