

**ALSAGOFF ARAB SCHOOL
ACQUIRED KNOWLEDGE DEPARTMENT
PRIMARY 6 SCIENCE SCHEME OF WORK 2016**

Term 1: Monday 4 January to Friday 11 March

School Holidays/Functions:

Week # 0	New Year's Day	Friday 1 January
Week # 1	First Day of School	Monday 4 January
Week # 3	Maulid Celebrations	Saturday 23 January
Week # 4	Maulid (In-Lieu)	Monday 25 January
Week # 5	Haflah Celebrations	Saturday 6 February
Week # 6	Chinese New Year	Monday 8 February & Tuesday 9 February
Between Term 1 & 2		Saturday 12 March - Sunday 20 March

*Week(s)	Chapter/Topic	Instructional Objectives	Period
1 & 2	<u>Chapter 1 (Interactions): Forces</u>	<ul style="list-style-type: none"> • Classify the forces observed in our daily activities such as a push or a pull • Discuss examples of pushing and pulling forces in our daily activities • State that a force is a push or a pull • Describe the effects of a force using examples from common observations • Show an understanding of the effects of forces on an object • State that a force can move an object at rest • State that a force can speed up, slow down or stop a moving object • State that a force can change the direction of a moving object • State that a force may change the shape and size of an object • Infer that a force is present from the change in the movement, direction or shape and size of an object • Observe from common phenomena and activities that a force can be useful or harmful <p><i>Chapter Assessment</i></p>	3

*Week(s)	Chapter/Topic	Instructional Objectives	Period
3 & 4	<u>Chapter 2 (Interactions):</u> Types of Forces	<ul style="list-style-type: none"> • Identify the different types of forces — frictional force / friction, elastic spring force, gravitational force / gravity and magnetic force • Describe friction as a force that opposes motion and is produced when two surfaces are rubbed against each other • Investigate the effects of friction on the movement of objects • Manipulate the conditions that affect friction • State that friction can be useful or can be a problem • List the advantages and disadvantages of friction • Discuss ways to reduce friction • Describe elastic spring force as a force that causes an elastic object to return to its original shape, after it has been stretched or compressed • Recognise that some materials and objects are elastic • Observe that a pulling force on a spring causes it to stretch • Observe that a pushing force on a spring causes it to compress • Identify when an elastic spring force is exerted • Observe that a larger pulling force on a spring causes it to extend more • Identify gravity as a force that can act at a distance • Describe gravity as the force of attraction between objects • Identify the factors that affect the strength of gravity • Discuss the actions of gravity • Recognise that the force of gravity between objects and the Earth causes the objects to have weight • State the instruments that can be used to measure weight • Identify the similarities and differences between weight and mass • Identify magnetic force as a force that can act at a distance • Describe magnetic force as a force that is caused by the pushing and pulling actions of magnets • Observe that like poles of magnets repel or push each other apart • Observe that unlike poles of magnets pull or attract each other <p><i>Chapter Assessment</i></p>	4
5	<u>Chapter 3 (Interactions):</u> Living Together	<ul style="list-style-type: none"> • Show an understanding that an organism is a living thing • Show an understanding that a population is a group of organisms of the same kind, which live together and reproduce in a particular place • Show an understanding that the population size is the number of organisms in a population • Identify the factors that affect the population size of an organism • Show an understanding that a habitat is the place where an organism lives • Recognise that habitats provide organisms with food, water, air, space and shelter for protection • Recognise that all the populations living in a habitat are interdependent for survival • Show an understanding that a community consists of all the different populations of organisms, which live together in a habitat • Recognise that different habitats support different communities, such as a pond, field, single plant, seashore, garden and other habitats • List examples of populations living in different habitats, such as a pond, field, single plant, seashore, garden and other habitats • Differentiate between the terms: organism, population, habitat and community <p><i>Chapter Assessment</i></p>	3

*Week(s)	Chapter/Topic	Instructional Objectives	Period
6 & 7	<u>Chapter 4 (Interactions):</u> Characteristics of the Environment	<ul style="list-style-type: none"> • Identify the living and nonliving factors that affect the survival of an organism • Describe the importance of the type of soil • Describe the importance of the presence of other organisms • Describe the importance of the availability of food • Describe the importance of the temperature • Describe the importance of the amount of sunlight • Describe the importance of the availability of air • Describe the importance of the availability of water • Show an understanding that the characteristics of the environment in each habitat are unique, in terms of the type of soil, presence of other organisms, availability of food, temperature, amount of sunlight, availability of air and availability of water • Observe and describe the characteristics of a local environment • State the instruments that can be used to collect data on the characteristics of an environment <p><i>Chapter Assessment</i></p>	4
8 & 9	Review	Review chapter to allow pupils to recall and prepare for Continual Assessment 1.	10
10	Continual Assessment 1	Administer pen and paper assessment. Go through answers and ensure that corrections are done.	5

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Term 2: Monday 21 March to Friday 27 May

School Holidays/Functions:

Week # 7 Labour Day (In-lieu)

