Re-engagement Curriculum

Subject: Science **SL:** CLE **QL**: TTE

Year Group	Knowledges and skills which have been missed or only covered by some	How the remaining teaching for this academic year will be adapted. (Wave 1 interventions)	Additional interventions that are required over and above normal lesson delivery (Wave 2 interventions)
7	Topics covered include: **Structure and function:** 1. Levels of organisation 2. Gas exchange 3. Respiratory system 4. Skeletal system 5. Movement – Joints 6. Movement – Muscles 7. Prosthetic limbs **Atoms and compounds:** 1. Atoms 2. Elements 3. Compounds 4. Chemical formulae. **Acids and alkalis:** 1. Acids and alkalis 2. Indicators 3. PH scale 4. Neutralisation 5. Making salts 6. Acidification in the real world **Waves:** 1. Waves 2. Speed of sound 3. Loudness and pitch 4. Animals Infrasound and Ultrasound 5. Echoes 6. Badger task – Ear defenders	Spring 2: Welcome back lesson followed by a mini assessment. Pupils then reset based on engagement and performance in the assessment. Pupils divided into three groups. Teaching is focused on content missed in Spring 1 / start of spring 2. This will be delivered as a condensed curriculum to those that missed online teaching / struggled with content and an enrichment curriculum for those that were able to access the curriculum. Topics and approximate number of lessons: **11 lessons** Levels of organisation; Breathing and gas exchange; Movement (skeleton, joints and muscles); Atoms and elements; compounds and chemical formulae; acids, alkalis, indicators and pH, neutralisation and making salts; waves; sound, speed of sound through different media, pitch and loudness, echoes and ultrasound, the ear. Following the Easter break, students will complete the rotation for the remainder of the academic year. The topics to be completed are: • Light • Separation techniques • Chemical reactions *Key idea and skills boosters will be delivered once the topic rotation is complete.*	At the end of March pupils will undertake a further assessment and along with teacher input a group of pupils will be identified as still requiring support. Summer 1 and Summer 2: These pupils to be targeted either during resilience or in after school sessions. Topics covered will be based on attainment in the assessment
8	Topics covered include: **The Earth and atmosphere.** 1. Formation of the three types of rock and the rock cycle. 2. The carbon cycle 3. Greenhouse effect, global	Spring 2: Welcome back lesson followed by a mini assessment. Pupils then reset based on engagement and performance in the assessment. Pupils divided into four groups. Teaching is focused on content missed in Spring 1 / start of spring 2. This will be delivered as a condensed curriculum to those that missed online teaching / struggled with content and an enrichment curriculum for those that were able to access the curriculum. Topics and approximate number of lessons:	At the end of March pupils will undertake a further assessment and along with teacher input a group of pupils will be identified as still requiring support. Summer 1 and Summer 2: These pupils to be targeted either during

	warming and climate change. 4. Recycling **Separation techniques.** 1. Pure and impure substances. 2. Solutions and solubility. 3. Filtration and evaporation. 4. Distillation 5. Chromatography. **Ecosystem processes.** 1. Photosynthesis and its importance. 2. Leaf structure and adaptations. 3. Plant minerals 4. Chemosynthesis 5. Aerobic respiration. 6. Anaerobic respiration (animals) 7. Fermentation.	**11 lessons** The rock cycle, carbon cycle and greenhouse effect, mixtures, solutions and solubility, separation techniques, photosynthesis, plant tissues, plant minerals, respiration, feeding relationships and ecosystems. Following the Easter break, students will complete the rotation for the remainder of the academic year. The topics to be completed are: • Electricity and magnetism • Light and sound • Metals and acids *Key skills boosters will be delivered once the topic rotation is complete.*	resilience or in after school sessions. Topics covered will be based on attainment in the assessment
9	Topics covered include: 9C2 Chemistry of the atmosphere (see SoW) **9P2 Forces** 1. Contact and non contact forces 2. Gravity and Weight 3. Scalar and Vector quantities, calculating vectors - distance and displacement. 4. Resultant force 5. Resistive forces (friction, air resistance and streamlining) 6. Work done, stretching and elasticity. 7. Friction home practical 8. Speed. Velocity and acceleration 9. Terminal velocity 10. Newtons' First law of motion	Spring 2: Welcome back lesson followed by a mini assessment. Pupils then reset based on engagement and performance in the assessment. Pupils divided into four groups. Teaching is focused on content missed in Spring 1 / start of spring 2. This will be delivered as a condensed curriculum to those that missed online teaching / struggled with content and an enrichment curriculum for those that were able to access the curriculum. Students following the condensed curriculum will need to work through the topics covered in a condensed format. Topics and approximate number of lessons for enrichment groups: Welcome back lesson – predator-prey graphing [1] Mini test [1] Quadrats [1] Transects [1] Stretching a spring investigation [3] Drag of different shapes investigation [3] Force multipliers [1] These can be taught in any order to ease equipment issues.	At the end of March pupils will undertake a further assessment and along with teacher input a group of pupils will be identified as still requiring support. Summer 1 and Summer 2: These pupils to be targeted in after school sessions. Topics covered will be based on attainment in the assessment

