George Johnson Education Centre

Relationships and Sex Education (RSE) Policy

Policy Issue Date: Sept 2020

Policy Review Date: Sept 2021

Policy Aims

The aims of relationships and sex education (RSE) at our Centre are to:

- Provide a framework in which sensitive discussions can take place
- Prepare pupils for and give them an understanding of sexual development and the importance of health and hygiene
- Help pupils develop feelings of self-respect, confidence and empathy
- Create a positive culture around issues of sexuality and relationships
- Teach pupils the correct vocabulary to describe themselves and their bodies

Statutory requirements

As an education provider we must provide relationships education to all pupils as per section 34 of the Children and Social work act 2017.

We do not have to follow the National Curriculum but we are expected to offer all pupils a curriculum that is similar to the National Curriculum including requirements to teach science, which would include the elements of sex education contained in the science curriculum.

In teaching RSE, we have regard to guidance issued by the secretary of state as outlined in section 403 of the Education Act 1996.

At SESN we teach RSE as set out in this policy.

Definition

RSE is about the emotional, social and cultural development of pupils, and involves learning about relationships, sexual health, sexuality, healthy lifestyles, diversity and personal identity.

RSE involves a combination of sharing information, and exploring issues and values.

RSE is not about the promotion of sexual activity.

Curriculum

We have developed the curriculum in consultation with parents, pupils and staff, taking into account the age, needs and feelings of pupils.

SESN aims to provide young people with relevant and appropriate information in order that they are able to make safe and informed choices about their own behaviour and lifestyles as laid out in Appendix One.

This includes:

- Providing opportunities for learners to discuss and understand the importance of developing safe, stable and loving relationships.

- Promote an awareness that successful relationships are strengthened by trust, mutual respect and shared decisions.
- Develop learners' knowledge and understanding about the biological facts related to human growth and development including reproduction and contraception.
- Develop learners' knowledge and understanding about sexuality and sexual health.
- Signpost relevant health services that are available, and to ensure that they know how to access these services.
- Provide opportunities for learners to develop an understanding of and respect for difference, including gender, sexuality, disability, culture, beliefs and ethnicity.
- Raise awareness of risk and to enable learners to develop the skills necessary to protect themselves from exploitation.
- Provide learners with the opportunities to develop a greater understanding of the consequences of their decisions and actions.
- Present a clear understanding of the arguments for delaying sexual activity and resisting pressure.
- Connect sex and relationship education with issues of peer pressure and other risk taking behaviour, such as drugs, smoking and alcohol.
- Ensure learners understand how the law applies to sexual behaviour and relationships.

Delivery of RSE

RSE is taught within the personal, social, health and economic (PSHE) education curriculum.

Biological aspects of RSE are taught within the science curriculum, and other aspects are included in religious education (RE). Pupils will also receive ongoing one to one support through pastoral intervention and discuss topics through Global Citizenship and Debate.

Pupils also receive stand-alone sex education sessions delivered by a trained health professional.

RSE focuses on giving young people the information they need to help them develop healthy, nurturing relationships of all kinds including:

- Families
- Respectful relationships, including friendships
- Online and media
- Being safe
- Intimate and sexual relationships, including sexual health

These areas of learning are taught within the context of family life taking care to ensure that there is no stigmatisation of children based on their home circumstances. This includes (families can include single parent families, LGBT parents, families headed by grandparents, adoptive parents, foster parents/carers amongst other structures) along with reflecting sensitively that some children may have a different structure of support around them (for example: looked after children or young carers).

Responsibilities

The Board

The Board will approve the RSE policy, and hold the Centre Manaer to account for its implementation.

Centre Manager

The Centre Manager is responsible for ensuring that RSE is taught consistently across the school, and for managing requests to withdraw pupils from [non-statutory/non-science] components of RSE.

Staff

Staff are responsible for:

- Delivering RSE in a sensitive way
- Modelling positive attitudes to RSE
- Monitoring progress
- Responding to the needs of individual pupils
- Responding appropriately to pupils whose parents wish them to be withdrawn from the [non-statutory/non-science] components of RSE

The Circular 5/94 Education Act 1993: Sex Education in Schools does not give teachers the same rights as parents concerning withdrawing themselves from involvement in sex education lessons. Staff who have concerns about teaching RSE are encouraged to discuss this with the Centre Manager.

Pupils

Pupils are expected to engage fully in RSE and, when discussing issues related to RSE, treat others with respect and sensitivity.

Parents' right to withdraw

Parents do not have the right to withdraw their children from relationships education.

Parents have the right to withdraw their children from the [non-statutory/non-science] components of sex education within RSE up to and until 3 terms before the child turns 16. After this point, if the child wishes to receive sex education rather than being withdrawn, the Centre will arrange this.

Requests for withdrawal should be put in writing using the form found in Appendix 2 of this policy and addressed to the Centre Manager.

