

### SCIENCE SCHEME OF WORK GRADE 5 TERM 3

NAME	
TSC NO.	
SCHOOL	

## SCIENCE TECHNOLOGY SCHEME OF WORK GRADE 5 TERM 3

Wk	Ln	Strand/ Theme	Sub strand	Specific learning outcome	Key inquiries questions	Learning experience	Learning resources	Assessment methods	Ref L
<b>1</b>	1	<b>COMPUTING DEVICES</b>	<b>Coding</b> Creating games	By the end of the sub strand, the learner should be able to: a. Create animated graphics using simple programming simulations. b. Use available learning applications to fine solutions to problems in local environment. c. Appreciate the role of available learning like scratch in everyday life.	What coding skills can be applied in solving day to day problems?	<b>Project:</b> use the scratch or any other simple programming simulation tool to generate some animated graphics.	Microsoft device  word	a. Word practical tasks b. Typing c. Document formatting	
	2		<b>Coding</b> Creating games	By the end of the sub strand, the learner should be able to: a. Create animated graphics using simple programming simulations. b. Use available learning applications to fine solutions to problems in local environment. c. Appreciate the role of available learning like scratch in everyday life.	What coding skills can be applied in solving day to day problems?	<b>Project:</b> use the scratch or any other simple programming simulation tool to generate some animatey762qwaaaaa1d graphics.	Microsoft device  word	a. Word practical tasks b. Typing c. Document formatting	
	3	<b>MATTERS</b>	<b>Change of state of matter</b> Through heating	By the end of the sub strand learners should be able to: a. Define the term matter b. Observe and record changes of state when common substances are heated c. State the changes of state when substances	1) What is the effect of heating matter: 2) What is the effect of cooling matter 3) What is the importance of of change of	Learners should observe and record what happens to different solids when heated.(cooking fat or ice or candle wax, naphthalene (moth ball)	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	

				are heated d. Appreciate that matter changes states when heated or cooled	state of matter in day to day life				
	4		<b>Change of state of matter</b> Through heating	By the end of the sub strand learners should be able to: a. Define the term matter b. Observe and record changes of state when common substances are heated c. State the changes of state when substances are heated d. Appreciate that matter changes states when heated or cooled	<ul style="list-style-type: none"> <li>• What is the effect of heating matter</li> <li>• What is the effect of cooling matter</li> <li>• What is the importance of change of state of matter in day to day life</li> </ul>	Leaners should observe and record what happens to different solids when heated.(cooking fat or ice or candle wax, naphthalene (moth ball))	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
<b>2</b>	1		<b>Change of state of matter</b> Through cooling	By the end of the sub strand learners should be able to: a. Define the term matter b. Observe and record changes of state when common substances are heated c. State the changes of state when substances are heated d. Appreciate that matter changes states when heated or cooled	<ul style="list-style-type: none"> <li>• What is the effect of heating matter</li> <li>• What is the effect of cooling matter</li> </ul> What is the importance of change of state of matter in day to day life	Learners to observe, record and discuss liquids when heated (water) Learners to observe , record and discuss what happens to water vapor when it cools Leaners to observe , record and discuss what happens when vapor from naphthalene (moth) ball is boiled Learners use digital devices to access videos, observe and record what happens when matter is heated or cooled	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
	2		<b>Change of state of matter</b> Application of states of matter	By the end of the sub strand learners should be able to: a. State the application of the change of state of mater in everyday life b. Describe the changes that takes place in the water cycle c. Appreciate that matter changes states when	<ul style="list-style-type: none"> <li>• What is the effect of heating matter</li> <li>• What is the effect of cooling matter</li> </ul> What is the importance of change of state of matter in day to	Learners to discuss the applications to changes of state of maters in everyday in their locality (drying grains and clothes, making ice cubes) In group learners are guided to discuss the water cycle In groups learners watch a video clip on the water cycle	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	

