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Year 7 Overview 2025-26 – *Subject*

<table>
<tr><th>Date</th><th>Wk</th><th>Week</th><th>Units Studied & Learning Outcomes</th><th>Key Concepts & Assessment</th></tr>
<tr><td colspan="5">8 weeks (8 Lessons) (38Days)</td></tr>
<tr>
<td>Tues 2-Sep
Tues Y7 only
Wednesday-whole school</td><td>A</td><td>1</td>
<td rowspan="9">
• <u>Overview of Unit/No. lessons</u>

• <u>Lesson Sequence of Content</u>:
Lesson 1-Understanding what makes something living
Lesson 2 & 3-Learning about parts of plant and animal cells.
Lesson 4-The light microscope and how it works
Lesson 5-Using the light microscope to observe specimens
Lesson 6-Learning about specialised animal cells
Lesson 7-Learning about specialised plant cells
Lesson 8-Classification
Lesson 9-Understanding diffusion
Lesson 10-Learning about tissues
Lesson 11-Learning about organs
Lesson 12-Learning about organ systems
Lesson 13-Adaptations of organisms for survival
Lesson 14-Natural selection and the survival of organisms
Lesson 15-End of unit test and application
Lesson 16- Long Answer Question
• <u>Unit Learning Outcomes</u>:
GW BI EW

<table>
<tr><th>Prior (Y6)</th><th>Current (Y7)</th><th>Next (Y8)</th></tr>
<tr><td>Year 6 – Identifying heart, lungs and blood vessels. Adaptations of organisms to their environment.</td><td>Year 7- The content of a healthy human diet. - Consequences of imbalances in the diet - Tissues and organs of the human digestive system and how</td><td>Year 9 – Cells, tissues, organs and systems. Microscopy and stem cells. Year 10 – Transport in and out of cells. Year 11 – Adaptations for survival, Natural selection</td></tr>
</table>
</td>
<td rowspan="9">
• Foundational Concepts
Cell Biology & Organisation

Outcomes
• Classify whether something is living or not using MRS GREN life processes
• Identify the parts of a plant and animal cell and the role of each of the organelles
• Know the parts that make up a light microscope and understand how to use one correctly
• Prepare specimens correctly and use a light microscope to focus and observe them.
• Name and identify different examples of specialised plant and animal cells, describing their role, linking this to structural adaptations they have to perform their role.
• Identify substances that cells must take in, get rid of for survival. Describe how this occurs.
• Understand that cells are built into larger structures, with examples. Know the definitions of tissue, organ and organ system.
• Identify the roles of tissues, organs and systems
• Know that organisms have adaptations for survival in their environment and be able to identify adaptations. Suggest how some adaptations aid survival.
• Understand the key process that leads to the survival and evolution of organisms over time.
• Understand how organisms are classified
• Understand why organisms need to be classified
• Describe the Linnean system of classification
• Apply knowledge of classification to classify examples of organisms

• Skills used/learned
○ Practical skills
○ Method writing
○ Interpretation skills
○ Evaluation skills

• Tier 2/3 Vocabulary
Referenced on PowerPoint slides, quick quizzes.

• KW: Respiration, Excretion, Reproduction, Organelle, Mitochondria, Vacuole, Objective lens, Stage, chloroplast, diffusion

Links to root words- Etymology
• The word 'chloroplast' derives from the Greek words Khloros and plastos, which mean green form.
</td>
</tr>
<tr><td>8-Sep</td><td>B</td><td>2</td></tr>
<tr><td>15-Sep
(INSET Friday)</td><td>A</td><td>3</td></tr>
<tr><td>22-Sep</td><td>B</td><td>4</td></tr>
<tr><td>29-Sep</td><td>A</td><td>5</td></tr>
<tr><td>6-Oct</td><td>B</td><td>6</td></tr>
<tr><td>13-Oct</td><td>A</td><td>7</td></tr>
<tr><td>20-Oct</td><td>B</td><td>8</td></tr>
</table>

