ASSIGNMENT 3

Lesson Plan

INSTRUCTIONS	https://docs.google.com/document/d/1eaFYpQDWGsD-dQtqREHkaoK8gbCN3DopbMHorZRkAak/edit#heading=h.81wgbzdexfqy
Video 1	https://drive.google.com/file/d/1mFX9Vkq3hLWW_rDyZqBfUt1kfXtHgV9-/view?usp=drivesdk
Video 2	https://drive.google.com/file/d/1PKVe7dhMwX7kwThL5ol234HKAELf-1kL/view

RESOURCES	
Grasp	https://www.tdsb.on.ca/Portals/ecoschools/docs/GRASP.pdf
Curriculum	https://assets-us-01.kc-usercontent.com/fbd574c4-da36-0066-a0c5-849ffb2de96e/2674c944-8ede-43d8-aa39-55156a0468ac/The%20Ontario%20Curriculum%20Grades%201–8%20–%20Science%20and%20Technology%202022.pdf
Grade 5 LRP - ON	https://www.dcp.edu.gov.on.ca/en/long-range-plans-science-technology/g5
Grade 5 LRP – ON	https://scitechontario.ca
Scientific and Engineering Design Process	https://docs.google.com/presentation/d/1mnrJWaNCpVsFy6-33nf65kRl1w13jChRo62C4DWlzos/edit#slide=id.g1b18ea233f67e7ab_9

5E Model of Instruction	Engage. Explore. Explain. Elaborate. Evaluate. https://www.edutopia.org/article/how-use-5e-model-your-science-classroom/#:~:text=One%20approach%20to%20inquiry%20science,their%20learning%20to%20new%20contexts. https://www.hmhco.com/blog/5e-model-of-science-instruction

	https://nearpod.com/blog/5e-lesson-plan/
SIGN-UP SHEET	https://assets-us-01.kc-usercontent.com/fbd574c4-da36-0066-a0c5-849ffb2de96e/2674c944-8ede-43d8-aa39-55156a0468ac/The%20Ontario%20Curriculum%20Grades%201–8%20–%20Science%20and%20Technology%202022.pdf
LESSON PLAN	
Template	https://docs.google.com/document/d/1Oet3OVI-W0NPUJT7uu9_XiFeqr_qES76/edit
Example	https://drive.google.com/file/d/1ZBWt-4g4ft7t3JlekMRvD5Ef5qimLJVK/view
Design	https://docs.google.com/document/d/10HbiPCdQsBHc6G56tWvRZdeVHZVF-Uls6oAzTVQpVn8/edit
DIFFERENTIATED INSTRUCTION	Students, Structures, Strategies https://drive.google.com/file/d/1_kvesnDKmbrieMoc7HvQbbY9YuC45-ev/view
Definition	https://www.readingrockets.org/topics/differentiated-instruction/articles/what-differentiated-instruction
Video 1	https://drive.google.com/file/d/1kfPK63VAbvnq6Zw6rJqPkjNKSUNokUJz/view
ASSESSMENT AND EVALUATION	
Learning Goals and Success Criteria	https://www.oregon.gov/ode/educator-resources/assessment/Documents/writing_tips_learning_goals_success_criteria.pdf
Action Words	https://www.utica.edu/academic/Assessment/new/Blooms%20Taxonomy%20-%20Best.pdf
Growing Success	https://www.edu.gov.on.ca/eng/policyfunding/growsuccess.pdf
UDL	https://udlguidelines.cast.org
CONNECTIONS & CROSS-CURRICULAR	https://www.dcp.edu.gov.on.ca/en/program-planning/cross-curricular-and-integrated-learning/introduction

Video 1	https://www.youtube.com/watch?v=4H_xlkNSRLk&embeds_referring_euri=https%3A%2F%2Fwww.edutopia.org%2F&embeds_referring_origin=https%3A%2F%2Fwww.edutopia.org&source_ve_path=Mjg2NjY&feature=emb_logo

DIFFERENTIATED INSTRUCTION **LESSON PLAN**	**GRADE 5 SCIENCE AND TECHNOLOGY** *Three 50-minute periods*
	https://drive.google.com/file/d/1_kvesnDKmbrieMoc7HvQbbY9YuC45-ev/view http://leilehuamentorprogram.weebly.com/uploads/1/6/5/6/16563028/classroom-instruction-that-works_pdf.pdf

DIFFERENTIATED INSTRUCTION DETAILS

Knowledge of Students

- ☐ Readiness
- ☐ Interests
- ☐ Preferences
- ☐ Intelligences
- ☐ Other (e.g., environment, gender, culture)