	11. Newtons' Second law of motion 12. Momentum 13. Stopping distance **9B3 Biodiversity** 1. -Food chains and webs, 2. ecosystems, 3. biotic and abiotic factors 4. biodiversity 5. human impact 6. maintaining biodiversity.		
10	Topics covered include: **C4 Chemical changes** (See SoW) **C5 Energy changes** (See SoW) **P2 Electricity** 1. Symbols, 2. electric current in terms of flow of electrons, 3. potential difference in terms of energy transferred, 4. Ohm's law, 5. how current and voltage changes in parallel circuits compared to series circuits, 6. Resistance in Parallel and Series.	Spring 2: Welcome back lesson followed by a mini assessment. Pupils then reset based on engagement and performance in the assessment. Pupils divided into four groups. Teaching is focused on content missed in Spring 1 / start of spring 2. This will be delivered as a condensed curriculum to those that missed online teaching / struggled with content and an enrichment curriculum for those that were able to access the curriculum. Topics and approximate number of lessons for enrichment groups: Welcome back lesson – Practice of electrical equations. [1] Mini test [1] Resistance of a wire investigation RP [3] Resistors in parallel and series circuits RP [3] Electrolysis RP [3] Energy changes in chemical reactions RP [3] There is some flexibility to the order if equipment issues demand it.	At the end of March pupils will undertake a further assessment and along with teacher input a group of pupils will be identified as still requiring support. Summer 1 and Summer 2: These pupils to be targeted in after school sessions. Topics covered will be based on attainment in the assessment
11	Topics covered include: C9, B6 and C10 – Completed through remote learning. **B6 Inheritance, variation and evolution key topic covered:** Sexual & asexual reproduction, Meiosis, DNA& the genome, genetic inheritance, inherited disorders, sex determination, Variation and evolution, evolution, Fossils, selective breeding, genetic engineering, resistant bacteria and classification.	Spring 2: Continue delivery of topics. Deliver and assess C10 and P6 units (outlined in detail here: https://mayfieldschoolpo2.sharepoint.com/:w:/g/science/EVJpLzAVSApKrH50pjcPtLgBOH0WRUHOWl-8lcezQTmw6g) S1: Review previous lessons, then cover LCAs , alternative methods of metal extraction and Recycling S2: Review previous lessons, then cover LCAs and Recycling S3 & S4: Start C1 Lesson 1 T1: Review previous lessons, then cover alternative methods of metal extraction and Recycling T2: Review previous lessons, then cover, Recycling T3 & T4: Focus on re-engaging all students review of performance in all end of unit tests. Test to be re-written by HAB to allow assessment of HoW Science works questions. Summer 1: C10 and P6 and ensure completion of the end of rotation test.	Summer 1: Students identified to have low access to remote learning will need to attend catch up sessions during period 0 and period 6. In Summer 1. Further intervention on examination skills: This will be run both by individual class teachers and as part of the departments Monday tutoring sessions after school. This will also help to keep the group sizes lower.

	C9: Evolution of the atmosphere: composition of the present atmosphere, atmospheric pollutants, greenhouse effect, global warming, climate change, carbon footprint. **C10 Using resources:** Using resources, potable water, Water purification RP wastewater treatment, life cycle assessments, reducing the use of resources & recycling & alternative methods for extracting metals (HT). Attendance has varied across the year group. From High to very low. Our focus will be to get students re-engage this year group we will commence with new content to kick start motivation Time will be given for students to review the content and practice, examination techniques and developing skills such as graph drawing and interpretation of data will be given in Summer 1.	Review of key topics followed by assessments. Summer 2 This may include the use of the AQA November 2020 exam papers or part of them to provide evidence towards the centre assessed grades awarded to pupils.	*Additional considerations: Assess student' welfare and willingness to re-engage and support students where necessary. Inform SENCO of any at risk students. Identify students for further intervention in Summer 1.*