			<table><tr><td></td><td>food is digested.</td><td>and the theories of evolution .</td></tr></table> • **GW**: Identify names cell organelles, tissues, organs and systems. State substances that move in and out of cells • **BI**: Can link organs in the organ systems to their roles and the adaptations they have to perform the role. Can describe the roles of specialised cells and the adaptations they have. Can predict which way substances might diffuse. • EW: Can suggest how unfamiliar adaptations might allow organisms to survive. Can understand how diffusion might speed up or slow down and identify how cells are adapted to maximise diffusion. **Assessment** ○ Starter quizzes based on previous learning ○ HSW Practical task – interpreting the results of cell diffusion practical ○ End of unit quiz	• The word 'diffusion' derives from the Latin diffundo, which means 'I spread or pour out' • The word 'vacuole' comes from the Latin word vacuus, meaning empty. • **Links to culture** • Appreciation of how our bodies are made up from cells. • Understanding organisms around them. • Can link to organ transplants etc. **History** • Links to historical events such as the invention of early microscopes and the early observation of cells. Links to Charles Darwin and ideas about evolution • In 1859, Charles Darwin set out his theory of evolution by natural selection as an explanation for adaptation and speciation. He defined natural selection as the "principle by which each slight variation [of a trait], if useful, is preserved". **Careers links**: • Careers involving knowledge of anatomy • Lab-based careers – uses of microscopes to analyse samples • Engineering links to production of artificial organs and machines • Ecological and conservation links **EDI links:** • Organisms from different continents around the world • Theory of evolution – religious beliefs • Max Perutz- Red blood cells (specialised cells) • Betty Hay – significant understanding of cell and development biology *Parent and Carers month/Black History month* *3/9 World afro day* *23/9 International day of sign languages* *10/10 world mental health day* *5/10 world teachers day* *6/10 World cerebal palsy day* • **Assessment** (Quiz/Tests/application tasks/ ST: Including foundational concepts, wider disciplinary knowledge, key content.) Lesson 7
Half-Term			**7** weeks (7 lessons) (35 Days)	
3-Nov	A	9	**<u>Overview of Unit/No. lessons</u>** Reproduction: 11 lessons <u>Lesson **Sequence** of Content</u>: Lesson 1-The Egg and The Sperm	• ***Equality Diversity and Inclusion (EDI) links?*** *Mens health awareness month/disability confident month* *1/11 Diwali* *12/11 Remembrance Sunday* *13/11-19/11 Transgender awareness week* *14/11 World Diabetes Day* *1/12 World AIDS day*
10-Nov	B	10		
17-Nov	A	11		

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24-Nov	B	ST1 (core only)
1-Dec	A	ST1 (core only)
8-Dec	B	14
15-Dec	A	15

Lesson 2-Male and Female reproductive organs
Lesson 3-Growth in the womb
Lesson 4-The Menstrual Cycle
Lesson 5-Puberty
Lesson 6-Mother to Baby
Lesson 7-Plant structure and fertilisation
Lesson 8-Spreading pollen
Lesson 9-Inside the Nucleus
Lesson 10-End of unit test and application
Lesson 11-Long Answer Question

Prior	Current	Next
N/A	Understand Reproduction in Humans and Plants	Year 9 – Hormones Year 11 – Inheritance

- **GW:** Recall the main cells and organs involved in reproduction
- **BI:** Describe how reproduction occurs in plants and animals
- **EW:** Explain the role of the nucleus in reproduction

Assessment

- HSW practical task – students should be able to explain findings using their Science knowledge
- End of unit quiz
- Long answer extension question at the end of the unit

Application task

25/12 Christmas Day

Foundational Concepts:
Cell Biology, Genetics, variation & evolution and Homeostasis

Outcomes
- Identify what is required for fertilisation to occur
- Describe the organs of the male and female reproductive system and explain how reproduction occurs.
- Understand how the foetus develops during pregnancy.
- Understand the stages of The Menstrual cycle and the role of hormones
- Describe the changes that occur during puberty.
- Identify the substances that pass from mother to foetus and explain the effects of this transmission.
- Understand how plants reproduce
- Understand how and why seeds are spread
- Understand the role of DNA is passing on characteristics.

