BTEC SCIENCE
TRANSITION INFORMATION 2020

WHO WILL TEACH ME?

Miss Rogers
Chemistry

Mr Sangster
Physics

Miss Reynolds
Biology

Mrs Challinor
Biology (Yr13)

WHAT IS BTEC?

- BTEC IS A NATIONALLY RECOGNISED VOCATIONAL QUALIFICATION
- THIS MEANS THAT ITS EMPHASIS IS ON GAINING PRACTICAL, LAB BASED SKILLS WHICH ARE THEN ASSESSED VIA WRITTEN ASSIGNMENTS
- THIS DIFFERS TO A LEVELS WHERE THE EMPHASIS LIES ON THE FINAL EXAMS.

WHAT SKILLS CAN I GAIN BY DOING BTEC SCIENCE

- PRACTICAL SKILLS (AS PREVIOUSLY MENTIONED)
- MEETING DEADLINES
- REPORT WRITING
- DATA COLLECTION
- STATISTICAL ANALYSIS
- WORKING WITH OTHERS

WHERE CAN A BTEC QUALIFICATION TAKE ME?

- ANYWHERE!
- A BTEC QUALIFICATION CAN BE USED TO GAIN EMPLOYMENT, AN APPRENTICESHIP AND ENTRY TO UNIVERSITY.
- AT QEGS WE OFFER A SINGLE SCIENCE COURSE WHICH MEANS IT CAN BE USED IN CONJUNCTION WITH A LEVELS AND OTHER BTEC COURSES TO ACHIEVE THE ABOVE.
- HAVE A LOOK ON THE UCAS WEBSITE FOR MORE INFORMATION.

HOW AM I ASSESSED?

- A MIXTURE OF WRITTEN ASSIGNMENTS (INTERNALLY MARKED) AND EXAMINED ASSESSMENTS (CARRIED OUT IN SCHOOL BUT WILL BE EXTERNALLY MARKED).
- THESE WILL BE GRADED WITH EITHER A PASS, MERIT OR DISTINCTION.
- DEPENDING ON WHAT YOU HAVE ACHIEVED ON EACH ASSIGNMENT AND ASSESSMENT WILL DETERMINE YOUR OVERALL GRADE. THIS WILL BE DISCUSSED NEARER THE TIME.

WHAT WILL I BE LEARNING?

The course consists of four units: 1, 2, 3 and 8 (see specification for more details).

YEAR 12

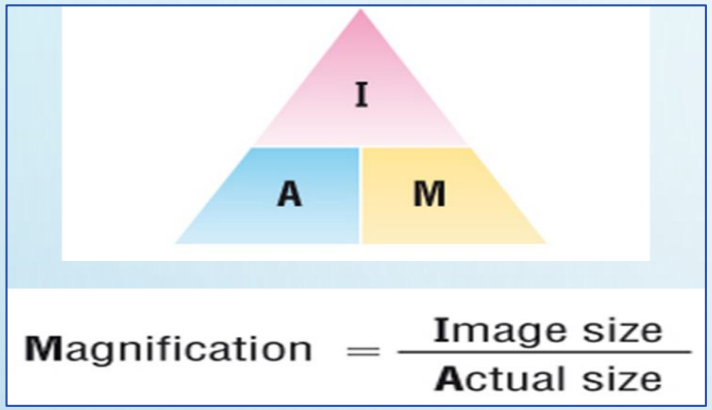
- **UNIT 1- PRINCIPALS AND APPLICATIONS OF SCIENCE** IS AN EXAMINED UNIT THAT CONTAINS ASPECTS OF ALL THREE SCIENCES. HERE YOU CAN EXPECT TO LEARN: PERIODICITY OF ELEMENTS, CELL SPECIALISATION AND USING WAVES FOR COMMUNICATION.
- **UNIT 3- SCIENCE INVESTIGATION SKILLS** IS ALSO AN EXAMINED UNIT THAT CONTAINS ASPECTS OF ALL THREE SCIENCES. HERE YOU CAN EXPECT TO LEARN ABOUT: ENZYMES, DIFFUSION, FUELS FOR ENERGY AND ELECTRICAL CIRCUITS

YEAR 13

- **UNIT 2- PRACTICAL SCIENTIFIC PROCEDURES AND TECHNIQUES** IS AN ASSIGNMENT BASED UNIT THAT ALLOWS THE STUDENT TO LEARN TITRATION, CALORIMETRY AND CHROMATOGRAPHY SKILLS.
- **UNIT 8- PHYSIOLOGY OF HUMAN BODY SYSTEMS** IS AN ASSIGNMENT BASED UNIT ON THE MUSCULOSKELETAL, LYMPHATIC AND DIGESTIVE SYSTEM FUNCTIONS AND RELATED DISEASES.

THE FOLLOWING SLIDES PROVIDE A FEW EXAMPLES OF THE WORK YOU MAY BE EXPECTED TO DO

Magnification



Step 1)
Measure the image size using a ruler in millimetres (mm)
Step 2)
Convert the millimetres (mm) into micrometres (µm)
Step 3)
Divide your answer by the actual size

Question 1

This is a fly. Its actual eye size is 1,000µm. What is the magnification?

