



BISHOP CHALLONER CATHOLIC COLLEGE

Year 9 T2 Assessments

Dear Parent/Carer

In upcoming weeks students will be preparing for these assessments in class and will be provided revision guidance. Could I please ask that you encourage your son/daughter to revise at home on a regular basis over the next few weeks; this will allow them to demonstrate what they know in the assessments and help them build future foundations for revision patterns as they move onto Year 10. Heads of Department have provided some areas of guidance and direct links for revision which I have included on the reverse of this letter. Using these resources as part of their revision will help them feel well prepared for the forthcoming assessments.

History

In History students are completing their T2 on the causes of WW2. The assessment will measure their knowledge, use of sources and their ability to write an extended answer on historians' interpretations.

The assessment will take place w/c 7th June and they will have two lessons before the HT to complete revision with their teachers. In addition, revision materials will be provided to students via ClassCharts.

English

Year 9 will be completing their T2s in English in the w/b 24th May - they will have been informed which two lessons these are taking place by their teacher.

Reading Assessment - Jekyll & Hyde. The question will be based on the presentation of Hyde, Jekyll or the setting. Pupils must learn a small selection of key quotations for each of these topics from memory, as well as learning key contextual ideas.

Writing Assessment - Persuasive Writing. Pupils will write a persuasive article, arguing for or against a point of view about a statement given in the assessment. Pupils should be revising and practising using persuasive techniques, synchronised sentences, and the structure of an article.

Science

Revision guidance will be put on Teams/Classcharts.

- Revision guidance will take place week commencing Monday 17th May
- Assessments will take place week commencing Monday 7th June

Students will sit 3 papers, 1 for each science. Each paper will be about 35 mins:

- **Biology:** Topic 1 key concepts specification points 1.1 - 1.12
- **Chemistry:** Topic 2 States of matter (2.1-2.12); Topic 1 key concepts (1.1- 1.12)
- **Physics:** Motion and forces: (2.1-2.19, 2.27-2.30)

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PLATINUM SCIENCE FAIR WINNER 2017-2020

Specification detail below:**Biology:**

https://qualifications.pearson.com/content/dam/pdf/GCSE/Science/2016/Specification/GCSE_Biology_Spec.pdf

- 1.1.1** Explain how the sub-cellular structures of eukaryotic and prokaryotic cells are related to their functions, including:
 - a. animal cells – nucleus, cell membrane, mitochondria and ribosomes
 - b. plant cells – nucleus, cell membrane, cell wall, chloroplasts, mitochondria, vacuole and ribosomes
 - c. bacteria – chromosomal DNA, plasmid DNA, cell membrane, ribosomes and flagella
- 1.2** Describe how specialised cells are adapted to their function, including:
 - a. sperm cells – acrosome, haploid nucleus, mitochondria and tail
 - b. egg cells – nutrients in the cytoplasm, haploid nucleus and changes in the cell membrane after fertilisation
 - c. ciliated epithelial cells
- 1.3** Explain how changes in microscope technology, including electron microscopy, have enabled us to see cell structures and organelles with more clarity and detail than in the past and increased our understanding of the role of sub-cellular structures
- 1.4** Demonstrate an understanding of number, size and scale, including the use of estimations and explain when they should be used
- 1.5** Demonstrate an understanding of the relationship between quantitative units in relation to cells, including:
 - a. milli (10⁻³)
 - b. micro (10⁻⁶)
 - c. nano (10⁻⁹)
 - d. pico (10⁻¹²)
 - e. calculations with numbers written in standard form
- 1.6** Core Practical: Investigate biological specimens using microscopes, including magnification calculations and labelled scientific drawings from observations
- 1.7** Explain the mechanism of enzyme action including the active site and enzyme specificity
- 1.8** Explain how enzymes can be denatured due to changes in the shape of the active site
- 1.9** Explain the effects of temperature, substrate concentration and pH on enzyme activity
- 1.10** Core Practical: Investigate the effect of pH on enzyme activity
- 1.11** Demonstrate an understanding of rate calculations for enzyme activity
- 1.12** Explain the importance of enzymes as biological catalysts in the synthesis of carbohydrates, proteins and lipids and their breakdown into sugars, amino acids and fatty acids and glycerol

