

# INTERGRATED SCIENCE SCHEMES OF WORK GRADE 8

**NAME OF THE TEACHER:** \_\_\_\_\_

**SCHOOL:** \_\_\_\_\_ **TERM: III** **YEAR:** \_\_\_\_\_

Wk	LSN	strand	Sub-strand	Lesson Learning Outcomes	Learning Experiences	Key Inquiry Question(s)	Learning Resources	Assessment Methods	Refl
1	1	<b>FORCE AND ENERGY</b>	Forms of energy in nature – light, heat	By the end of the lesson, the learner should be able to: a. identify forms of energy in nature, b. observe light and heat energy in nature c. appreciate the various forms of energy in daily life.	The learner is guided to: ● discuss with peers and identify forms of energy found in nature ( <i>light, heat</i> )	What are the sources of energy in the environment	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.114-117 Active Integrated Scie Grd 8 P.b Pg.130-131	Demonstration, QA, group discussion	
	2		Forms of energy in nature – potential, kinetic	By the end of the lesson, the learner should be able to: a. identify forms of energy in nature, b. observe potential and kinetic energy in nature c. appreciate the various forms of energy in daily life.	The learner is guided to: ● discuss with peers and identify forms of energy found in nature ( <i>potential, kinetic</i> ),	What are the sources of energy in the environment	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.114-117 Active Integrated Scie Grd 8 P.b Pg.130-131	Demonstration, QA, group discussion	
	3		Forms of energy in nature – gravitational, electrical energy, sound energy	By the end of the lesson, the learner should be able to: a. identify forms of energy in nature, b. observe gravitation, electrical and sound energy in nature c. appreciate the various forms of energy in daily life.	The learner is guided to: ● discuss with peers and identify forms of energy found in nature ( <i>gravitational, electrical energy, sound energy</i> ),	What are the sources of energy in the environment	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.114-117 Active Integrated Scie Grd 8 P.b Pg.130-131	Demonstration, QA, group discussion	
	4		Forms of energy in nature – chemical, nuclear or atomic energy	By the end of the lesson, the learner should be able to: a. identify forms of energy in nature, b. observe chemical and nuclear energy in nature c. appreciate the various forms of energy in daily life.	The learner is guided to: ● discuss with peers and identify forms of energy found in nature ( <i>chemical energy, nuclear or atomic energy</i> ),	What are the sources of energy in the environment	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.114-117 Active Integrated Scie Grd 8 P.b Pg.130-131	Demonstration, QA, group discussion	

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	5	<b>Classification of energy sources</b>	Renewable energy	By the end of the lesson, the learner should be able to: a. Highlight the forms of energy in nature that are renewable b. classify energy sources renewable source of energy c. appreciate the various classes of energy.	The learner is guided to: ● discuss and classify energy sources in nature ( <i>renewable</i> ) ● print media to look for more information on classification of energy sources in nature,	What is the difference between renewable and non	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.114-117 Active Integrated Scie Grd 8 P.b Pg.130-131	Demonstration, QA, group discussion	
2	1		Non-renewable energy	By the end of the lesson, the learner should be able to: a. Highlight the forms of energy in nature that are non-renewable b. classify energy sources non-renewable source of energy c. appreciate the various classes of energy.	The learner is guided to: ● discuss and classify energy sources in nature ( <i>non-renewable sources</i> ), ● print media to look for more information on classification of energy sources in nature,	What is the difference between renewable and non	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.114-117 Active Integrated Scie Grd 8 P.b Pg.130-131	Demonstration, QA, group discussion	
	2	<b>Energy transformations in nature</b>	Electrical to heat	By the end of the lesson, the learner should be able to: a. identify forms of energy transformations, b. Observe the transformation electrical energy to heat. c. appreciate the energy transformations in nature.	The learner is guided to: ● carry out activities to show energy transformation in day-to-day life ( <i>electrical to heat</i> ),	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	
	3		Electrical to heat	By the end of the lesson, the learner should be able to: a. identify forms of energy transformations in nature, b. demonstrate simple energy transformations in nature from electrical to heat, c. appreciate the energy transformations in nature.	The learner is guided to: ● carry out activities to show energy transformation in day-to-day life ( <i>electrical to heat</i> ),	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	

