



Course: Science 7

Teacher: Amir Farrokh

Unit: Physics

Date: April-May

Duration: About 5 weeks

Description: Students start to learn about the different ways of producing electricity in this unit, as well as the differences between electricity and magnetism. Since there are many similarities between these two, differing between attracting magnetic force between two opposite poles and electrical force between two opposite charges is key. Also, they will learn green ways of generating electricity and non environment-friendly methods. In addition to all mentioned, the students should start questioning themselves: Why does the magnet not need to come into contact with the needle to attract it? How and why the compass always points to the geographical north-pole?

	Big Ideas	Essential Questions
Understand	The electromagnetic force produces both electricity and magnetism.	<p>How is electricity generated?</p> <p>What is the relationship between electricity and magnetism?</p>

	Core Competencies	
Do	<i>Creative Thinking; (3) Critical Thinking; (4) Personal Awareness and Responsibility (6) Social Responsibility.</i>	<ul style="list-style-type: none"> ● Estimate reasonably <i>Demonstrate understanding of the possible outcomes and not accepting any numbers out of range</i> ● Apply <i>Use the physical knowledge to solve real-life questions</i>
	Curricular Competencies	
	<p>Identify a question to answer or a problem to solve through scientific inquiry</p> <p>Formulate alternative “If...then...” hypotheses based on their questions</p>	<i>Students will explore these competencies using virtual labs and applications or websites like Gizmos which help students see the effect of any change on the system in a real time manner.</i>

Curricular Content	
Know	<p>electricity generated in different ways with different environmental impacts</p> <p>electromagnetism</p> <p><i>Which activities, projects, exercises or discussions will teach this Curricular Content?</i></p> <ol style="list-style-type: none"> 1. <i>Class discussion of how Magnetism and Electricity are related</i> 2. <i>Discussions of the Foundation of atoms</i> 3. <i>Consider worked examples and analyse steps</i> 4. <i>Discussion of the basis of the producing green energies</i> <p><i>Through class discussions, independent work and self-reflection, students will have the opportunity to reinforce the following First Peoples Principles of Learning:</i></p> <ul style="list-style-type: none"> ● <i>Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits and the ancestors.</i> ● <i>Learning is holistic, reflexive, reflective, experimental, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).</i> ● <i>Learning is embedded in memory, history, and story.</i> ● <i>Learning involves patience</i>

Unit Assessment		
<p>For Learning:</p> <ol style="list-style-type: none"> 1. Whiteboard work 2. Check for specific questions from homework 3. Participation in video conference 	<p>As Learning:</p> <ol style="list-style-type: none"> 1. Self-Assessment using Google Forms 	<p>Of Learning:</p> <ol style="list-style-type: none"> 1. Test

Required Resources

McGraw Hill Science 7 textbook

Youtube videos

Gizmos website

Video conferencing