

# Science Progression Model

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## Engagement (Social Partners)

Class 7 and 8

A learning environment that develops social communication and emotional regulation through targeted transactional support (SCERTS). Science skills are developed consequentially through stimuli on a personal basis; songs, playing, therapies and sensory exploration.

## Engagement (Language Partners)

Class 9

Science is experienced as part of a SCERTS based curriculum that focuses on learners improving their communication, and independent skills, whilst developing emotional regulation strategies to allow them optimum access to learning. Learners are stimulated appropriately through song, play and sensory input to develop skills through exploration and experimentation.

## Qualifications

<b>GCSE</b>	Science is taught as a discrete subject. Scientific theory and practical skills are consolidated and developed in a formal learning environment. The learner applies skills to meet the demands of a standardized test in controlled conditions.	MK, WB, JD
<b>STEM- Engineering BTEC Level 1</b>	Engineering is taught as a discrete subject. Pupils complete units including working safely in engineering and develop practical skills using various hand tools and machinery in a formal learning environment. Evidence is gathered according to each unit assessment criteria for qualification.	STEM Group
<b>EL3</b>	Science is taught as a discrete subject. Learners consolidate and develop KS2 science skills in a formal learning environment in preparation for standardized written and practical tests in controlled conditions.	Upper 3 Upper 4
<b>EL2</b>	Science is taught as a discrete subject. Learners consolidate and develop KS2 science skills in a formal learning environment in preparation for standardized written and practical tests in controlled conditions.	Upper 3 Upper 4
<b>EL1</b>	Science is taught as a discrete subject. Learners consolidate and develop KS21science skills in a formal learning environment in preparation for standardized written and practical tests in controlled conditions.	Upper 3 Upper 4

## National Curriculum (iASEND)

<b>D (NC KS3)</b>	Science is taught as a discrete subject. The learning environment is formal, most pupils can regulate their emotions independently. Concepts from the N curriculum are built upon and learners develop their scientific skills at a National Curriculum KS3 level.	
<b>N (NC KS2)</b>	Science is taught as a discrete subject. Formal learning is recognisable much of the time; practical activities are used to increase the depth of learning. Concepts from the E curriculum are built upon and learners develop their scientific skills at a National Curriculum KS2 level.	Class 10 Class 12
<b>E (NC KS1)</b>	Science is taught as a discrete subject. Formal learning is blended with practical activities, the use of rewards and visuals are imperative. Concepts from the S curriculum are built upon and learners develop scientific skills at a National Curriculum KS1.	Class 5 Class 6 Class 11 Upper 2
<b>S (NC Pre KS1)</b>	Science is taught as a discrete subject. Learners access some formal learning to understand scientific concepts, but learning is mainly through sensory exploration and experimentation to build and develop skills to work scientifically. The use of rewards and visuals are imperative.	Class 3 Class 4

## Cleaswell Hill Early Years (Cherry Garden)

Cherry Garden follows the early years foundation stage model and provides the essential substance for all future learning. Learners access a socially and emotionally secure environment, with a less formal atmosphere, in which they can learn successfully and play purposefully. Scientific skills are developed through sensory exploration and experimentation. Activity is completed in collaboration with one member of staff depending on individual child progress.

Class 1

Class 2

## Science Progression Model

**CPD:** Using the Ofsted framework for Primary Science Curriculum (AA), Practical ideas for Science (AA), Reach Out CPD online (AA, TM, PFH, Hap, VC), Sphero Robotics (AJ), VEX Robotics (AJ), 3D Printing (AJ)

**Pupil Premium:** Our approach, reinforced by research from the EEF, prioritises improvements in the quality of education and teaching, including supporting pupils' access to learning. Utilisation of the PPG will benefit wider pupil groupings in school, specifically raising the quality of interventions in supporting best outcomes.