Chemistry

https://qualifications.pearson.com/content/dam/pdf/GCSE/Science/2016/Specification/GCSE_Chemistry_Spec.pdf

- 1.1** Describe how the Dalton model of an atom has changed over time because of the discovery of subatomic particles
- 1.2** Describe the structure of an atom as a nucleus containing protons and neutrons, surrounded by electrons in shells
- 1.3** Recall the relative charge and relative mass of:
 - a. a proton
 - b. a neutron
 - c. an electron
- 1.4** Explain why atoms contain equal numbers of protons and electrons
- 1.5** Describe the nucleus of an atom as very small compared to the overall size of the atom
- 1.6** Recall that most of the mass of an atom is concentrated in the nucleus
- 1.7** Recall the meaning of the term mass number of an atom
- 1.8** Describe atoms of a given element as having the same number of protons in the nucleus and that this number is unique to that element
- 1.9** Describe isotopes as different atoms of the same element containing the same number of protons but different numbers of neutrons in their nuclei
- 1.10** Calculate the numbers of protons, neutrons and electrons in atoms given the atomic number and mass number

- 1.11 Explain how the existence of isotopes results in relative atomic masses of some elements not being whole numbers
- 1.12 Calculate the relative atomic mass of an element from the relative masses and abundances of its isotopes
- 2.1 Describe the arrangement, movement and the relative energy of particles in each of the three states of matter: solid, liquid and gas
- 2.2 Recall the names used for the interconversions between the three states of matter, recognising that these are physical changes: contrasted with chemical reactions that result in chemical changes
- 2.3 Explain the changes in arrangement, movement and energy of particles during these interconversions
- 2.4 Predict the physical state of a substance under specified conditions, given suitable data
- 2.5 Explain the difference between the use of 'pure' in chemistry compared with its everyday use and the differences in chemistry between a pure substance and a mixture
- 2.6 Interpret melting point data to distinguish between pure substances which have a sharp melting point and mixtures which melt over a range of temperatures
- 2.7 Explain the types of mixtures that can be separated by using the following experimental techniques:
 - a. simple distillation
 - b. fractional distillation
 - c. filtration
 - d. crystallisation
 - e. paper chromatography
- 2.8 Describe an appropriate experimental technique to separate a mixture, knowing the properties of the components of the mixture
- 2.9 Describe paper chromatography as the separation of mixtures of soluble substances by running a solvent (mobile phase) through the mixture on the paper (the paper contains the stationary phase), which causes the substances to move at different rates over the paper
- 2.10 Interpret a paper chromatogram:
 - a. to distinguish between pure and impure substances
 - b. to identify substances by comparison with known substances
 - c. to identify substances by calculation and use of R_f values
- 2.11 Core Practical: Investigate the composition of inks using simple distillation and paper chromatography
- 2.12 Describe how:
 - a. waste and ground water can be made potable, including the need for sedimentation, filtration and chlorination
 - b. sea water can be made potable by using distillation
 - c. water used in analysis must not contain any dissolved salts

Physics

https://qualifications.pearson.com/content/dam/pdf/GCSE/Science/2016/Specification/GCSE_Physics_Spec.pdf

- 2.1 Explain that a scalar quantity has magnitude (size) but no specific direction
- 2.2 Explain that a vector quantity has both magnitude (size) and a specific direction
- 2.3 Explain the difference between vector and scalar quantities
- 2.4 Recall vector and scalar quantities, including:
 - a. displacement/distance
 - b. velocity/speed
 - c. acceleration
 - d. force
 - e. weight/mass
 - f. momentum
 - g. energy
- 2.5 Recall that velocity is speed in a stated direction
- 2.6 Recall and use the equations:
 - a. (average) speed (metre per second, m/s) = distance (metre, m) $\div$ time (s)
 - b. distance travelled (metre, m) = average speed (metre per second, m/s) $\times$ time (s)
- 2.7 Analyse distance/time graphs including determination of speed from the gradient
- 2.8 Recall and use the equation:

acceleration (metre per second squared, m/s^2) = change in velocity (metre per second, m/s) $\div$ time taken (second, s)

