

Revision Booklet 2018 Year 9





December 2017

Dear Parent/Carer

The purpose of this booklet is to inform you about the keys concepts and topics that have been covered in lessons from September. Each subject has extension tasks and suggestions of places to visit, such as museums and galleries. Also included is a section on what students can do to extend their learning leading up to the forthcoming assessments in January.

We will aim to update this booklet twice every year, so that you can support your son/daughter in their learning. There are some broad topics suggested and we would therefore encourage our students to be independent thinkers by researching information from books or the internet.

We want to encourage a love for reading and would ask that you support your son/daughter by showing a keen interest in what they are reading. A visit to the library or local book shop would also be beneficial to support this interest and help to further nurture a love of reading.

Our Year 9 students have made a positive start this academic year and, as I walk around the Academy, I am proud of their achievements and the way they are conducting themselves at the start of their GCSE studies.

We hope that all our students enjoy a well-deserved rest over the Christmas holidays and look forward to welcoming them back to the Academy on Thursday 4 January 2018.

Yours sincerely

MR A GRFFITHS Vice Principal

Art and Design

Topics covered this year:

- Still life observational drawing
- Bird study
- Paul Cezanne artist study
- Mark-making skills
- Pepper study
- Mixed media experimentation.

Future topics to be covered:

- Natural forms
- 3D sculpture of a bird
- Bird sheet
- Distortion in portraiture
- Artist connection Francis Bacon
- Giacometti study
- Artist connection Chuck Close
- Portrait drawing
- Experimental drawing.

Focused revision areas:

We will be looking at Georgia O'Keeffe as part of the natural forms unit of work. O'Keeffe is an American abstract artist who painted natural forms such as flowers and dried bones, mostly depicted in arid deserted landscapes.

We will shortly be focusing on distortion in portraiture and looking at artists that create portraits that are distorted and abstract. The motivation for these types of portraits is often "self". Artist Francis Bacon would use bold brush strokes to depict his portraits showing an almost disfigured portrait.

Extension tasks:

Cutting up unusual fruit and drawing them using a dynamic sense of scale. Focusing on various mark-making techniques and describing the various surfaces and textures within.

Taking 20 images of the fruit using macro (close-up facility on your camera), printing these off and presenting them on a design board. Considering light when capturing the images and ensuring the focus is sharp.

Museum/Gallery visits to extend learning:

Visit the National Portrait Gallery to view Cezanne's' portraits. The exhibition is on until 11 February. Taylor Wessing Photographic Portrait prize 2017 is on until 8 February.

National Portrait Gallery, St Martin's Place, London, WC2H 0HE

Tel: 020 7306 0055

What to do when there? Collect postcards, any information, sketch the images and explore!

BTEC Business Enterprise

Topics covered this year:

- Business enterprise
- Market research
- Customer demand
- Adding value
- Franchises
- Creativity
- Invention and Innovation.

Future topics to be covered:

- Marketing
- Meeting customer needs
- Financial management
- People management
- The wider world.

Extension tasks:

Students are developing knowledge and understanding of the characteristics of enterprises and the skills needed by entrepreneurs. This is with a view to planning and running an enterprise of their own next year.

Students should research and create an engaging PowerPoint presentation on a local entrepreneur including details of the skills and qualities they have put to use. Consider the following questions:

- What is the background of your entrepreneur; how did they come to start up their business?
- What challenges have they faced along the way and how did they overcome these?
- What successes have they enjoyed and what are they most proud of?
- What can we learn from this person's story, as some of us hope to be entrepreneurs ourselves?

Museum/Gallery visits to extend learning:

Visit the Bank of England museum which houses gold bars, coins, notes and award-winning interactive systems. There are also special exhibitions and events taking place in the museum covering aspects such as the work and history of the BoE.

Address: Bartholomew Lane, London EC2R 8AH

Tel 020 7601 5545

Open Monday to Friday 10.00am to 5.00pm, admission and events are free

What to do when there:

Complete the activity sheet "Discover the Bank" for extra insight

http://www.bankofengland.co.uk/education/Documents/museum/visiting/discover-the-bank.PDF

Child Development

Topics covered this year:

Year 9 is a year of theory in preparation for Year 10 coursework, which includes three assessments

- Growth and development
- Behaviour
- Learning.

