Teaching And Learning Policy

The Meadows Montessori High School

Approved by:	David Green	**Date:** 01/09/2022
Last reviewed on: 27/10/2019		
Next review due by: 01/09/2024		

Overview

This document presents a high-level view of how and what students learn at The Meadows Montessori High School (referred to as 'The Meadows' hereafter). It outlines our intentions as a secondary school, our teaching approach, our curriculum, monitoring, assessment and reporting to parents.

Intentions

The Meadows' curriculum and approach to teaching and learning intends to provide students with the knowledge and skills necessary for a happy and successful future. This means that we have three main goals: to provide an environment for the development of the personality as our students move from childhood to adulthood; to prepare our students to achieve qualifications similar to those achieved in other secondary schools; and to prepare students for the social life of adults. By this we mean that we intend for students to understand their role in a community, to play their part, to have social responsibility, to be financially aware and to help others.

These goals sit within the overall vision of The Meadows Montessori School to provide a school community in which every child can thrive and be prepared for life; for all children to have a lifelong love of learning, be truly independent, intrinsically motivated, secure, responsible and confident.

Teaching

Most explicit teaching at The Meadows occurs in small groups of around three or four; these groups may be mixed or organised by age, ability, at the discretion of the subject teacher. Each session has a clear focus, is delivered by subject specialists and guided by the students' needs in a given subject. Each session includes follow-up learning for the students to complete in their own time (during the school day). Learning for each student is determined throughout each week, following observations, informal assessments and discussions between classroom teachers, and these are documented in the student's journal so that each child follows a curriculum that is appropriate to their needs. In this way students have the freedom to manage their own learning and when to complete it; at the same time, teachers are free to support on a one-to-one basis within the main teaching space. Our teaching spaces are resourced so that students are able to access differentiated information, tools and tasks to support and extend their learning if required.

Students with Special Educational Needs

Our SENCo offers support to both primary and high school, providing appropriate transition between year six and seven. This support is on a one-to-one basis and feedback is provided to teaching staff in a fortnightly basis, or more regularly if the need is urgent. Students also have one-to-one engagement with teachers in weekly mentor meetings and this, coupled with the small teaching groups, helps us to provide the necessary support for students with special educational needs.

Our curriculum

Our curriculum is partially timetabled. Some aspects are taught to explicitly while others can occur at any period of untimetabled time at the choosing of the individual student. The section below provides more detail.

Taught subjects – English, Mathematics, Science and Languages

Students have a lesson working one-to-one or in small groups with a subject teacher for approximately one hour per subject per week. The content of these lessons is decided by choice of topic for Great Lesson studies, consideration of preparation for GCSE, student ability and age. Following the lesson, the subject teacher gives students follow-up work to be completed over the coming week. Students are given appropriate resources to be able to practise and embed their

learning between sessions but are able to consult with teachers at other times if they need additional support. In year nine, languages are optional.

Students in years ten and eleven will follow formal qualifications in English, Mathematics and Science. The actual qualifications depend on the ability of each student, but typically includes some of the following:

- GCSE in Mathematics
- Level 2 Qualification in Further Mathematics (for able students)
- GCSE in English Language
- GCSE in English Literature
- GCSE in Science (either a single or double award)
- GCSEs in each of Physics, Chemistry and Biology.

English

In English, students are taught the key skills of reading, writing and speaking and listening. Within reading, students consider a range of fiction and non-fiction texts, increasing in difficulty as their ability demands and as they move towards their GCSEs. They are taught explicitly to read for meaning, analyse writer's craft, evaluate and compare different texts in relation to their audience and purpose and consider how texts are influenced by their historical and social contexts. The texts we study are chosen by ability, and where possible are linked to the focus of each Great Lesson. In this way, we intend for our young people to be exposed to a range of rich literature crossing times and cultures.

Students are encouraged to write in a range of styles for a range of purposes. They are explicitly taught how to use their analysis of a text to inform their own writing, and through exploring a wide variety of reading they will be able to find suitable models for their own work. Students are directed to spelling, punctuation and grammar tasks depending on their needs and skills. Vocabulary is taught through English lessons and beyond, specifically through etymology and word families.

