Curriculum Intent, Implementation and Impact 2019-20

Subject (include exam board if examination subject): Separate Sciences - Biology (AQA 8461); Chemistry (AQA 8462); Physics (AQA 8463)

Year group: 9

Periods per fortnight: 14

INTENT:

Vision

Engagement, Discovery and Success

Mission Statement

In the Buckingham School Science Department, we will teach lessons that are fun and **engaging**. Students will be encouraged to develop the curiosity they need to **discover** new concepts for themselves. Lessons will be taught with student **engagement** in mind and where possible we will use practical activities. Questioning will be encouraged, in particular why and how?

Student effort and will be rewarded and students will be aware of how their learning is progressing and are proud of their **success**. At the end of the course students will be well prepared for a career in science should they wish or should be able to use the scientific skills they have acquired in whatever they choose to do in the future.

In year 9 separate science, students be taught biology, chemistry and physics and work towards a separate GCSE grade in each. The lessons will be taught using a range of different techniques, including practical and written tasks.

The school virtues will be encouraged throughout the teaching of the topics and embedded into schemes of learning.

Ambition – Science careers will be discussed as part of the 'big-picture' section of our teaching. Students will be taught how what they are doing applies to the outside world.

Confidence – Students will develop the confidence to carry out practical tasks and written work. Success will be rewarded within the department and will be encouraged to make mistakes.

Respect – Students will be taught to be respectful of each other and of their environment. Every student's opinions will be given equal weighting and students will be given the chance to have their views heard.

Empathy – Within science empathy is a very important skill. It is important to be able to put yourself into someone else's shoes in order to see how a particular scientific advancement might affect them. We often refer to other people's beliefs and ethics within the curriculum. For example, in the Atomic Structure topic, students are taught how a scientific theory has developed over time and why people didn't always adopt new theories when they were presented to the public.

Resilience – Resilience is very important within science. Students will be encouraged to discover new ideas for themselves, make hypotheses and potentially make mistake. Mistakes are as important in science as being correct. Students will develop these skills by being encouraged to come up with their own ideas and then test them.

Integrity – Integrity in science will be taught by encouraging key scientific principles of objectivity, clarity and reproducibility. Scientific studies must be carried out without bias and this is a key skill we will address in our teaching of the practical aspect of the course.

Curiosity – We will develop curiosity through the discovery aspect of the lessons. Students will be encouraged as much as possible to discover new concepts for themselves through practical tasks. They should make their own conclusions about the world around them.

IMPLEMENTATION:

Term	**Topics studied** Add dates and any assessments included	**Extended learning opportunities** (homework, controlled assessments, field work, trips etc.)	**How parents could support students**
Students are taught all topics on a rotation throughout the year	B1 – Cells B2 – Organisation B3 Health Matters C1 – Atomic Structure C2 – Structure and Bonding C3 – Chemical Quantities C5 – Energy Changes P1 - Energy P2- Electricity P3 – Particle Model of Matter P4 – Atomic Structure	Homework will be given regularly and saved onto the google classroom. Homework tasks will range from assignments, worksheets, web-based activities and revision tasks. There will be opportunities for students to go on trips within science at some point throughout the academic year – more information to follow. Assessments ● End of unit tests completed at the end of each topic. ● Skills assessment taken in each topic. ● Mock Examinations. These will include GCSE exam-style questions on all the topics studied during the year.	Parents should ensure their child completes all homework tasks. KS4 revision guides will be available from reprographics and there is a range of websites that they can use to support them. Motivate their children to revise regularly, preferably following a revision timetable. Ask their children about what they are learning and discuss the subjects with them. Incentivise their children to use websites for studying such as BBC Bitesize

IMPACT:

By the end of year 9 students will have a broad knowledge of scientific concepts and skills. This will be evident through their in class assessments and their exercise books. The students will also be displaying the school virtues within their science lessons, as well as being **engaged**, developed a love for **discovery** and have shown **success** in their curriculum.

The students will be assessed through end of topic tests and end of term tests. End of topic tests will only cover content the students have just been working on, but end of term tests will cover all GCSE content they have currently studied.