



DAARUL QUR'AN INTERNATIONAL SCHOOL

SCHEME OF WORK SEMESTER I

SCIENCE COMBINED (SECONDARY 1/PRE-IGCSE)

ACADEMIC YEAR 2008/2009

Semester/ Wk	No. of Periods	Content/Topic	Learning Objectives (Knowledge/Skills/Attitudes)	Learning Activities	Learning Evaluation	Resources
1/1	2	Topic 1 SCIENCE AS AN INQUIRY 1. Science and technology	At the end of this chapter, students are able to: <ul style="list-style-type: none"> • Explain the meaning of science and technology • Describe the parts of science and scientist • Discuss the benefits, limitations and abuses of science and technology. 	<ul style="list-style-type: none"> § Brainstorming § Explicit teaching § Class discussion § Investigation report 	<ul style="list-style-type: none"> Project assessment Student presentation 	Federal Sci. Adv 1 Pp 3-4
1/1-2	6	2. Scientific work	<ul style="list-style-type: none"> • Recognize study and practice of scientific work. • Recognize the process of science 	<ul style="list-style-type: none"> § Explicit teaching § Class discussion § Laboratory work 	<ul style="list-style-type: none"> Worksheets Student presentation 	Federal Sci. Adv 1 Pp 5-8
1/1-2	4	3. Science laboratory	<ul style="list-style-type: none"> • Observe safety rules in the science laboratory • Recognize the symbols representing hazardous substances • Use common science laboratory apparatus and equipment 	<ul style="list-style-type: none"> § Brainstorming § Explicit teaching § Class discussion 	<ul style="list-style-type: none"> Worksheets Quizzes 	Federal Sci. Adv 1 Pp 9-13 Sci. matt. Prac. Vol A. Pp 1-4/5-6(B)
1/3	6	Topic 2 MEASUREMENT 1. Measuring length, area and volume	<ul style="list-style-type: none"> • Use the appropriate units for length, area and volume • Use instrument like the metre rule, measuring tape and vernier calipers to measuring length • Determine suitable units for area and volume 	<ul style="list-style-type: none"> § Explicit teaching § Class discussion § Laboratory work 	<ul style="list-style-type: none"> Practical performances Worksheets Quizzes Project Assessment 	Federal Sci. Adv 1 Pp 19-29 Sci. matt. Prac. Vol A. Pp 11-18 Phy.check.point. Pp 7-17

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			<ul style="list-style-type: none"> Estimate length, area and volume 			
1/4	6	2. Measuring mass and density	<ul style="list-style-type: none"> Recognize mass as a measure of the amount of matter an object has Measure mass using the beam balance, spring balance and electronic balance Explain what is meant by density Calculate density by using the formula Determine suitable units for density 	§ Explicit teaching § Class discussion § Laboratory work	Practical performances Worksheets Quizzes	Federal Sci. Adv 1 Pp 44-55 Sci. matt. Prac. Vol A. Pp 19-20 Fed.Sci.Ad.WB. Pp 22,25-27
1/5	6	3. Measuring temperature, time, rate and speed	<ul style="list-style-type: none"> Measure temperature by using thermometer Measure time using a stopwatch and a stop clock Explain what is meant by average speed Calculate average speed using the formula and determine its units 	<ul style="list-style-type: none"> Explicit teaching Class discussion Laboratory work Observation 	Worksheets Quizzes	Federal Sci. Adv 1 Pp 43-54 Sci. matt. Prac. Vol A. Pp 21-24,27-30 Fed.Sci.Ad.WBA. Pp 30-31/33
1/6	6	Topic 3 DIVERSITY 1. Characteristic of living organisms 2. Variation and classification of living organisms	<ul style="list-style-type: none"> List and describe the characteristics of living organisms Define the term nutrition, excretion, respiration, sensitivity, reproduction, growth and movement Describe variation in living organisms Define and describe the binomial system of classification in living organisms Use simple dichotomous keys bases on easily identifiable features 	<ul style="list-style-type: none"> Explicit teaching Class discussion Laboratory work Explicit teaching Class discussion Laboratory work 	Worksheets Quizzes Practical performances Worksheets Quizzes Project Assessment worksheet	Bio.check.point.Pp 10-18 Sci. matt. Prac. Vol A. Pp 103-107

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1/7	2	3. Classification of Matter	<ul style="list-style-type: none"> Describe properties of materials in term of density, strength, hardness, flexibility, electrical conductivity, thermal conductivity, boiling point and melting point. Identify the main classes of materials (metals, ceramics glass, plastics and fibres) in term of their properties Use data to relate the properties of different materials to their uses 	<ul style="list-style-type: none"> Explicit teaching Class discussion Laboratory work 	Worksheets Quizzes Practical performances	Federal Sci. Adv 1 Pp 60-61
1/7	4		<ul style="list-style-type: none"> Classify materials as elements, compounds or mixtures Identify an element as the basic building block of matter Compare properties of metals and non metals Distinguish elements, compounds and mixtures 	<ul style="list-style-type: none"> Explicit teaching Class discussion Laboratory work 	Worksheets Quizzes Practical performances	Fed.Sci.Ad.WBA. Pp 34-37
1/7-8	8	4. Elements, compounds and mixture	<ul style="list-style-type: none"> Recognise that mixtures can be separated by physical methods. Explain how some separation methods such as filtration, magnetic attraction, evaporation, distillation and chromatography are used Describe the use of separation methods in our daily routines Explain how pure water can be obtained from sea water in desalination plants using distillation and reverse osmosis 	<ul style="list-style-type: none"> Explicit teaching Class discussion Laboratory work 	Worksheets Quizzes Practical performances	Federal Sci. Adv 1 Pp 70-85 Chem.Check.point Pp 75-84 Sci.mat.vol A.Pp 39-57 Sci.ad.WB.Vol A Pp 38-47
1/8-9	8	5. Separating mixtures	<ul style="list-style-type: none"> Distinguish solute, solvent and solution 	<ul style="list-style-type: none"> Explicit teaching Class discussion Laboratory work 	Worksheets Quizzes Practical performances Project Assessment	Federal Sci. Adv 1 Pp 91-101 Sci.ad.WB.Vol A Pp 48-52 Sci.mat.vol A.Pp 55-63
1/9-10	6	6. Solutions and suspensions		<ul style="list-style-type: none"> Explicit teaching Class discussion 	Worksheets Quizzes Practical	Federal Sci. Adv 1 Pp 108-116 Sci.ad.WB.Vol A Pp 56-

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1/10-11	8		<ul style="list-style-type: none"> List examples of solutions and suspension State properties of solutions and suspension Use inquiry in experiment to investigate factors that affect the solubility and rate of dissolving of substances Describe the importance of solutions in homes, industries, agriculture and medicine. 	<ul style="list-style-type: none"> Laboratory work 	performances Project Assessment	61 Sci.mat.vol A.Pp 67-81
1/12-14	12	7. Acid alkalis and salts	<ul style="list-style-type: none"> Use investigations to demonstrate the nature of some common acid and alkalis. Describe the properties of acids in reactions with metals, bases and carbonates Describe the characteristic properties of bases with respect to reactions with acids (neutralisation) and ammonium of salts Recognize that indicators are substances that change colour when an acid or alkali is added to them 	<ul style="list-style-type: none"> Explicit teaching Class discussion Laboratory work 	Worksheets Quizzes Practical performances Project Assessment	Federal Sci. Adv 1 Pp 124-134 Sci.ad.WB.Vol A Pp 63-74 Sci.mat.vol A.Pp 85-99
1/15-16	First semester Examination					

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