Subject: Science
Curriculum Staff:

ARCHBISHOP SENTAMU ACADEMY
CHURCH OF ENGLAND

Intention Overview:

How does Science develop:	
Respect	Students are encouraged to debate the more controversial aspects of science, and to respect and understand the differing views around them. Examples include Stem Cell Research and the use of GMOs
Courage	Students are supported to show courage and tackle difficult concepts and knowledge. They are supported to face some topics that they might need courage to study in detail, such as communicable and non-communicable diseases.
Community	Throughout their programme of study, students are reminded how scientific advancements and knowledge have made the community in which they live possible and how science continues to improve the wider community
Wisdom	Students are supported to develop their critical thinking and analytical skills, equipping them to face the brave new world in which we find ourselves - students are encouraged to question if everything they hear from peers or the media fits in with their scientific knowledge of the world and to question the biases and motives of sources of scientific information

Science Key stage 3- Intention statement:
The key stage 3 science curriculum follows a bespoke curriculum, designed in house. This curriculum covers the foundations students will need to progress at KS4 as well as covering the national curriculum in full. It is centred around 27 topics; 9 each in Biology, Chemistry and Physics. Through this model it is intended that the students master key scientific concepts ready to progress to key stage 4 and develop the laboratory skills needed to engage fully with the practical element of key stage 4.

Intention overview:

CURRICULUM KNOWLEDGE	
See Curriculum Overview	
ESSENTIAL SKILLS TO DEVELOP	
Subject Specific Skills	***Supportive Learning Skills or Attributes***
Students work on their "Pre-CPAC" skills, based on the common practical competencies at A-Level. By delivering practical skills explicitly through our curriculum rather than indirectly, we enable students to progress from novice to master learner over their 5/7 years with us. Delivery follows the "Pre-CPAC Master Plan"	
CULTURAL CAPITAL (opportunities and experiences)	

Implementation:

- The curriculum is mapped out over three years in the programme of study. Year 7 have started on this programme; while Year 8 are following a transitional plan.
- All the teaching resources are on the shared area and are designed to lead onto the AQA suite of qualifications at KS4
- Within the scheme of learning each topic has reference for teachers that shows what has been covered at key stage 2 and content they must master at key stage 3 to make good progress at key stage 4
- Low stakes assessment occurs throughout each topic in the form of knowledge quizzing, with summative assessment at the end of each topic.
- FAR Marking and DIRT activities happen after each summative assessment
- At the start of each topic a student receives a knowledge organiser to help map their progress through the topic and provide them with the key words.
- Students are taught, wherever possible, by subject specialists in each discipline
- Students use one exercise book for discipline
- Homework is set once a week and includes activities such as assignments on SENECA learning, learning mastery content.

Measuring Impact:

If the curriculum is successful students will make good progress at key stage 4.

Key stage 4- Intention statement:

To provide all students the opportunity to study Science at GCSE and provide them with the qualifications needed to progress to post 16 education. The courses studied provide students with the opportunity to increase their subject knowledge, make informed decisions regarding science in everyday life and enhance the practical skills developed at key stage 3.

Intention overview:

AQA GCSE Combined Science
This is the core offer at key stage 4. The content is covered in years 10 and 11, finishing at Christmas of Year 11 to allow time for consolidation and revision. Students continue to be taught by subject specialists within each discipline. This course allows students to progress onto KS5 study, and delivers a broad understanding of the workings of the world around them.

AQA GCSE Biology, Chemistry, Physics
Students on the enhanced pathway are entered for the AQA separate science qualifications. The course is structured almost identically to the combined science course; however, the pacing is quicker to enable the delivery of the additional content.

CURRICULUM KNOWLEDGE	
See Curriculum Overview	
ESSENTIAL SKILLS TO DEVELOP	
Subject Specific Skills	***Supportive Learning Skills or Attributes***
Science is a set of ideas about the material world. Through this course students investigate these through investigating, observing, experimenting, testing ideas and thinking about them. The course is designed so that students develop a deep understanding of key scientific concepts. Through the course students also develop mathematical skills which make up 10% of the biology paper, 20% of the chemistry and 30% of the physics.	

Students work on their “Pre-CPAC” skills, based on the common practical competencies at A-Level. By delivering practical skills explicitly through our curriculum rather than indirectly, we enable students to progress from novice to master learner over their 5/7 years with us. Delivery follows the “Pre-CPAC Master Plan”
CULTURAL CAPITAL (opportunities and experiences)

Implementation:

- The curriculum is mapped out over two years in the programme of study. This is reviewed at team meetings where appropriate.
- All the teaching resources are on the shared area and are based on the AQA scheme
- Low stakes assessment occurs throughout each topic in the form of knowledge quizzing, with summative assessment at the end of each topic.
- FAR Marking and DIRT activities happen after each summative assessment
- At the start of each topic a student receives a knowledge organiser to help map their progress through the topic and provide them with the key words.
- Students are taught, wherever possible, by subject specialists in each discipline
- Students use one exercise book for discipline
- Homework is set once a week and includes activities such as assignments on SENECA learning, learning mastery content.

Measuring Impact:

Students will make good progress at key stage 4 and progress onto the post 16 destination of their choice.

Key stage 5- Intention statement:

The KS5 offer enables students to specialize in a discipline that they are passionate about or to continue a bread scientific study. No matter their combination of courses, the KS5 science offer supports students in developing a deeper understanding of the world around them while opening doors to post-18 study in any STEM field.

Intention overview:

We currently offer four courses in KS5. The three traditional A-Levels in Biology, Chemistry and Physics; and then the BTEC Extended Certificate in Applied Human Biology. In each of these courses, students are taught by subject specialists who work to push their thinking within each discipline. Students also receive guidance on the appropriate combination of courses that will best support their post-18 plans.

CURRICULUM KNOWLEDGE	
See Curriculum Overview	
ESSENTIAL SKILLS TO DEVELOP	
Subject Specific Skills	***Supportive Learning Skills or Attributes***
Science is a set of ideas about the material world. Through this course students investigate these through investigating, observing, experimenting, testing ideas and thinking about them. The course is designed so that students develop a deep understanding of key scientific concepts. Through the course students also develop mathematical skills which make up 10% of the biology paper, 20% of the chemistry and 30% of the physics. Students work on their Common Practical Assessed Competencies (CPAC) By delivering practical skills explicitly through our curriculum rather than indirectly, we enable students to progress from novice to master learner over their 5/7 years with us. Delivery follows the “CPAC Master Plan” and has recently been assessed as good by external moderation by AQA.	

CULTURAL CAPITAL (opportunities and experiences)

Implementation:

- The curriculum is mapped out over two years in the programme of study. This is reviewed at team meetings where appropriate.
- All the teaching resources are on the shared area and are based on the AQA schemes for A-Level and BTEC National Certificate for the Applied Human Biology course
- Low stakes assessment occurs throughout each topic in the form of knowledge quizzing, with summative assessment at the end of each topic.
- FAR Marking and DIRT activities happen after each summative assessment
- At the start of each topic a student receives a knowledge organiser to help map their progress through the topic and provide them with the key words.
- Students are taught by subject specialists in each discipline
- Students use one folder for each discipline
- Homework is set regularly and includes activities such as assignments on SENECA learning, learning mastery content.
- In addition to homework assignments, supported private study is set for each subject to further support learning.

Measuring Impact:

Students will make good progress at key stage 5 and progress onto the post-18 destination of their choice.