Students have a wide range of opportunities to develop their speaking and listening skills throughout the school week. They are regularly invited to present their findings on work they will have completed during Great Lessons, and advice, guidance and feedback will be provided to ensure they understand how to do this in the most effective way. During their regular mentor meetings, students develop their skills of interacting with adults in a formal work setting, and again advice, guidance and feedback will be provided to ensure they become more proficient in this. In addition, through other areas of the curriculum, the school creates a range of opportunities for our young people to engage orally with external adults, either through careers, erdkinder projects, creative projects or trips. For Drama, students have the opportunity to use role play to demonstrate their learning, and there are also the opportunities for students to rehearse and perform plays related to our Great Lessons or English Literature studies.

Mathematics

The mathematics curriculum includes skills and techniques found in most high schools. Emphasis is placed on students having a deep understanding of mathematical concepts and not just memorising methods. When appropriate, students are encouraged to see connections between areas of mathematics and the wider curriculum such as its use in IT, geography, PE, art and science. There is a balance between learning skills that have direct applications and engaging with more abstract concepts. Students are encouraged to learn how to communicate their mathematics by presenting ideas and collaborating with others.

Given the vertical nature of mathematics, in which the learning of skills usually depends on the prior learning of other skills, the curriculum is presented as a series of learning ladders. There is a ladder for each of these topic areas:

- Number Systems
- Calculations
- Construction
- Proportion and Percentages
- Equations and Formulae
- Graphs and Sequences
- Transformations
- Angles
- Mensuration
- Probability
- Statistics

Skills related to problem solving, proof, IT and mathematical literacy do not have their own topic area but are spread across the other areas (e.g., students will learn about algebraic proof within the 'Equations and Formulae' and 'Graphs and Sequences' topics whilst the proof of circle theorems is covered in the 'Angles' topic).

The ladders cover topics from skills usually taught in primary schools up to Higher GCSE content.

Rungs on the ladder are graded by difficulty and are structured so a skill is not taught until students have first engaged with the prerequisite skills. For each rung, students are introduced to concepts through investigations and modelling by the tutor.

The follow-up work for each week has two parts. The first part is usually directly linked to the skills and concepts studied in the recent lesson. This might be a series of more traditional or exam-like questions with varying difficulty leading to tasks that have more emphasis of the application of the skills or techniques or enrichment tasks. This work might also take other forms, when appropriate, such as a task that uses IT, physical activities (e.g., taking measurements to create a scale-drawing of the school) or the use of Montessori mathematics materials (or materials inspired by the Montessori method).

The second part of the follow-up work is selected by each student (referred to as their 'DIY maths'). This is an opportunity to revisit an earlier topic. Although students might choose tasks to do from public sources (such as Corbett Maths) – a number of in-house worksheets (with answers for self-marking) along with help-sheets and videos are available to help the students work independently.

Some mathematical concepts and activities are covered by the Great Lessons element of the curriculum — but usually these are not directly linked to core mathematics. For example, students may study symmetry in art, the history of number systems or combinatorics.

Students do their mathematics work and record their notes in an exercise book when appropriate.

Science

For science students are taught in mixed age groups for years 7 and 8 and in single year groups for year 9 in order to prepare them for studying for GCSEs in year 10 and 11. Our curriculum is outlined in more detail in the next section but largely follows the KS3 national curriculum but with greater flexibility for students to follow their own interests. Students have one hour a week of lesson time where they will learn new content from their teacher. Often during this lesson time students will

carry out a practical experiment (for example in a lesson about acids and alkalis) or build a model to make abstract concepts more concrete (for example in lesson about the structure of the atom). Students are also given one hour of independent follow-on work per week which may range from drawing a graph of their results, to designing a musical instrument, to researching the adaptations of an animal to their environment. In addition to this, students may be offered optional experimental sessions which they can choose to attend to carry out experiments outside of the core curriculum (for example, dissecting a sheep's eyeball when learning about light). Student also have the option to ask for extension work such as practice exam questions or additional quizzes or research questions. The aim of these optional tasks is to enable students who are particularly interested in the topic being studied to pursue their learning further and follow their interests. The curriculum is outlined below, but this is only a guide, lesson content will change to follow the interests of students and tie in where appropriate with the great lessons being studied.