			heated or cooled	day life	and record the different changes of state of matters involved			
	3	<b>Changes of states of matter</b> application of state of matter	By the end of the sub strand learners should be able to: <ul style="list-style-type: none"> <li>a. Describe the changes that takes place in the water cycle</li> <li>b. Watch video clip on the water cycle</li> <li>c. Appreciate that matter changes states when heated or cooled</li> </ul>	<ul style="list-style-type: none"> <li>• What is the effect of heating matter</li> <li>• What is the effect of cooling matter</li> </ul> What is the importance of change of state of matter in day to day life	-Learners to observe, record and discuss liquids when heated (water) Learners to observe , record and discuss what happens to water vapor when it cools Learners to observe , record and discuss what happens when vapor from naphthalene (moth) ball is boiled Learners use digital devices to access videos, observe and record what happens when matter is heated or cooled	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
	4	<b>Changes of states of matter</b> water cycle	By the end of the sub strand learners should be able to: <ul style="list-style-type: none"> <li>a. Describe the changes that takes place in the water cycle</li> <li>b. Watch video clip on the water cycle</li> </ul> Appreciate that matter changes states when heated or cooled	<ul style="list-style-type: none"> <li>• What is the effect of heating matter</li> <li>• What is the effect of cooling matter</li> </ul> What is the importance of change of state of matter in day to day life	Learners to discuss the applications to changes of state of matters in everyday in their locality (drying grains and clothes, making ice cubes) In group learners are guided to discuss the water cycle In groups learners watch a video clip on the water cycle and record the different changes of state of matters involved	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
<b>3</b>	1	<b>Changes of states of matter</b> water cycle	By the end of the sub strand learners should be able to: <ul style="list-style-type: none"> <li>a. Make a candle using a candle wax and bee wax</li> <li>b. Watch video clip on water cycle</li> <li>c. Appreciate that matter changes when heated or cooled</li> </ul>	<ul style="list-style-type: none"> <li>• What is the effect of heating matter</li> <li>• What is the effect of cooling matter</li> </ul> What is the importance of change of state of matter in day to day life	<b>Projects:</b> learners to make candles wax or bee wax	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
	2	<b>Changes of states</b>	By the end of the sub strand learners should be able to:	1.What is the effect of heating matter?	<b>Projects:</b> learners to make candles wax or bee wax	Convectional laboratory	- question and answer	

			<b>of matter</b> water cycle	<ol style="list-style-type: none"> <li>Make a candle using a candle wax and bee wax</li> <li>Watch video clip on water cycle</li> <li>Appreciate that matter changes when heated or cooled</li> </ol>	<p>2.What is the effect of cooling matter?</p> <p>3.What is the importance of change of state of matter in day to day life?</p>		resources and improvised resources from the environment	method - class quizzes - individual performance assessment Project work	
	3		<b>Acids and bases</b> differences between acids and bases	<p>By the end of the sub strand learners should be able to:</p> <ol style="list-style-type: none"> <li>Differentiate between acid and bases</li> <li>Identify acids and bases in the locality</li> <li>Apply safety precautions when handling acids and bass</li> </ol>	<p>1. What is the importance of acids and bases in the society?</p> <p>2. What it safety precautions must be observed when handling corrosive acids and bases?</p>	<p>In groups leaners are guided to use litmus paper to identify acids and bases (lemon juice, wood ash solution)</p> <p>In groups leaners are guided to observe safety precautions when handling acids and bases</p>	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
	4		<b>Acids and bases</b> using litmus paper to classify commonly used substances as acids and bases	<p>By the end of the sub strand learners should be able to:</p> <ol style="list-style-type: none"> <li>Use litmus paper to identify acids and bases</li> <li>Classify commonly used substances as acids and bases</li> <li>Apply precautions when handling acids and bases</li> </ol>	<p>1. What is the importance of acids and bases in the society?</p> <p>2. What it safety precautions must be observed when handling corrosive acids and bases?</p>	<p>In groups leaners are guided to use litmus paper to identify acids and bases (lemon juice,</p> <p>In groups learners are guided to carry out activities to classify commonly used substance as acids and bases using litmus papers(lemon juice, orange juice,grape juice, bar soap,wood ash, baking powder,anti- acid tablets, sour milk</p>	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
<b>4</b>	1		<b>Acids and bases</b> using litmus paper to classify commonly used substanc	<p>By the end of the sub strand learners should be able to:</p> <ol style="list-style-type: none"> <li>Use litmus paper to identify acids and bases</li> <li>Classify commonly used substances as acids and bases</li> <li>Apply precautions when handling acids and bases</li> </ol>	<p>1. What is the importance of acids and bases in the society?</p> <p>2. What it safety precautions must be observed when handling corrosive acids and bases?</p>	<p>In groups leaners are guided to use litmus paper to identify acids and bases (lemon juice,</p> <p>In groups learners are guided to carry out activities to classify commonly used substance as acids and bases using litmus papers(lemon juice, orange juice, grape</p>	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	