Transcript of P.I.E.S Child Development Booklet (Prezi) P.I.E.S stands for, it is an acronym. The P stands for physical, the I stands for intellectual, the E stands for emotional and the S stands for social. P.I.E.S. is used to determine how the child is growing.

Future topics to be covered:

- The new baby
- Reflexes
- Caring for a baby / what the baby can do / feeding
- Focusing on coursework
- Managing difficult children
- · Habits of early childhood
- Learning about food and nutrition.

Focused revision areas:

- Any aspects of the developing child
- Understanding of P.I.E.S.
- Basic food preparation and hygiene.

Extension tasks:

Reading on the development of the foetus would be an advantage as this area is covered at length in following years.

Television programme - Secret Life of a 4/5 Year Olds.

Museum/Gallery visits to extend learning:

Students would benefit from having some experience of working in a nursery or at least visiting one. Science museum to look at genetics

Visiting a new baby within the family (if applicable)

Computer Science

Topics covered this year:

Python programming

- Operators and variables
- String manipulation
- Sequence construct
- Selection construct using If-statement
- Iteration using For-loop
- Writing functions for efficiency in code

Data Representation

- · Converting decimal numbers to binary and vice versa
- Adding binary numbers
- Binary shift for multiplication and division in binary
- Converting binary numbers to hexadecimal
- ASCII character set.

Future topics to be covered:

Databases

- Creating tables
- Adding validations
- Running queries
- Creating forms
- Creating reports

Storing bit-map graphics as digital data

Storing vector graphics as digital data

Storing sound as digital data

Compressing data

- Lossy compression
- Lossless compression
- Run Length Encoding (RLE).

Focused revision areas:

Linking binary, decimal and hexadecimal - practising showing a number in all three forms.

Linking binary to ASCII, extended ASCII and Unicode - practising showing a number in all three forms.

Extension tasks:

Understanding and using Structured Query Language (SQL) to extract required data from a database. Editing SVG

Code (Scalable Vector Graphics) embedded in HTML to see how vector graphics maintain quality when resized.

Museum/Gallery visits to extend learning:

Science Museum

Bletchley Park, Buckinghamshire

Construction

Topics covered this year:

- Health and safety
- Timber production
- · Classification of wood
- Carpentry tools and their uses
- Wood joints
- Practical lessons- making of a picture frame
- Isometric drawing.

Future topics to be covered:

- Marking and cutting out
- Plastics
- Working with plastics
- Making of a pencil tidy
- Perspective drawing
- Orthographic drawing.

Focused revision areas:

We will be looking at unit 6 of the Construction and The Built Environment text book and focusing on different types of tools and their uses. We will also discuss the different wood joints and when and where they are used. We will focus on materials and their characteristics. Students can download the specification and look at the unit in greater detail

Extension tasks:

Explore the process of plastics and metal

Look into alloys of metal

Look at safety on a construction site and the implications of not being safe

Understand key tools in the workplace and the function of that particular tool

Look at extending knowledge of extensions and supporting walls.

Draw a plan of your house accurately showing keys for doors, windows and rooms.

Museum/Gallery visits to extend learning:

We hope to visit a building site in the Spring term

We hope to invite a speaker from the industry to come to talk to students

English (Language and Literature)

Topics covered this year:

- Analysis of non-fiction texts
- Poetry (power and conflict).

Future topics to be covered:

- Study of a Shakespearian text (Macbeth)
- · Creative reading and writing
- Unseen poetry.

Focused revision areas:

Using websites like Lit Charts and BBC Bitesize, students should be revising to prepare for their English Literature GCSE exam. Currently, the students should be revising the comparative aspects (meaning, structure, language technique and context) between the following poems: *Storm on the Island, Exposure, Ozymandias* and *The Prelude*.

Next term, students will be introduced to *Macbeth*. Once the students have studied the play, they will need to revise for their assessment; an essay relating to either a theme and/or character in the play.

Extension tasks:

Students will have the opportunity to produce and perform their own version of *Macbeth*.

To instil a love of reading, students should be reading for minimum of twenty minutes per day.

