

SCIENCE

INTRODUCTION

Every scholar at AGFS takes GCSE Science. It is a core subject and develops students skills in problem solving, observing and analysing.

THE COURSE

All Key Stage 4 scholars follow the AQA specification. We offer 2 pathways:

Combined Science:- worth 2 GCSEs. There are six papers: two biology, two chemistry and two physics. Each paper is 1 hour 15 minutes long and is worth 70 marks (16.7% of GCSE)

Triple Science (Biology, Chemistry and Physics) – worth 3 GCSEs. There are six papers: two biology, two chemistry and two physics. Each paper is 1 hour 45 minutes long and is worth 100 marks (50% of each GCSE). **Scholars only qualify for triple science if they have a predicted grade of a 6 or above, 100% completion rates of Independent Learning and Prerequisite Tests and have a referral from their science teacher. The science department reserves the right to decline a triple science option selection, based on one or more of the criteria above not being fulfilled.**



Biology

1. Cell biology
2. Organisation
3. Infection and response
4. Bioenergetics
5. Homeostasis and response
6. Inheritance, variation and evolution
7. Ecology

Chemistry

1. Atomic structure and the periodic table
2. Bonding, structure and the properties of matter
3. Quantitative chemistry
4. Chemical changes
5. Energy changes
6. The rate and extent of chemical change
7. Organic Chemistry
8. Chemical analysis
9. Chemistry of the atmosphere
10. Using resources

Physics

1. Energy
2. Electricity
3. Particle model of matter
4. Atomic structure
5. Forces
6. Waves
7. Magnetism and electromagnetism
8. Space (triple science only)

For more information about the course, please click [here](#).

NEEDED SKILLS

Scientists need to be detail oriented, noticing even tiny observations and remembering and recording them. You must have patience to undergo the years of work that might be required to make a discovery in a scientific field. Being open-minded is crucial for successful people in science careers. A good scientist will accept whatever outcome his or her work has and not try to force the results into a preformed opinion. A scientist also has good ethics and will not give false results or shade an experiment to fulfill the expected outcome. He or she will accept the solutions of others, even when they conflict with his or her own.

THE FUTURE

Thanks to your newly acquired scientific knowledge and analytical skills (not to mention the fact that you'll now be a master at problem-solving) when it comes to potential careers, the world is pretty much your oyster. Traditional career pathways include:

- Engineer
- Pharmacist
- Research scientist
- Doctor
- Chemist/Biochemist
- Forensic scientist

For further information on Science, please contact Ms Byrne, Head of Science.