The St Michael Steiner School

The Lower & Middle School Curriculum 2018 - 2019

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INTRODUCTION

After the unprecedented horror of the first World War, many people hoped for and believed in the possibility of a better future, based on new forms of social organisation. One of these was the industrialist, Emil Molt, owner of the Waldorf Astoria cigarette factory in Stuttgart, Germany. Molt was a friend of philosopher and scientist, Rudolf Steiner. Steiner had written books and given lectures on social renewal and education, and now, at the request of the workers in his factory, Molt asked Steiner to found a school for their children. He agreed, took twelve teachers through an intensive study of child development, and 'The Waldorf School' opened in September 1919.

The first Waldorf (or Steiner) schools in the English speaking world opened in south London in 1925, Gloucester in 1927 and New York in 1928. The German and other European schools were closed by the Nazis in 1939, but many reopened after 1945. Since then this ground-breaking form of education has expanded across the globe; our movement now includes more than a thousand schools worldwide.

The Waldorf School is not an 'alternative school' like so many others, founded on the belief that it will correct all errors in education. It is founded on the idea that the best principles and the best will in this field can come into effect only if the teacher understands human nature. However, this understanding is not possible without developing an active interest in all of human social life. Through a teacher who understands the soul, who understands people, the totality of social life affects the new generation struggling into life. People will emerge from this school fully prepared for life.

Rudolf Steiner

EDUCATIONAL PRINCIPLES

Behind Waldorf Education stands a deep understanding of the human being in body, soul and spirit, which Rudolf Steiner wrote and spoke about in several hundred books and lectures during his life. He called this knowledge 'Anthroposophy' – literally 'wisdom of the human being' – and in it he described and characterised the stages of development which can be observed in the journey through childhood (and also adulthood). To understand this unique view of child development better, see Rudolf Steiner's essay *The Education of the Child in the Light of Anthroposophy*. The e-book is here: https://www.waldorflibrary.org/books/3/view_bl/127/about-anthroposophy/60/education-of-the-child-the-ebook

Our aim, in everything we do, is to bring the children into a relationship with the world. This means cultivating genuine interest, understanding and an open, questioning attitude. These three things work together: questioning without interest leads to cynicism; interest cannot be cultivated if questioning is encouraged too early; a wish to understand develops out of interest; questions cannot arise without understanding.

As a basic principle, education for children under about 7 needs to ensure that they experience the world as something good, so that they meet it with joy and acceptance, which is their natural inclination. This will give them a secure foundation for what comes later. If they are exposed to the 'harsh realities' of life at this age, they will become confused, anxious and fearful. They cannot protect themselves - that is the task of the adults around them.

In the Lower School, as the children develop more objectivity, the basic principle becomes 'the world is beautiful'. The children gradually move from experiencing the world revolving around them, to feeling that they are involved, with others, in something much greater and full of wonder. They are introduced first to the world of

nature - as something that has been given to us - and then to human culture - what human beings have created for themselves and each other. We focus on the wonderful achievements of mankind, so that the children between 7 and 12 feel awe and respect for what human beings have achieved, and experience that this is a picture of their own potential.

In this way, when they reach the Middle School, where the principle becomes 'truth', and look also at the human potential for destruction, this rests on the foundation that has been established: a feeling of belonging to the world; that human beings have created something beautiful and meaningful; that they themselves have the potential to create or to destroy; and perhaps most importantly, that they have a choice about what they do with that potential.

OUR TEACHERS

These basic principles underlie Waldorf teacher education. Our teachers must first understand the process of child development with which we work; that the consciousness of each child is in a process of evolution; that being a five-year-old is not the same experience as being a ten-year-old, and that therefore they need to learn different things in different ways. Student teachers then learn and practise the observation skills that will enable them to see what each child needs, followed by the practical approaches that can be used in the classroom. In this way, student teachers gradually develop the necessary skills and understanding to create the content and method of their own teaching.

After training, when teachers become part of the school faculty, it is expected that they will continually develop their knowledge and practice through the conferences, workshops and training opportunities that are available within the school and elsewhere.

There is, of course, a large body of work created by Waldorf teachers over the last century, and many teachers draw on this, as well as on the indications given by Rudolf Steiner, so that a canon of manifestly suitable themes and traditions for each age has become established in most Waldorf schools worldwide. However, this is by no means prescribed. In his lectures on education, Steiner gave many indications for suitable subject matter and approaches to teaching for different ages but always stressed that teachers must be free to interpret these indications in their own way. Indeed, he said, if they did not do so, Waldorf education would become a method as good as, but no better than, many other methods.

> *This, of course, imposes upon [teachers] a great responsibility, but without this responsibility teaching is impossible. A system of teaching which lays down beforehand the teacher's time-table and every imaginable limitation […] completely excludes the teacher's art. And this must not be. The teacher must be the driving and stimulating element in the whole being of the school.*
>
> *Rudolf Steiner*

In order that we can give our teachers the freedom to be authentic Waldorf teachers and, at the same time, ensure that all of the children receive a rich, diverse, balanced, education that takes account of their individual needs and interests, enabling each one to achieve all that is possible for him/her, it is an essential requirement that all teachers who work at The St Michael Steiner School are trained in Steiner Waldorf Education.

The school has a structured system whereby our teachers mentor, observe, consult and advise each other, so that the College, which is made up of teachers, has oversight of the education being offered across the school, and is accountable to the trustees, and of course also to the children and students and their parents, for its quality.

THE PRINCIPLES IN PRACTICE

Although teachers are expected to create the lesson content for their own classes, there are some practices which, because they have proved so successful in providing the best possible education for the children, have become established in most schools. This does not mean that they are never questioned, only that they are used because they continue to work. The two aspects of Waldorf Education most prevalent in this category are the Class Teacher and the Main Lesson, both of which apply in our school.

THE CLASS TEACHER

Normally, and as far as possible given exceptional circumstances, Class Teachers stay with the same group of children for eight years, from age 7 to 14. This means that the teachers know their children very well and are best placed to understand what support or challenge each one needs, and to build on what has been learnt in previous years.

… the custom should be followed […] as faithfully as possible of the teacher retaining his same pupils; of taking them over for the first form, of keeping them the next year in the second form, of going up with them again in the third year, etc., as far as this is possible in conjunction with outside regulations. […] For one must sometimes be able to come back years later in a positive way to what was instilled into the children's souls years before. […] the formation of the disposition or feeling life suffers greatly when the children are passed every year to a fresh teacher who cannot himself develop what he instilled into children in earlier years. It is part of the teaching method itself that the teacher should go up with his own pupils through the different school-stages. Only in this way can we enter into the rhythm of life. […] The human organism conforms closely […] to a rhythm; not only the external organism, but the whole being, is rhythmically organised. For this reason, too, it is a good thing […] to be able to attend to rhythmical repetition. [and] we do well to think that even every year is not too often to return to quite definite educational themes. Therefore select subjects for the children, make a note of them, and come back to something similar every year. […] You teach, let us say, […] addition in the first school year; you come back to addition in the second, and teach more about it, and in the third year you return to it in the same way, so that the same act takes place repeatedly, but in progressive repetition.