- **Skills used/learned**
  - Practical skills
  - Method writing
  - Interpretation skills
  - Evaluation skills

- **KW**: Gamete, reproduction, fertilisation, DNA, Chromosome, Nucleus, Ovary, Oviduct, Vagina, Uterus, Testes, Sperm duct, Penis, Urethra, puberty

Links to root words- Etymology
- The word 'puberty' derives from the Latin word 'pubertas' meaning maturity.

Tier 2/3 Vocabulary
Referenced on PowerPoint slides, quick quizzes.

Links to culture
- Links to pregnancy prevention and caring for your baby.
- Development of embryo throughout pregnancy, misconeptions about pregnancy, conception and STIs
- Gardening and horticulture.
- Twins – differences between identical & non-identical

History
- Pollination is believed to have begun around 130-150 million years ago.

				• One of the first microscopists was Antonj van Leeuwenhoek (1632–1723) who, amongst his many other discoveries, was the first to conduct rigorous observations on human spermatozoa • **Careers:** midwifery, fertility treatment, plant breeding, conservation, microbiologist, laboratory technician, process development, research scientist, cell biologist genetic scientist **EDI links:** • Male and female genitalia at birth • Puberty- physical differences • Diversity & inclusion – LGBT • Awareness of difference between gender and biological gender **Assessment** (Quiz/Tests/application tasks/ ST: Including foundational concepts, wider disciplinary knowledge, key content.) Lesson 7
Christmas Holiday			6 weeks (6 lessons) (30 Days)	
5-Jan	B	16	**<u>Overview of Unit/No. lessons</u>** Nutrition and digestion/11 lessons <u>Lesson **Sequence** of Content</u>: **Nutrition and digestion:** Lesson 1-Understanding what diet means and how foods can be grouped and what nutrients are Lesson 2-Knowing what a balanced diet is and how this links to the nutrients we need. Lesson 3 & 4-Using chemical reagents to test for nutrients in food Lesson 5 & 6-Learning about the structure and function of the digestive system Lesson 7-Modelling absorption of nutrients in the small intestines Lesson 8-Understand what digestive enzymes are and how they work inside the digestive system Lesson 9-The consequences of imbalances in the diet Lesson 10-End of unit test and application Lesson 11-Long answer question	**Foundational Concepts:** Cell Biology, Bioenergetics, **Outcomes** • Identify the nutrients needed by the body and describe WHY they are needed. State examples of foods that are rich sources. • Evaluation of food intake as a balanced diet and suggestions of how to improve the intake of nutrients. • Identify the presence or absence of key nutrients using chemical reagents and evaluation of the practical as a qualitative test. • Understand the role of the digestive system, identifying the key organs and how each one works. • Evaluating a demo of the digestive system as a suitable model or how to improve it. • Understand that nutrient size determines the absorption into the bloodstream and consider how large nutrients are dealt with. • Stating what an enzyme is and understanding their key role. Identifying that different enzyme types are responsible for digesting different nutrients. • Identifying reasons why humans may have imbalanced diets and describing the consequences imbalances may have on the body, with named examples. • **Skills used/learned** ○ Practical skills
12-Jan	A	17		
19-Jan	B	18		
26-Jan	A	19		
2-Feb	B	20		
9-Feb	A	21		