			es as acids and bases			juice, bar soap, wood ash, baking powder, anti-acid tablets, sour milk)			
	2		<b>Acids and bases</b> physical properties of acids and bases	By the end of the sub strand learners should be able to: <ul style="list-style-type: none"> <li>a. Classify commonly used substance as acids and bases</li> <li>b. State physical properties of acids and bases</li> <li>c. Apply safety precautions when handling acids and bases</li> </ul>	1. What is the importance of acids and bases in the society? 2. What it safety precautions must be observed when handling corrosive acids and bases?	In groups learners are guided to watch video clips on physical properties of acids and bases In groups learners are guided to discuss physical properties of acid and bases In groups leaners are guided to observe to observe safety precautions when handling acids and bases	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
	3		<b>Acids and bases</b> physical properties of acids and bases	By the end of the sub strand learners should be able to: <ul style="list-style-type: none"> <li>a. Classify commonly used substance as acids and bases</li> <li>b. State physical properties of acids and bases</li> <li>c. Apply safety precautions when handling acids and bases</li> </ul>	1. What is the importance of acids and bases in the society? 2. What it safety precautions must be observed when handling corrosive acids and bases?	In groups learners are guided to watch video clips on physical properties of acids and bases In groups learners are guided to discuss physical properties of acid and bases In groups leaners are guided to observe to observe safety precautions when handling acids and bases	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
	4		<b>Acid and bases</b> uses of acids and bases	By the end of the sub strand learners should be able to: <ul style="list-style-type: none"> <li>a. State the uses of acids and bases in daily life</li> <li>b. Develop curiosity in explaining the importance of acids and bases in the society</li> <li>c. Apply safety precautions when handling acids and bases</li> </ul>	1. What is the importance of acids and bases in the society? 2. What it safety precautions must be observed when handling corrosive acids and bases?	In groups learners are guided to discuss the uses of acids and bases In groups learners are guided to observe safety precaution when handling acids and bases	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
<b>5</b>	1	<b>FORCE AND ENERGY</b>	Gravity Effect of gravity	By the end of the sub strand t learners should be able to:	1. How does gravity affect objects?	In groups learners to demonstrate the effect of gravity on the	Convectional laboratory resources	- question and answer method	

