Merstone School Science – Intent and Implementation through the Pathways	
Intent	At Merstone School, we feel that Science is one of the most interesting subjects to learn and engage students in. Our intention and vision is to ensure our curriculum provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. We aim to ensure pupils are taught essential aspects of the knowledge, methods, processes and uses of science in a way that is accessible and exciting for all pupils working at all levels of the curriculum. Through the teaching of science, we hope to foster a growth mind-set approach, where children will experience the joy of learning 'how' and 'why', whilst gaining valuable skills, such as gathering and making sense of evidence and generating and testing ideas, as well as the skills required to eventually become independent learners. Before they leave us, our intention is to ensure all pupils are equipped with the scientific knowledge required to understand the uses and implications of science, today and for their future.
Implementation	At Merstone School, we are now facilitating a pathways approach based on children's needs rather than age groups. Science is taught weekly to all pupils, this is from year 1 to year 14. Merstone school understands the vital skills learnt in science and the various topics it covers. Through science, our pupils better understand the world around them and how things work together. In our foundation stage, pupils are taught science whilst learning about the world around them, beginning the journey of developing a love for science.
Moonstones and Pebbles	At Merstone School, pupils in our foundation stage are not taught science explicitly but have many opportunities to learn about the world around them to through a thematic approach across the seven areas of learning within the Early Years Curriculum. During their first years at school our children will explore creatures, people, plants and objects in their natural environments. They will observe and manipulate objects and materials to identify differences and similarities. They will also learn to use their senses, feeling dough or listening to sounds in the environment, such as sirens or farm animals.
Topaz	Topaz follow a learning through play curriculum. Science is not explicitly taught in this pathway but there are many sensory activities in Topaz that stimulate at least one of the five senses. These activities allow children in Topaz to explore and investigate the world around them whilst encouraging creativity and scientific exploration. Topaz offers this learning through play curriculum across the key stages 1 to 3.
Ruby	The PMLD curriculum at Merstone School is a process based, sensory and developmental curriculum, focusing on the experience gained through completing activities that stimulate the senses. It focuses upon

	developing children's communication, engagement and experiences. We use an adapted, adult-led play based approach to teaching. Classrooms are set up to provide continuous provision and sensory exploration activities throughout the day. We use a topic approach which follows a 12 year rolling program which aims to cover a variety of themes, science fits under Sensology. Although sessions are planned and delivered in a variety of ways (whole class, group and individually) all teaching is individualised. The adult's role is to facilitate learning across all areas for the curriculum and school day.
Emerald	Through the Emerald Subject specific Equals Curriculum, learning science gives all pupils the opportunity to think and learn, and develop an interest in, and curiosity about, the world around them through exploratory and investigative experiences and activities. Science in Emerald pathway allows children to develop an awareness of, and interest in, themselves and their immediate surroundings and environment by joining in practical activities that link to ideas, for example, doing and thinking, using their senses to explore and investigate. Children will develop over time understanding of cause and effect. Over time, the Emerald pathway will develop an understanding of the more abstract as well as the concrete and practical.
Sapphire	The semi-formal Equals curriculum for science (The World about Me) acknowledges that learners are likely to have difficulties making generalisations, which they can apply and link appropriately to future learning. These difficulties may act as barriers in applying what they have learned in order to make the necessary connections when studying science. The learners may need support to remember previous experiences and link them to make sense out of a new one. The intent of the semi-formal curriculum is to build on what the learner has experienced in the past and use this to support the learners to make connections and link future learning to these experiences.
Diamonds	Science is taught in discreet lessons and learning is based around modules from ASDAN Towards Independence. Pupils are completing tasks that promote their independence and life skills. Diamonds aims to allow young adults to apply knowledge from science lessons to real life as they come to the end of their time at Merstone school.