

# Science at TDA



# Science at KS4 at TDA

- ▶ All students study science leading to a minimum of 2 GCSEs.
- ▶ Students will either be following Trilogy (2 GCSE's) or separate GCSE's in Biology, Chemistry and Physics.
- ▶ In the course students develop, apply and use scientific knowledge and understanding of theory and practical skills.

# Exam board



# Reformed Science GCSE

- ▶ All assessment at end of course
- ▶ Increased maths skills
- ▶ Practical skills assessed in the exam
- ▶ No coursework
- ▶ Grading change from A\*-G to 9-1
- ▶ No mixing of tiers for combined award





# Combined Science: Trilogy outline content

- ▶ Covered in core science lessons
- ▶ Worth 2 GCSEs

Biology	Chemistry	Physics
4.1. Cell biology 4.2. Organisation 4.3. Infection and response 4.4. Bioenergetics	5.1. Atomic structure and the periodic table 5.2 Bonding, structure, and the properties of matter 5.3 Quantitative chemistry 5.4 Chemical changes 5.5 Energy changes	6.1 Energy 6.2 Electricity 6.3 Particle model of matter 6.4 Atomic structure
4.5. Homeostasis and response 4.6. Inheritance, variation and evolution 4.7. Ecology	5.6 The rate and extent of chemical change 5.7 Organic chemistry 5.8 Chemical analysis 5.9 Chemistry of the atmosphere 5.10 Using resources	6.5 Forces 6.6 Waves 6.7 Magnetism and electromagnetism



# Assessments: combined sciences

## Trilogy

Six papers, 1¼ hours, 70 marks

Two papers for each subject

Assessment split by topics

Questions on practical work in all papers

# Grading in Combined Science

- ▶ **Either** two numbers the same:
  - ▶ 9-9, 8-8, 7-7, 6-6, 5-5, 4-4, 3-3, 2-2, 1-1
- ▶ **Or** one number different:
  - ▶ 9-8, 8-7, 7-6, 6-5, 5-4, 4-3, 3-2, 2-1
- ▶ No zero, so no 1-0 or 1-U
- ▶ No other grades

Ofqual

New GCSE grading structure

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

GOOD PASS (DfE)  
5 and above = top of C and above

AWARDING  
4 and above = bottom of C and above

# Triple science

- ▶ This is covered in core science lessons and in one option block.
- ▶ It leads to 3 GCSEs in Biology, Chemistry and Physics.
- ▶ Students get a separate grade for each GCSE.
- ▶ It covers the same topics but each topic has more content and there is one additional physics topic – space.



# Assessments: Biology, Chemistry and Physics

Two papers for Biology, 2 papers for Chemistry and 2 papers for physics

Each paper, 1 hour 45 minutes, 100 marks

Assessment split by topics

Questions on practical work in all papers

# Tiers of entry

- ▶ Higher tier targets grades 4-9 or 44-99. There is a 3 or 3-4 to stop students falling off the bottom of the tier.
- ▶ Foundation tier targets grades 1- 5 or 11-55.
- ▶ Only students who are a very secure grade 4 will be considered for higher tier.

# Decisions on tiers of entry

- ▶ Initial decisions will be made before the mock exams based on end of year 10 exam results and topic test results.
- ▶ This decision is made by KS4 lead and HOD.
- ▶ After mocks the decision is reviewed based on how students have performed in their mock exams.
- ▶ Tiers of entry are not decided by students.
- ▶ Class teachers are consulted but do not make the final decision.
- ▶ Decisions are made on the evidence of how students have performed not on promises that they will try hard in the future.

# Key Assessments until Christmas

- ▶ Term 1 – Biology, Chemistry and Physics all complete 1 assessment
- ▶ Term 1 – Trilogy complete 2 assessments
- ▶ Term 2 – Mocks w/b 12/11/2018
- ▶ Term 2 – second assessment for Biology, Chemistry and Physics.
- ▶ Term 2 – third assessment for Trilogy

# Expectations in science – Students need to be prepared

- ▶ Pen (black/blue)
- ▶ Purple pen
- ▶ Pencil
- ▶ Ruler
- ▶ Pencil sharpener
- ▶ Scientific calculator



Lessons, Resources, Assessment,  
and Kerboodle Books

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# Resources to help students

- ▶ [www.bbc.co.uk/schools/gcsebitesize/science/aqa](http://www.bbc.co.uk/schools/gcsebitesize/science/aqa)
- ▶ You Tube – free science lessons
- ▶ Revision guides

# Revision sessions

- ▶ After school revision sessions are in the process of being timetabled.



# Need more information

- ▶ Your Science Teacher
- ▶ Mrs Hey – Subject Leader with oversight of KS4 science
- ▶ Mr Lomas – Subject Leader Biology
- ▶ Mrs Hey – Subject Leader Chemistry
- ▶ Mr Hagan – Subject Leader Physics
- ▶ Mr Dilley – Head of Department Sciences