Need to Know

-

How to Find Out

-

Differentiated Instruction Response

- ☐ Topic, Entry Point *(Content)*
- ☐ Ways of Learning *(Process)*

☐ Ways of Demonstrating Learning *(Product)*

☐ Learning Environment

CURRICULUM CONNECTIONS	
Big Idea:	
Fundamental Concepts	
Overall Expectation A	**Overall Expectation D**
Specific Expectations	**Specific Expectations**
Learning Goals	

PRIOR LEARNING
Prior to this lesson, students will have:

MINDS ON *Learning Group -> Activity/Strategy* ◆ *Establishing a positive learning environment* ◆ *Connecting to prior learning and/or experiences* ◆ *Setting the context for learning* ACTION *Learning Group -> Activity/Strategy*	ASSESSMENT AND EVALUATION AfL AoL Assessment Tool MATERIALS AND RESOURCES List CONNECTIONS Literacy

◆ *Introducing new learning or extending/reinforcing prior learning* ◆ *Providing opportunities for practice and application of learning (guided > independent)* CONSOLIDATION *Learning Group -> Activity/Strategy* ◆ *Helping students demonstrate what they have learned* ◆ *Providing opportunities for consolidation and reflection*	Mathematics

ACTIVITY 1: Energy Transformation at home (5-7 minutes)

1. VIDEO: https://www.youtube.com/watch?v=-8atIc3XixY
2. Graphic Organizer: Paper and Pen, Online,
3. Show and Tell
4. Scientific Research ???

ACTIVITY 2: Energy Transformation outside of our home

1. Google Maps: More Energies
2. Graphic Organizer
3. Scientific Research ???
4. Scientific Experiment:

1. Introduce self and greet everyone.	RESOURCES

2. Introduce main topic: *Energy Transformation*. 3. Transition to review of prior learnings and introduction of new topic thru *Minds On*. MINDS ON ➢ *Review of Anchor Chart/Visual Aid* ➢ *Pop Quiz* ➢ *Transition to Topic:* Energy Transformation ➢ Learning Goal: *We Are Learning To* 4. Show and review of visual aid.	• Visual Aid - Visual Aid: *Kinetic vs Potential Energy* - Jamboard: *Prior **K**nowledge and Further **W**onderings thru Post-it Notes* • Pop Quiz - Jamboard: *Further **W**onderings and New **L**earnings* • Learning Goals: - *We are learning*

Engineering Designs to do at home: https://www.sciencebuddies.org/blog/potential-kinetic-energy-lessons

https://docs.google.com/document/d/1Oet3OVl-W0NPUJT7uu9_XiFeqr_qES76/edit
EXAMPLE: https://drive.google.com/file/d/1ZBWt-4g4ft7t3JlekMRvD5Ef5qimLJVK/view

CURRICULUM CONNECTIONS
Big Idea: Potential energy is stored energy. Kinetic energy is the energy in motion. Energy is directly proportional to mass and velocity/speed. Initial point of an object can impact its related energy levels.
Fundamental Concepts: Forms of Energy
Overall Expectations: **A1. STEM Investigation and Communication Skills** use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures: **A1.2** use a scientific experimentation process and associated skills to conduct investigations

Minds On (5 mins) *Engage:* 1. REVIEW: potential and kinetic energy using Visual Aid. - *What do we remember about Energy?* - *… Kinetic Energy?* - *… Potential Energy?* - *… examples of them?* 2. ACTIVITY: Using Jamboard, students are to provide at least 5 examples EACH of Kinetic and Potential energy. How? - Google search or non-fiction texts - Exploring your surroundings (safely) - Or using your imagination - *Write, draw, or screenshot 3. Share examples within the class. 4. TRANSITION to next activity: Energies at work	Resource: - Visual Aid: *Kinetic and Potential Energy* - Jamboard: https://jamboard.google.com/d/15Hhj1vB70HxJDpP09cpjwWUhD_wS3A9fOlPGHjZTLtY/viewer?f=1 ALTERNATIVE to Jamboard: - Pen and Paper - Video Conference App Chat Option
Action (20 mins)	
Explore 1. ACTIVITY: Energy Skate Park – Explore the *Intro to Basics:* - Various starting points - Various data visualization - Changing mass - Changing ramps 2. While exploring, jot down your questions/wonderings using WH-Questions on Jamboard 5. TRANSITION: Introduce topic of discussion: *Exploring Characteristics of Kinetic and Potential* 6. LEARNING GOALS: *We are learning to*	Resource: - Simulator: https://phet.colorado.edu/sims/html/energy-skate-park-basics/latest/energy-skate-park-basics_all.html ALTERNATIVE to Jamboard: - Pen and Paper Video Conference App Chat Option

- *Describe the relationship of kinetic and potential energy* - *Describe how energy levels increase or decrease with* • Mass • Speed • Starting points	
Consolidation (10 mins)	