Rudolf Steiner

THE MAIN LESSON

The Main Lesson. This is a two hour lesson first thing every morning in which subjects such as writing and reading, maths, geography, history and sciences are taught individually in three or four-week blocks. In this way, each topic can be entered into deeply and thoroughly for that time and, through continuity, the children can form a strong connection with what they are learning.

The Main Lesson is carefully and rhythmically structured so that the children have to listen, work independently, participate, collaborate

Our whole attitude from first to last will be one of dealing with the same subject of study for some length of time.[…] We do not draw up a time-table according to which we write in the first lesson, read in the second, etc., but we deal for longer periods at a time with things of the same nature. […] so that we keep the children busy for some time at one subject, and then, only when they have been engaged on it for weeks, turn to something else. This concentrates the teaching and enables us to teach much more economically than if we were to allow the appalling waste of time and energy involved in taking one subject first and extinguishing it in the next lesson.

Rudolf Steiner

and think at different times. The subjects taught in Main Lessons are broad throughout the school and increase in diversity as the children get older. *(see our Curriculum Policy on the Policies page of our website)*

We believe that children learn best not by being told things, but through being active. Main Lessons often involve singing, music, recitation, movement, painting and drawing. These practical and artistic activities are not 'added on' to the conventional modes of learning; they *are* the mode of learning, and an integral part of any lesson. The children learn through them in a multi-sensory way, developing practical understanding, imagination and creativity.

CURRICULUM CONTENT

As we have seen, the content of the lessons in each class is guided very much by the developmental needs - physical, emotional, cognitive - of the children in the class. The way children see the world and their place in it develops gradually, through identifiable stages, from total immersion to varying degrees of objectivity by the time they reach adulthood.

> *It will always be a question of finding out what the development of the child demands at each age of life. For this we need real observation and knowledge of Man. The child up to the ninth or tenth year is really demanding that the whole world of external nature shall be made alive, because he does not yet see himself as separate from it. In the form of stories, descriptions and pictorial representations of all kinds, we give the child in an artistic form what he himself finds in his own soul.*
>
> *Rudolf Steiner*

If the content of the curriculum, and the method of teaching, can be aligned with the characteristics of each stage, then a wonderful symbiosis is created whereby the lesson touches on the deep concerns of the child and arouses his/her interest; and, because s/he can relate personally to it, the child is able to understand and take in the content of what is being taught.

The way this works in specific topics at particular ages, and with different teachers and classes of children in the Lower School[1], is the subject of this directory, which aims to promote a thorough understanding of why we do what we do. Sections are written by various teachers, who describe and explain their own approaches and lesson content.

These descriptions are offered as examples of what can be done in each class; they are not definitive and what is taught in each class will vary from year to year. This directory will be updated annually.

[1] Information about the High School curriculum can be found in our High School Course Directory, on our website at www.stmichaelsteiner.hounslow.sch.uk

CONTENTS

OVERVIEW

Class 1 9

Class 2 12

Class 3 15

Class 4 20

Class 5 25

Class 6 29

Class 7 34

Class 8 39

SUBJECT LESSONS

Foreign Languages 42

Religion & Global Issues 42

Outdoor Curriculum 43

Games & P.E. 44

Music 46

Handwork & Crafts 49

Art 51

Eurythmy 51

Assessment 53

Class 1

In this year the children make the important transition from kindergarten to school where they begin formal learning. There is a general mood of dreamy wholeness, with more broad awareness than focused concentration, where they experience themselves and the world as one. The sense of oneness gradually transforms as they begin to discover themselves as unique beings. Much learning is done through practical activity and imitation. During the first year, the aim is to cultivate in the child the imagination, the ability to create vivid inner pictures, a reverence for nature, care for the environment, respect for others, and interest in the world.

Form Drawing

Form drawing helps children with spatial orientation and gives them a solid foundation for letter and number formation, handwriting, and in later years, geometry. Basic geometry can be taught in the Form Drawing lessons through freehand shapes: the circle, square, triangle, spirals into and out of the centre, 5, 6, 7, 8, 9 and 10-pointed stars, and symmetrical completion of forms on the vertical axis. Motifs and patterns develop out of stories that are related to the form, with hills and valleys, rolling waves in the sea, or castle ramparts. The children often first "walk" the shape, make the form with their bodies, and draw in the air with their hands and feet, before putting it onto paper.

Numbers

Number work begins with rhymes, stories and discussions about the qualities of the numbers 1 to 12, then drawing them in Roman and Arabic forms. The children later learn to count and write numbers from 1-100, for example, through skipping games, card games or making their own "Snakes and Ladders" boards.

Throughout the year the children learn the times tables, beginning with 2x, 3x, 5x, 10x using rhymes, clapping, stepping and throwing beanbags; and number bonds from 1 - 12.

The 4 processes are introduced through stories, with each process personified as a character, for example, Pumpkin Plus, the baker who specialises

in hot cross buns but struggles to work out how many buns he needs to bake each day; kind-hearted Miner Minus who gives away all the jewels he finds to the needy; Tappy Times who taps her magic sticks and multiplies scarce food and resources; and Prince Divide who is fair and just, and helps villagers to settle disputes and share things fairly.

Their adventures translate into sums: Pumpkin Plus might bake for the greedy king, who gobbles up more and more buns; Miner Minus who gives everything away and has nothing left for himself; Tappy Times who multiplies sticks in order to build a raft to cross the river, or Prince Divide who helps fighting siblings to learn to share.

The children learn to answer simple horizontal number problems using all four processes with the help of conkers or beans as counters, before moving on to mental calculations and then working out the answers on paper.

With open-ended tasks like discovering all the different ways to make "10" (6+4, 12-2, 5x2, 20÷2), the children develop a non-linear approach to sums, and the freedom to discover the many different possibilities rather than working towards only one result.

By the end of Class 1, the children might be expected to know how to write numbers up to 100 and to work with all four processes (+ - ÷ x) with one, two and three digit numbers, horizontally, finding any part of the calculation (? - 5 = 20, 9 + ? = 15, 12 ÷ 3 = ?). They will also be able to work with word problems that use these calculations, number bonds up to 12, and times tables up to 12x, although it is not expected that they will know them all by heart at this stage.

