



Dear Parents and Guardians,

I would like to welcome you to the Science Department's monthly curriculum guide. On behalf of the Science team, I would like to wish all students a warm welcome back to school.

This year I am extremely proud to welcome the Science team that is Ms Aisha, Mr Saju, Ms Ronisha, Ms Elizabeth, Ms Marjia and myself Mr Elias. We are a group of young, energetic and talented specialist teachers with a wealth of experience in leading and teaching science from Key Stage 3 through GCSE to A-Level. I have the upmost confidence that our dedicated team will work tirelessly to ensure that you child's needs are met and that they are engaged in challenging and purposeful lessons.

We are excited for our students to embark on a journey where we explore and extend on fundamental concepts within Science.

### **Science mission statement**

Within the department, we have come up with three core principles which we believe complement our vision and core purpose of nurturing successful scientists. These three principles will be embedded in all matters science.

**UNDERSTAND ASPIRE EXPLORE**

### **An important year ahead for our Grade 10 students**

This year is an extremely important year for our Grade 10s. They will be the first students in Al Basma's history to be sitting the IGCSE examinations. This qualification is key to the next stage of your child's academic future. To give your child the best possible chance of success, it is vitally important that he/she gets into the habit (from now) of constantly engaging and revising through scientific content! The science department will of course provide all the support and guidance your child requires.

### **Setting in Science**

We strongly believe that 'every child matters' therefore to push forward with this agenda and to meet the needs of every student; all classes from Grade 6 to 10 will be streamed. In order to do this successfully, all classes are currently in the process of conducting Baseline Assessments. This will give us an idea of where your child is currently and will enable us to place them in the most appropriate class to scaffold, strengthen and extend their learning. Please note that these sets are not fixed and are subject to change based on performance over time.

### **What are our students doing?**

Students in Grade 6 – 8 are currently undertaking some pretty cool experiments. These experiment include:

- Burning foods – aim: to find which food has the most energy content
- Friction of different surfaces – aim: to identify which surface provide the best surface for a rolling car

- Burning candles – aim: to find out whether the size of jar affects the time it takes for the flame to extinguish.

These experiments will expose your child to the different aspects of the 'scientific model'. By the end of these experiments, your child should be able to do the following:

- Write an aim
- Give a hypothesis/ prediction
- Identify variables : independent, dependent and controls
- Write a detailed equipment list
- Write a suitable method of the practical
- State the risks associated with the experiment
- Input data into a results table
- Conclude their results.

## Grade 8 and 9

In order to give our Grade 8 students the best possible chance of success in their IGCSE examinations in Grade 10, we have taken the decision to begin teaching the IGCSE Science content from Grade 8 as opposed to Grade 9. This should accelerate your child's learning and ensure that they get accustomed to the IGCSE language and style of exam questions.

Grade 8 and 9 will be starting the NEW EDEXCEL IGCSE 9-1 specification. Due to changes in scales determined by Ofqual, from 2019 all students will be awarded a grade from 9 to 1, rather than grade A\* to G. Please note that this does not apply to students in Grade 10 in science subjects, only in English and Maths!

Current Grade 10 students worldwide will be the final year group taught from the current IGCSE specifications.

Topics to be taught in September

## Grade 8-9

### Biology:

The nature and variety of living organisms

Levels of organisation and cell structure

### Physics:

Forces and motion:

- Speed
- distance-time graphs
- velocity-time graph
- acceleration

## Grade 10

### Biology:

Revision through topics taught in section 1, 2 and 3

### Chemistry:

## Grading scale

New International GCSE	Current
9	A*
8	A
7	A
6	B
5	C
4	C
3	D
2	E
1	F
1	G
U	U

Revision through topics taught in Section 1, 2 and 3

## **Physics:**

Forces and motion:

- Speed
- distance-time graphs
- velocity-time graph
- acceleration

## **Assessment**

All students from Grade 6 – 10 will be undertaking regular in-class topic reviews to support teacher judgement of attainment and progress. Performance will indicate how well your child is progressing and will help to identify areas where your child needs support in order to improve. It is important that your child is regularly reviewing taught content if they have no other homework and spend time looking at key words and their meanings.

## **Homework**

Your child will receive at least one piece of homework per week in Science. All students are expected to record all homework into their diaries. Please regularly check through your child's diary and Bric to ensure that all homework is completed to deadline.

## **Here are some useful websites:**

### **Grades 6 and 7**

BBC KS3 Bitesize <http://www.bbc.co.uk/bitesize/ks3/science/>

Skool.co.uk <http://inteleducationresources.intel.co.uk/parents.aspx?id=321>

### **Grade 8, 9 and 10**

BBC KS4 Biteize <http://www.bbc.co.uk/education/levels/z98jmp3>

### **Grade 8 and 9 New IGCSE Science Specification (2017) and Practice Paper Material:**

- **Chemistry:** <https://qualifications.pearson.com/en/qualifications/edexcel-international-gcses-and-edexcel-certificates/international-gcse-chemistry-2017.html>
- **Biology:** <https://qualifications.pearson.com/en/qualifications/edexcel-international-gcses-and-edexcel-certificates/international-gcse-biology-2017.html>
- **Physics:** <https://qualifications.pearson.com/en/qualifications/edexcel-international-gcses-and-edexcel-certificates/international-gcse-physics-2017.html>

### **Grade 10 only Current Edexcel IGCSE Specification (2011) and Past Paper Material:**

- **Chemistry:** <http://qualifications.pearson.com/en/qualifications/edexcel-international-gcses-and-edexcel-certificates/international-gcse-chemistry-2011.html>
- **Biology:** <http://qualifications.pearson.com/en/qualifications/edexcel-international-gcses-and-edexcel-certificates/international-gcse-biology-2011.html>

- **Physics:** <http://qualifications.pearson.com/en/qualifications/edexcel-international-gcses-and-edexcel-certificates/international-gcse-physics-2011.html>

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**Thank you in advance in supporting us to bring out the best in your child.**

Mr Elias