		on an object	<ul style="list-style-type: none"> <li>a. State the meaning of gravity as force acting on objects</li> <li>b. Identify the effect of gravity on an object.</li> <li>c. Appreciate effects of gravity in everyday life</li> </ul>		<p>objects(throwing a ball up, stone raised and released to fall, book tipped to fall from the table)</p> <p>Learners are guided to define the term gravity</p> <p>In groups, learners to use digital devices to observe and record the effect of gravity on the objects.</p>	and improvised resources from the environment	<ul style="list-style-type: none"> <li>- class quizzes</li> <li>- individual performance assessment</li> <li>Project work</li> </ul>	
2		Gravity Effect of gravity on an object	<p>By the end of the sub strand learners should be able to:</p> <ul style="list-style-type: none"> <li>a. State the meaning of gravity as force acting on objects</li> <li>b. Identify the effect of gravity on an object.</li> <li>c. Appreciate effects of gravity in everyday life</li> </ul>	. How does gravity affect objects?	<p>In groups learners to demonstrate the effect of gravity on the objects(throwing a ball up, stone raised and released to fall, book tipped to fall from the table)</p> <p>Learners are guided to define the term gravity</p> <p>In groups, learners to use digital devices to observe and record the effect</p>	Convectional laboratory resources and improvised resources from the environment	<ul style="list-style-type: none"> <li>- question and answer method</li> <li>- class quizzes</li> <li>- individual performance assessment</li> <li>Project work</li> </ul>	
3		Gravity Effect of gravity on an object	<p>By the end of the sub strand learners should be able to:</p> <ul style="list-style-type: none"> <li>a. State the meaning of gravity as force acting on objects</li> <li>b. Identify the effect of gravity on an object.</li> <li>c. Demonstrate the effect of gravity on objects</li> <li>d. Appreciate effect of gravity in everyday life</li> </ul>	. How does gravity affect objects?	<p>In groups learners to demonstrate the effect of gravity on the objects(throwing a ball up, stone raised and released to fall, book tipped to fall from the table)</p> <p>Learners are guided to define the term gravity</p> <p>In groups, learners to use digital devices to observe and record the effect</p>	Convectional laboratory resources and improvised resources from the environment	<ul style="list-style-type: none"> <li>- question and answer method</li> <li>- class quizzes</li> <li>- individual performance assessment</li> <li>Project work</li> </ul>	
4		<b>Gravity</b> Application of effect gravity	<p>By the end of the sub strand learners should be able to:</p> <ul style="list-style-type: none"> <li>a. State the meaning of gravity as force acting on objects</li> <li>b. Identify the effect of gravity on an object.</li> <li>c. Demonstrate the effect</li> </ul>	. How does gravity affect objects?	<p>In groups learners are to discuss the effect of gravity</p> <p>In group learners to use digital devices to observe and record the effect of gravity on object</p>	Convectional laboratory resources and improvised resources from the environment	<ul style="list-style-type: none"> <li>- question and answer method</li> <li>- class quizzes</li> <li>- individual performance assessment</li> </ul>	

				of gravity on objects d. Appreciate effect of gravity in everyday life			t	Project work	
<b>6</b>	1		<b>Gravity</b> Applicati on of effect gravity	By the end of the sub strand learners should be able to: a. State the effect of gravity on objects b. Demonstrate the effect of gravity on objects c. Appreciate the effect of gravity on objects d. Appreciate the effect of gravity on everyday life	. How does gravity affect objects?	In groups learners are to discuss the effect of gravity In group learners to use digital devices to observe and record the effect of gravity on object	Convectiona l laboratory resources and improvised resources from the environmen t	- question and answer method - class quizzes - individual performance assessment Project work	
	2		<b>Gravity</b> Applicati on of effect gravity	By the end of the sub strand learners should be able to: a. State the meaning of gravity on objects as force acting on objects b. Identify the effect of gravity on an object c. Demonstrate the effect of gravity on objects d. Appreciate effect of gravity in everyday life	. How does gravity affect objects?	In groups learners are to discuss the applications of gravity In group learners to use digital devices to observe and record the effect of gravity on object	Convectiona l laboratory resources and improvised resources from the environmen t	- question and answer method - class quizzes - individual performance assessment Project work	
	3		Sound energy Differenc e btw loud and soft energy	By the end of the sub strand t learners should be able to: a. Define the term sound energy b. Differentiate between loud and soft sound produced by an objects c. Develop interest in protecting self against pollution	1. How do we produce loud and soft sound? 2. What are the effects of sound pollution? How do you protect yourself from sound pollution?	Learners to produce sound using different object in their locality (example: bells , drum, plucking a ruler, plucking string) Learners to identify area with a loud sound in their locality	Convectiona l laboratory resources and improvised resources from the environmen t	- question and answer method - class quizzes - individual performance assessment Project work	
	4		Sound energy Classifyin g sound as loud and soft	By the end of the sub strand t learners should be able to: a. Define the term sound b. Classify sound as loud and soft sound c. Develop interest in protecting self against sound pollution	1. How do we produce loud and soft sound? 2. What are the effects of sound pollution? How do you protect yourself from	Learners to discuss classify the sound produce as loud and soft sound	Convectiona l laboratory resources and improvised resources from the environmen	- question and answer method - class quizzes - individual performance assessment	