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			<table><tr><th>Prior</th><th>Current</th><th>Next</th></tr><tr><td>Year 6 – Lifestyle and health – impact on the body Year 7 - Organ systems</td><td>KS3 NC- The content of a healthy human diet. -Consequences of imbalances in the diet - Tissues and organs of the human digestive system and how food is digested.</td><td>Year 10 – Digestive system and enzymes.</td></tr></table> • **GW**: Identify names of nutrients, foods that contain them and basic structures of the digestive system • **BI:** Can link organs in the digestive system to their roles and the adaptations they have to perform the role. Can describe what a digestive enzyme is. • **EW:** Can evaluate the role of digestive enzymes and explain their importance – making links to absorption. **Assessment** ○ Starter quizzes based on previous learning ○ HSW Practical task – being able to explain why certain nutrients can pass through a membrane and others cannot ○ End of unit quiz ○ Long answer extension question at the end of the unit Application task	○ Method writing ○ Interpretation skills ○ Evaluation skills • **KW:** Nutrient, Carbohydrate, Protein, Lipids, Reagent, Qualitative, Organ system, Digestion, Absorption, Enzyme, Catalyst, Deficiency, Obesity, Starvation, digest **Links to root words- Etymology** • The word 'digest' derives from the Latin verb digerere which means divided. • The word 'absorption' derives from the Latin absorbere, which means to swallow up **Tier 2/3 Vocabulary** Referenced on PowerPoint slides, quick quizzes. **Links to culture** • Links to society and culture in terms of staple foods and the kinds of diets people eat when considering balanced/unbalanced diet **History** • Links to historical events when considering dietary imbalance e.g. drought/famine • In the mid-seventeenth century, a Flemish physican and follower of Paracelsus, Jan Baptiste Van Helmont, returned to this idea. He offered the first chemical account of digestion. Eventually, medical practitioners came to see the stomach, colon, and intestines as important, yet base and natural organs. • In 1877, German physiologist Wilhelm Kühne (1837–1900) first used the term enzyme, which comes from Greek ἔνζυμον, "leavened" or "in yeast", to describe this process • **Careers:** Dietician, sport science, veterinary scientist, cell physiologist, neuroscientist, embryologist, biomedical scientist, gastroenterologist, proctologist, dietician, research scientist, digestive health nurse **EDI links:** • Geographically varied foods • Dietary needs of different ethnicities *Autism and stress awareness month.* *25/4 World Malaria Day* *26/4 Lesbian visibility day* *UK national walking month.* *1/5-7/5 Deaf awareness week* *23/05 Vesak*

				Assessment (Quiz/Tests/application tasks/ ST: Including foundational concepts, wider disciplinary knowledge, key content.)
Half-Term			6 weeks (?? lessons) (28 Days)	
23-Feb	B	22		*Women's history month* *Ramadhan begins* *World Down Syndrome day* *Transgender day of visibility* **Assessment** (Quiz/Tests/application tasks/ ST: Including foundational concepts, wider disciplinary knowledge, key content.) Lesson 8
2-Mar	A	23		
9-Mar	B	24		
16-Mar	A	25		
23-Mar	B	26		
30-Mar (finish Wednesday 1st April)	A	27		
Easter Holiday			5 weeks (?? lessons) (24 Days)	
20-Apr	B	28		• Foundational Concepts • Tier 2/3 Vocabulary • Links to wider disciplinary knowledge/cultural capital: history, culture, authentic artefacts, music, art(ists), literature? • Careers links • ***Equality Diversity and Inclusion (EDI) links?*** *Good Friday* *Easter Sunday* *Autism and stress awareness month.* *World Malaria Day* *Lesbian visibility day* *UK national walking month.* *Deaf awareness week* **Assessment** (Quiz/Tests/application tasks/ ST: Including foundational concepts, wider disciplinary knowledge, key content.)
27-Apr	A	29		
4-May (Bank holiday Mon)	B	30		
11-May	A	ST2		
18-May	B	ST2		
Half-Term			7 weeks (?? lessons) (35 Days)	
1-Jun	A	33	**Common misconceptions**	• Foundational Concepts • Tier 2/3 Vocabulary • Links to wider disciplinary knowledge/cultural capital: history, culture, authentic artefacts, music, art(ists), literature? • Careers links • ***Equality Diversity and Inclusion (EDI) links?*** *LGBTQ+ pride month.* *Gypsy, Roma and Traveller history month.* *world day against child labour* *autistic pride day* *World refugee day* **Assessment** (Quiz/Tests/application tasks/ ST: Including foundational concepts, wider disciplinary knowledge, key content.)
9-Jun	B	34		
16-Jun	A	35		
23-Jun	B	36		
30-Jun	A	37		
7-Jul	B	38		
14-Jul	A	39		
(Total: 190 Days)				