- 2.9** Use the equation:
(final velocity)² ((metre/second)², $(\text{m/s})^2$) – (initial velocity)² ((metre/second)², $(\text{m/s})^2$) = 2 $\times$ acceleration (metre per second squared, m/s^2) $\times$ distance (metre, m)
- 2.10** Analyse velocity/time graphs to:
- compare acceleration from gradients qualitatively
 - calculate the acceleration from the gradient (for uniform acceleration only)
 - determine the distance travelled using the area between the graph line and the time axis (for uniform acceleration only)
- 2.11** Describe a range of laboratory methods for determining the speeds of objects such as the use of light gates
- 2.12** Recall some typical speeds encountered in everyday experience for wind and sound, and for walking, running, cycling and other transportation systems
- 2.13** Recall that the acceleration, g, in free fall is 10 m/s^2 and be able to estimate the magnitudes of everyday accelerations
- 2.14** Recall Newton's first law and use it in the following situations:
- where the resultant force on a body is zero, i.e. the body is moving at a constant velocity or is at rest
 - where the resultant force is not zero, i.e. the speed and/or direction of the body change(s)
- 2.15** Recall and use Newton's second law as: force (newton, N) = mass (kilogram, kg) $\times$ acceleration (metre per second squared, m/s^2) $F = m \times a$
- 2.16** Define weight, recall and use the equation: weight (newton, N) = mass (kilogram, kg) $\times$ gravitational field strength (newton per kilogram, N/kg) $W = m \times g$
- 2.17** Describe how weight is measured
- 2.18** Describe the relationship between the weight of a body and the gravitational field strength
- 2.19** Core Practical: Investigate the relationship between force, mass and acceleration by varying the masses added to trolleys
- 2.27** Explain methods of measuring human reaction times and recall typical results
- 2.28** Recall that the stopping distance of a vehicle is made up of the sum of the thinking distance and the braking distance
- 2.29** Explain that the stopping distance of a vehicle is affected by a range of factors including:
- the mass of the vehicle
 - the speed of the vehicle
 - the driver's reaction time
 - the state of the vehicle's brakes
 - the state of the road
 - the amount of friction between the tyre and the road surface
- 2.30** Describe the factors affecting a driver's reaction time including drugs and distractions

Geography

Date: Week commencing 24th May

Topics: Iceland and Geographical Skills

Revision Material: All students have been issued on class-charts a revision guidance sheet (revision checklist / knowledge organiser) and will have at least two lessons prior to the assessment to prepare.

French

The assessments in French will be about:

Vocabulary is available on Quizlet

Unit 1 Relationship with family + marriage

Unit 2 New technology and social networks

Unit 3 Hobbies and food

Grammar:

- Reflexive verbs (I have fun, I argue)
- Future tense (I am going to have a family)

- adjectives (to describe personality, food and general opinion)
- modal verbs (I can, I want, I must)
- more complex structures (in order to = pour / it allows me to / I want to eat / I can share, ...)
- past tense (I ate, I shared, I used, I played, I went, ...)

They will have 4 assessments:

- Speaking will be given as a homework over the half-term on Teams
- Listening, Reading and Writing will take place during the 2nd window of assessments, i.e. after half-term

To revise they have access to Quizlet and their book where they will find plenty of model answers

RE

Pupils have been informed with 2+ weeks of the date; they have had home learning as revision and 3 RS lessons on revision as well.

The Year 9 assessment is focusing on our unit called 'Catholic Church Unique'.

Skills to practice:

- Define a word in two sentences
- Write in full paragraphs (P.E.E.L) using evidence to support points.
- Memorising sources of wisdom and authority

Topics:

Rosary

Our Mother Mary

Incarnation

Holy Trinity

Pentecost

Sacraments

Baptism

Eucharist

Yours sincerely,

Mrs Brown

Head of Year 9