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					sound pollution?		t	Project work	
	1		Sound energy Sound pollution	By the end of the sub strand learners should be able to: a. Define the term sound pollution b. Explain what is sound pollution in the environment c. Employ measures to protect sefl from sound pollution d. Develop self interest in protecting self against sound pollution	1. How do we produce loud and soft sound? 2. What are the effects of sound pollution? How do you protect yourself from sound pollution?	Learners are guided to discuss the meaning of the sound pollution Learners to take precautionary measures to protect self from loud sound (turn down music, using hearing protection, avoid area with loud sound, sound proof walls	Convectional laboratory resources and improvised resources from the environmen t	- question and answer method - class quizzes - individual performance assessment Project work	
	2		Sound energy Effect of loud sound on health	By the end of the sub strand learners should be able to: a. Explain what is sound pollution in the environment b. Identify effect of loud sound on health c. Employ measures to protect self from sound pollution d. Develop self against sound pollution	1. How do we produce loud and soft sound? 2. What are the effects of sound pollution? How do you protect yourself from sound pollution	In groups , leaners to discuss the effect of sound pollution on health and behavior of human being(hearing loss, lack of concentration, irritability, sleep disturbances, interference with communication)	Convectional laboratory resources and improvised resources from the environmen t	- question and answer method - class quizzes - individual performance assessment Project work	
	3		Sound energy Making cone sound amplifier or ear muffs	By the end of the sub strand t learners should be able to: a. Identify locally available materials for the project. b. Make a sound cone amplifier or ear muffs using locally available materials c. Develop interest in protecting self against sound pollution	1. How do we produce loud and soft sound? 2. What are the effects of sound pollution?  How do you protect yourself from sound pollution?	<b>Projects:</b> leaners to make sound cones sound amplifier or ear muffs from locally available materials	Convectional laboratory resources and improvised resources from the environmen t	- question and answer method - class quizzes - individual performance assessment Project work	

	4		Sound energy Making cone sound amplifier or ear muffs	By the end of the sub strand learners should be able to: a. Identify locally available materials for the project. b. Make a sound cone amplifier or ear muffs using locally available materials c. Develop interest in protecting self against sound pollution		<b>Projects:</b> learners to make sound cones sound amplifier or ear muffs from locally available materials	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
8	1		Heat transfer Defining the term convection	By the end of the sub strand learners should be able to: a. Define the term convection b. Demonstrate transfer of heat in liquid and gases c. Draw and label the transfer of heat from liquid to gases d. Develop interest in finding out more about convection and radiation	1. How is heat transferred in liquids and gases? 2. How is heat transferred where there is no matter?	Learners to perform experiment to demonstrate convection in liquid and gases and record the observations In groups learners are guided to find the meaning of convections in groups learners to discuss the effect of convection in day to day life	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
	2		Heat transfer from liquid to gases	By the end of the sub strand learners should be able to: a. Define the term convection b. Demonstrate transfer of heat in liquid and gases c. Draw and label the transfer of heat from liquid to gases d. Develop interest in finding out more about convection and radiation	1. How is heat transferred in liquids and gases? 2. How is heat transferred where there is no matter?	Learners to perform experiment to demonstrate convection in liquid and record the observation In groups learners are advised to find the meaning of convection	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
	3		Heat transfer Application of	By the end of the sub strand learners should be able to: a. Demonstrate the transfer of heat in liquid	1. How is heat transferred in liquids and gases?	Learners to perform experiment to demonstrate convection in liquid and gases and record the	Convectional laboratory resources and	- question and answer method - class	

