Lesson Plan Template

Grade:9th

Subject: physical science

Materials:

Technology Needed:

Instructional Strategies:

- Direct instruction
- Guided practice
- Socratic Seminar
- Learning Centers
- Lecture
- Technology integration
- Other (list)
- Peer teaching/collaboration/ cooperative learning
- Visuals/Graphic organizers
- PBL
- Discussion/Debate
- Modeling

Guided Practices and Concrete Application:

- Large group activity
- Independent activity
- Pairing/collaboration
- Simulations/Scenarios
- Other (list)
- Hands-on
- Technology integration
- Imitation/Repeat/Mimic

Explain:

Standard(s)

Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision. HS-PS2-3

Objective(s)

Know what force and friction are
Understand what causes a surface to have more or less friction

Bloom's Taxonomy Cognitive Level: know and understand

Differentiation

Below Proficiency:
Allow students to give 1 example
Above Proficiency:
Can share multiple examples
Approaching/Emerging Proficiency:
Expected to have a couple examples
Modalities/Learning Preferences:
Visual, auditory, and kinesthetic

Classroom Management- (grouping(s), movement/transitions, etc.)

Students will show how forces pull on a rope
Students will get up when I tell them to and try to move the tables across the room

Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)

Students pulling on the rope will be informed to be careful and not pull too hard
Students will not push tables to hard and hurt others

Minutes	Procedures
	Set-up/Prep:
15	**Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)** • Mrs. Larson – handed out worksheet from last class and exams from the pervious day • She talked about exams and the worksheet • Ask students to think about their favorite activities when I begin class • Have them remember these answers as I introduce the topic of force
12	**Explain: (concepts, procedures, vocabulary, etc.)** • Go over the PowerPoint notes • Talk about force, friction, and the helpful and not helpful uses for friction • Ask some critical thinking questions throughout the notes • Have students come up and help me show examples for different forces Two of them pull against each other to create equal forces
18	**Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)** • Show examples of each type of friction Static friction – the table in the room not moving when I push it Kinetic friction – Sliding friction – pushing a table across the room Rolling friction – volleyball rolling across the room • Show video at the end on force and friction
5	**Review (wrap up and transition to next activity):** Go over any last minute questions and revisit the video if the students have any questions

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	Ask students to take out a sheet of paper and write down one examples of a force and one way friction can be helpful for us

Formative Assessment: (linked to objectives) **Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.** Periodic questioning throughout Exit slip for students **Consideration for Back-up Plan:** Use physics aviary to play a game	**Summative Assessment (linked back to objectives)** **End of lesson:** **If applicable- overall unit, chapter, concept, etc.:**

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

The lesson went fairly well over all and there was a good use of time. The students were able to relate the information to their everyday life. They also really enjoy the sports figures video.
Considerations for next time:

- Have a strategy for calling on students instead of allowing the same students to dominate the group
- Provide more physical examples for students