A copy of withdrawal requests will be placed in the pupil's personal folder. The Centre Manager will discuss the request with parents and take appropriate action.

Alternative work will be given to pupils who are withdrawn from sex education.

Training

Staff are trained on the delivery of RSE as part of their induction and it is included in our continuing professional development calendar.

The Centre Manager will also invite visitors from outside the school, such as school nurses or sexual health professionals, to provide support and training to staff teaching RSE.

Monitoring arrangements

The delivery of RSE is monitored by the Teaching and Learning Development Manager through regular subject reviews and during teaching and learning review meetings.

Pupils' development in RSE is monitored by class teachers as part of our internal assessment systems.

Approved by:

Signed: _____ Date: 6th September 2020

Richard Bell, CEO

Appendix 1: By the end of year 11 pupils should know

TOPIC	PUPILS SHOULD KNOW
Families	• That there are different types of committed, stable relationships • How these relationships might contribute to human happiness and their importance for bringing up children • What marriage is, including their legal status e.g. that marriage carries legal rights and protections not available to couples who are cohabiting or who have married, for example, in an unregistered religious ceremony • Why marriage is an important relationship choice for many couples and why it must be freely entered into • The characteristics and legal status of other types of long-term relationships • The roles and responsibilities of parents with respect to raising of children, including the characteristics of successful parenting • How to: determine whether other children, adults or sources of information are trustworthy: judge when a family, friend, intimate or other relationship is unsafe (and to recognise this in others' relationships); and, how to seek help or advice, including reporting concerns about others, if needed
Respectful relationships, including friendships	• The characteristics of positive and healthy friendships (in all contexts, including online) including: trust, respect, honesty, kindness, generosity, boundaries, privacy, consent and the management of conflict, reconciliation and ending relationships. This includes different (non-sexual) types of relationship • Practical steps they can take in a range of different contexts to improve or support respectful relationships • How stereotypes, in particular stereotypes based on sex, gender, race, religion, sexual orientation or disability, can cause damage (e.g. how they might normalise non-consensual behaviour or encourage prejudice) • That in school and in wider society they can expect to be treated with respect by others, and that in turn they should show due respect to others, including people in positions of authority and due tolerance of other people's beliefs • About different types of bullying (including cyberbullying), the impact of bullying, responsibilities of bystanders to report bullying and how and where to get help • That some types of behaviour within relationships are criminal, including violent behaviour and coercive control • What constitutes sexual harassment and sexual violence and why these are always unacceptable • The legal rights and responsibilities regarding equality (particularly with reference to the protected characteristics as defined in the Equality Act 2010) and that everyone is unique and equal
Online and media	• Their rights, responsibilities and opportunities online, including that the same expectations of behaviour apply in all contexts, including online • About online risks, including that any material someone provides to another has the potential to be shared online and the difficulty of removing potentially compromising material placed online • Not to provide material to others that they would not want shared further and not to share personal material which is sent to them • What to do and where to get support to report material or manage issues online • The impact of viewing harmful content • That specifically sexually explicit material e.g. pornography presents a distorted picture of sexual behaviours, can damage the way people see themselves in relation to others and negatively affect how they behave towards sexual partners

	• That sharing and viewing indecent images of children (including those created by children) is a criminal offence which carries severe penalties including jail • How information and data is generated, collected, shared and used online
Being safe	• The concepts of, and laws relating to, sexual consent, sexual exploitation, abuse, grooming, coercion, harassment, rape, domestic abuse, forced marriage, honour-based violence and FGM, and how these can affect current and future relationships • How people can actively communicate and recognise consent from others, including sexual consent, and how and when consent can be withdrawn (in all contexts, including online)
Intimate and sexual relationships, including sexual health	• How to recognise the characteristics and positive aspects of healthy one-to-one intimate relationships, which include mutual respect, consent, loyalty, trust, shared interests and outlook, sex and friendship • That all aspects of health can be affected by choices they make in sex and relationships, positively or negatively, e.g. physical, emotional, mental, sexual and reproductive health and wellbeing • The facts about reproductive health, including fertility and the potential impact of lifestyle on fertility for men and women • That there are a range of strategies for identifying and managing sexual pressure, including understanding peer pressure, resisting pressure and not pressurising others • That they have a choice to delay sex or to enjoy intimacy without sex • The facts about the full range of contraceptive choices, efficacy and options available • The facts around pregnancy including miscarriage • That there are choices in relation to pregnancy (with medically and legally accurate, impartial information on all options, including keeping the baby, adoption, abortion and where to get further help) • How the different sexually transmitted infections (STIs), including HIV/AIDs, are transmitted, how risk can be reduced through safer sex (including through condom use) and the importance of and facts about testing • About the prevalence of some STIs, the impact they can have on those who contract them and key facts about treatment. • How the use of alcohol and drugs can lead to risky sexual behaviour • How to get further advice, including how and where to access confidential sexual and reproductive health advice and treatment

