**OPA Curriculum Explained – Year 7 Science**

**What will my child be learning in Spring Term 2024**

*(Thursday 4th January 2024 to Thursday 28th March 2024)*

**Year 7 Science Spring Term Curriculum Focus**

|  |  |
| --- | --- |
| **Term** | **Topic** |
| **2A** | **Biology Unit:** Structure and function of body systems* Gas exchange
* Breathing
* Skeleton
* Muscles and joints
 | **Chemistry Unit**: Reactions* Word equations
* Oxidation reactions
* Exothermic and endothermic reactions
 |
|
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| **2B** | **Physics Unit:** Sound* Waves
* Loudness and pitch
* Echoes
* Ultrasound
 | **Biology Unit:** Reproduction* Adolescence
* The menstrual cycle
* Flowers and pollination
 |
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**Year 7 Science Spring Term Assessment Focus**

|  |  |
| --- | --- |
| Dates | Assessment |
| Weeks 1-7Weeks 10-12 | End of topic test for each unit |
| Weeks 7-9 | End of term Exam |

**Year 7 Spring Term Science Homework Focus**

|  |  |
| --- | --- |
| Week | Home learning Focus  |
| Week 1 -3 | Human Skeleton; Muscles and Gas Exchange in Humans |
| Week 4-6 | Chemical Equations and Chemical Reactions |
| Week 7-8 | Sound Waves; Travelling Sound Waves and Detection of Sound Waves |
| Week 9 -11 | Human Reproductive Systems; Menstruation, Gestation and Birth and Plant Reproduction |

**OPA Curriculum Explained – Year 8 Science**

**What will my child be learning in Spring Term – 2024**

*(Thursday 4th January 2024 to Thursday 28th March 2024)*

**Year 8 Science Spring Term Curriculum Focus**

|  |  |
| --- | --- |
| **Term** | **Topic** |
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| **Term 2A** | **Physics Unit:** Electricity and magnetism* Circuits
* Resistance
* Magnets and Electromagnets
 | **Biology Unit:** Inheritance* Variation
* Inheritance
* Natural selection
* Extinction
 |
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| **Term 2B** | **Chemistry Unit**:The Periodic Table* Elements
* Metals and non-metals
* Groups in the periodic table
 | **Biology Unit:** Biological processes* Structure of leaves
* Photosynthesis
* Respiration
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| --- | --- |
| Dates | Assessment |
| Weeks 1-7Weeks 11-12 | End of topic test for each unit |
| Weeks 8- 10 | End of term Exam |

**Year 8 Science Spring Term Assessment**

**Year 8 Science Spring Term Homework**

|  |  |
| --- | --- |
| **Dates** | **Homework** |
| Date set 04-01-2024Date due deadline 14-01-2024 | Electric Current; Potential Difference and Resistance and Measuring Resistance |
| Date set 16-01-2024Date due deadline 29-01-2024 | Periodic Table; Reaction Patterns in Periodic Table and Metals and Non-metals |
| Date set 23-01-2024Date due deadline 09-02-2024 | Inheritance; Variation and Competition |
| Date Set 04-03-2024Date due deadline 18-03-2024 | Photosynthesis; Life Depends on Photosynthesis and Adaptations of leaves |

**OPA Curriculum Explained – Year 9 Science**

**What will my child be learning in Spring Term – 2024**

*(Thursday 4th January 2024 to Thursday 28th March 2024)*

|  |  |
| --- | --- |
| **Term** | **Topic** |
| **Term 2A** | **Biology Unit:** Cell Division* Cell Division
* Stems cells
* Issues with stem cells
 | **Chemistry Unit**: The Periodic Table* Electronic structures
* Patterns and trends in the groups
* Group 1 and Group 7
 |
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|
| **Term 2B** | **Physics Unit:** Energy transfer by heating* Conduction
* Specific heat capacity
* Insulating buildings
 | **Biology Unit:** Food and Digestion* The human digestive system
* Enzymes
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| --- | --- |
| Dates | Assessment |
| Weeks 1-8 | End of topic test for each unit |
| Weeks 9- 11 | End of term Exam |

**Year 9 Science Spring Term Assessment Focus**

|  |  |
| --- | --- |
| **Dates** | **Homework** |
| Date set 03-01-2024Date due deadline 12-01-2024 | Cell specialisation and Cell division |
| Date set 15-01-2024Date due deadline 29-01-2024 | The periodic table; Group 1 and Group 7 |
| Date set 29-01-2024Date due deadline 12-02-2024 | Energy changes in systems |
| Date set 22-01-2024Date due deadline 11-02-2024 | Human digestive enzymes |

**Year 9 Science Spring Term Homework**

**OPA Curriculum Explained – Year 10 Science**

**What will my child be learning in Spring Term 1 – 2024**

*(Thursday 4th January 2024 to Thursday 28th March 2024)*

|  |  |
| --- | --- |
| Week | Topic |
| Biology | Chemistry | Physics |
| Term 2A | **Unit:** Preventing and treating disease* Vaccination
* Antibiotics
* Drugs
 | **Unit**: Electrolysis* Electrolysis of molten compound
* Electrolysis of aqueous solution
* Extraction of aluminium
 | **Unit:** Radioactivity* Atomic structure
* Nuclear radiation
* Half-life
 |
| Term 2B | **Unit:** Non-communicable disease* Cancer
* Lifestyle and risk factors

**Unit:** Bioenergetics * Photosynthesis
* Respiration
 | **Unit:** Energy changes* Exothermic vs Endothermic reaction
* RP: Temperature change
* Bond energy
 |

**Year 10 Science Spring Term Assessment Focus**

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| --- | --- |
| Dates | Assessment |
| Weeks 1-5 | End of topic test for each unit |
| Weeks 5-6 | End of half term exam |
| Weeks 7-10 | End of topic test for each unit |
| Weeks 11-12 | End of half term exam  |

**Year 10 Science Spring Term Homework**

|  |  |
| --- | --- |
| **Term Dates** | **Homework** |
| Weeks 1-6 | * Preventing infection
* Antibiotics, Painkillers and drugs
* Electrolysis 1
* Electrolysis 2
* Atoms and isotopes
* Radiation and radioactive contamination
 |
| Weeks 7-12 | * Non-communicable diseases
* Exothermic and Endothermic reaction
* Energy changes of reaction
* Photosynthesis
* Aerobic and Anaerobic respiration
* Exercise and metabolism
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\*Science home learning is set on Educake (educake.co.uk) and by the classroom teacher on specific tasks.

\*Home Learning is designed to recap previous knowledge, to consolidate current learning or to create curiosity or preparedness for future learning.