

Science Progression Model (Summer 2022)

Engagement and Highly Personalised Micro Steps (Pathway to Adulthood)

Learners continue to access an environment that develops social communication and emotional regulation through targeted transactional support (SCERTS). This enables them to have a voice within their community. Learners are supported in making healthy and safe choices and to maintain physical strength and movement wherever possible. Staff promote choice making and independence in a range of situations and provide access to community learning and social support. Science skills are developed consequentially through stimuli on a personal basis; songs, sensory exploration, playing, therapies, community and problem solving. Prescribed learning is connected to individual PLIM targets.

Engagement and Highly Personalised Micro Steps

Learners access a learning environment that develops social communication and emotional regulation through targeted transactional support (SCERTS). This enables them in becoming increasingly competent, confident and active participants in social interactions which improves their ability to regulate. Learners work towards being able to cope with transitions and actively engage with others. Science skills are developed consequentially through stimuli on a personal basis; songs, play and sensory input to develop skills through exploration and experimentation. Prescribed learning is connected to individual PLIM targets.

SCERTS

Language Partners

Literacy skills are developed consequentially through stimuli on a personal basis; songs, playing, sensory exploration, therapies, community and problem solving.

Social Partners

Literacy skills are developed consequentially through stimuli on a personal basis; songs, playing, sensory exploration and experimentation, therapies, community and problem solving.

Symbolic Awareness

Objects of reference, photographs, coloured symbols, black and white symbols, written words (sight).

Blank Levels 1

Engagement Model

Launchpad to Literacy

Launchpad for Literacy is an approach to literacy readiness. It also gives practitioners a tool to clarify what children can do, and identify developmental skill gaps by bridging the gap between spoken language and literacy through focusing on incremental sequences of skills (that may not be at the child's chronological age.)

Class 13

Class 10

Class 9

Class 5

Class 2

Vocational Learning (Pathway to Adulthood)

Entry Level 1

Pre Entry
Level Linear

Pre Entry
Level Lateral

E (KS1)

(Pre KS2
Standards)

S (Pre KS1)
Linear

S (Pre KS1)
Lateral

Cherry
Garden
Linear

Cherry
Garden
Lateral

Science is taught as a discrete subject. Learners consolidate and develop early KS1 science skills in a formal learning environment in preparation for standardised written and practical tests in controlled conditions. PLIM targets have a strong influence on learning and help to create an enabling environment.

Science is taught as a discrete subject. Learners develop fluency in functional science which enables them to access their community with an appropriate level of independence. The majority of activities are practical which aids in the development of communication. There is a focus on PLIM targets to ensure that learners are prepared for the next stage in their journey.

Science activities are set up as part of a wider engaging environment where PLIM targets drive learning intentions. There is a focus on developing maintenance and fluency of key functional science skills through sensory exploration and experimentation that learners will be able to use in their local communities with support.

Modified Pre Curriculum Criteria - iASEND

Science is taught as a discrete subject. Formal learning is blended with play and practical activities, the use of rewards and visuals are imperative. Concepts from the S curriculum are built upon and learners develop their scientific skills at a National Curriculum KS1. PLIM targets influence the classroom environment and the expectations that are placed on individual learners.

Science is taught as a discrete subject but PLIM's help structure the learning environment. Learners begin to access formal learning and an increased amount of demand is placed upon learners. Skills are progressed through exploration and experimentation. The use of rewards and visuals are imperative. Concepts from Cherry Garden are built upon and learners develop their scientific skills at a Pre-Key Stage (iASEND- S curriculum).

Science activities are set up as part of a wider engaging environment where PLIM targets drive learning intentions. Activities are play based where skills are progressed through exploration and experimentation. Science concepts from iASEND (S curriculum) are built upon sequentially.

Modified Pre Curriculum Criteria – Cherry Garden

Science is taught as a discrete subject where PLIM targets mould the learning environment and teaching style. Learners begin to access formal learning, but many activities are play based where skills are progressed through exploration and experimentation. The use of rewards and visuals are imperative. Concepts from Cherry Garden are built upon and learners develop their mathematical skills at a Pre- Key Stage Standards 1-2 level.

Science activities are set up as part of a wider engaging environment, activities are play based where skills are progressed through exploration and experimentation. PLIM targets direct learning for individual pupils.