Language & Literacy

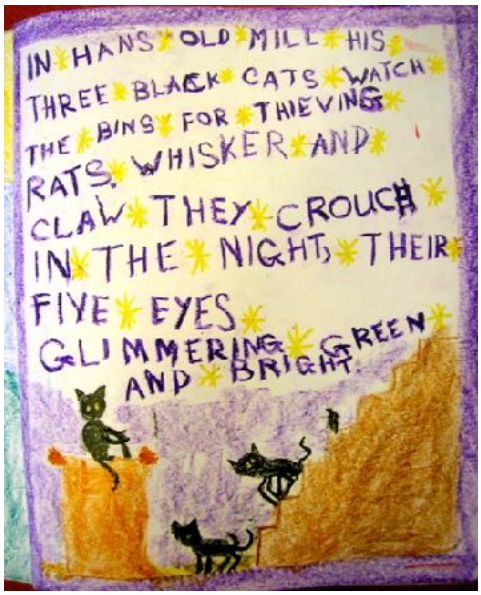
Language - and in Class 1 this means speech - is the main tool of Steiner Waldorf education and is the way we communicate with our fellow human beings. One of the advantages in starting formal teaching at 7 is that the children have a much broader spoken vocabulary, and more sophisticated ways of expressing themselves than they do at 5, and are therefore able to use what they say, hear and understand to develop writing and reading.

Writing is introduced using folk stories and fairy tales, which are told, and can come from many cultures around the world, in particular from the cultures represented in the classroom. Stories become pictures, out of which uppercase letters emerge. These are accompanied by rhyming verses, songs, movement and form drawing.

Once the children are familiar with the sounds for each letter, they begin to write short sentences based on the stories. The sentences come out of recall and discussions, and are copied from the blackboard at first. Gradually the children begin to put their own sentences together from words found in the recall and then written on the board. Each sentence is usually accompanied by an illustration.

Around the last term of Class 1 - it can be a little earlier or later - lowercase letters are introduced, and the children can see and discuss how some "baby letters" resemble the "big letters", while others look completely different, much like in the animal kingdom.

Reading begins with the children's own written work, familiar



verses that they know by heart, and simple consonant-vowel-consonant words which can be dictated or worked out and put into their own sentences. There are always books in the classroom for the children to look at and read.

Speech, in the form of poems and games, as well as recall of the previous day's work and other class discussions, is an essential part of every lesson. In recall, the children are encouraged to use full sentences and to express themselves clearly; they also hear stories told every day. In this way, their use and understanding of language is already rich and broad before they start to read.

Listening and speaking skills are also practised in the weekly recitation of their own birthday verses.

Towards the end of the year, it is expected that all of the children will have learned how to write, recognise, sound and name all of the capital and lower case letters; they will have begun to read and to compose their own texts, spelling phonetically; some will have become fluent and enthusiastic readers. Reading is by far the best way to learn spelling and grammar, which are not touched on formally in Class 1, but which the children use quite naturally in speaking, and in writing what they want to say. Later, grammar will be taught by drawing their attention to, and building on, what they already know and use.

Home Surroundings

In the Home Surroundings blocks, the children hear seasonal nature stories about the things they see around them every day: blackbirds, magpies, foxes, squirrels, bluebells, daffodils, mushrooms, oaks, silver birch, horse chestnut and beech. Through these stories, the children are brought, in an imaginative way, to think about the plants and animals that can be found in their local environment.

This block forms the basis on which we will later build History, Geography and Science, but at this stage, the important thing is the feeling connection they make with the things around them. The children feel connected with the plants and animals through their own experiences; a relationship develops and they begin to notice and wonder about the things around them.

Drawing, Painting & Modelling

The children learn how to draw a variety of scenes using the four edges of beeswax crayon blocks and how to use layering and blending to create different moods and effects.

In wet-on-wet watercolour painting, they explore the qualities and moods of primary colours and how they interact with each other. They learn how to hold and use the brush properly and how to help each other tidy up after each painting session.

In modelling with clay and plasticine, the children learn how to mould a beautiful sphere and shape it into a convex or concave shape by pressing or pulling to create simple forms like a bowl, a hedgehog, a snake or a nest.

Class 2

After their first year of formal education, the children in Class 2 visibly grow and change, both outwardly and inwardly. Their school, their classmates, their teacher, are all very familiar now; they become more confident and, in comparison with the contentment of Class I, more talkative, louder and more cheeky; they push boundaries more than before; they begin to notice and question things. The authority of teachers who are clear in themselves about what is acceptable and what is not, is vital now; as the scope for self-directed work and behaviour widens, boundaries must remain firm. Slowly, through the course of this year and the next, the impulse to just follow - to imitate - will be replaced by the growing wish for independence. The challenging behaviour of the 8-year-old signals the beginning of that process, which will lead them eventually to become free thinking, empathetic, responsible adults.

Form Drawing

A Form Drawing Main Lesson at the beginning of the year brings some form to the children after the freedom of the summer holiday. At the same time, it is an artistic activity and so the children enjoy it, and the form - ability to focus, to sit still, to listen, to work carefully, to abide by class rules - comes in almost unnoticed.

Class 2 will revisit some of the forms they drew last year before moving on to more complicated forms with mirroring. This continues throughout the year in a weekly, dedicated lesson where we work on large drawings to develop the senses of balance and movement and also on 'running' forms as practice for cursive handwriting.

These lessons in form are among the most valuable tools we have for bringing harmony and form to the developing child, and for identifying any difficulties the children may have. They will continue next year.

Numbers

In the 'Numbers' blocks in Class 2, work with the four processes continues, and the children begin to do different work, according to their ability. It is important that they grasp the basics before moving on too much. Some children need a lot of practice working with the four processes with one or two digit numbers while others, who are already very able and confident with this, develop independence and flexibility in number work through problem solving.

Some children also love to work with enormous numbers, like 2,000,000 – 1,000,000 or 3,000,000 x 1 and are delighted by how easy they are. Working out how to write 'three million' in digits is not so easy, and 'two million five thousand two hundred and fifty six' is very challenging.

Following on from this, we look at place value. This helps the children to understand why, when twenty-one looks like this (21), fourteen looks like this (14) and not like this (41), which is the way we say it. We then start to work with the four processes in columns.

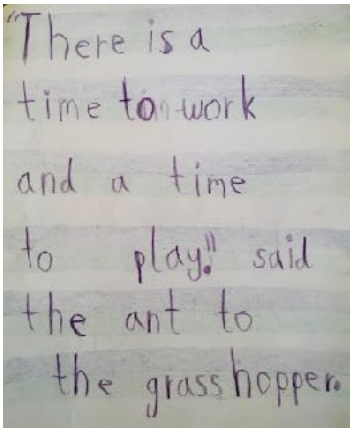
Learning of times tables by heart, through recitation and movement, continues and, by the end of the year, everyone should know the 2, 5, and 10 times tables; most should also know 11, 3 and 4; some will know all of them. We aim to have all the tables securely learned by the end of Class 3 as it becomes more difficult for children to learn them in this rhythmical way after about the age of 10, and they then have to memorise them consciously.