I would also encourage students to write continuously throughout the year, using their prompts from the writing journal they received last year.

Museum/Gallery visits to extend learning:

To develop an understanding of drama, a trip to the Globe Theatre or the National Theatre would be a fantastic opportunity.

Food Preparation and Nutrition

Topics covered this year:

Nutrition underpins all topics covered

- Staple foods fats and carbohydrates
- Fish and cheese vitamins and minerals
- Desserts and vegetarianism protein
- Cooked various staple foods such as pasta, bread, lasagne etc.
- Health and safety and hygiene.

Future topics to be covered:

Nutrition underpins all topics covered

- Vegetables healthy eating
- · Meat cookery methods of cooking
- Pastry making raising agents
- Cake and biscuit making decorative skills
- Health and safety and hygiene
- · Looking at different pastries.

Focused revision areas:

Bread, cereals, pasta, rice, heat transference and nutrition. Looking at more complicated pastries. Nutrition is key to the accessing the assessment throughout Years 9, 10 and 11. As the students' progress it is all about building and extending knowledge.

Extension tasks:

- If possible to practise all cooking techniques at home by helping with the preparation of meals.
- Considering health and safety aspects when preparing different types of food.
- Practise will help you speed up simple processes e.g. peeling potatoes so that you will be able to fit more into the three hour practical exam taken in Year 11.

Visits to extend learning:

Help with the shopping and look at food prices, variety available and where it comes from (origin on labels) to help with your understanding of food provenance.

Consider when eating out the nutritional value of your food.

An awareness of the cost of food.

A visit to a fresh food farm store would be good; perhaps pictures can be taken.

French

Topics covered this year:

Identity and culture - me, my family and friends

- Myself and my family (descriptions)
- My family and friends (getting on with others)
- Personal relationships on se marie?
- Future relationships.

Future topics to be covered:

- Technology
- Free-time activities
- Customs and festivals.

Focused revision areas:

- Avoir and etre: present tense of the 2 most common irregular verbs
- Reflexive verbs (mostly regular –er verbs) present tense
- Adjectives: position and agreement
- The immediate future tense using aller + infinitive
- Possessive adjectives (my/your/his/her)
- Regular verb endings in the present tense.

Extension tasks:

Watch a French movie.

Listen to a variety of French music on radio/Youtube.

Continue to use Duolingo to strengthen and consolidate vocabulary and skills.

Museum/Gallery visits to extend learning:

Tate Britain: Millbank, London SW1P 4RG.

The EY Exhibition - Impressionists in London, French Artists in Exile (1870-1904) The story of the artists who fled to Britain to escape war in France.

The France Show 26 to 28 January Olympia London, Hammersmith Road.

Geography

Topics covered this year:

- Tectonic hazards Montserrat
- Tropical storms Hurricane Katrina/Typhoon Haiyan
- Extreme weather in the UK
- River landscapes Boscastle
- Coastal landscapes Bognor Regis

Future topics to be covered:

- Ecosystems rainforests and deserts
- Urbanisation urban change in Manchester or Bristol.
- Development Nigeria
- Resource management.

Focused revision areas:

Look at contrasting places and how they cope with tectonic hazards.

Also consider how the impacts differ in richer and poorer countries, compare these differences and state the varying structures that effect destruction.

Extension tasks:

Follow events in the news - earthquakes/floods/weather events etc.

Use BBC or Sky News apps on phones to add to knowledge of current issues

Museum/Gallery visits to extend learning:

Natural History Museum, London

Geography documentaries related to topics above.

Visit a coastal landscape and record using photographs the different aspects of erosion.

History

Topics covered this year:

- Changes in Health and Medicine in Britain c500 to the present day (CAA).
- USA 1929-2000 (JEC).

Future topics to be covered:

- Germany in Transition 1918-1939
- Elizabethan England 1558-1603.

Focused revision areas:

Medicine

What have been the causes of illness and disease over time?

- Problems in the medieval era: poverty, famine, warfare
- Lack of hygiene in the medieval and early modern eras, particularly the Black Death of the fourteenth century and the Great Plague of the seventeenth century
- The effects of industrialisation and the incidence of cholera and typhoid in the nineteenth century; the spread of bacterial and viral diseases in the twentieth century

How effective were attempts to prevent illness and disease over time?