			convection in daily life	<ul style="list-style-type: none"> <li>b. Identify the application of convection in day to day life</li> <li>c. Develop interest in finding out more about convection and radiation</li> </ul>	2. How is heat transferred where there is no matter?	<p>observations</p> <p>In groups learners are guided to fine the meaning of convections in groups leaners to discuss the effect of convection in day to day life</p>	improvised resources from the environment	quizzes - individual performance assessment Project work	
	4		Heat transfer Defining the term radiation	<p>By the end of the sub strand learners should be able to:</p> <ul style="list-style-type: none"> <li>a. Define the term radiation</li> <li>b. Demonstrate heat transfer by radiation</li> <li>c. Develop interest in finding more about radiation</li> </ul>	<p>1. How is heat transferred in liquids and gases?</p> <p>2. How is heat transferred where there is no matter?</p>	<p>Learner to perform experiment to demonstrate radiation and record the observation</p> <p>In groups learners are guided to find the meaning of radiation</p> <p>In groups learners are guided to the applications of radiation in day to day life</p>	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
9	1		Heat transfer through radiation	<p>By the end of the sub strand t learners should be able to:</p> <ul style="list-style-type: none"> <li>a. Define the term radiation</li> <li>b. Demonstrate heat transfer by radiation</li> <li>c. Develop interest in finding more about radiation</li> </ul>	<p>1. How is heat transferred in liquids and gases?</p> <p>2. How is heat transferred where there is no matter?</p>	<p>Learner to perform experiment to demonstrate radiation and record the observation</p> <p>In groups learners are guided to find the meaning of radiation</p> <p>In groups learners are guided to the applications of radiation in day to day life</p>	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
	2		Heat transfer through radiation	<p>By the end of the sub strand t learners should be able to:</p> <ul style="list-style-type: none"> <li>a. Demonstrate heat transfer by radiation</li> <li>b. Identify application of radiation in day to day life</li> <li>c. Develop interest in finding out more about convection and radiation</li> </ul>	<p>1. How is heat transferred in liquids and gases?</p> <p>2. How is heat transferred where there is no matter?</p>	<p>Learner to perform experiment to demonstrate radiation and record the observation</p> <p>In groups learners are guided to find the meaning of radiation</p> <p>In groups learners are guided to the applications of radiation in day to day life</p>	Convectional laboratory resources and improvised resources from the environment	- question and answer method - class quizzes - individual performance assessment Project work	
	3		Application of radiation	<p>By the end of the sub strand t learners should be able to:</p> <ul style="list-style-type: none"> <li>a. Identify the application</li> </ul>	1. How is heat transferred in liquids	<b>Project: make improvised solar heater</b>	Convectional laboratory resources	- question and answer method	

			in real life	<p>of radiation in day to day life</p> <p>b. Make an improvised solar heater</p> <p>c. Develop interest in finding out more about convection and radiation</p>	<p>and gases?</p> <p>2. How is heat transferred where there is no matter?</p>		<p>and improvised resources from the environment</p>	<p>- class quizzes</p> <p>- individual performance assessment</p> <p>Project work</p>	
4			Heat transfer radiation in real life	<p>By the end of the sub strand t learners should be able to:</p> <p>a. Identify the application of radiation in day to day life</p> <p>b. Make an improvised solar heater</p> <p>c. Develop interest in finding out more about convection and radiation</p>	<p>1. How is heat transferred in liquids and gases?</p> <p>2. How is heat transferred where there is no matter?</p>	<b>Project: make improvised solar heater</b>	<p>Convectional laboratory resources and improvised resources from the environment</p>	<p>- question and answer method</p> <p>- class quizzes</p> <p>- individual performance assessment</p> <p>Project work</p>	