Upper 3

Upper 2

Upper 1

Class 11

Class 7

Class 11

Class 7

Class 6

Class 6

Class 3

Class 4

Class 4

Accreditations (Pathway to Adulthood)

Level 2 / GCSE

Level 1 / GCSE

Entry Level 3

Entry Level 2

Entry Level 1

D (KS3)

N (KS2)

E (KS1)

Science is taught as a discrete subject. Scientific skills are consolidated and developed in a formal learning environment. The learner applies skills to meet the demands of a standardised test in controlled conditions. PLIM targets ensure that learning is meaningful and skills can be functionally used when a learner leaves school.

Science is taught as a discrete subject. Learners consolidate and develop upper KS2 science skills in a formal learning environment in preparation for standardised written and practical tests in controlled conditions. PLIM targets have a strong influence on learning and help to create an enabling environment.

Science is taught as a discrete subject. Learners consolidate and develop upper KS1 science skills in a formal learning environment in preparation for standardised written and practical tests in controlled conditions. PLIM targets have a strong influence on learning and help to create an enabling environment.

Science is taught as a discrete subject. Learners consolidate and develop early KS1 science skills in a formal learning environment in preparation for standardised written and practical tests in controlled conditions. PLIM targets have a strong influence on learning and help to create an enabling environment.

Modified National Curriculum Criteria - iASEND

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 working scientifically skills at a National Curriculum KS3 level. PLIM targets are purposeful in helping learners to prepare for future accreditations and work place experiences.

Science is taught as a discrete subject. Formal learning is recognisable much of the time; play and practical activities are used to increase the depth of learning. Concepts from the E curriculum are built upon and learners develop their working scientifically skills at a National Curriculum KS2 level. PLIM targets help to mould the learning environment and contextualise learning.

Science is taught as a discrete subject. Formal learning is blended with play and practical activities, the use of rewards and visuals are imperative. Concepts from previous learning are built upon and learners develop their working scientifically skills at a National Curriculum KS1 level. PLIM targets influence the classroom environment and the expectations that are placed on individual learners.

Upper 4

Upper 3

Upper 3

Upper 3

Class 15

Class 14

Class 15

Class 16

Class 8

Class 16

Class 7

Cleaswell Hill Early Years

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 exploration and experimentation. Prescribed learning takes place in a condensed format where an activity is completed in collaboration with one member of staff, this allows an initial judgement, on which pathway a learner should progress on, to be made. PLIM targets influence the classroom environment and the expectations that are placed on individual learners.

Class 1

CPD: Using the Ofsted framework for Primary Science Curriculum (AA), Practical ideas for Science (AA), Reach Out CPD online (AA, LM, JL, HR, JW), Working team with SEN schools across Northumberland (AA), Sphero Robotics (AJ), VEX Robotics (AJ), 3D Printing (AJ).

Content (Intent): Teachers reflect on what content is necessary for pupils dependent on their; cognitive, behavioral, physical, communication and sensory needs. Targets are set to reflect this and pupils are set using a stage not age approach so they can access a curriculum that is specific and appropriate to their 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 and PLIM. Teachers plan systematic repetition of the most crucial content to make sure it can be used functionally across different contexts. Teaching and learning takes place within a range of contexts in order to improve working scientifically aspects of learning across all situations and environments.

Activities, Expectation and Challenge (Implementation): Lesson activities are challenging to pupils academically and in regard to their EHCP targets. Personalised learning and individual outcomes are linked to pupil interests ensuring high expectations, appropriate challenge and retention of the content taught as well as the activity itself. Expectations are high for all pupils developing their cognitive, behavioral, physical, communication and sensory needs. Reward systems and visual aids are used to motivate learning where appropriate. Ability grouping ensures pupils are being challenged and planning is sequential over time, to deliver highly engaging and meaningful learning. For pupils working in the engagement pathway, the following strategies are used to develop shared attention: Intensive Interaction, Attention Autism, PECS, Makaton, Sensory Stories.

Assessment and Progression (Impact): Pupils make good progress by accessing appropriate content which is measured using a suitable assessment system. The curricula follow a progression model that identifies the most useful knowledge for cumulative sufficiency. Ongoing assessment identifies pupils that need further support. Teachers are aware of previous learning, current learning and future learning. There is a solid understanding of appropriate qualifications/accreditations for pupils to access in order to plan for future pathway opportunities, allowing challenging targets to be set in line with life goals. Some pupils (Engagement Pathway) make smaller steps of progress and this is accounted for and monitored through the specific assessment system (MAPP).

National standard assessment strategies (Engagement Model, GCSE, Entry Level Practical Skills) are used to aid staff to choose the most appropriate assessment method to capture the achievements of all pupils at Cleaswell Hill.