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	4		Chemical to electrical	By the end of the lesson, the learner should be able to: a. identify forms of energy transformations, b. Observe the transformation of chemical energy to electrical. c. appreciate the energy transformations in nature.	The learner is guided to: ● carry out activities to show energy transformation in day-to-day life ( <i>chemical to electrical</i> ).	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	
	5		Chemical to electrical	By the end of the lesson, the learner should be able to: a. identify forms of energy transformations in nature, b. demonstrate simple energy transformations in nature from chemical to electrical, c. appreciate the energy transformations in nature.	The learner is guided to: ● carry out activities to show energy transformation in day-to-day life ( <i>chemical to electrical</i> ).	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	
3	1		Mechanical to electrical	By the end of the lesson, the learner should be able to: a. identify forms of energy transformations, (mechanical) b. Observe the transformation mechanical energy to electrical. c. appreciate the energy transformations in nature.	The learner is guided to: ● carry out activities to show energy transformation in day-to-day life ( <i>mechanical to electrical</i> ).	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	
	2		Mechanical to electrical	By the end of the lesson, the learner should be able to: a. identify forms of energy transformations in nature, b. demonstrate simple energy transformations in nature from mechanical energy to electrical, c. appreciate the energy transformations in nature.	The learner is guided to: ● carry out activities to show energy transformation in day-to-day life ( <i>mechanical to electrical</i> ).	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	

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	3		Electrical to light	By the end of the lesson, the learner should be able to: a. identify forms of energy transformations nature b. Observe the transformation of electrical energy to light c. appreciate the energy transformations in nature.	The learner is guided to: ● carry out activities to show energy transformation in day-to-day life ( <i>electrical to light</i> ).	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	
	4		Electrical to light	By the end of the lesson, the learner should be able to: a. identify forms of energy transformations in nature, b. demonstrate simple energy transformations in nature from electrical to light, c. appreciate the energy transformations in nature.	The learner is guided to: ● carry out activities to show energy transformation in day-to-day life ( <i>electrical to light</i> ).	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	
	5		Electrical to sound	By the end of the lesson, the learner should be able to: a. identify forms of energy transformations in nature. b. Observe the transformation from electrical energy to sound. c. appreciate the energy transformations in nature.	The learner is guided to: ● carry out activities to show energy transformation in day-to-day life ( <i>electrical to sound</i> ).	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	
4	1		Electrical to sound	By the end of the lesson, the learner should be able to: a. identify forms of energy transformations in nature, b. demonstrate simple energy transformations in nature from electrical to sound, c. appreciate the energy transformations in nature.	The learner is guided to: ● carry out activities to show energy transformation in day-to-day life ( <i>electrical to sound</i> ).	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	

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	2		Potential to kinetic	By the end of the lesson, the learner should be able to: <ul style="list-style-type: none"> <li>a. identify forms of energy transformations,</li> <li>b. Observe the transformation of potential energy to kinetic.</li> <li>c. appreciate the energy transformations in nature.</li> </ul>	The learner is guided to: <ul style="list-style-type: none"> <li>● carry out activities to show energy transformation in day-to-day life (<i>potential to kinetic</i>).</li> </ul>	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	
	3		Potential to kinetic	By the end of the lesson, the learner should be able to: <ul style="list-style-type: none"> <li>a. identify forms of energy transformations in nature,</li> <li>b. demonstrate simple energy transformations in nature from potential to kinetic,</li> <li>c. appreciate the energy transformations in nature.</li> </ul>	The learner is guided to: <ul style="list-style-type: none"> <li>● carry out activities to show energy transformation in day-to-day life (<i>potential to kinetic</i>).</li> </ul>	How is energy transformation applied in day-to-day life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.117-119 Active Integrated Scie Grd 8 P.b Pg.132-137	Demonstration, QA, group discussion	
	4		Safety measures associated with energy transformations in nature	By the end of the lesson, the learner should be able to: <ul style="list-style-type: none"> <li>a. describe safety measures associated with energy transformation,</li> <li>b. examine the appliances whose working relies on energy transformation</li> <li>c. appreciate the safety measures during energy transformations in nature.</li> </ul>	The learner is guided to: <ul style="list-style-type: none"> <li>● discuss safety measures associated with energy transformation and strategies of mitigating them (<i>relate to road accidents, K.E to P.E; action and reaction, accidents caused by fire, electricity, health hazard from bright light, loud sound</i>).</li> </ul>	What are the appliances whose working relies on energy transformation?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.119-124 Active Integrated Scie Grd 8 P.b Pg.138-142	Demonstration, QA, group discussion	
	5		Applications of energy transformations in daily life	By the end of the lesson, the learner should be able to: <ul style="list-style-type: none"> <li>a. identify application of energy transformations in nature,</li> <li>b. analyze the applications of energy transformation in daily life.</li> <li>c. appreciate the applications of energy transformation in day-to-day life.</li> </ul>	The learner is guided to: <ul style="list-style-type: none"> <li>● discuss and identify applications of energy transformations in day-to-day life (<i>use of a falling object, rubbing both hands, burning of wood, electric bulbs, Light Emitting Diodes (LED), electric heater, steam engine, piezoelectricity, microphone, windmills, electric generator/dynamo, hydroelectric dams, thermocouple, geothermal power plant, solar panel, electric motor</i>).</li> </ul>	What are the applications of energy transformation in daily life?	Dictionary, charts on forms of energy Active Integrated Scie Grd 8 T.G Pg.124-125 Active Integrated Scie Grd 8 P.b Pg.144-146	Demonstration, QA, group discussion	