Overview of Year 7	
Based on your Flight Path	**By the end of Year 7, students will have learned**
GW:	• Classify whether something is living or not using MRS GREN life processes

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	• Identify the parts of a plant and animal cell and the role of each of the organelles • Know the parts that make up a light microscope and understand how to use one correctly • Name and identify different examples of specialised plant and animal cells • Identify substances that cells must take in and get rid of for survival • Understand that cells are built into larger structures, with examples. Know the definitions of tissue, organ and organ system. • Identify the roles of tissues, organs and systems • Know that organisms have adaptations for survival in their environment and be able to identify adaptations • Understand why organisms need to be classified • Identify what is required for fertilisation to occur • State the plant and human sex cells • Identify the nutrients needed by the body. • State examples of foods that are rich sources. • Identify the presence or absence of key nutrients using chemical reagents and evaluation of the practical as a qualitative test. • Understand the role of the digestive system, • Identify the key organs in the digestive system • Stating what an enzyme is and understanding their key role. • Identify that different enzyme types are responsible for digesting different nutrients. • Identify reasons why humans may have imbalanced diets
BI:	• Describe the role of specialised cells • Describe how cells let substances in and out. • Describe the Linnean system of classification • Identify what is required for fertilisation to occur • Describe the organs of the male and female reproductive system and explain how reproduction occurs. • Describe how the foetus develops during pregnancy. • Describe the changes that occur during puberty. • Describe how plants reproduce • Describe why key nutrients are needed. • Describe how the key organs work in the digestive system • Describe the consequences imbalances of nutrients may have on the body, with named examples. •
EW:	• Prepare specimens correctly and use a light microscope to focus and observe them. • Link to structural adaptations specialised cells have to perform their role. • Explain the roles of tissues, organs and systems • Suggest how some adaptations aid survival. • Apply knowledge of classification to classify examples of organisms • Explain the key process that leads to the survival and evolution of organisms over time. • Understand the stages of The Menstrual cycle and the role of hormones • Know the substances that pass from mother to foetus and explain the effects of this transmission. • Describe how and why seeds are spread • Explain the role of DNA is passing on characteristics. • Evaluation of food intake as a balanced diet and suggestions of how to improve the intake of nutrients. • Identify the presence or absence of key nutrients using chemical reagents and evaluation of the practical as a qualitative test. • Understand the role of the digestive system, identifying the key organs and how each one works. • Evaluating a demo of the digestive system as a suitable model or how to improve it. • Explain how enzymes work

Prompt Questions

Now that the revised curriculum has been taught, please consider the Implementation and Impact of the curriculum you taught. What changes might need to be made to the Curriculum Intent (See Curriculum Map and Overviews) in light of this year's experiences?

Please revisit the prompts from last year:

- What are the Key concepts for this unit?
- How will it link to wider disciplinary knowledge/cultural capital: history, culture, authentic artefacts, music, art, literature?
- How does it build on prior knowledge and link to other units, concepts, years, GCSE?
- What is it intended students will have learned?
  - For each Unit? By the end of the Year?
    - GW: ; BI: ; EW
- Is it worth summarising in a knowledge organiser?
- **Assessment: how do you know they have learned the foundational concepts, curriculum and wider disciplinary knowledge? Does assessment look like GCSE light? Should it?**
- Skills used/learned
- Tier 2/3 vocabulary ((Etymology e.g. of Greek/Latin)
- How will you assess students understanding?
- How will written feedback be given?
- How can lessons be adapted?