Regular practice of writing calculations neatly and in the correct way, as well as mental arithmetic and working with word problems, continue.

Language & Literacy

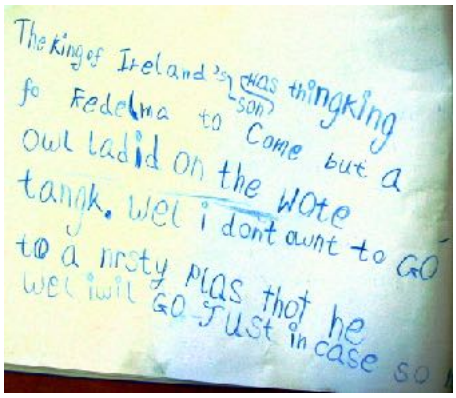
During the 'Writing' blocks, the children practise their handwriting, starting with capitals and moving on to printed lower case letters and finally cursive writing. All three are practised so that they can develop neat, well-formed handwriting.

When they are practising handwriting, the emphasis is on the form of the writing itself, rather than the content. In this case, they write out poems that they know by heart, which allows them to focus on the mechanics of writing and is also very helpful for the children who are not yet reading independently, because they know what they are writing and so can read it.



They continue to practise using letters and their sounds through games like "The Minister's Cat", as well as daily recitation of poems, accompanied by movement. In the games, we also work with consonant blends like st, sm, br, cr, sk, sp etc. and begin to distinguish between ordinary and proper nouns ('names of things') through the use of capital and lower case letters.

The other main activity in the Writing blocks is composition. It is too early for the children to be writing their own stories – at this age they either don't know what to write or everything explodes! – but they can write, in their own words (and without any pressure to spell words correctly), parts of some of the stories they have heard. It is a good discipline for them to have to remember what happened, put events into the right order and work out for themselves how things might be spelt. Often in Class 2 we tell *The King of Ireland's Son*, and this story provides excellent material for composition.

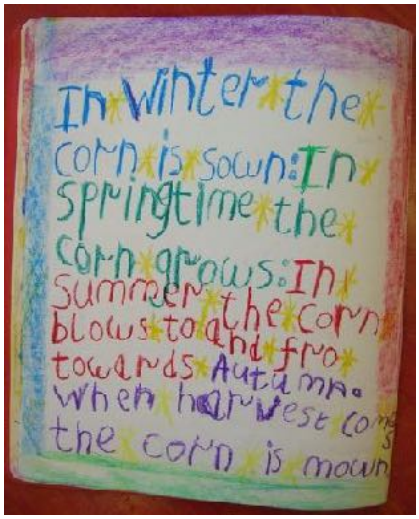


Many children at this age are very articulate and like nothing better than to talk, so they can put this to good use and will produce some wonderful pieces of writing. Others, who tend to hold back, will have the opportunity to hear and use other people's ideas and also to write down what they are too shy to say. Some of the most fluent writing can come from the children who say the least.

Compositions are prepared by the whole class during the recall part of the Main Lesson and everyone should contribute. They will be able to retell the whole story and add their own descriptions and details, and to suggest words they could use in their writing, which are then written on the board. Later in the year, they can be asked specifically, for example, for 'words that tell us what the sea was like' or 'words that tell us what he was doing' as the first introduction to grammar, which will continue in a more formal way next year.

Most of the children should be reading quite well by the end of Class 2, and everyone should be able to spell basic words (the, and, but, then etc.) correctly with everything else spelled phonetically, with the letters in more or less the right order. Children who are not able to do this will need some additional support now, and real learning difficulties (rather than just late development) will have become apparent.

The most important thing is that the children feel confident enough to write what they want to say without feeling constrained by the need to spell everything correctly. It is noticeable, however, that the ones who like to read will learn to spell very quickly and their vocabulary will grow fast. It isn't really possible to teach English spelling through rules, because there are so many exceptions and illogical spellings, so regular reading for pleasure is an important part of their development and education. Regular opportunities to read are built into the timetable.

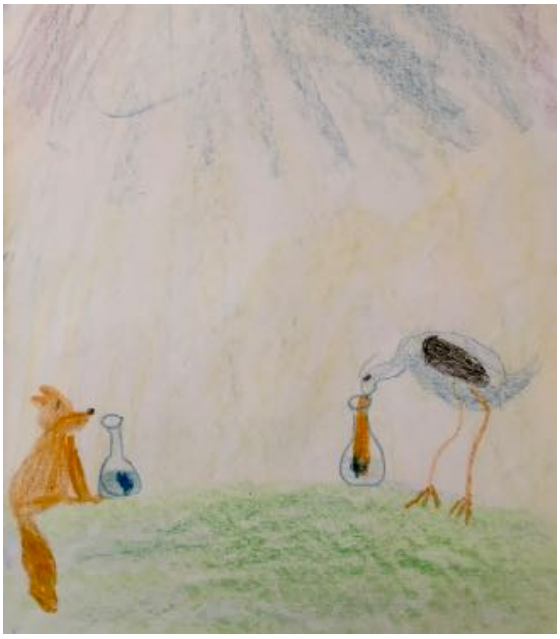


Home Surroundings

This block has a very broad remit but its central aim is to cultivate in the children an interest in, and respect for, the world and the people around them. Stories are told in these blocks, about the animals, plants, places and people in the local environment. These stories form the basis of what will later become humanities and natural sciences.

Saints & Fables

In Class 2, fables are told and contrasted with stories of saints. 'Saints' can include people from any culture whose deeds set them above the ordinary. The children's sense of right and wrong is beginning to become conscious now and more and more they will have to be responsible for their own actions in the world.



In the contrast between the higher human qualities of the saints and the lower ones, represented by animals such as the sly fox and the greedy wolf, the children get a sense of the potential nobility of the human being as something that must be striven for against the temptations of lower desires and temptations. Of course, they are told the stories without this explanation, so that their feeling for what is noble and good and what isn't (albeit funny or clever) is allowed to arise naturally.

Class 3

One can imagine the children of classes one and two still existing somewhat 'in the clouds' - they have a dreamlike consciousness, compared with older children and adults, and do not sharply distinguish the separation between themselves and the world around them.

In class three, and on into class four, the child begins to wake up and become more conscious of themselves as existing as a 'self' which is separate from the world. This can sometimes be an unsettling experience, as they feel themselves to be losing the magic of early childhood. They may have doubts and anxieties which they are not able to clearly express, and it is important that the adult world around them works to remain for them a loving and positive picture of authority in which they can place their trust.

Whilst this 'crossing of the Rubicon', as Rudolf Steiner called it, can be a difficult experience for the children, it is also of course a necessary and important step towards eventually becoming a free and independent human being.