**Content (Intent):** Teachers reflect on what content is necessary for pupils dependent on their; cognitive, behavioral, physical, communication and sensory needs. The use of vocabulary is carefully considered by staff so it is not a barrier to learning. The order of teaching is based upon ensuring the most coherent acquisition of knowledge as well as empowering and inspiring pupils through development of skills linked to their EHCP. Teachers plan systematic repetition of the most crucial content to make sure it can be used functional across different contexts.

**Activities, Expectation and Challenge (Implementation):** Lessons activities are challenging to pupils academically and in regards to their EHCP targets. Granular content profoundly affects the parameters of activities where the pace and depth of learning is personalized. Pupils remember the content taught not just the activity itself. Expectations are high for all pupils developing their cognitive, behavioral, physical, communication and sensory needs. Pupils are engaged through increased capacity of problem solving, team work and intrinsic interests.

**Assessment and Progression (Impact):** Pupils make good progress by accessing appropriate content which is measured using a suitable assessment system. The curricula follows a progression model that identifies the most useful knowledge for cumulative sufficiency. Assessment checks content is remembered long term, identifying those pupils that need further support. Teachers are aware of previous learning, current learning and future learning. There is a solid understanding of appropriate qualifications and future pathways, allowing challenging targets to be set.

**English, Communication and Reading:** Appropriate feedback is given dependent on the needs of individuals, this models how content should be organized. Pupils use appropriate texts to stretch learning through word and real life problem solving. Pupils are widen their vocabulary at an appropriate level with support from outside agencies (SaL, Metis, Jigsaw). Pupils have a plethora of opportunities to ask and answer questions and this is support through the; blanks model, colourful semantics and SCERTS.

### Science Action Plan

Area	Deep Dive	Action	Time (aim)	Who	Impact
<b>Early Years</b>	Pathway to iASEND curriculum mapped. Science assessment focusses across both to be linked to ensure continuous progress.	iASEND and Cherry Garden Science objectives to be linked where appropriate.	Feb 20- Introduce activity March 27- Map Cherry Garden to iASEND June 20- Baseline pupils moving from CG to iASEND	AA, SO, TMC, AT	Progression model learning from Cherry Garden to iASEND.
<b>National Curriculum</b>	Staff could describe content, progression, challenge and assessment.	All National Curriculum teachers and trainee teachers to complete Reach Out CPD half termly focusing on topic being taught.	Feb 20- Introduce to staff March 20- Create file of certificates for completed CPD	All iASEND groups	Consistency, support and developing subject knowledge for all staff especially for NQT's and struggling teachers.
<b>National Curriculum</b>	Sequenced learning following progression model evident. To highlight use a science scheme to support for KS2.	Introduce a science scheme to distinguish sequenced learning through iASEND progression model.	March 20- Create science scheme March 20- Link scheme to iASEND April 20- Plan using scheme Sep 20- Follow scheme	All iASEND groups	Progression model and sequenced learning enhanced by a suitable scheme that improved consistency. Increased learner progression.
<b>National Curriculum/Qualifications</b>	Science club, trips and outdoor science activities implemented to enrich the curriculum.	- Introduce Facebook activities for home - STEM ambassadors to visit carrying out activities with pupils - Science week for pupils to carry out project and present.	March 20- set Facebook activity April 20- STEM Ambassador in school May 20- Science week	All iASEND and qualification groups	Enriching science curriculum
<b>Qualifications</b>	Staff could describe content, progression, challenge and assessment. Further support could be offered to new and struggling staff by adopting a consistent approach.	All groups to have a paper-based file that includes information on; behavior support, academic support, attainment and PLIM.	April 20- Example file to be created April 20- Introduce to staff Feb 20- AA to create files for groups. March 20- Staff using files consistently	All qualifications groups	Consistency and support for all staff especially for NQT's and struggling teachers.
<b>Pupil Premium</b>	Action plan made to secure expected progress for PP pupils in science.	- Order resources to ensure high quality teaching for learning - Reach out CPD for all science teaching staff - Follow progress towards targets on iASEND to implement intervention where necessary	March 20- Resources order March 20- All staff to begin completing CPD Half termly- Assess progress towards targets	AA	PP pupils achieve their expected level of progress.