			2nd Term						
i	2.0: Investigates matter, properties of matter and their interaction to enhance the quality of life	2.2: Uses mole to quantify elements and compounds	1. define the term atomic mass unit.	3	Textbook, beads or seeds of various masses				
			2. define the term relative atomic mass						
			3. calculate relative atomic mass of a given atom						
			4.define the term relative molecular mass	2					
			5. calculate relative molecular mass of a given molecule.						
			6. calculate relative molecular mass of a compound using relative atomic mass of constituent elements.	2					
			7. define Avogadro constant.	2					
			8.describe mole as the unit of amount of substance.						
			9.state the definition of mole						
			10 carry out calculations based on the relationship among mass, amount of substances and molar masses	3					

No.	Unit/competency	Lesson/competency level	Teaching leaning process/learning outcomes	No. of periods	Quality Inputs	Proposed Date	Date taught	Signature of teacher	Note of supervision
			11. accept that relative atomic mass and relative molecular mass have no units while molar mass has unit.						
	1.0: Explores life and life processes in order to improve productivity of biological systems	1.3: Uses characteristics of living matter to differentiate the living from non-living	1. explain cellular organization, nutrition, respiration, sensitivity, excretion, movement, reproduction, growth and development as characteristics of living matter. .	4	Pictuers of cells, Microscope,Clay ,Cover slips,Glass slides				
			2. evaluate evidences to classify living and non-living matter.	1					
			3. respect all living matter as life forms.						
			4. accept that some living forms are difficult to differentiate as living or non-living.						
	3.0: Utilizes various forms of energy, their interaction with matter and energy transformations by maintaining efficiency and effectiveness at an optimum level	3.4: Makes jobs easy using resultant of forces	1. describe the concept of resultant of forces.	1	Trolleys, pulleys, a horizontal surface with white paper pasted slotted mass.				
			2. conduct simple activities to show the effect of the resultant of forces.						
			3. conduct simple activities to find resultant of two collinear forces acting in the same direction and also in opposite directions.	1					
			4. conduct simple activities to find the resultant of two parallel forces acting in the same direction.						
			5. solve simple numerical problems to find the resultant of two collinear forces and of two parallel forces (the line of action of resultant force is not necessary)	2					
			6. accept that a large force can be obtained by collection of small forces.	1					
			7. accept that there are ways of varying the magnitude and direction of a force according to the situation.						
	2.0: Investigates matter, properties of matter and their interaction to enhance the quality of life	2.3: Relates properties of compounds with the existing bonds	1.express that electrons participate in the formation of chemical bonding.	2	Different colour beads, ekkels and clay, beakers, connecting wires, bulbs, sodium chloride, sugar, Bunsen burner, batteries/dry cells, laboratory atomic model sets.				
			2.describe that atoms form cations by losing electrons and anions by gaining electrons.						
			3. accept that elements form chemical bonds to become stable						
			4. determine the charge of an ion formed by a given atom based on its electronic configuration.	1					
			5. state that electron transfer takes place during the formation of ionic bonds.						

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i			6. illustrate the formation of ionic compounds diagrammatically.	2					
			7. accept ionic bond as a strong electrostatic attraction between cations and anions.						
			8. describe that covalent bond is formed by sharing pairs of electrons between atoms.	2					
			9. draw Lewis structures for simple covalent compounds.						
			10. construct models of ionic and covalent compounds	1					
			11. describe that a bond formed between two different atoms are polarized due to their electronegativity differences.	1					
			12. state that intermolecular bonds are formed in water due to the polarization of water molecule.						
			13.conduct simple activities to demonstrate physical properties of ionic and covalent compounds.	1					
	3.0: Utilizes various forms of energy, their interaction with matter and energy transformations by maintaining efficiency and effectiveness at an optimum level	3.5: Estimates and calculates the turning effect of a force	1. conduct simple activities to demonstrate the turning effect of a force.	1	A uniform wooden or aluminum strip in which holes are drilled at equal distances from its centre, suitable stand to pivot the wooden or aluminum strip at a height of about 25 cm from the table, weights of several values				
			2. describe the factors affecting the moment of force.	1					
			3. express the moment of a force about a point as the product of the force and the perpendicular distance from the point to the line of action of the force.						
			4. express the unit of the moment of a force as N m.						
			5. state that the turning effect of the moment of a force can be clockwise or anticlockwise.	1					
			6. make calculations involving the moment of force.	2					
			7. accept the importance of turning effect of a force in day-to-day activities						
			8. describe the moment of a couple of forces.	1					
			9. make a list of instances where moment of a couple of forces apply in day-to-day life.						
			10. accept that moments appear in couples in many practical situations.						
	3.0: Utilizes various forms of energy, their interaction with	3.6: Investigates the conditions of equilibrium of forces	1. explain the equilibrium of forces on a body.	1	Spring balances, a metre ruler, a plastic pan with a diameter of 3 cm on which two				
			2. construct simple arrangements to demonstrate the equilibrium of forces.						
			3. explain the conditions necessary for two forces to be in equilibrium.						

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	matter and energy transformations by maintaining efficiency and effectiveness at an optimum level		4. explain the conditions necessary for three parallel forces to be in equilibrium.	2	connectors are fixed across two edges of a diameter and a similar plastic pan on which three connectors are fixed from three places				
			5. describe practical applications of equilibrium of forces.						
			6. state the conditions necessary for three non-parallel forces to be in equilibrium (qualitatively).	1					
			7. accept that the equilibrium can exist under more than three forces too.						
i	1.0: Explores life and life processes in order to improve productivity of biological systems	1.4: Classifies organisms using suitable methods	1. explain the importance of classification.	1	Classification charts,Pictures of plants and animals,Video clips				
			2. state that there are natural and artificial methods of classification.						
			3. state the domains as Archaea, bacteria and Eukarya.						
			4. classify the living organisms as major groups – bacteria, protista, fungi, plantae and animalia based on their specific features.	2					
			5. identify monocots from dicots using their distinct features.	1					
			6.classify non flowering plants as seed bearing and non seed bearing with examples.	1					
			7.classify invertebrates as Coelenterate, Annelida, Mollusca, Arthropoda and Echinodermata.	3					
			8.classify vertebrates as Pisces, Amphibia, Reptilia, Aves and Mammalia.	3					
			9. write scientific names using binomial nomenclature.	1					
	1.0: Explores life and life processes in order to improve productivity of biological systems	1.5: Investigates the contribution of reproduction in maintaining the continuity of organisms	1.differentiate sexual and asexual reproduction using suitable examples. .	1					
			2. conduct simple activities to demonstrate vegetative propagation in plants.	2	Specimens pf plant parts, Pictures of reproductive systems of human,Video clips				
			3.explain basics behind tissue culture	1					
			4.explain sexual reproduction in plants.	2					
			5. identify the methods of dispersal of fruits and seeds and their adaptations for it	1					
			6.accept the concept of sustainable use of plant resources.						
			7. describe the processes of fertilization and implantation.	1					
			8.explain importance of menstrual cycle in human reproduction.	1					
			9.describe sexually transmitted diseases	1					
			10.act as a responsible citizen with regard to sexual behaviour.						
			Revision						
			Term Test						