The curriculum for class three works to strengthen the children as they step out of the clouds and on to the earth. Through the practical Main Lessons on Farming and Building the children see and participate in the basic activities of human survival on the earth and build a more conscious connection to the work that adults do. In the Main Lessons on Measurement the children begin to wake up to the dimensions and qualities of the world they inhabit by practically engaging with the measurement of distance, time, liquid volume and weight. In the stories of the Old Testament the children experience in grand pictures an echo of their own journey – they too are experiencing a little fall from paradise like Adam and Eve, and they see that as the Israelites followed Moses into the loneliness of the desert, they drew strength from their absolute trust in the guidance of the authority above them.

The children will now test us more and more, but they need us more than ever to remain their strong guides, knowing what is right for them; only as adolescents do they begin to develop the necessary capacities for true independent judgement.

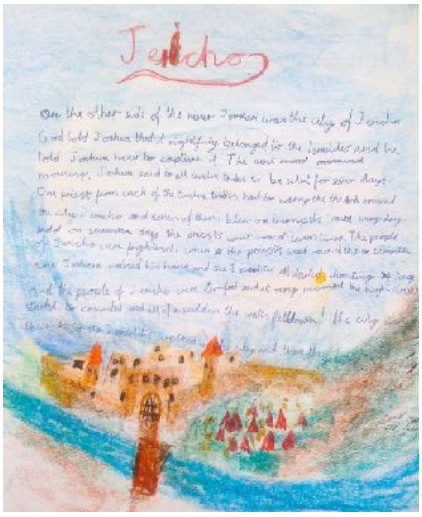
Music, Recitation and Movement

The beginning of the Main Lesson each day is devoted to active and aesthetically satisfying work, in which the children can feel surrounded by the beauty of what they create together. Coming out of the traffic of the morning rush-hour, the games, songs, recitation and recorder practice bring the children into a harmonious group ready for the day ahead.

As in Classes 1 and 2, the poems and songs in Class 3 have to do with the topics of the Main Lessons, and also celebrate the seasons and festivals. The children get to grips with the gravelly and weighty sounds of the Hebrew language by reciting the beginning of Genesis, for example.

The children now progress to singing and playing the recorder in rounds, in which two or more groups start the song at different times. This is, at first, very disorienting for the children, who are used to singing everything together in unison. In singing and playing in different parts, they are called upon to hold their own part without being distracted by the other group, whilst at the same time keeping one ear open to how it sounds as a whole – a valuable social lesson!

Literacy



The majority of the children's writing this year is, as in Class 2, taken from the story content of the lessons. The stories of the Old Testament are full of exciting, funny, sad and beautiful stories that have provided the blueprint for much of Western Literature since; they are an essential foundation for understanding their own culture.

After recalling the stories, the children write their own versions in their Main Lesson books, accompanied by an illustration. Sometimes summaries are also dictated, to model good sentence structure and to widen their range of expression. Now and then, something is written on the board for them to copy, in order to re-enforce their handwriting skills and layout.

New this year, the children are asked to describe accurately what they have seen or done in the previous lesson, for example, during the Farming, Measurement and Building Main Lessons. This process of exact observation helps the children to move away from imitation and towards independence - trusting their own senses - and forms the foundation on which the study of the sciences can be built in later years.

Through games and conversation the children's vocabulary widens and they are introduced to the difference between nouns, verbs and adjectives, without those terms being named as such yet. They are given tasks in which they can use 'naming words', 'doing words' and 'describing words', and their texts become richer and more varied. Next year grammar will be taken up more explicitly.

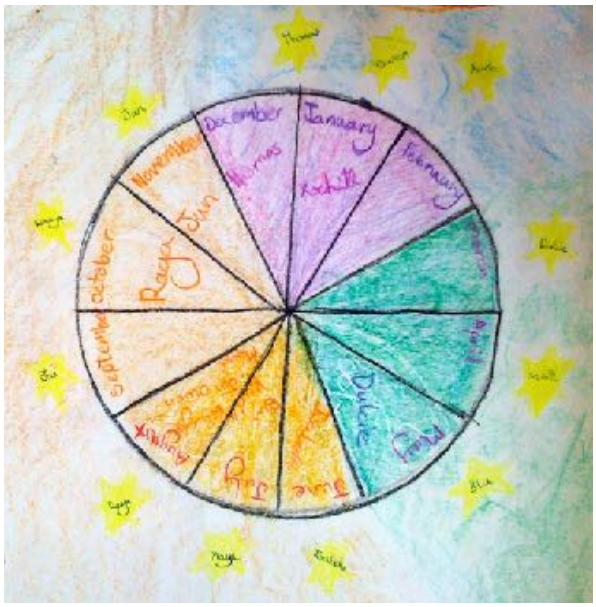
Numeracy

During the maths Main Lessons this year, the day often starts with skipping, stamping and clapping to the times tables. This is done in different ways - the children might be asked to count silently as they skip "1, 2, 3..." and then turn 180° when they reach any number in the seven times table, for example. By the end of the school year they can answer questions on the times tables randomly as they skip, throw or catch a beanbag, for example.

The children's relationship to numbers continues to develop through different games and activities. They might be asked, for example, to estimate the number of matchsticks in a heap, before counting to find the real number; or to quickly say which number lies halfway between 7 and 13.

As their work in mathematics becomes more abstract as they progress, we try to keep their concrete experience of number, and their mental arithmetic, as strong as possible, for example by continuing to work with calculations horizontally (e.g. 76 – 38 =) for as long as possible, although in Class 3 we also progress towards carrying out operations vertically. e.g.

$$\begin{array}{r} 76 \\ -\ 38 \\ \hline \end{array}$$



The children enjoy the power this gives them to carry out the addition and subtraction of very large numbers, which would have been very difficult for them to do in their heads.

The class also has Main Lesson blocks on Measurement. The relationship with time comes first and outwardly we see this in their ability to keep time and rhythm in music. Beat becomes part of their lives. They can see rhythm in other parts of their lives too and, whereas it was unobtrusively supportive when they were little, now it becomes conscious and they say 'why do we always ...?' and anticipate the lessons that are coming without having to look at the timetable. They are introduced experientially to the measurement of time through the seasons, months, weeks, days, hours and seconds; to the imperial measurement of distance, and then to the imperial and metric measurement of liquid volume and weight.

The Measurement Main Lessons provides lots of opportunities for practising maths, especially since the children are introduced to imperial measurements first, which require more mental agility than the decimal metric system: if there are 12 inches in a foot, and 3 feet in a yard, how many inches in a yard?

In the curriculum, we give them the tools to measure the things around them and this leads inwardly to an ability to measure the size of problems, fears, anxieties, likes and dislikes and to find some equilibrium within themselves. There is always an inner and outer element to the curriculum.