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5	1	Pressure I	Meaning of pressure	By the end of the lesson, the learner should be able a. define the term pressure. b. Observe pictures of pressure in solids and liquids. c. Desire to work on activities involving pressure.	The learner is guided to: ● brainstorm on the meaning of pressure as used in science.	What is pressure?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	
	2		Pressure in solids – sharp and blunt cutting surfaces	By the end of the lesson, the learner should be able a. describe pressure in solids b. Observe pressure in solids using sharp and blunt cutting surface. c. Develop curiosity in pressure as a result of solids.	The learner is guided to: ● observe pictures of pressure exerted by solids ( <i>sharp and blunt cutting surfaces</i> ),	How is pressure described in solids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	
	3		Pressure in solids – sharp and blunt cutting surfaces	By the end of the lesson, the learner should be able a. describe pressure in solids b. Demonstrate pressure in solids using sharp and blunt cutting surface. c. Develop curiosity in pressure as a result of solids.	The learner is guided to: ● carry out activities to demonstrate pressure exerted by solids ( <i>sharp and blunt cutting surfaces</i> ),	How is pressure described in solids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	
	4		Pressure in solids – stiletto and flat soled shoes	By the end of the lesson, the learner should be able a. describe pressure in solids b. Observe pressure in solids using stiletto and flat soled shoes. c. Develop curiosity in pressure as a result of solids.	The learner is guided to: ● observe pictures of pressure exerted by solids ( <i>stiletto and flat soled shoes</i> ),	How is pressure described in solids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	
	5		Pressure in solids – stiletto and flat soled shoes	By the end of the lesson, the learner should be able a. describe pressure in solids b. Demonstrate pressure in solids using stiletto and flat soled shoes. c. Develop curiosity in pressure as a result of solids.	The learner is guided to: ● carry out activities to demonstrate pressure exerted by solids ( <i>stiletto and flat soled shoes</i> ),	How is pressure described in solids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	

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6	1		Pressure in solids – bricks on different surfaces	By the end of the lesson, the learner should be able a. describe pressure in solids b. Observe pressure in solids using bricks on different surfaces c. Develop curiosity in pressure as a result of solids.	The learner is guided to: ● observe pictures of pressure exerted by solids ( <i>bricks on different surfaces</i> ).	How is pressure described in solids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	
	2		Pressure in solids – bricks on different surfaces	By the end of the lesson, the learner should be able a. describe pressure in solids b. Demonstrate pressure in solids using bricks on different surfaces c. Develop curiosity in pressure as a result of solids.	The learner is guided to: ● carry out activities to demonstrate pressure exerted by solids ( <i>bricks on different surfaces</i> ).	How is pressure described in solids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	
	3		Pressure in solids – construction of water dams	By the end of the lesson, the learner should be able a. describe pressure in solids b. Observe pressure in solids in the construction of water dams c. Develop curiosity in pressure as a result of solids.	The learner is guided to: ● observe pictures of pressure exerted by solids ( <i>construction of water dams</i> ).	How is pressure described in solids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	
	4		Pressure in solids – construction of water dams	By the end of the lesson, the learner should be able a. describe pressure in solids b. Demonstrate pressure in solids in the construction of water dams c. Develop curiosity in pressure as a result of solids.	The learner is guided to: ● carry out activities to demonstrate pressure exerted by solids ( <i>construction of water dams</i> ).	How is pressure described in solids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	
	5	<b>Pressure in liquids</b>	Tin with vertical holes	By the end of the lesson, the learner should be able a. describe pressure in liquids, b. collect materials necessary for conducting pressure in liquids, c. Develop curiosity in pressure as a result of liquids.	The learner is guided to: ● Observe pictures of pressure in liquids ( <i>tin with vertical holes at different heights filled with water.</i> ).	How is pressure described in liquids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	