Appendix 2: Parent form: withdrawal from sex education within RSE

To be completed by the parent:			
Name of Child:		**Students DOB:**	
Name of Parent:		**Date:**	
Reason for withdrawing from sex education within relationships and sex education			
Any other information you would like the Centre to consider			
Parent Signature:			
Date:			

TO BE COMPLETED BY THE SCHOOL
Agreed actions from discussion with parents

Appendix 1: Curriculum map

Relationships and sex education curriculum map

CURRICULUM MAPPING - PSHE

George Johnson Education Centre – Curriculum Map – PSED						
Overview for Year 2020 - 2021						
Term Name	**Autumn Term**		**Spring Term**		**Summer Term**	
	1 **WCA – Diwali Day**	**2** **WCA – Christmas Traditions From Around The World**	**3** **WCA – Chinese New Year**	**4** **WCA – Spanish Food and Culture**	**5** **WCA – Easter Celebrations**	**6** **WCA – American Independence Day**
	Personal Development E-Safety	Personal Development Consent Contraception Conception	Personal Development Welcome to the real world	Personal Development Moral thinking	Personal Development GCSE Options	Personal Development First Aid British Values
	TUTOR GROUP **TERM 1** Surviving Covid 19 Childhood Poverty Childhood Obesity Relationships	**TUTOR GROUP** **TERM 1** Surviving Covid 19 Childhood Poverty Childhood Obesity Relationships	**TUTOR GROUP** **TERM 1** Surviving Covid 19 Childhood Poverty Childhood Obesity Relationships	**TUTOR GROUP** **TERM 1** Surviving Covid 19 Childhood Poverty Childhood Obesity Relationships	**TUTOR GROUP** **TERM 1** Surviving Covid 19 Childhood Poverty Childhood Obesity Relationships	**TUTOR GROUP** **TERM 1** Surviving Covid 19 Childhood Poverty Childhood Obesity Relationships

	Gang Culture and Racism Black History Month Debate Week **TUTOR GROUP** **TERM 2** Social Media/Fake News Politics Education Anti-bullying Week Science4 and Technology Sports Christmas Debate Week **TUTOR GROUP** **TERM 3** New Year Art Media Human Rights	Gang Culture and Racism Black History Month Debate Week **TUTOR GROUP** **TERM 2** Social Media/Fake News Politics Education Anti-bullying Week Science4 and Technology Sports Christmas Debate Week **TUTOR GROUP** **TERM 3** New Year Art Media Human Rights	Gang Culture and Racism Black History Month Debate Week **TUTOR GROUP** **TERM 2** Social Media/Fake News Politics Education Anti-bullying Week Science4 and Technology Sports Christmas Debate Week **TUTOR GROUP** **TERM 3** New Year Art Media Human Rights	Gang Culture and Racism Black History Month Debate Week **TUTOR GROUP** **TERM 2** Social Media/Fake News Politics Education Anti-bullying Week Science4 and Technology Sports Christmas Debate Week **TUTOR GROUP** **TERM 3** New Year Art Media Human Rights Food	Gang Culture and Racism Black History Month Debate Week **TUTOR GROUP** **TERM 2** Social Media/Fake News Politics Education Anti-bullying Week Science4 and Technology Sports Christmas Debate Week **TUTOR GROUP** **TERM 3** New Year Art Media Human Rights	Gang Culture and Racism Black History Month Debate Week **TUTOR GROUP** **TERM 2** Social Media/Fake News Politics Education Anti-bullying Week Science4 and Technology Sports Christmas Debate Week **TUTOR GROUP** **TERM 3** New Year Art Media Human Rights Food

	Food Debate Week **TUTOR GROUP** **TERM 4** British Values World Book Week My Local Area Multi-Cultural UK Debate Week **TUTOR GROUP** **TERM 5** **TBC** **TUTOR GROUP** **TERM 6** **TBC**	Food Debate Week **TUTOR GROUP** **TERM 4** British Values World Book Week My Local Area Multi-Cultural UK Debate Week **TUTOR GROUP** **TERM 5** **TBC** **TUTOR GROUP** **TERM 6** **TBC**	Food Debate Week **TUTOR GROUP** **TERM 4** British Values World Book Week My Local Area Multi-Cultural UK Debate Week **TUTOR GROUP** **TERM 5** **TBC** **TUTOR GROUP** **TERM 6** **TBC**	Debate Week **TUTOR GROUP** **TERM 4** British Values World Book Week My Local Area Multi-Cultural UK Debate Week **TUTOR GROUP** **TERM 5** **TBC** **TUTOR GROUP** **TERM 6** **TBC**	Food Debate Week **TUTOR GROUP** **TERM 4** British Values World Book Week My Local Area Multi-Cultural UK Debate Week **TUTOR GROUP** **TERM 5** **TBC** **TUTOR GROUP** **TERM 6** **TBC**	Debate Week **TUTOR GROUP** **TERM 4** British Values World Book Week My Local Area Multi-Cultural UK Debate Week **TUTOR GROUP** **TERM 5** **TBC** **TUTOR GROUP** **TERM 6** **TBC**

