**Ormiston Park Academy Curriculum Map/Overview (Yrs 7-11) 2020- 21 Department: Science Curriculum Leader: Alison Durant**

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|  | HT1 | HT2 | HT3 | HT4 | HT5 | HT6 |
| **Year 11** | **Key Content:** **Biology**HomeostasisThe Nervous System**Chemistry**Chemical analysisThe earth's atmosphere**Physics**Light**Triple Science**Required Practicals & Maths Skills**DC0** | **Key Content:** **Biology**HomeostaisReproduction**Chemistry**The earth's atmosphereThe earth's resources **Physics**ElectromagnetsSpace & the Universe**Triple Science**Required Practicals & Maths Skills**MOCK EXAMS 1** | **Key Content:** **Biology**Variation & EvolutionGenetic Engineering**Chemistry**The earth's resourcesUsing our resources**Physics**Revision**Triple Science**Required Practicals & Maths Skills**MOCK EXAMS 2** | **Key Content:** **Biology**Adaptations, Interdependence and coordinationOrganising and ecosystemsBiodiversity**Chemistry**Chemical calculations**Physics**Revision**Triple Science**Required Practicals & Maths Skills | **Key Content:** REVISION FOR PAPER 1**PAPER 1 EXAMS** | **Key Content:** REVISION FOR PAPER 2**PAPER 2 EXAMS** |
|  | **Key Skills:** Describing Key ProcessesRelating Properties to StructureWriting word and symbol equationsBalancing equationsInvestigative skillsUse of practical techniquesMathematical Skills | **Key Skills:** Mathematical SkillsDescribing Key ProcessesRelating Properties to StructureWriting Word and Symbol EquationsBalancing EquationsExam TechniquePractical Skills | **Key Skills:** Mathematical SkillsEvaluating information Writing word and symbol equationsBalancing equationsInvestigative skillsUse of practical techniquesExam Technique | **Key Skills:** Writing word and symbol equationsBalancing equationsInvestigative skillsUse of practical techniquesExam TechniqueDescribing Key Processes | **Key Skills:** Exam TechniqueRecall & Revision StrategiesMathematical SkillsInvestigative Skills | **Key Skills:** Exam TechniqueRecall & Revision StrategiesMathematical SkillsInvestigative Skills |
| **Year 10** | **Key Content:** **Biology**Organising plants and animals**Chemistry**Structure and bonding**Physics**RadioactivityHalf Life Graphs & CalculationsNuclear Fission & Fusions | **Key Content:** I**Biology**Communicable Diseases**Chemistry**Chemical changes**Physics**Radioactivity | **Key Content:** **Biology**Treating diseaseNon-Communicable Diseases**Chemistry**ElectrolysisEnergy changes**Physics**Forces in Balance | **Key Content:** **Biology**Photosynthesis**Chemistry**Energy changesChemical calculations**Physics**Motion | **Key Content:** **Biology**Respiration**Chemistry** Chemical calculations**Physics**Force and motionForce and pressureMOCK Exams | **Key Content:** **Biology**The nervous system**Chemistry**Rates and equilibrium**Physics**Waves and propertiesElectromagnetic waves**End of Year Assessments** |
|  | **Key Skills:** Mathematical skillsRecall of partsUse of practical techniqueDescribing key processesExam technique | **Key Skills:** Mathematical skillsRelating Properties to StructureUse of practical techniqueDescribing key processesExam technique | **Key Skills:** Recall of PartsBalancing Symbol EquationsForces CalculationsInvestigative SkillsDescribing key processesExam technique | **Key Skills:** Recall of PartsDescribing key processesForces CalculationsInvestigative SkillsExam technique | **Key Skills:** Recall of partsDescribing key processesMathematical skillsExam technique | **Key Skills:** Recall of partsMathematical skillsDescribing key processesExam technique |