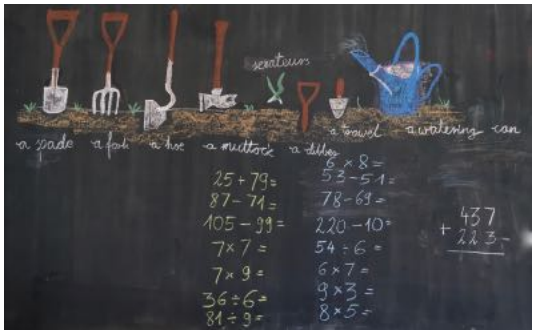
Farming and Building

In the Farming Main Lesson, the children learn about the farmer's responsibilities and how much of what we rely on comes from farms. They hear about the farmer's year – when to sow and when to harvest, and how farmers care for their animals. The lessons have a practical element as they may plant their own wheat or vegetables. They may also make butter, grind wheat kernels to make bread, press apples and boil up jam. The theme continues into weekly cooking lessons, making bread, soup, pizza, so that they experience the whole process from growing plants to eating food.

An essential part of this block is a trip to a farm, where they can experience first hand what they are learning. We have a longstanding relationship with the farmer at Plaw Hatch biodynamic farm, where the children can milk the cows by hand and collect eggs - around 200 each day!

In the Building Main Lesson, the children work together to construct a modest building or shelter. They use locally available materials like sticks, bamboo and clay for 'wattle and daub' walls.

It is a powerful experience for the children at this age to build an effective shelter around themselves, and a wonderful moment when the roof goes up and they see that they are now standing *inside* the building which they had been working on.

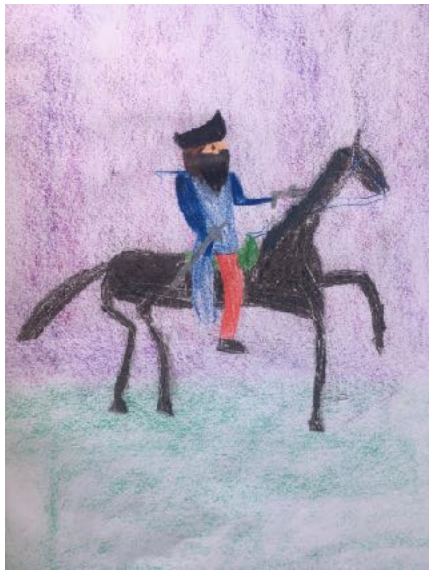


Drawing and Painting

Form drawing helps the children develop skills like laterality, focusing, hand/eye co-ordination, a sense for proportion, harmony and beauty and it supports the development of their imagination and flexible thinking. In Class 3 the children work with more complex forms that require a greater capacity to visualise what they intend to draw before they put crayon to paper.

In Painting, the children move out of the abstract use of colour and into figurative painting. They can paint out of the Main Lesson themes, for example, the days of creation and other scenes from the Bible, as well as seasonal scenes. The emphasis is still on colour over form, and the children are encouraged to think about and experience which colours will lend the appropriate mood to different scenes.

Class 4



The successive school years in Steiner education can be seen as a process of breathing: breathing in one year to breathe out the next year. One can see this when one surveys the classes across the school – some years have a definite introspective quality whilst others a more lively, outward-looking character. Growth and learning does not happen in a straight line. A new development in a child's maturing soul is marked by a period of challenge or even turmoil followed by a steadier time in which the child enjoys and demonstrates newly acquired capacities or a new view of the world, before the next wave arrives and a new challenge presents itself. Children go through this individually and as a class.

Whilst individual classes of course vary depending on the relative age of the children and their individual stories, as well as on the temperament of the Class Teacher, one can say that the odd years generally have a quieter, more unified quality compared with the even years, which can be more exuberant and sometimes more fractious. The harmony of class one usually breaks in class two. The children become cheekier and start to differentiate more between boys and girls, for example. In class three the children become quieter and more inward. They are beginning to wake up and become aware of their individuality, which can also lead to a feeling of separateness and doubt. The mood of class three is met by the reverence of the Old Testament stories with their austere and sure moral authority.

Class four is exuberant, wild, funny, argumentative, clever, quick and hard-working. Of course there are still moments of individual doubt and uncertainty as well, because class four is a continuation of that process which began in class three. Some children go through the 'Rubicon' of the nine/ten year change well into class four. The overall impression when one stands before the class though is of confidence and enthusiasm. The children are now really *here*. You can see it in the way they greet and look at you. We can have a much stronger sense this year that we are standing in front of individual *personalities*. The children develop strong likes and dislikes and become more consciously interested in - and critical of - each other and their similarities and differences.

They also become much more interested in the world. We hear many more pop songs being sung, or current events being discussed. The children are now really aware of everything going on around them. They take in the world at this age very intensely and are sensitive to the adult world surrounding them and project this back out without much of a filter. On a subtle level, one could say that they are very *aware* but not yet fully *awake*, and still experience life as a wakeful dream, which is why the curriculum must meet them with powerful stories, rich pictures and engaging activity.

The Norse Myths & Literacy

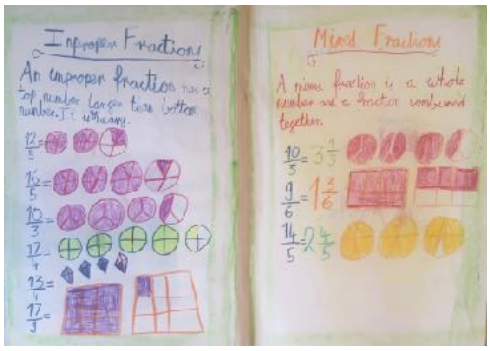
The Norse myths begin with the creation of world as a clash between fire and ice. What an appropriate way to begin the year in Class 4! The world of the Norse myths is enormous, outrageous, humorous and strange and the children, drawn more now towards the colourful and sensational, are immediately engaged by them. Just as they

are becoming more aware of each others' personalities and conscious of others' faults and strengths, they are presented with the range of characters inhabiting Asgard. These are larger-than-life superheroes with special abilities and equipment: magic hammers and spears, enchanted jewellery, a ship which folds into a cloth. Yet they nearly all have their faults, of which the children become keenly aware. There are many debates at break time about whether they like certain characters or whether the right choices have been made in the story. They love Loki's cleverness, trickery and mischief, until it turns sour and spiteful towards the end of the myths, bringing about the downfall of the Gods. The children see a caricatured reflection of their own developing psyches in these characters and stories, and learn a great deal from them.

The children's work with literacy and grammar can be based around the content of these myths. The children love writing about and illustrating the stories. Sometimes they are given an opening sentence, sometimes they write freely, and we speak about ways to enrich their writing.

We begin writing poems, at first together as a class, then in pairs or individually. We also make a study of verbs, nouns, adjectives and adverbs, and this new content works its way into their writing as well. As long as it does not inhibit the children from writing freely and spontaneously, it is now a good time for the children to become more aware of the laws of the language which they have up until now used without any thought.