- How alchemy, soothsayers and medieval doctors tried to prevent illness and disease
- How Science was used to prevent illness and disease in the eighteenth and nineteenth centuries
- The work of Edward Jenner and vaccination
- The discovery of antibodies and developments in the field of bacteriology

How have attempts to treat illness and disease changed over time?

- Traditional treatments and remedies common in the medieval era, herbal medicines, barber surgeons, use of leeches
- Joseph Lister and the use of antiseptics in the later nineteenth century
- James Simpson and the development of anaesthetics

Twentieth century developments

- Marie Curie and the development of radiation
- The roles of Fleming, Florey and Chain regarding antibiotics
- Barnard and transplant surgery; modern advances in cancer treatment and surgery; alternative treatments

USA

How was the USA affected by the Great Depression between 1929 and 1945?

• The impact of the Wall St. Crash; Republican attempts to deal with the crisis; life during the Depression; Roosevelt and the New Deal

How had the economy of the USA changed by the 1960s?

Industrial output; post-war affluence; consumerism and suburbanization; poverty amidst plenty

Why was it difficult for black Americans to gain equal rights between 1941 and 1970?

• The contribution of black Americans to the war effort; the issue of education - Brown vs Topeka, Little Rock High; Montgomery Bus Boycott; the roles of Martin Luther King and Malcolm X; Civil Rights legislation.

What were the main political developments in the USA between 1960 and 2000?

• The domestic policies of Kennedy; Nixon and Watergate; the Reagan Years; changes under Bush Senior and Clinton

How did American society change between 1950 and 2000?

• Changes in music, entertainment, media and literature; changes in youth culture and student protest; the changing role of women

Why did relations between the USA and the USSR deteriorate between 1945 and 1973?

• The Truman Doctrine and containment of Communism; Berlin Crisis 1948-49; Cuban Missile Crisis; US involvement in Vietnam

What has been the USA's role in the search for peace since 1970?

• Détente and attempts to limit arms; changing relations with China; changing US relations with the USSR; the fall of Communism and the end of the Cold War; US involvement in Iran, Iraq and the Gulf War.

Mathematics

Topics covered this year:

Higher

Calculations, checking and rounding Indices, roots, reciprocals and hierarchy of

operations

Factors, multiples and primes

Standard form and surds

Algebra - the basics

Setting up, rearranging and solving equations

Sequences

Averages and range

Representing and interpreting data

Scatter graphs Fractions Percentages

Ratio and proportion

Polygons, angles and parallel lines Pythagoras' Theorem and trigonometry Graphs - the basics and real-life graphs Linear graphs and coordinate geometry Quadratic, cubic and other graphs Perimeter, area and 3D forms

Circles, cylinders, cones and spheres

Foundation

Integers and place value

Decimals

Indices, powers and roots Factors, multiples and primes

Algebra - the basics

Expanding and factorising single brackets Expressions and substitution into formulae

Tables

Charts and graphs

Pie charts Scatter graphs Fractions

Fractions, decimals and percentages

Percentages

Statistics and questionnaires

The averages

Angles, lines and symmetry Polygons and parallel lines

Interior and exterior angles of polygons

Equations Inequalities Sequences

Future topics to be covered:

Higher

Transformations

Constructions, loci and bearings

Solving quadratic and simultaneous equations

Inequalities Probability

Multiplicative reasoning

Similarity and congruence in 2D and 3D

Graphs of trigonometric functions

Further trigonometry

Collecting data

Cumulative frequency, box plots and histograms Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics

Circle theorems
Circle geometry

Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof

Vectors and geometric proof

Reciprocal and exponential graphs; gradient and

area under graphs

Direct and inverse proportion

Foundation

Perimeter and area

3D forms and volume

Real-life graphs

Straight-line graphs

Transformations I - rotations and translations

Transformations II - reflections and enlargements

Ratio

Proportion

Right-angled triangles - Pythagoras and trigonometry

Probability I Probability II

Multiplicative reasoning

Plans, elevations and nets

Constructions, loci and bearings

Quadratic equations - expanding and factorising

Quadratic equations: graphs

Circles, cylinders, cones and spheres

Fractions and reciprocals Indices and standard form

Similarity and congruence in 2D

Vectors

Rearranging equations, graphs of cubic and reciprocal

functions and simultaneous equations

Focused revision areas:

www.mathsgenie.co.uk www.accessmaths.co.uk www.corbettmaths.co.uk

www.hegartymaths.com http://www.twinkl.co.uk

Extension tasks:

Enrich website - https://nrich.maths.org/

MyMaths website www.mymaths.co.uk Username: Chesham Password: median

Media Studies

Topics covered this year:

- Advertising and marketing
- Film industry poster analysis
- Magazine design and analysis
- Analysis of TV dramas comparison of texts
- Understanding what representation, media industries, audiences and media language entails in terms of all media texts
- Planning and researching to make a film
- Planning and researching to make a magazine
- Develop analytical skills
- Develop an understanding of social and historical effects of media texts.

Future topics to be covered:

- Pokemon Go
- Video games
- Analysis of contemporary pop videos i.e. Pharrell Williams, Bruno Mars, Taylor Swift, Katie Perry
- Radio
- Newspapers
- Develop analytical skills
- Develop an understanding of financial effects on media texts.

Focused revision areas:

From being taught the foundations of all media study by learning how to analyse media texts and use the appropriate media terminology to do this, students will be given two unseen magazines to compare and contrast in terms of representation. They will also be given a print advert to analyse in terms of analysing the media language used and the meaning behind this language.

Students will focus on how audiences affect and view products and how different types of audiences are targeted. This will be in connection to the film industry.

Extension tasks:

Students will look at how social media can be used as marketing tools and linked to other online platforms to help reach larger audiences. This may be achieved by setting up Year 9 blogs or websites with working social media links.

Museum/Gallery visits to extend learning:

Future visit to the Guardian in London to create a newspaper in a real newsroom or to Sky to create a newsbroadcast.

Photography

Topics covered this year:

- Rule of thirds
- Leading lines
- Composition
- Artist analysis
- History of Photography.

Future topics to be covered:

- Drawing with light
- Creative aspects to photography
- Man Ray or Rayograms
- Hannah Hoch study
- Composition
- Macro landscapes
- Experimental photography.

Focused revision areas:

We will be analysing the work of Man Ray and looking at composition and shape. Creative aspects of photography will be explored looking at manipulation of images by hand and by editing packages.

Ansel Adams will be explored and his use of contrast, shape and huge landscapes looking at the purpose and intentions of the photographer.

We will be looking at the most important component in photography - light and how it can alter an image.

Extension tasks:

Taking 20 images of anything related to your environment using macro (close-up facility on your camera), printing these off and presenting them on a design board. Consider light when capturing the images and ensuring the focus is sharp. What macro-landscapes can you see?

Looking at the history of photography from the early 18th century to modern abstract pieces of work.

Museum/Gallery visits to extend learning:

Visit the Photographers' Gallery and see the work entitled *Invisible Wounds*, by Alma Haser and Nick Ballon. The work is heavily manipulated by hand overlaying multiple images with a clear message. Photographers' Gallery, 16-18 Ramillies Street, London W1F 7LW

What to do when there? Collect postcards and any free leaflets, look at other exhibitions that are on. Perhaps visit the National Portrait Gallery around the corner at St Martin's Place, London, WC2H 0HE Tel: 020 7306 0055

Religious Studies

Topics covered this year:

Relationships and families – Muslim and Christian Attitudes

- Types of family
- Marriage
- Divorce
- Cohabitation
- · Roles of men and women

Christian beliefs and teachings

- Denominations
- Nature of God
- Jesus Christ
- The afterlife

Life and death - Muslim and Christian attitudes

- Euthanasia
- Abortion
- The origins of the world
- The soul

Christian Practices

- Worship
- Pilgrimage and celebration
- The Church in the local community
- The worldwide church.

Future topics to be covered:

- Good and Evil Muslim and Christian attitudes
- Human Rights Muslim and Christian attitudes
- Muslim beliefs and teachings
- Muslim practices.

Focused revision areas:

Students should be going over the Relationships and families unit even though we have moved on to a new topic area.