Monday 2 May

Between Semesters 1 & 2

Saturday 28 May to 12 June

*Week(s)	Chapter/Topic	Instructional Objectives	Period
1 & 2	<u>Chapter 5 (Interactions):</u> Food Chains & Food Web	<ul style="list-style-type: none"> • Trace how energy from the Sun is transferred to organisms • State how energy is obtained and used by organisms • Show an understanding that a producer uses the Sun's energy to produce food • Describe the role of a producer • Show an understanding that a consumer cannot produce its own food and gets its food either directly or indirectly from food producers • Identify different types of consumers • Show an understanding that a predator hunts and feeds on other animals • Show an understanding that a prey is hunted and eaten by other animals • Describe the roles of a predator and a prey in a community • Show an understanding that a food chain shows the food relationship between different organisms and how energy is transferred from one organism to another • Construct a food chain • Show an understanding that a food web is made up of food chains that are interconnected or linked together • Construct a food web • Recognise the effects on the rest of a food chain when there is a change in the population size of organisms • Recognise that the populations of all the producers and consumers in a food chain or food web are kept in balance • Show an understanding that a decomposer breaks down dead matter and animal wastes into mineral salts, water and carbon dioxide • List some examples of decomposers • Describe the role of a decomposer • Recognise that some animals help decomposers to break down dead organisms into simple substances more quickly <p><i>Chapter Assessment</i></p>	5

*Week(s)	Chapter/Topic	Instructional Objectives	Period
3 & 4	Chapter 6 (Interactions): Adaptations for Survival	<ul style="list-style-type: none"> • Recognise that adaptations are special characteristics that organisms need to help them survive in their natural habitats • Classify adaptations into structural adaptations and behavioural adaptations • Show an understanding that structural adaptations are special parts an organism has that help it to survive in its natural habitat • Show an understanding that behavioural adaptations are special ways an organism behaves to survive in its natural habitat • Recognise when an organism is adapted to its environment • Describe adaptations of organisms for breathing in water • Describe adaptations of organisms for movement • Describe adaptations of organisms for catching prey • Describe adaptations of organisms for obtaining sunlight • Describe adaptations of organisms for coping with extreme temperatures • Describe adaptations of organisms for protection • Describe adaptations of organisms for reproduction • Relate how certain adaptations in organisms serve to enhance survival <p><i>Chapter Assessment</i></p>	6
5 & 6	Chapter 7 (Interactions): Man's Impact on the Environment	<ul style="list-style-type: none"> • Show an understanding that Man depends on Earth's natural resources for his survival • List examples of the positive impacts Man has on his environment • List examples of the negative impacts Man has on his environment • Show an understanding that deforestation is the removal of a large section of a forest by cutting down or burning trees • Identify the impacts of deforestation • Show an understanding that global warming is the rise in temperature on Earth • Identify some causes of global warming • Describe how carbon dioxide in the air causes the Earth's temperature to rise • Show an understanding that the greenhouse effect refers to the way greenhouse gases, such as carbon dioxide, retain heat around the Earth • Identify the effects of global warming • Identify the sources of man-made land, water and air pollution • Describe ways to save Man's environment <p><i>Chapter Assessment</i></p>	7
7	MYE: Paper 1, Oral & LC only		-
8	Revision	Review chapters to allow pupils to recall and prepare for Mid-Year Examination.	5
9 & 10	Mid-Year Written Examination		-

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Term 3: Monday 13 June to Friday 25 June, Monday 11 July to Friday 2 September

School Holidays/Functions:

Last 10 days of Ramadhan		Saturday 25 June to 10 July
Week #	Youth Day (In-lieu)	Monday 4 July
	Hari Raya Puasa	Wednesday 6 July
Week # 6	Family Day (In-lieu)	Monday 1 August
Week # 7	National Day	Tuesday 9 August & Wednesday 10 August
Week # 10	Teachers' Day	Friday 2 September

*Week(s)	Chapter/Topic	Instructional Objectives	Period
1	<u>Chapter 1 (Energy):</u> Energy In Food	<ul style="list-style-type: none"> • Show an understanding that animals depend on plants for their source of energy • State the conditions and the products of photosynthesis • Relate what happens during the process of photosynthesis • Trace the energy pathway for animals and plants to the Sun <i>Chapter Assessment</i>	5
2	<u>Chapter 2 (Energy):</u> Forms & Uses of Energy	<ul style="list-style-type: none"> • Differentiate between the different forms of energy • Describe some examples of the different forms of energy and their uses • Observe the conversion of energy from one form to another and report the findings <i>Chapter Assessment</i>	5
3	<u>Chapter 3 (Energy):</u> Sources of Energy	<ul style="list-style-type: none"> • Describe some examples of the various sources of energy and their uses • Observe the conversion of energy from one form to another and report the findings • Understand the need and importance of using energy wisely in daily life <i>Chapter Assessment</i>	2
4 to 5	Revision for Prelims		
6	Prelims		
7 to 10	Revision for PSLE		

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Term 4: Monday 12 September to Friday 18 November

School Holidays/Functions:

Week # 1 Hari Raya Haji Monday 12 September & Tuesday 13 September
Week # 4 Children's Day Friday 7 October

*Week(s)	Chapter/Topic	Instructional Objectives	Period
1 to 3	Revision for PSLE		
3 & 4	PSLE		