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7	1		Tin with vertical holes	By the end of the lesson, the learner should be able <ul style="list-style-type: none"> <li>a. describe pressure in liquids,</li> <li>b. demonstrate pressure in liquids using tin with vertical holes,</li> <li>c. Develop curiosity in pressure as a result of liquids.</li> </ul>	The learner is guided to: <ul style="list-style-type: none"> <li>● carry out activities to demonstrate pressure in liquids (<i>tin with vertical holes at different heights filled with water.</i>).</li> </ul>	How is pressure described in liquids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	
	2		Water finding its own level on a container, the syringe, drinking straw	By the end of the lesson, the learner should be able <ul style="list-style-type: none"> <li>a. describe pressure in liquids,</li> <li>b. demonstrate pressure in liquids using straw, syringe.</li> <li>c. Develop curiosity in pressure as a result of liquids.</li> </ul>	The learner is guided to: <ul style="list-style-type: none"> <li>● carry out activities to demonstrate pressure in liquids ( <i>water finding its own level in a container, the syringe, drinking straw</i>).</li> </ul>	How is pressure described in liquids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.130-159 Active Integrated Scie Grd 8 P.b Pg.149-136	Demonstration, QA, group discussion	
	3		Relationship between pressure, area of contact and weight of solids	By the end of the lesson, the learner should be able <ul style="list-style-type: none"> <li>a. describe the relationship between pressure, area of contact and weight of solids,</li> <li>b. demonstrate the relationship between area of contact, pressure and weight.</li> <li>c. appreciate the relationship between pressure, area of contact and weight.</li> </ul>	The learner is guided to: <ul style="list-style-type: none"> <li>● <i>discuss the relationship among pressure, area of contact and weight of solids</i> (qualitative treatment only).</li> </ul>	What is the relationship between pressure, area of contact and weight	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.136-139 Active Integrated Scie Grd 8 P.b Pg.160-166	Demonstration, QA, group discussion	
	4		Relationship between pressure, and height of liquids	By the end of the lesson, the learner should be able <ul style="list-style-type: none"> <li>a. describe the relationship between pressure and height of liquids.</li> <li>b. demonstrate the relationship between pressure and height of liquids.</li> <li>c. appreciate the relationship between pressure, area of contact and weight.</li> </ul>	The learner is guided to: <ul style="list-style-type: none"> <li>● <i>discuss the relationship between pressure and height of liquid based on observations made on materials with different surface areas and liquid columns</i> (qualitative treatment only).</li> </ul>	What is the relationship between pressure, area of contact and weight	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.136-139 Active Integrated Scie Grd 8 P.b Pg.160-166	Demonstration, QA, group discussion	
	5		Applications of pressure in solids	By the end of the lesson, the learner should be able <ul style="list-style-type: none"> <li>a. identify applications of pressure in solids,</li> <li>b. demonstrate the applications of pressure in solids</li> <li>c. appreciate the applications of pressure in solids.</li> </ul>	The learner is guided to: <ul style="list-style-type: none"> <li>● <i>discuss the applications of pressure in solids and liquids</i> (axle load capacity, high heeled shoes, cutting tools, bicycle pumps.).</li> <li>● <i>use print media to look for more information on the applications of pressure in solids.</i></li> </ul>	What are the applications of pressure in solids ?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.139-140 Active Integrated Scie Grd 8 P.b Pg.167-171	Demonstration, QA, group discussion	

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8	1		Applications of pressure in liquids	By the end of the lesson, the learner should be able <ol style="list-style-type: none"> <li>identify applications of pressure in liquids,</li> <li>demonstrate the applications of pressure in liquids.</li> <li>appreciate the applications of pressure in liquids.</li> </ol>	The learner is guided to: <ul style="list-style-type: none"> <li><i>discuss the applications of pressure in solids and liquids</i> (syringe, car brakes, siphons, drinking straw).</li> <li><i>use print media to look for more information on the applications of pressure in liquids.</i></li> </ul>	What are the applications of pressure in liquids?	Dictionary, charts with illustrations on pressure Active Integrated Scie Grd 8 T.G Pg.139-140 Active Integrated Scie Grd 8 P.b Pg.167-171	Demonstration, QA, group discussion	
	2-5	<b>REVISION EXERCISE</b>							
9	1-5	<b>END YEAR ASSESSMENT/CLOSING</b>							