The next assessment will be covering Christian beliefs and teachings.

Extension tasks:

Cut out newspaper articles that relate to any topic we are covering; current affairs can really support you in the exam. The Day is a good online newspaper for young people: www.theday.co.uk

Netflix: The Bible, The Red Tent, A.D. Kingdom and Empires

YouTube: The Bible Project videos

Museum visits to extend learning:

Visit the Imperial War Museum to view the Holocaust Exhibition for learning that links to the Good and Evil Theme.

Imperial War Museum: London, Lambeth Road, London, SE1 6HZ

What to do when there? Collect postcards, any information, do an audio-tour!

Science

Topics covered this year:

- Cell biology (Biology)
- Atomic structure and the periodic table (Chemistry)
- Energy (Physics)

Future topics to be covered:

- Photosynthesis (Biology)
- Structure, bonding and the properties of matter (Chemistry)
- Electricity (Physics)
- Moving and changing materials (Biology)
- Chemical quantities and calculations (Chemistry)
- Particle model of matter (Physics)
- Health matters (Biology)

Focused revision areas:

Year 9 are about establishing the basics in the three strands of science: cells (biology), atomic structure (chemistry) and energy (physics). Due to the synoptic nature of science we will be covering and recovering these concepts over the course of the next three years.

To this end it is imperative that students not only know but understand these fundamental concepts in science. Therefore, students should be revising the different aspects of these and have working knowledge of them to call upon.

Extension tasks:

Lots of reading is essential in understanding sciences. Practical experiments at home, understanding the laws of physics, can support your learning and extend your understanding.

The Science Museum has many aspects related to the above topics, collecting information and take notes will support your understanding.

Museum/Gallery visits to extend learning:

The Science Museum, London

The Natural History Museum, London

Natural History Museum, Tring

London Zoo, London

London Zoo, Whipsnade

Techniquest, Cardiff Wales

The Eden Project, Cornwall

Thinktank, Birmingham

National Space Centre, Leicester

Museum of the History of Science, Oxford

Bletchley Park, Bletchley, Buckinghamshire.

Spanish

Topics covered this year:

Identity and Culture - me, my family and friends

- Myself and my family (descriptions)
- My family and friends (getting on with others)
- Future plans

Local national and global areas of interest

- Home/where you live
- Local area.

Future topics to be covered:

Current and future study/employment

- My studies
- Life at school and at college
- Education post-16
- Talking about future jobs/work experience

Identity and culture

- Free time
- Music/cinema/TV
- Sport.

Focused revision areas:

- Ser, tener, ir, hacer present tense of irregular verbs
- Adjectives position and agreement
- The immediate future tense using part of ir + a + infinitive
- Possessive adjectives (my/your/his/her)
- Regular verb endings in the present tense
- Preterite and imperfect tenses (past).

Extension tasks:

Watch a Spanish movie.

Listen to a variety of Spanish music on radio/Youtube.

Continue to use Duolingo to strengthen and consolidate vocabulary and skills.

BTEC Sport

Topics covered this year:

- Developing techniques and methods to improve own performance in a selected sport
- Applying rules, regulations and scoring systems to two selected sports.

Future topics to be covered:

- Investigating the benefits of participation in different types of sport
- Investigating how the body systems respond to participation in sport
- Exploring the provision of sports and careers in the sports sector
- Understanding the roles and responsibilities of a sports leader and leadership styles
- Planning and leading a sports activity session
- Evaluating the sports activity session.

Focused revision areas:

- Investigating the benefits of participation in different types of sport
- Investigating how the body systems respond to participation in sport
- Exploring the provision of sports and careers in the sports sector
- Understanding the roles and responsibilities of a sports leader and leadership styles
- Planning and leading a sports activity session
- Evaluating the sports activity session.

Extension tasks:

Taking the lead as much as possible in core PE lessons as well as after-school activities or clubs attended in the community. This will help develop leadership skills which forms part of the assessment of this course.

Museum/Gallery visits to extend learning:

Participation in sport, whatever the activity, will help to develop or maintain fitness levels which is important. Experiencing being part of a team and the social skills this develops also helps students to make good progress.