| **Year 9** | **Key Content:** CellsTransport MechanismsPathogens and DiseaseCell Division & Mitosis | **Key Content:** Energy TransferThermal EnergyAtomic structure | **Key Content:** Atomic StructureThe Periodic TableMendeleev & The Development of the Periodic TableEnergy transfer by heating | **Key Content:** Energy ResourcesCharge & Electricity | **Key Content:** Electricity in the HomeDensityInternal Energy & SLHGas Temperature & Pressure | **Key Content:** The Digestive SystemDigestive EnzymesFood Tests**End of Year Assessments** |
|  | **Key Skills:** Recall of partsDescribing functionsUse of Practical TechniqueExam technique | **Key Skills:** Describing Key ProcessesInvestigative SkillsEnergy Transfer CalculationsExam technique | **Key Skills:** Recall of PartsExam techniqueInvestigative SkillsDeveloping Scientific Theory | **Key Skills:** Linking Properties to StructureRecall of PartsMathematical SkillsExam technique | **Key Skills:** Recall of PartsDescribing Key ProcessesMathematical SkillsExam Technique | **Key Skills:** Recall of PartsLinking Properties to StructureExam technique |
| **Year 8** | **Key Content:** ForcesPressureMagnetic FieldsElectromagnetsWork Done & EnergyEnergy Transfer | **Key Content:** Sound WavesRadiation & EnergyModelling WavesAtoms, Elements & CompoundsChemical FormulaePolymersThe Periodic TableGroups 1, 7 and 0. | **Key Content:** Atoms in Chemical ReactionsCombustionThermal DecompositionConservation of MassExothermic & Endothermic ReactionsEnergy Profile DiagramsThe Carbon Cycle & Global WarmingExtracting Metals & Recycling | **Key Content:** Gas ExchangeDrugs, Alcohol & SmokingNutrients & Food TestsDiet & The Digestive SystemBacteria & Enzymes in DigestionAerobic RespirationAnaerobic RespirationPhotosynthesis | **Key Content:** Investigating PhotosynthesisPlant MineralsNatural SelectionCharles DarwinExtinctionPreserving BiodiversityInheritanceDNA & Genetics | **Key Content:** Food Testing InvestigationStearic Acid, Colling CurveHooke’s Law Investigation**End of Year Assessments**Photosynthesis InvestigationThermal Decomposition InvestigationMaking Electromagnets Investigation |
|  | **Key Skills:** Recall of parts and functionsLinking Properties to StructureDescribing ProcessesUse of Key TerminologyMathematical Calculations | **Key Skills:** Writing word equationsWriting symbol equationsBalancing EquationsUse of Key TerminologyDescribing Key Concepts | **Key Skills:** Writing word equationsWriting symbol equationsBalancing EquationsUse of Key TerminologyDescribing Key Concepts | **Key Skills:** Use of EvidenceUse of Key TerminologyInvestigative SkillsDescribing Key ConceptsWriting word & symbol equations | **Key Skills:** Use of EvidenceUse of Key TerminologyInvestigative SkillsDeveloping Scientific TheoryDescribing Key Concepts | **Key Skills:** Wave CalculationsEnergy Transfer CalculationsUse of Key Terminology |
| **Year 7** | **Key Content:** Practical & Safety Skills for ScienceForcesElectricity | **Key Content:** EnergyWaves – Sound & The Ear | **Key Content:** LightThe Eye & VisionStates of MatterDiffusion | **Key Content:** Separating Mixtures Chemical ReactionsAcids & AlkalisNeutralisation | **Key Content:** Metals and Non-MetalsMaking SaltsDisplacement of MetalsStructure of the EarthThe Rock Cycle | **Key Content:** The SkeletonMovement and the JointsCellsFood Chains & WebsFlowers and Pollination**End of Year Assessments** |
|  | **Key Skills:**SafetyCarrying out investigationsForces calculationsRecall of parts and functionsUse of Key Terminology | **Key Skills:** Energy/Power CalculationsWave CalculationsUse of Key Terminology | **Key Skills:** Wave calculationsRecall of parts and functionsDescribing ProcessesUse of Key Terminology | **Key Skills:** Techniques for separatingUse of Technical EquipmentUse of Key Terminology | **Key Skills:** Investigative SkillsResearch SkillsDescribing ProcessesUse of Key Terminology | **Key Skills:**Recall of parts and functionsUse of Key TerminologyUse of Microscopes |