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George Johnson Education Centre – Curriculum Map – PSHE						
Overview for Year 2020 - 2021						
Term Name	**Autumn Term**		**Spring Term**		**Summer Term**	
	1 **WCA – Diwali Day**	**2** **WCA – Christmas Traditions From Around The World**	**3** **WCA – Chinese New Year**	**4** **WCA – Spanish Food and Culture**	**5** **WCA – Easter Celebrations**	**6** **WCA – American Independence Day**
		Personal Development Consent Contraception Conception	Personal Development Welcome to the real world	Personal Development Moral thinking	Personal Development GCSE Options	Personal Development First Aid British Values
WEEKLY LEARNING	KEY: N – NEW LEARNING, SKILLS AND KNOWLEDGE HQ – HINGE QUESTION WCA – WHOLE CENTRE ACTIVITY					
1	N – Outline what is meant by the "Grandma Rule" and THINK. HQ – What is the Grandma term? How important can this term be?	N – Explain what is meant by affirmative consent. HQ – What is affirmative consent? HQ - Can you give a	N – Know the difference between a job, occupation and a career. HQ – Can you determine and define each of the terms?	N – Define terms such as Morals, Values and Opinions HQ – Can you identify what each term is?	N – Evaluate skills and abilities and how they are suited to option choices. HQ – What type of skills or abilities could there be?	N – Develop knowledge and understanding of a variety of minor injuries, causes and treatments. HQ – What could be considered a minor injury?

	HQ - What does THINK represent? HQ - How important might this term be? HQ - Without these ideas, what could occur?	clear description/definition? HQ - When is consent given and for what reasons? HQ - How is consent given? HQ - Is consent always clear? HQ - What might affect someone's judgement on whether consent is given or not?	HQ - What might influence each term, job, occupation or career? HQ - Can they change?	HQ – Can you give some examples of each term? HQ - What can influence such terms? HQ – Is everyone's perception and understanding the same on specific morals, values or opinions? Discuss.	HQ - What skills or abilities do you possess? HQ - What option choices are there? HQ - Can you link skills and abilities with specific option choices? HQ - Can you highlight strengths and weaknesses, pros and cons?	HQ - Can you identify and/or explain bruises, abrasions, small cuts/strains/sprains/burns / scalds/ head injuries?
2	N – Define terms such as sexting, trolling and cyber-bullying. HQ – Can you identify and give an example for each of the terms? HQ - Why is it important to have knowledge of such terms?	N – Define key terms relating to intimate relationships. HQ – Can you define the term intimate? HQ - Can you define the term relationship? HQ - Can you describe what an intimate relationship might be or consist of?	N – Understand the cost of living in today's society? HQ – Can you define what "cost of living" means? HQ - What might influence the cost of living? HQ - Does the cost of living change? HQ - Why might the cost of living for different people vary?	N – To form and defend an opinion. HQ – What is in opinion? HQ - What influences an opinion? HQ - Can you effect of influences another person's opinion? HQ - What things could influence opinions?	N – Come up with an action plan to help make right choices about options. HQ – What is an action plan? HQ - What is the purpose of an action plan? HQ – What ideas are there for action plans? HQ - How do you know your choice of action plan is effective?	N – Develop a basic understanding and experience of the recovery position HQ – What is the recovery position? HQ - Why is it important? HQ - When might it be useful/helpful?

3	N – Outline strategies for staying safe online. HQ – What is meant by staying safe online? HQ – Who could be wanting to harm or cause damage to you, why and how? HQ - What preventative measures could be used? HQ - What support networks are there?	N – Identify different types of contraception and evaluate them. HQ – What is contraception? HQ - Why is contraception important? HQ - Why might contraception be used? HQ - At what stage and who may use contraception? HQ – Where can you get contraception and what support networks are there?	N – Understand the link between education level, job prospects and lifestyle choices. HQ – Can you identify what each term means? HQ - What links each of the terms? HQ - Does each term depend or rely on the other?	N – Demonstrate ability to make decisions and explain the reason for them. HQ – What is decision making? HQ - Why might it be important? HQ - What decision might you have to make? HQ – What decisions might a parent have to make? HQ - What decisions might a teacher have to make? What decisions might a professional have to make? HQ - Can you justify your decisions?	N – Continuation from week 2. Continue to consider what actions you need to take in order to make good decisions about your options.	N – Explore choking, preventative and treatment measures. HQ – What is choking? HQ - What could cause choking? HQ - How can we prevent chocking? HQ - How can we prevent chocking in young children? HQ - How can we treat or support someone who is choking?
4	N – Discuss the impact of their digital footprint. HQ – What is a digital footprint?	N – Explain how to use a condom. HQ – What is a condom?	N – Define the terms gross income, net income, deductions and	N – Understand the consequences of decisions and actions and explain them.	N – Research and discuss potential careers options and gain a better understanding of	N – Explore the term democracy. Introduce and develop knowledge of the rule of law. HQ – What is democracy?

