TECC Teaching Module Example

1. Topic Title

"Forces in Daily Life: The Force Relay Challenge in TECC"

2. Prepared by:

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3. Introduction to TECC Learning Activity

In this TECC-based lesson, students will explore the concept of forces through a gamified team challenge. The collaborative classroom environment will allow students to experiment with real-time physics simulations, enhancing their understanding through active participation and digital interactivity.

4. Selection of Learning Activity/Strategy

Activity Name: "Force Relay Challenge"
Justification:
This activity simulates real-life situations where forces act upon objects, such as in sports and machinery. It contextualizes Newton's Laws through engaging team-based challenges.
Use of AI/Technology for Activity Planning:
ChatGPT was used to brainstorm collaborative activity ideas. Canva Code was utilized to create an interactive simulation where students adjust force vectors and observe motion outcomes.

5. Learning Objectives (CLO/LO)

- Students will define and explain Newton's Three Laws of Motion.
- Students will apply force formulas to calculate net forces in simple systems.
- Students will predict how changes in force magnitude affect an object's motion.

6. Induction Set Plan (Ice-Breaker / Starter Activity)

Start with a quick interactive poll: "Which requires more force: Pushing a shopping cart or pulling it backwards?"
This will be followed by a short video clip showing surprising examples of forces in action (e.g., sumo wrestlers, tug-of-war).

7. Activity Implementation Plan

A. Manual/Physical Implementation (if applicable):

Materials Needed:
- Ropes

- Small carts with weights
- Stopwatch

Steps of Activity Execution:
1. Divide students into groups.
2. Each group will perform tasks applying different force techniques (push, pull, angle).
3. Observe and record time taken to move the cart across a line.

B. Digital Implementation (Recommended for TECC):

Tools/Platforms Used: Canva Code Simulation
Digital Elements Created:
- Force sliders to adjust magnitude and direction.
- Live motion trajectory visualizer.
Link to Digital Activity: https://studioprize.my.canva.site/force-relay-challenge

8. Classroom Flow Plan (Time-Stamped Activity Steps)

Activity	Duration	Description
Introduction & Induction Set	5 mins	Ice-breaker poll & video
Physical/Digital Relay Challenge	15 mins	Groups perform force experiments
Group Analysis & Discussion	10 mins	Groups discuss observations
Q&A Session	5 mins	Clarify concepts
Summary & Key Takeaways	5 mins	Recap Newton's Laws & real-world relevance

9. Assessment & Reflection

Quick Assessment Method:
- Short Kahoot quiz on force equations.
Group Reflection Question:
- "How did adjusting the force magnitude/direction impact object movement?"
Lecturer Reflection Notes:
- [To be filled after session to note effectiveness and improvements]

10. Resources & References

- ChatGPT Prompt Ideas
- Canva Code Force Simulator Link
- Physics Classroom Resources (www.physicsclassroom.com)