Maths



In the Main Lesson blocks we first return to and practise material that was introduced in Class 3 - vertical addition, subtraction and multiplication. Then fractions are introduced. The children in Class 4 are ready for the conceptual leap into this new way of thinking about number. At first they are reintroduced to an idea they encountered in class one: that *one* is actually the biggest number, it is the *whole*. Once the whole is split you have more pieces. 'Have any of you ever *fractured* a bone, class four? When you break the whole, you have a *fraction.'* Of course we can begin our study of fractions by cutting and eating a cake, and then continue splitting other things into their equally-sized fractions.

When the idea of fractions has ben experienced in a practical way, we can move into their numerical representation, which takes some getting used to. The children learn the terminology needed to work with fractions: numerator, denominator, top-heavy etc. and begin to multiply, divide, add and subtract fractions, simplifying them, finding equivalents and lowest common denominators in order to add and subtract non-equivalent fractions

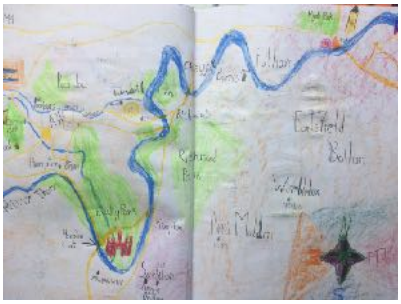
e.g. 1/3 + 2/4

= 4/12 + 6/12 = 10/12, or 5/6

Fractions will be revisited regularly over the coming years. They tend to be one of the areas of maths that is more easily forgotten and many of the children will need reminding a few times before the concepts and rules are firmly embedded.

Knowledge of times tables is essential when working with fractions, so times tables practice continues through games and mental arithmetic each day during the maths Main Lesson blocks.

Local Geography



As the children become more aware of their surroundings, a study of their local geography is undertaken. This can begin with an imaginative leap – to imagine the world looked at from above and make bird's-eye-view drawings of their bedrooms, the classroom, the school and the local area. They are drawing maps. The children's journeys to school can be collected to create a large map of West London, placing their houses in relation to the river, the parks and the main roads.

This block should also involve walks around the local area and along the river Crane to meet the Thames. In a city in which one sometimes only the sees the surface of things from a car or bus window, it is a satisfying and eye-opening experience to follow this ancient waterway through parks, neighbourhoods and industrial areas before it opens up into the vast Thames at Isleworth. The children are also introduced to some of the local history of the area – Hanworth Park's history as an airfield, and the dangers of highwaymen in the seventeenth and eighteenth centuries.

It is an empowering lesson that gives the children a close relationship with their surroundings. Around this time, some of the children will start making their own way to school.

Man and Animal

This Main Lesson represents the beginning of a differentiated natural science curriculum. We begin with the part of the natural world that is closest to us, the animals, and move outwards from there. In class five we will look at plants in a Botany Main Lesson, followed by the rocks in Geology in class six. The children are developing a distance and therefore an objectivity towards the world, and so we approach animals in a new way – they no longer come walking and talking as they do in fairy tales and fables, but in a picture, accurately imagined and precisely described, of the animal in its environment. Still, we have to be careful to avoid dry facts and

information taken in isolation, and rather give a truthful picture of each animal within a comparative framework.

We see, through looking at each one's way of life and habitat, that most animals specialise in something, and that as a result each has developed in a one-sided way. Birds for example, are so perfectly developed for flight, with their hollow bones and wonderful feathers, that they do not digest their food very thoroughly, certainly compared to the heavy cow, with its four stomachs! The human being, in contrast, does not have a body specialised for anything – we can't leap like a squirrel from tree to tree or change colour like the cuttlefish. We have therefore retained a balance – one can see this in our teeth in the balance of molars, canines and incisors – and have the freedom as individuals to develop in many directions. What's more, we differ from the animals because only we have fully freed our hands from the task of locomotion. Because we stand upright, our hands are free to shape and serve the world.

Closely related to this is the reason we don't train our children for particular sports or specialised physical activities when they are young. While their limbs are still growing, repetitive training in (particularly, but not only) football, tennis, martial arts, ballet and gymnastics pushes them into developing in a certain way - into taking a form that is suitable for that particular activity - and this undermines the child's freedom to develop his or her own body in a way that expresses the individuality that inhabits it. Children now generally move much less than we did when we were young. There isn't the running, walking, skipping and climbing going on after school that there once was. If they are spending most of their free time sitting down and the rest being trained in a particular sport, there is no opportunity for the free, natural movement they need for healthy growth. The games we play in the lower classes allow the children to run, skip, jump and move freely, so that their bodies develop naturally. If a person's body doesn't 'fit' his individuality well, it will be a constant, if subtle, irritation - a source of frustration - to him for the rest of his life and that will affect everything he does.

Movement, Music, Recitation

Each day continues to begin with some movement - skipping or a game - and something artistic such as singing, recitation or recorders. Singing in rounds develops into part singing.

Poems reflect the Main Lesson content and bring the children's attention to language features like alliteration, rhythm and form. Alliterative poems, in which words in the line begin on the same letter ('*Forge* me with *fire* a *sword* for my *smiting*') have a strong beat which suits the children at this age. It grounds them and harnesses their energy. The results are quite powerful!

The Class Play

Classes work together on some sort of play most years, In Class 4 this is usually based on one of the Norse myths, for example the episode in which the Gods' golden Apples of

Immortality are stolen by the giants, along with the apples' guardian, Iduna. Of course, it was Loki's fault, and he is charged with making it right again.

The children are able, at this age, to speak alone, rather than just in chorus, and can begin to embody their assigned characters. They are also involved in putting costumes, set and props together, and the play is performed for the whole school, which makes it quite an important event for them.

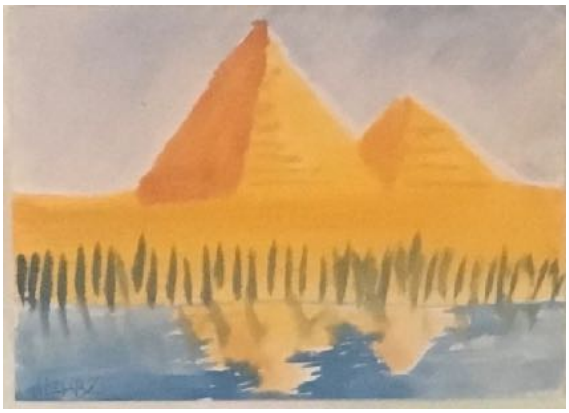
The Class Trip

In Class 3, the children will have visited and stayed at a farm. From then onwards, annual class trips become a feature of school life. Class 4 trips can vary, but are often related to the Local Geography or Man and Animal blocks. Walks in the nearby countryside give them an opportunity to spot animals they may not have seen before, and to practise their map reading skills.