	HQ - Who does a digital footprint affect? HQ - What does/can a digital footprint consist of? HQ – What affect can a digital footprint have?	What is a condoms purpose? HQ - Is there a method of use? HQ - Are there checks and safety measure to recognise and think of? HQ - Where can you access and gain/receive/purchase condoms from? HQ - Where can you seek further advice and knowledge from?	disposable income. HQ – Can you identify each of the terms? HQ - Where might theses terms be seen? HQ - Why is each of these terms important to know and understand?	HQ – Can you give examples of a number of decisions you have had to make in life? HQ - Why were these decisions made? HQ - How did you act? HQ - Have you ever had to face consequences of your actions or decisions you have made? HQ - What were they and how did they impact on you?	interests, direction and requirements. HQ – What careers are out there? HQ – What requirements, experience and qualifications might be required for specific careers? HQ - Can you recognise the link between qualifications, interests and careers? HQ - Are there any career events, functions or venues available to Access?	HQ - How can it be used to influence citizens? HQ - What is the rule of law? HQ - Why are laws required and important? HQ - How does living under the rule of law protect and promote citizens?
5	N – Identify where to go for support with online issues such as sexting and cyberbullying. HQ – Can you identify and give a definition of both terms? HQ - Are you able to recognise signs of both acts?	N – Identify some of the issues relating to becoming parents. HQ – What is a parent? HQ - What might parenting consist of? HQ - Is there one method of parenting? How can parenting vary? HQ - What issues or difficulties could arise	N – Identify different types of qualification and their levels. HQ – Can you identify different qualifications? HQ - Why are there different qualifications? HQ - What do different qualification	N – As a grouped task, select 3 different topics/questions and spend 10 minutes on each, discussing, sharing opinions, analysing moral factors, the impact of the given topic and more.	N – Put together a presentation of your ideal career choice and a plan of action to achieve this. Have a plan A, B and C. HQ – Can you rely upon the given education, support and knowledge from the past 5 weeks to aid this task?	N – Explore freedom of faith in the UK HQ – What is freedom of faith? HQ - Certain faiths may fall or develop in the numbers of those following and practising, why might this be?

	HQ - How can sexting and cyber-bullying be prevented and combatted? HQ - What support networks and measures are there available?	when becoming a parent?	equate to or what might they mean or lead to? HQ - Does age have an effect on education and level of qualifications? HQ - How important can qualifications be? HQ - Can you provide an argument for and against qualifications?	HQ – How did you find the discussion? HQ - How were your communication skills? HQ - Were you able to interact appropriately and effectively? HQ - Did you influence anyone or did anyone else influence you?	HQ - Do you have a better understanding of careers? HQ - Options? Choices? Etc.	
6	N – Time to continue any unfinished work or projects. Consolidate any prior learning. Educate and strengthen any gaps in knowledge.	N – Time to continue any unfinished work or projects. Consolidate any prior learning. Educate and strengthen any gaps in knowledge.	N – Time to continue any unfinished work or projects. Consolidate any prior learning. Educate and strengthen any gaps in knowledge.	N – Time to continue any unfinished work or projects. Consolidate any prior learning. Educate and strengthen any gaps in knowledge.	N – Time to continue any unfinished work or projects. Consolidate any prior learning. Educate and strengthen any gaps in knowledge.	N – Time to continue any unfinished work or projects. Consolidate any prior learning. Educate and strengthen any gaps in knowledge.
7	British Values Topics for extension - UK religious belief and practise	British Values Topics for extension - UK religious belief and practise - Challenging	British Values Topics for extension - UK religious belief and practise	British Values Topics for extension - UK religious belief and practise	British Values Topics for extension - UK religious belief and practise	

	- Challenging discrimination	discrimination	- Challenging discrimination	- Challenging discrimination	- Challenging discrimination	

CURRICULUM MAPPING - KEY STAGE 4 – Year 9 and Year 11

George Johnson Education Centre – Curriculum Map – ELC in Science						
Overview for Year 2020 - 2021						
Term Name	**Autumn Term**		**Spring Term**		**Summer Term**	
	1 **WCA – Diwali Day**	**2** **WCA – Christmas Traditions From Around The World**	**3** **WCA – Chinese New Year**	**4** **WCA – Spanish Food and Culture**	**5** **WCA – Easter Celebrations**	**6** **WCA – American Independence Day**
	ELC Biology • The Human Body	**ELC Biology** • Environment, evolution & inheritance	**ELC Chemistry** • Elements, mixtures and compounds	**ELC Chemistry** • Chemistry in our world	**ELC Physics** • Energy, Forces and the structure of matter	**ELC Physics** • Electricity, magnetism and waves

Year 11 studying ELC in Biology, Chemistry and Physics as none of the students completed the core practical sessions outlined within the GCSE specification due to being out of school, educated elsewhere and being impacted by COVID-19 Government guidance and lockdown.

