EYFS and Key Stage 1&2 Science Curriculum

Chelsea Community Hospital School

At Chelsea Community Hospital School (CCHS), the Science curriculum is taught following the 2014 National Curriculum and with reference to EYFS Framework Early Learning Goals.
At CCHS we recognise that learners in a hospital school setting have often missed significant periods of school and may join us with spiky learning profiles and gaps in their learning. CCHS staff tailor teaching and learning in Science to the level and pace specific to each learner. For all areas of the Science curriculum we use our own planning, set work from a student's enrolled school, and the pupil's interests as an aid to motivation and engagement.

Intent

We are committed to ensuring that our students receive engaging and well-rounded Science lessons at the appropriate level. Through the study of science, we encourage our pupils to be inquisitive and to develop a curiosity and respect for the world around them. Pupils explore the key knowledge identified in the curriculum alongside the development of important scientific skills. Whether children are being taught in isolation or in groups, we ensure that they are given varied opportunities to learn through experiments, investigations, research and discussion. We are committed to providing engaging and exciting science experiences to all our pupils to encourage a lifelong curiosity and interest in the sciences.

In line with the 2014 National Curriculum for science, we aim to ensure that all pupils:

- develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics.
- develop understanding of the **nature, process and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them.
- Are equipped with the **scientific skills** required to understand the uses and implications of science, today and for the future.

Implementation

At CCHS, teachers nurture positive attitudes to science learning and adapt their approach to suit the specific requirements of each pupil either individually or within a group setting. We believe that all pupils can thrive in science and have systems in place support this. Our approach to the teaching and learning of science involves the following:

- Science is taught through a whole primary school thematic approach. This allows for a greater depth of knowledge and shows the importance of science within a range of contexts.
- Links are made with other subjects such as English, Maths, Geography and DT.
- For longer term pupils, we will liaise with their home school and offer the specific science topics that they are missing.
- We give children the resources, time and space to use problem solving skills, discussion, research and to ask questions that interest them.
- Children can access high-quality fiction and non-fiction books relating to science.

- Curiosity is celebrated within our school and we promote a learning environment where children feel confident enough to make mistakes and embrace this as an important part of the scientific process.
- Teachers use assessment for learning techniques, such as precise questioning, to ascertain previous knowledge, identify potential gaps and assess understanding.
- Activities are effectively differentiated so that all children have an appropriate level of support and challenge.
- Teachers encourage pupils to use a range of methods to record their work in science including writing, tables, diagrams, videos, audio recordings, posters and photographs.
- Children are given a range of opportunities to use scientific equipment, collate and interpret results and discuss ideas.
- New vocabulary is introduced through direct teaching and modelled by the teacher. Children are given plenty of opportunities to revise and use new vocabulary.
- On the sites where it is possible, pupils are encouraged to use the outdoor environment to collect data and make observations. Where this is not possible, we use photos, videos and bring outside resources to the pupils (in keeping with specific infection control measures).
- Introduce and explore a range of diverse scientists and inventors relevant to specific topics.
- Science Week is promoted throughout the school to get children even more excited about science, to provide a wider range of experiences and contexts and to highlight its relevance to everyday life.
- Teachers can access a range of resources to ensure that all areas are covered and that science is taught to a high standard. These include science progression maps (for both the knowledge and enquiry skills) and a yearly curriculum map. In addition, plans from a pupil's home school can be adapted as can Switched on Science schemes of work. This ensures that teachers are equipped with secure scientific subject knowledge, enabling them to deliver high-quality teaching and learning opportunities while making them aware of possible misconceptions.

Impact

The approach at CCHS results in a fun, engaging, high-quality science education for our pupils. We encourage them to ask questions and develop the necessary skills to explore and answer them. Children who feel confident in their science knowledge and enquiry skills will be excited about science, show that they are actively curious to learn more and will see the importance of science in the real world. Children learn that science has changed our lives and is vital to our future. We encourage all our pupils to feel that science is an area in which they can achieve and to learn about the possibilities for careers in science. We endeavour to ignite and encourage a love of science in our pupils while learning with us, but also for the future.

EYFS

In the foundation stage, we nurture children's natural curiosity and help to instill a love of learning in science. We consider the individual needs and interests of our youngest learners and provide well planned activities and interesting hands-on experiences for them through a mix of adult-led and child-initiated learning. Through science, they are encouraged to build observational skills, problem solving skills and practise using equipment. They also build communication skills by being introduced to new vocabulary, expressing their ideas and working in groups where possible. The most relevant statements for Science taken from the Early Learning Goals in the EYFS statutory framework and the 2020 Development Matters are taken from the following areas of learning:

Understanding the World:

- Explore the natural world around them.
- Describe what they see, hear and feel while they are outside.

- Recognise some environments that are different to the one in which they live.
- Understand the effect of changing seasons on the natural world around them.

Personal, Social and Emotional Development:

- Know and talk about the different factors that support their overall health and wellbeing.
- Show resilience and perseverance in the face of a challenge.

Communication and Language:

- Learn new vocabulary.
- Ask questions to find out more and to check what has been said to them.
- Articulate their ideas and thoughts in well-formed sentences.
- Describe events in some detail.
- Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.
- Use new vocabulary in different contexts

EAL

EAL learners may face a range of challenges in terms of the language requirements of science. However, practical science sessions can also provide important opportunities for language development because they are often collaborative and provide a rich context for learners to communicate. At CCHS, we help EAL learners in science sessions by:

- Using visual diagrams alongside verbal or written instructions and information.
- Using online animations and videos.
- Pre-teaching new vocabulary and modelling how to use it in a range of contexts.
- Using science dictionaries, word mats and glossaries.
- Modelling effective use of language.

Providing opportunities for children to work in groups where possible so that language is also modelled by their peers.

SEN

CCHS is an inclusive school and we aim to give all our students equal access to our classrooms and resources regardless of their special educational needs or disabilities. In science, students with SEN will be supported to engage meaningfully in their learning through quality first teaching whereby they receive high quality teaching, differentiated for individual pupils using individualised strategies, support and curricula which are reviewed and improved on a regular basis.
Given the unique changing profile of our students there are specialised SEN teachers which can be consulted to offer targeted and specialised support through high quality interventions (see SEN Curriculum Statement for further information).

In science, children are given opportunities to feedback their ideas in a range of diverse ways whether that be writing, speaking, drawing, voice recordings or using their own specific means of communication. If children need to be seen at their bedside, they are still given an equal amount of opportunity for practical experiments and investigations. The exciting, hands-on elements of science are not only important for the learning of children in isolation, but can also be beneficial to their well-being.

Throughout the school, we use the Northern Ireland Curriculum to develop sensory stories that support targeted teaching for children with SEND. Some have a direct link to science topics and all provide hands-on opportunities for children to explore the world around them through a variety of sounds, objects and materials. Teachers can use the Equals Science Curriculum to support their

planning for children with SEN. Children can access a range of technology and specialist equipment that support their learning and communication.