

## 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.

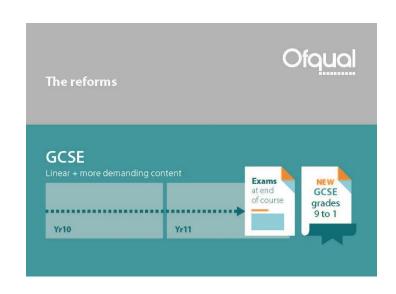
### Exam board





### 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

5, 5 5, 15 5, 16 5				
	Biology	Chemistry	Physics	
	<ul><li>4.1. Cell biology</li><li>4.2. Organisation</li><li>4.3. Infection and response</li><li>4.4. Bioenergetics</li></ul>	<ul> <li>5.1. Atomic structure and the periodic table</li> <li>5.2 Bonding, structure, and the properties of matter</li> <li>5.3 Quantitative chemistry</li> <li>5.4 Chemical changes</li> <li>5.5 Energy changes</li> </ul>	<ul><li>6.1 Energy</li><li>6.2 Electricity</li><li>6.3 Particle model of matter</li><li>6.4 Atomic structure</li></ul>	
	<ul><li>4.5. Homeostasis and response</li><li>4.6. Inheritance, variation and evolution</li><li>4.7. Ecology</li></ul>	<ul><li>5.6 The rate and extent of chemical change</li><li>5.7 Organic chemistry</li><li>5.8 Chemical analysis</li><li>5.9 Chemistry of the atmosphere</li><li>5.10 Using resources</li></ul>	<ul><li>6.5 Forces</li><li>6.6 Waves</li><li>6.7 Magnetism and electromagnetism</li></ul>	
res				

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### Assessments: combined sciences

#### Trilogy

Six papers, 11/4 hours, 70 marks

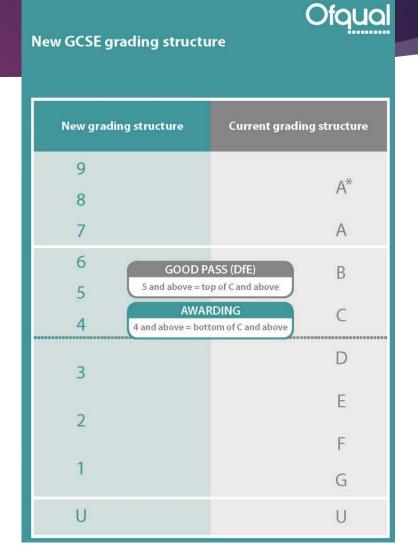
Two papers for each subject

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



## 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

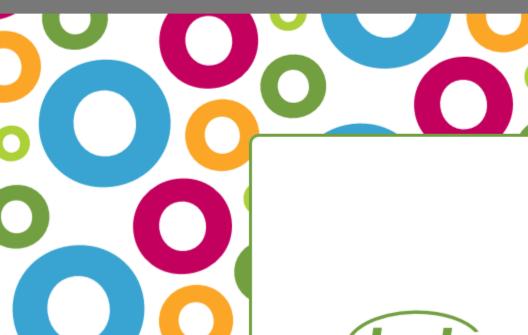
- ▶ Initial decisions will be made before the mock exams based on end of year 10 exam results and topic test results.
- ▶ This decision is made by KS4 lead and HOD.
- ▶ After mocks the decision is reviewed based on how students have performed in their mock exams.
- ▶ Tiers of entry are not decided by 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

What is Kerboodle?

Username/Email	
Password	
Institution Code	
Log in	

Trouble logging in?

## Resources to help students

www.bbc.co.uk/schools/gcsebitesize/sci ence/aga

► 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