Term 1 – ELC Biology – The Human Body Weekly sequencing of learning	N – New Knowledge/Learning	HQ – Hinge Question	Link to Key Stage 4 and GCSE
1	1 . Detailed cellular structure and specialisms 2. Tissues and organ (functions and location) of circulatory and digestive system	• What are the parts of a cell? • What specialisms of a cell are there? • Relate the structure of the cell to it's function. • How to use a microscope – Required Practical 1 • How is the tissue and organ structure related? • Name and locate tissues and structures. • Explain the function of tissues and structures	
2	3. The role of enzymes in the body	• Define an enzyme.	

	4. How do living things “make” energy through respiration	• What are the variables for enzyme function • Effect of pH on enzymes - Required Practical 4 • What is the lock and key hypothesis? • What is the difference between aerobic and anaerobic respiration? • Where do the above processes take place and why do they occur there? • Recall the word and symbol equations for aerobic and anaerobic respiration as outlined above.	
3	5. Infectious (communicable) diseases, how they are spread and how the body combats infection. 6. What white blood cells are, the different types and how they work alongside vaccinations.	• How do pathogens cause disease? (Bacteria, virus and fungi) • How do you reduce or prevent infection? • Evaluate the effect of disinfectants and antibacterial washes in pre-inoculated petri dishes • What are the different types of lymphocytes (white blood cells)? • How do white blood cellss work? • How does a vaccination work?	
4	7. Medical Drugs – How are they made, tested and the effects they have on the body.	• What is a legal / illegal drug? • What does a drug do? • What are the effects of the different	

	8. Automatic control systems in the human body, including reflex arcs and nervous responses	classifications of drugs? • What is drug dependency and withdrawal? • What is the role of antibiotics? • Evaluate the effect of antibiotics in preinoculated petri dishes • What is the central nervous system (CNS)? • What does the CNS do? • What is a reflex arc and its associated sensors, relays and effectors? • Required Practical 6 – Plan and carry out a practical to compare the speed of catching reflex / response reflex of people.	
5	9. The use and function of hormones in the human body	• What are hormones? • Where are hormones produced and how are they transported? • Which hormones are produced in the endocrine glands? • What is the role of insulin in the human body? Core practical: pH and enzyme activity.	

6	10. Uses of hormones to control fertility	• What are oral contraceptives to inhibit fertility. • What is the role of fertility drugs in egg stimulation in IVF? • What are the benefits and problems of using fertility hormones? Research and teaching opportunity on contraceptive methods hormonal and non-hormonal, or a mixture of both?	
7	Assessment Week	Provided by ELC Component 1- The Human Body - Biology Examination paper. 3 x chances to pass at Level 3 covering all prior learning for the topic.	

Term 2 – Biology Component 2 – Environment, evolution and inheritance. Weekly sequencing of learning	N – New Knowledge/Learning	HQ – Hinge Question	Link to Key Stage 4 and GCSE
1	1. Photosynthesis, formula, process and why it is required	• What is the energy source for photosynthesis? • What is the word and formula equation for photosynthesis? • Have you met a similar equation before? (Link to respiration). • Do plants respire? • What factors affect photosynthesis? • Required Practical 5 - What affects the rate of photosynthesis? (Light Intensity)	
2	2. Adaptations of animals and plants for life 3. What are food chains and food webs, and what do they show?	• How are organisms adapted to live in their natural environment? • Give examples of both for plants and animals. • Design an animal / plant that can live in……	

		• Where do woodlice prefer to sleep? Use of choice chambers • What is a food chain? • What is a food web? • What is at the start of every chain / web? • How are feeding relationships represented? • How are they interlinked? • What happens if x dies out in the food chain /web? • What are the effects of over / under population? • Required Practical 7 – Use sampling techniques to investigate the effect of a factor on the distribution of this species (growing cress close together and spaced out?)	
3	4. The decay cycle and how living materials are recycled for nutrients and building blocks for future organisms. When living things decay carbon is released which is then used by plants for photosynthesis.	• What is decay? • What are the variables that cause organic decay? (Investigate dessication, moist environments, etc) Human Death Farm Video?!? • What is the water cycle?	

	5. What do plants and animals compete for? (relate to MRS GREN)	• What is the carbon cycle? • What are abiotic factors? • What are biotic factors? Required Practical 7 – Use sampling techniques to investigate the effect of a factor on the distribution of this species (growing cress close together and spaced out?)	
4	6. Building upon 5, the environmental changes that effect plants and animals, eg. Temperature and predation. 7. Pollution of water, air and the land	• What abiotic and biotic factors effect populations? • What happens to a population if it gets too hot / cold? • What happens to a population if there are too many predators? • Predator / prey graphs – cross curricular link to Maths • Required practical 9 – Measure the population size of a common species in a habitat. Using sampling techniques to investigate the effect of a factor on the distribution of the species. • What are the sources of pollution and how the growing population is increasing this pollution?	