English, Literacy and Communication Interventions: Appropriate feedback is given dependent on the needs of individuals, this models how content should be organised. Pupils use appropriate texts to stretch learning through word and real life problem solving. Pupils widen their vocabulary at an appropriate level with support from a range of professionals (SaLT and OT). Pupils have a plethora of opportunities to ask and answer questions and this is supported through the; blanks model, colourful semantics and SCERTS. Literacy and communication is focused upon further through small group literacy support from an academic mentor, ELS, sight reading, handwriting formation, Early Talk Boost, Talk Boost KS1, Talk Boost KS2, Nuffield Early Language Intervention (NELI), Colourful semantics, VOCA group, Communication book group, Lego based therapy.

Cultural Capital: Cultural Capital is the essential knowledge that children need to prepare them for their future success – in the world of work, in relationships forged throughout life and as a valued contributor to society. When beginning their Cleaswell Hill journey many children arrive to school with different and sometimes more limited experiences than others. Therefore, our aim is to give children the knowledge and skills to prepare them for what comes next in their lives. This includes the relevant communication skills and vocabulary needed throughout their education and the opportunity to link maths to real-world problem solving. With our firm belief that mathematical knowledge is transferable, our pupils are given every opportunity to participate in a wide range of learning experiences beyond their classroom. These experiences include educational visits to museums, adventure centres and community projects in and around Southeast Northumberland. They are also given regular opportunities to participate in area and national special school events which encourage the use of functional skills.

Integrated Therapies: There is a strong collaboration between therapy leads and teachers in planning enabling environments for all pupils. This includes the integrated planning of activities that develop communication, gross and fine motor skills as well as mathematical skills. Occupational therapist (OT) works closely with teachers to develop pre-writing and handwriting skills through multi-sensory and carefully graded approaches. There is also a strong focus towards developing access to information and communication technology (ICT) and the use of a range of software to ensure that pupils can record their learning and at a level commensurate to their ability.

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. We continually monitor the progress and attainment of individual pupils as well as wider cohorts to ensure there is little variation in the performance of different pupil groups.

Area	Deep Dive	Action	Time (aim)	Who	Impact
Engagement	Sensology identified as an engaging learning experience. Further support required to adopt a consistent approach by all engagement teachers.	Working support group led by AA: - Sequence of Sensology session - Creating PowerPoints - Recording observations template - Communication boards - Shared resources area	Summer Term A– Meetings Summer Term B– Implementation	Engagement groups - AA, LH, MB, AB, GL, LT	- Engaging learning experience increasing attention, focus, tolerances, communication and anticipation. - Developing sensory diet
National Curriculum	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.	Continue to introduce to new teaching staff. Termly Reminders.	All iASEND groups	Consistency, support and developing subject knowledge for all staff especially for NQT's and struggling teachers.
National Curriculum	Working Scientifically learning sequenced from KS1/ KS2 to Entry Level. - To highlight where pupils are working at and identify in which areas more support is required. - To identify pupils at pre– KS1 to complete AQA Unit Awards.	Introduce working scientifically templates for investigations linking to Entry Level Certificate in Science to core/ extended classes.	Summer Term– Phase 2 and Phase 3 extended/ core classes implementing working scientifically Collate evidence for Working Scientifically focused lessons throughout Summer term.	Phase 2– 4 Core and Extended groups	- Progression model and sequenced learning enhanced by a suitable scheme that improved consistency. - Increased learner progression. - Identification of suitable qualifications.
Qualifications	Pupils working at Pre– KS1 to complete AQA Unit Awards through engaging and functional project based learning.	- Working science group led by Percy Hedley science lead to create engaging and functional AQA Unit Awards. - Example created to be trialed .	Summer B– Example projects trialed with Pre – KS1 classes	National Curriculum Pre KS1	- Engaging and functional learning experiences. - Recognising the achievement of learners .
National Curriculum/ Qualifications	Science club, trips and outdoor science activities implemented to enrich the curriculum.	- STEM ambassadors to visit carrying out activities with pupils - Science week for pupils to carry out project and present.	STEM Ambassador in school Spring term - Science week	All iASEND and qualification groups	Enriching Science curriculum
Pupil Premium	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.	Use fundraised money throughout the year to continue purchasing suitable resources. Shared across school. Summer term– Staff trained on working scientifically to support science interventions.	AA, LC	PP pupils achieve their expected level of progress.