Year 7 and Year 8

In year 7 and year 8 students follow a broad and varied curriculum similar to the KS3 national curriculum. This will include the units listed below. Two units from each subject will be taught each year.

Chemistry

Introduction to Chemistry: States of matter and phases changes, the particle model of matter, chemical and physical changes, separating mixtures, chemical reactions as rearranging atoms, endothermic and exothermic reactions.
Geology: Igneous, sedimentary and metamorphic rock, the rock cycle, weathering and erosion, fossils.
Chemical reactions: Chemical reactions as rearranging atoms, combustion, thermal decomposition, oxidation, displacement reactions, the reactivity series, endothermic and exothermic reactions, representing chemical reactions using formulae.
Acids and alkalis: pH scale, indicators (litmus, universal, cabbage), characteristics of acids and alkalis, neutralisation reactions, acids and metals, acids and metal carbonates.

Physics

Motion and Forces: Measuring and calculating speed, non-contact forces, forces in balance, contact forces including friction, pressure.
Electricity: potential difference, current and resistance, series and parallel circuits, building circuits with a variety of components.
Waves: slinky waves, water waves, sound waves, parts of the ear and how we hear sound, longitudinal and transverse waves, wavelength, amplitude, frequency, period, reflection and refraction of light, the light spectrum and how we see colour.
Energy: conservation of energy, energy stores and transfers, kinetic energy, gravitational potential energy, elastic energy, chemical energy and thermal energy, efficiency, electricity production and distribution, renewable and non-renewable energy resources.

Biology

Cells: Animal and plant cells, cell organelles, specialised cells, using microscopes to look at cheek and onion cells, magnification, diffusion, osmosis and active transport
Reproduction: gametes (sperm and egg cells), the reproductive organs in humans and plants, puberty, the menstrual cycle, pregnancy, life cycles of animals other than mammals.
Respiration and Photosynthesis: Aerobic respiration, photosynthesis, plant and animal cells, using a microscope to look at chloroplasts in leaf cells and euglena, investigating oxygen production in pondweed.
Ecology: characteristics of living organisms, taxonomy, researching how specific animals and plants are adapted to their environment, evolution through natural selection, selective breeding, food chains and webs.

Year 9

In year 9 students follow a curriculum specifically planned to prepare them for GCSE. Again it runs close to the KS3 national curriculum but it focuses on the elements which will provide a sturdy foundation for studying GCSE.

Chemistry

Fundamentals of Chemistry: States of matter and the particle model, separation techniques, physical and chemical changes, the structure of the atom (protons, neutron and electrons).
Periodic table: History of the periodic table, patterns in periodic table, metals and non-metals, alkali metals, halogens, noble gases, the periodic table and atomic structure.

Physics

Motion: measuring and calculating speed, vectors and scalars, displacement-time graphs, acceleration, the effect of balanced and unbalanced forces on motion.
Force experiments: drawing force diagrams, investigating upthrust, Hooke's law investigation, investigating force and acceleration using a trolley.

Biology

Cell structure: animal and plant cells, using a microscope to observe cheek cells and onion cells, calculating magnification, specialised cells, diffusion, osmosis and active transport.
Health and disease: communicable diseases, bacteria and viruses, non-communicable diseases, the immune system, vaccines, nutrition, food tests. [Please note that for Y9 in 22/23 this module has been replaced by the Reproduction unit from Y8].

Year 10 and 11

In year 10 and 11 students have the option to study for GCSEs in science. Students can study for single science GCSEs such as Chemistry, Physics and Biology or can choose to study a double award GCSE which covers all three sciences. Our examining body is AQA.

Languages

In years seven and eight, students study Spanish, French or both as a compulsory subject. This gives the foundations for further study either for personal interest, travel or for formal qualifications. Language lessons focus on giving students a cultural and historical understanding of some of the countries that speak Spanish and French. In year nine students can choose to continue their language learning or not. Those choosing to continue can start working towards the study of a qualification or simply continue learning the language for the joy of it.