		• How do we manage waste? • How do we manage land use? • Required practical 13 – Analysis and purification of water samples from different sources, including pH, dissolved solids and distillation [may be done in Chemistry Component 4].	
5	8. Defining and explaining what evolution, natural selection and artificial selection are.	• Define evolution, natural selection and artificial selection, and state the differences. • Evaluate evolution, natural selection and artificial selection • What evidence do we have for evolution? (Cross curricular links with RE & RSE) • Give examples of evolution, natural selection and artificial selection.	
6	9. What are the two types of reproduction, give the differences between them and evaluate the advantages and disadvantages of each. 10. Genes, chromosomes and DNA and the principals of genetic engineering.	• What s sexual reproduction? • What is asexual reproduction? How does sexual and asexual reproduction occur in animals and plants? • Evaluate the advantages and disadvantages of each. • Investigate how plants are grown from runners (strawberry, spider plants, alovera, etc.) • Where and what chromosomes are made of.	

		• How do chromosomal pairs determine sex inheritance • Extracting DNA from fruit • What are the potential benefits and risks of genetic engineering?	
7	Assessment Week	Provided by ELC Component 2 – Environment, evolution and inheritance. 3 x chances to pass at Level 3 covering all prior learning for the topic.	

CURRICULUM MAPPING - KEY STAGE 4 – Year 10

George Johnson Education Centre – Curriculum Map – GCSE Science – (Year 1)						
Overview for Year 2020 - 2021						
Term Name	**Autumn Term**		**Spring Term**		**Summer Term**	
	1 **WCA – Diwali Day**	**2** **WCA – Christmas Traditions From Around The World**	**3** **WCA – Chinese New Year**	**4** **WCA – Spanish Food and Culture**	**5** **WCA – Easter Celebrations**	**6** **WCA – American Independence Day**
	Biology: • 4.6 Inheritance, Variation and Evolution	**Biology:** • 4.5 Homeostasis and Response	**Physics:** • 6.2 Electricity • 6.5 Forces	**Physics** • 6.5 Forces **Chemistry:** • 5.5 Energy Changes • 5.6 The rate of chemical changes	**Chemistry:** • 5.7 Organic Chemistry • 5.8 Chemical Analysis	**Chemistry:** • 5.9 Chemistry of the atmosphere **Biology:** • 4.4 Bioenergetics

Term 1 - Biology: 4.6 Inheritance, Variation and Evolution Weekly sequencing of learning	N – New Knowledge/Learning	HQ – Hinge Question	Link to Key Stage 4 and GCSE
1	Inheritance, Evolution and Response: Meiosis leads to non-identical cells being formed while mitosis leads to identical cells being formed. Sexual reproduction involves the joining (fusion) of male and female gametes: • sperm and egg cells in animals • pollen and egg cells in flowering plants. In sexual reproduction there is mixing of genetic information which leads to variety in the offspring. The formation of gametes involves meiosis. Asexual reproduction involves only one parent and no fusion of gametes. There is no mixing of genetic information. This	• Define mitosis and describe how cells divide. • Define meiosis and describe how cells divide. • State the differences • Evaluate the benefits and drawbacks of mitosis and meiosis in terms of reproduction • Discuss the importance of understanding the human genome. This is limited to the: • search for genes linked to different types of disease • understanding and treatment of inherited disorders	
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6	leads to genetically identical offspring (clones). Only mitosis is involved. The genetic material in the nucleus of a cell is composed of a chemical called DNA. DNA is a polymer made up of two strands forming a double helix. The DNA is contained in structures called chromosomes. A gene is a small section of DNA on a chromosome. Each gene codes for a particular sequence of amino acids, to make a specific protein. The genome of an organism is the entire genetic material of that organism. The whole human genome has now been studied and this will have great importance for medicine in the future. Some characteristics are controlled by a single gene, such as: fur colour in mice; and red-green colour blindness in humans. Each gene may have different forms called alleles. The alleles present, or genotype, operate at a molecular level to develop characteristics that can be expressed as a phenotype. A dominant allele is always expressed, even if only one copy is present. A recessive allele is only expressed if two copies are present (therefore no dominant allele present). If the two alleles present are the same the organism is homozygous for that	• use in tracing human migration patterns from the past. • Explain the terms: • gamete • chromosome • gene • allele • dominant • recessive • homozygous • heterozygous • genotype • phenotype. • Complete a Punnett square diagram and extract and interpret information from genetic crosses and family trees. • Make informed judgements about the economic, social and ethical issues concerning embryo screening, given appropriate information. • How many chromosomes in a normal adult? • Why are chromosomes in pairs?	