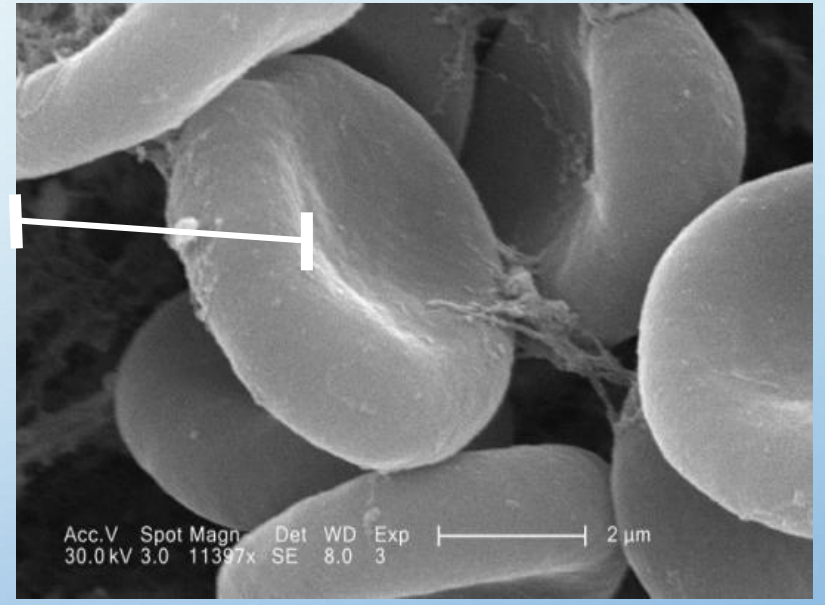
1) Length of eye is _____ mm
2) _____ mm x1000 = _____ µm
3) Image size = _____ µm
4) Magnification = Image ÷ Actual
Magnification = _____ µm ÷ _____ µm
Magnification = _____
The picture shows the eye magnified (zoomed in) by _____ times.

Question 2

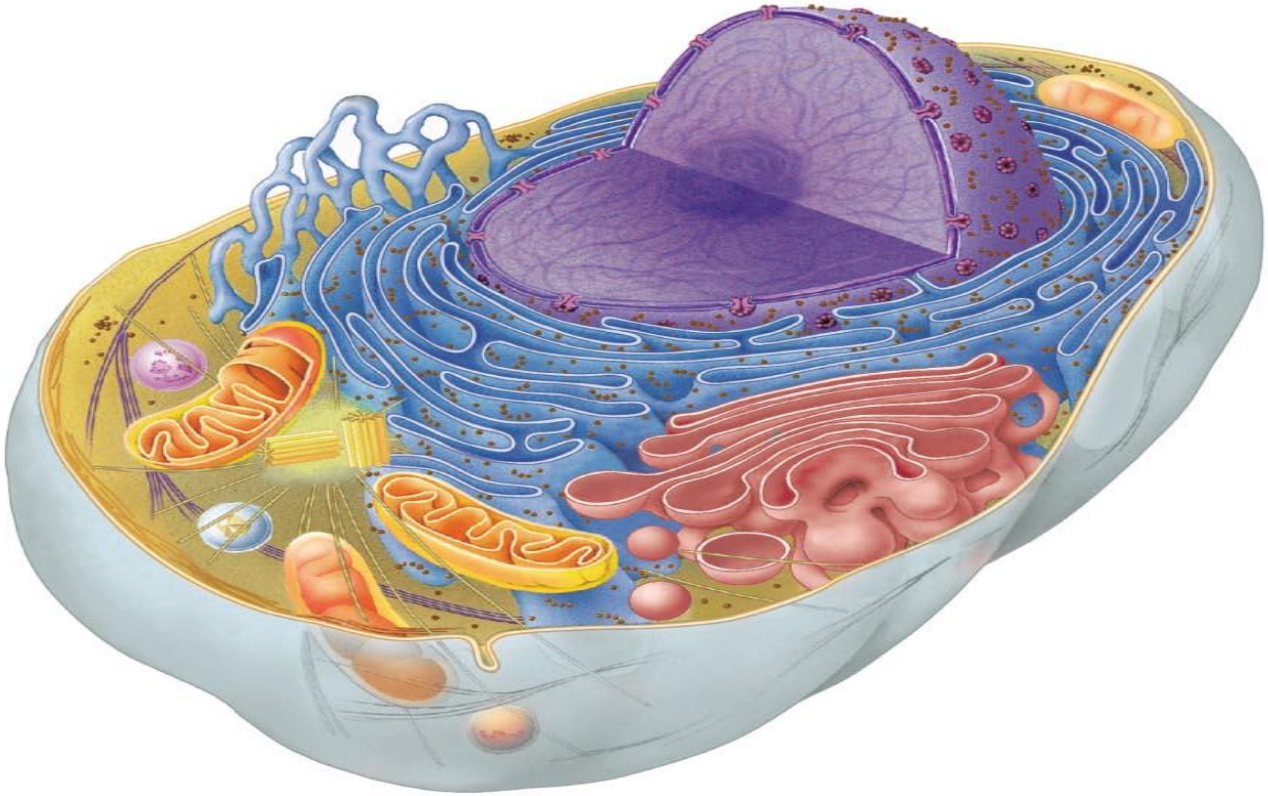
This is a red blood cell. Its actual size is 300µm. What is the magnification?

1) Length of cell is _____ mm

2) _____ mm x1000 = _____ µm
3) Image size = _____ µm
4) Magnification = Image ÷ Actual
Magnification = _____ µm ÷ _____ µm
Magnification = _____
The picture shows the cell magnified (zoomed in) by _____ times.



The diagram below shows an animal cell as seen under an electron microscope. Can you label the organelles?



Prokaryotes and Eukaryotes

A Prokaryote can be described as

A Eukaryote can be described as

Fill in the table below with similarities and difference

Prokayotes	Eukaryotes

CONTACTS US IF YOU WANT TO FIND OUT MORE OR HAVE A QUERY THAT IS NOT EXPLAINED HERE

- MISS ROGERS – ROGERS@QUEENELIZABETHS.DERBYSHIRE.SCH.UK
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We look forward to seeing you back at school soon