Great Lessons

The Great Lessons cover a large number of traditional subjects. It particularly covers topics related to the arts, humanities, culture and science. It can also be the foundation for lessons in English, sciences and languages.

Each half term over a three year cycle the Great Lessons focus on a different theme, chosen by the students. These topics are decided from a selection provided by teachers (see Appendix A). Students are presented with a 'lesson' at the start of each half term that provides an overview for the coming weeks. Students have the freedom to then explore, research, plan, write, build, collaborate, compose pieces of work inspired by the Great Lesson topic. This work is shared in a presentation to the other students at the end of each half term and is assessed in three areas: research, application and presentation. Throughout the half term brief key lessons are delivered to all students to highlight important areas within the half term's theme.

Formal Qualifications

Although there are sometimes times when it is appropriate for year ten and eleven students to take part in the Great Lesson, they mostly use that time to study for formal qualifications such as GCSEs

(in addition to the core subjects). In a similar way in which the core subjects are taught, students work one-to-one or in small groups with subject specialists for approximately one hour a week. They then work autonomously the rest of the week completing tasks provided by the specialists to apply and embed their learning. The specific curriculum is dictated by the particular courses being studied.

Creative Projects

The Creative Projects element of the curriculum exposes students to a number of artistic disciplines and crafts. Competency in these areas is not the goal, but to give students an opportunity to try a number of techniques or methods. Students may be influenced by this work during their Developing the Self time.

Typically, an enthusiast or teacher presents techniques or inspiration to students in one-off sessions or during several sessions over a number of weeks. Students then attempt a number of tasks. The particular topics covered here are influenced by things requested by the students and by the skills and interests of people in the community in which The Meadows belongs. Example of topics are:

- Painting with watercolours
- Restoration of furniture
- Building robots
- Writing software
- Sculpture

Developing the self

In line with Maria Montessori's ideas about the third plane of human development students are encouraged to spend some time developing their interior personalities through self-expression. Students are given time to be creative — through example such as writing, drawing, painting, composing or playing music — not with the intention of becoming proficient in those areas but for the purpose of the student developing a better understanding of their identity and beliefs. Sometimes students do these activities together.

Erdkinder

Montessori used the term Erdkinder ("children of the earth") to describe adolescents who are preparing to enter the larger, global community. She observed that the sensitive periods of adolescents are in the realms of social, emotional, and physical well being. She devised a programme in which students would spend a year outside of their usual learning environment to work on a farm. During this time, they would deal with many matters related to farming including dealing with customers and fixing machinery along with more obvious tasks such as planting and sowing.

At The Meadows, our Erdkinder element of the curriculum follows the spirit and purpose of Montessori's ideas but in a way that is much more appropriate for students in Ipswich. It gives students learning opportunities beyond the classroom to help prepare them for adulthood. It is an aspect of our curriculum that continues to develop as our school and students grow. We work with a local farm, run an allotment and a shop, but students are free to go beyond this, such as volunteering or setting up their own business. Our intention is to prepare students for what Montessori calls 'social life', a term we interpret to mean taking on social responsibility, being a part of a community and playing one's part, looking out for others and being financially aware.

Physical Education

PE lessons are currently taught off-site. All students will attend local, suitably equipped facilities to take part in sports activities with instruction from the resident experts or our sports lead teacher. The emphasis is on presenting students with many sports and general skills rather than a focus on individual sports. Sports we have engaged with so far include:

- Climbing
- Bowls
- Ultimate frisbee
- Basketball
- Football
- Trampolining
- Kickboxing

Personal, social, health and emotional education

The purpose of PSHE within our high school is to ensure that our young people develop into happy and healthy adults with an appreciation for their lives and a sound understanding of how to conduct themselves in the world outside our school. A large number of the topics within a standard PSHE curriculum are embedded into other parts of our school life. For example, the Developing the Self element of the curriculum allows our young people to develop their identities in creative ways; the Erdkinder element of the curriculum invites young people to consider their roles and responsibilities in the local, national and global communities; studies into the human body in our great lesson work ask our young people to consider the effects of lifestyle choices on our health; and literature and role play support our young people to develop their emotional intelligence. The Great Lesson element also includes the British values of tolerance, mutual respect, the rule of law, individual liberty and democracy. In addition, the very nature of our school's method of education encourages young people to develop skills in politeness, compassion, compromise and collaboration. In this way we feel PSHE is built into the daily lives of our school children. Having said this, there are some topics that require specific lessons, such as sex and relationships, and these are covered in age-specific stand-alone sessions. For more information, refer to the PSHE overview document.