	trait, but if the alleles are different they are heterozygous. Most characteristics are a result of multiple genes interacting, rather than a single gene. Some disorders are inherited. These disorders are caused by the inheritance of certain alleles. • Polydactyly (having extra fingers or toes) is caused by a dominant allele. • Cystic fibrosis (a disorder of cell membranes) is caused by a recessive allele. Ordinary human body cells contain 23 pairs of chromosomes. 22 pairs control characteristics only, but one of the pairs carries the genes that determine sex. • In females the sex chromosomes are the same (XX). • In males the chromosomes are different (XY). Differences in the characteristics of individuals in a population is called variation and may be due to differences in: • the genes they have inherited (genetic causes) • the conditions in which they have developed (environmental causes)	• Describe simply how the genome and its interaction with the environment influence the development of the phenotype of an organism. • state that there is usually extensive genetic variation within a population of a species • recall that all variants arise from mutations and that: most have no effect on the phenotype; some influence phenotype; very few determine phenotype. • Describe evolution as a change in the inherited characteristics of a population over time through a process of natural selection which may result in the formation of a new species. • Explain the term survival of the fittest • Explain the term natural selection • Explain the term selective breeding. • Why do we selective breed? • Give examples. • Give drawbacks of selective breeding. • Define genetic engineering.	

	• a combination of genes and the environment.	• Give examples of why we would want to genetically engineer an organism? • What ethics are there with genetic engineering? • Explain how fossils are formed. Why are fossils evidence of evolution?	
7	Assessment Week		

Term 2 – Biology 4.5 Homeostasis and Response Weekly sequencing of learning	N – New Knowledge/Learning	HQ – Hinge Question	Link to Key Stage 4 and GCSE
1	Homeostasis and Response: Homeostasis is the regulation of the internal conditions of a cell or organism to maintain optimum conditions for function in response to internal and external changes. Homeostasis maintains optimal conditions for enzyme action and all cell functions. In	• Explain what homeostasis is. • Give examples of homeostasis in the human body. • How does the body control these examples? • How does information pass along cells to and from the CNS? • What is a reflex arc and why is it important in automatic responses?	

	the human body, these include control of: • blood glucose concentration • body temperature • water levels Information from receptors passes along cells (neurones) as electrical impulses to the central nervous system (CNS). The CNS is the brain and spinal cord. The CNS coordinates the response of effectors which may be muscles contracting or glands secreting hormones. Stimulus → receptor → coordinator effector → response The endocrine system is composed of glands which secrete chemicals called hormones directly into the bloodstream. The blood carries the hormone to a target organ where it produces an effect. Compared to the nervous system the effects are slower but act for longer. The pituitary gland in the brain is a 'master gland' which secretes several hormones into the blood in response to body conditions. These hormones in turn act on other glands to stimulate other hormones to be released to bring about effects.	• Required practical 6 – investigation into human reaction time • Identify the position of the following on a diagram of the human body: • pituitary gland • pancreas • thyroid • adrenal gland • ovary • testes. • Explain how insulin controls blood glucose (sugar) levels in the body. • Describe Type 1 and Type 2 diabetes and how it is treat. • Extract information and interpret data from graphs that show the effect of insulin in blood glucose levels in both people with diabetes and people without diabetes. • Describe the roles of hormones in human	

	Blood glucose concentration is monitored and controlled by the pancreas. If the blood glucose concentration is too high, the pancreas produces the hormone insulin that causes glucose to move from the blood into the cells. In liver and muscle cells excess glucose is converted to glycogen for storage. During puberty reproductive hormones cause secondary sex characteristics to develop. Oestrogen is the main female reproductive hormone produced in the ovary. At puberty eggs begin to mature and one is released approximately every 28 days. This is called ovulation. Testosterone is the main male reproductive hormone produced by the testes and it stimulates sperm production. Several hormones are involved in the menstrual cycle of a woman. • Follicle stimulating hormone (FSH) causes maturation of an egg in the ovary. • Luteinising hormone (LH) stimulates the release of the egg. • Oestrogen and progesterone are involved	reproduction, including the menstrual cycle. • evaluate the different hormonal and nonhormonal methods of contraception. Explain everyday and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments	
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	in maintaining the uterus lining. Fertility can be controlled by a variety of hormonal and non-hormonal methods of contraception. These include: • oral contraceptives that contain hormones to inhibit FSH production so that no eggs mature • injection, implant or skin patch of slow release progesterone to inhibit the maturation and release of eggs for a number of months or years • barrier methods such as condoms and diaphragms which prevent the sperm reaching an egg • intrauterine devices which prevent the implantation of an embryo or release a hormone • spermicidal agents which kill or disable sperm • abstaining from intercourse when an egg may be in the oviduct • surgical methods of male and female sterilisation.		
7	Assessment Week		