Name
TA

Science 10
2022-2023

Learning Guide # 8: Types of Energy and Conservation of Energy

BIG IDEA: *Types of Energy and Energy Transformations*

Fundamental Knowledge (I know)

- ☐ The Law of Conservation of Energy and what it means
- ☐ The different types of energy and how energy can be transformed from one type to another
- ☐ And can explain/describe a situation from my life that follows the Law of Conservation Energy

Curricular Competencies (I can)

	Proficiency Scale Teacher and Student self assessment (Circle one)	**Evidence (How do you know?)**
I can: Evaluate the validity and limitations of a model or analogy in relation to the phenomenon modelled.	**Emerging (EMG)** **Initial Understanding** **Developing (DEV)** **Partial/Near Complete Understanding** **Proficient (PRF)** **Complete Understanding** **Extending (EXT)** **Sophisticated Understanding**	
Formulate physical or mental theoretical models to describe a phenomenon.	**Emerging (EMG)** **Initial Understanding** **Developing (DEV)** **Partial/Near Complete Understanding** **Proficient (PRF)** **Complete Understanding** **Extending (EXT)** **Sophisticated Understanding**	

Student Signature: **Teacher Signature:**

Date:

Instructions To help guide your learning, make your way through the activities in Option 1, Option 2, or Option 3. You may "mix and match" between the different Option columns.

TOPIC	OPTION 1	OPTION 2	OPTION 3
Types of Energy	**Watch the video and List/Define** 5 different types of energy AND explain how they can be converted from one type to another.	***Create*** a digital presentation, PowerPoint, Prezi, etc. illustrating five (5) different types of energy.	**Choose your own adventure!** Pick up a planning sheet from the Science Kiosk. Create a plan! Make sure you read through the first page of this LG, as you will need to design ways to learn/practice and show your understanding of the topic(s) and skill(s) (competencies.) You will need to have a teacher approve your plan before beginning the LG.
Conservation of Energy	Watch this video on conservation of energy and define the Law of Conservation of Energy.	Find and **document (record/reference)** three (3) website that explain the law of conservation of energy and define the Law of Conservation of Energy.	
Energy Conversions	**Describe** in a paragraph why a moving object (like a bicycle) will eventually slow down and come to a complete stop if you stop providing external energy (peddling).	Using **ONE daily activity** and **explain** in a paragraph how energy is converted between different forms AND how it is slowly lost.	
Potential and Kinetic Energy Defined	Explain the difference between kinetic and potential energy.	Explain the difference between kinetic and potential energy.	
Potential and Kinetic Energy Conversions	***Draw AND label*** a diagram of a roller coaster course showing where the energy conversions occur **and explain** how these conversions demonstrate the law of conservation of energy.	***Draw AND label*** a diagram of a roller coaster course showing where the energy conversions occur **and explain** how these conversions demonstrate the law of conservation of energy.	
Lab	No lab.		
Self Assessment	Reflect on the Fundamental Knowledge and Curricular Competencies. Use the rubric and make goals to improve for your next learning guide.		
Interview or Quiz	See you teacher for an interview or to have a quiz slip signed for the test center. Bring your work and staple it to your quiz when complete.		

Resources can be found at www.THSSscience.com or the Science Kiosk
User: ***THSS***
Password: ***science***