Evening Meal

Once a fortnight the students and staff stay after the main school day to prepare and eat a meal together. Sometimes the ingredients come from community projects as part of the Erdkinder element. The students and staff work together to plan, prepare and serve the meal. This helps build relationships within the school community and enable students to develop their interpersonal skills. We also aim for the meal to help students learn about nutrition and healthy living. Students prepare entertainment for the meal all with the intention of boosting our school community.

Scheduling and accountability

A key aspect of the Montessori approach to education is the responsibility the students should take for their own learning. The structure of the curriculum gives many opportunities for the students to follow their own interests but without complete freedom to do just what they wish. Another way in which students can show independence is through the scheduling of their work. Each week when a student meets with their subject specialists they will be given tasks to complete. The student will need to schedule these tasks throughout the coming week so that appropriate time is allocated. This scheduling also complements the timings of other activities such as PE, creative projects and whole class events outside the student's control. Students manage their time using a journal, following a format used in the primary school. When a task has been completed, the student (or a teacher, as appropriate) records it in a central held database using a custom build iPad App. For each task the following information is stored:

- A description of the task
- A reflection about the task (how the student found it, and particular problems etc)
- The date it was completed
- The time spent on the task
- The element of the curriculum (e.g., Erdkinder, PE, etc.)

Activities that children undertake at home can also be recorded in this way.

Each week, each student meets with his or her mentor. During this time, in addition to providing pastoral support, the mentor discusses the work done by the student over the previous week. If the student has not been maintaining their schedule, not completing the necessary work or not applying appropriate effort, the student and mentor discuss how the necessary skills can be developed for the next week.

Careers

Our education model allows us to offer careers guidance in two important ways: firstly, it allows us to work closely with our students to understand their interests and secondly, it allows us to go out into the world and see those interests being applied in career contexts. In this way, our young people see a range of careers that may spark their interest. In addition, our creative projects curriculum will include visiting specialists in a range of fields who may also inspire students to consider particular careers. As students' interests become clear, mentor meetings will be used to consider how their interests might apply to particular careers. Our subscription to the careers progamme Unifrog is also utilised throughout students' time with us and they are encouraged to use this resource to guide their thoughts. In years ten and eleven, where possible we will try to arrange work experience for our students, in an area of interest to them. For more information on how we deliver careers, please see our separate careers policy.

Assessing Progress and Feedback

Most activities that students undertake are points for assessment. This includes the completion of set or chosen tasks such as those from the Core Subjects or Great Lessons, or the carrying out of other activities such as contributing to the discussion at the evening meal or assisting another student with a piece of work. Students make personal reflections that allow them to assess the degree of success that they have had doing a task or demonstrating a skill. They consider what went well and how they might do things better another time. Sometimes these reflections will follow the receiving of feedback from teachers. At the students' weekly meetings with their mentors, they discuss the activities and have a further opportunity for reflections to be made.

Feedback is given in writing or orally. Emphasis is placed on describing the student's degree of success and how improvements can be made rather than assigning a particular grade to the work. Sometimes tasks cover a number of topics or topics not currently being learnt. This gives the chance to assess how well a student has memorised a fact or skill.

As students progress through year nine and beyond, some assessments are assigned using exam grades (such as 9-1 grades for GCSE courses). This enables students to prepare for public examinations and to understand how they will be assessed.

Reporting to parents and carers

Twice a year, parents and carers receive a report documenting their students across the course of half a year. These reports are written and provide detail about progress, attitude and achievement but no grade. Parents are invited to attend a consultation evening following the release of the report to discuss it with teachers.

Appendix A: Great Lesson themes