Class 5

In Class 1, history, geography and science were the various aspects of the Home Surroundings Main Lesson, woven together, intertwined and very close to home; a reflection of a world in which the children were still completely immersed. As they grow, they slowly come out of that world and develop an expanding picture of it; by Class 3, they can look back at the past and imagine the future; they can measure things both outwardly and inwardly; by Class 5 they can begin to draw their own conclusions and notice for themselves how things relate to each other. The 'oneness' of the world is becoming something they can observe more and more clearly. This change in their consciousness is mirrored in the curriculum, which becomes more differentiated as they develop the capacity to look more closely at things.

In Class 5 there are Main Lesson blocks in Local (London) or sometimes British Geography, Maths, Geometry, Man and Animal (Zoology), Botany and Mythology of Ancient Civilisations. In Class 6 we add European Geography, Roman and Medieval History and Physics, and beyond that, Chemistry, Physiology, World Geography and Modern History, expanding the world that we present to them in every direction, yet still carefully following the threads that connect the things they are learning, so that they understand the world as a whole and can move freely, in their thoughts and imagination, between different areas of study and interest.



In contrast, much of modern education is made up of fragmented and disjointed pieces of information that give a confused impression of the world as a place made up of lots of isolated units - like lego. In addition to this, little consideration is given to whether what they are being taught is relevant to the children's age or stage of development, and when they are given information with which they can't make an inner connection, they can't make any sense of it and they can't do anything with it except remember it. The gradual, development-related expansion and differentiation of the curriculum is one of the most important aspects of Steiner Waldorf education.

Mythology and History of Ancient Civilisations

During this year, mythology begins to transform into what most people would recognise as history. Archaeological artefacts and personalities start to take their place beside the gods, legends and stories. As we move from Ancient India through Persia, Mesopotamia and Egypt to Greece, we trace the evolution of human consciousness through five thousand years. With broad brush strokes, through poetry and stories, sometimes referring to physical geography as well, we try to paint a picture of how people's relationship with their gods and with earthly life changed; how their attention moved from one to the other; to show how people did not always think and

feel the way we do now and that much of what people did in the past, particularly the stories they told, can show us how they experienced life. This resonates with the children at this age; they can look back at their own lives and realise that they too were not always as aware as they are now; that whereas when they were younger, they simply accepted life as it was, now they question things and want to make decisions for themselves.

At the end of the year is the annual Class 5 Olympics, a four-day camp with Class 5s from all over the country and beyond. The children train together and compete in the seven disciplines of ancient Greek athletics: the dash, the marathon (a shortened version), long jump, high jump, discus, javelin and wrestling. The children invariably rise to the challenge and the occasion, and achieve things far beyond their expectations. This is often the highlight of the year and, for some, of the whole Lower School.

English

In English this year we work with punctuation, verb tenses, direct and indirect speech, descriptive writing generally and letter writing. All of this can be accomplished through writing exercises and reading of texts in the Mythology, Science, Geography and History blocks where reading and writing form the greater part of the children's work.

In recitation, we can work with dynamics in speech and focus much more than before on the meaning, form and beauty of poetry.

Maths

The Maths blocks in Class 5 are designed to build flexibility and familiarity with numbers and the ability to think around a problem. Practice is, of course, one of the most important elements, and this is always very comfortable for some and excruciating for others. It's always a matter of working with everything they can do, going back to Class 1 arithmetic, using times tables in many different contexts, fractions and decimals - going from one to the other, measurement, time, factors, prime, abundant, deficient and perfect numbers and everything they know so that they can get used to having to recognise for themselves which process they need to use, switching from one to another, thinking through a problem, working out the various stages they need to go through, all of this to develop independence in their thinking and the ability to maintain focus.

New topics this year are percentage, fractions with brackets, average, mean and median. We also work with data in pie charts, bar charts and graphs, deciding which is the most suitable in each situation, and touch on how these pictorial representations can be used to manipulate information and, sometimes, give a false impression. This is really the first

time we encounter maths as something that is not simply 'right' or 'wrong'. This relates perfectly to the development of individual freedom in Ancient Greece.

Geography

Many teachers bring national Geography in Class 5, but for children who live in a big city like London, there is another possible step between the immediate area and the country as a whole. (This is, of course, an even bigger issue for children growing up in America where their nation is really a whole continent!) So Geography in Class 5 can sometimes still be fairly local.

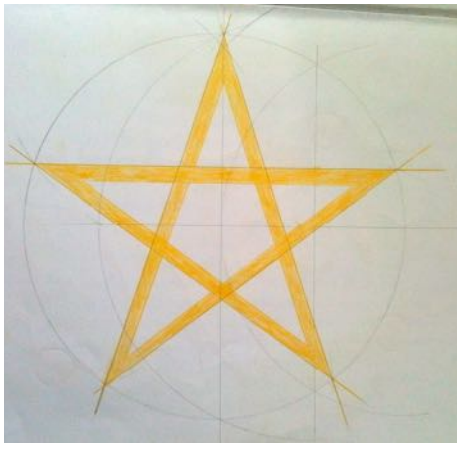
We can begin by talking about direction and orientation. How do we orientate ourselves on the earth? Do we have a sense of direction? We can make a simple compass - a magnetised needle floating in a dish of water - to find north, then work out where we all live in relation to the school. We can talk about how, if you live south of the school, you have to travel north to get here, even though you live in the south and the school is in the south. 'So some things are more south than others!' The idea of direction being relative to your position is a new one.

We can look at the school, it's location and history, the formation of the land and why this was a good place to found a town. We can study the industries that grew up here and go for walks to look at the landscape and landmarks that have a place in the area's history - things that characterise the way people lived here in the past, what has changed and why.

We can then expand by walking along the Thames in both directions - out of the city and into it - and noticing how the landscape changes. In the classroom, we look at old maps and new ones to see how the city has grown and developed.

As a footnote, it is a question how we can take the children out in London - in the modern world - without them being distracted by advertising and tourist attractions. It needs a lot of thought, but, on the other hand, this is only to be expected at an age when their awareness of the adult world and interest in how things work are both growing.

Geometry



A vital skill for geometry is the ability to draw fine lines, which is why geometry comes at this point in the children's development, and not earlier. In order to get them to draw fine lines, they need to understand what it means - what that would look like.

We can begin by asking them to find as many different meanings for the word 'fine' as possible. They will think of 'high quality', 'delicate' and 'beautiful' and this gives them a feeling for the beauty and nobility of the fine line and the sharpness of the pencil needed to draw it. Then their drawings will be careful and they will take care of their equipment, which makes the whole process of learning to draw geometrical constructions much easier for them.

The main aim of this block, beyond this, is to get to know regular geometrical figures, to grasp their interrelationships, through drawing them. We construct triangles, squares, hexagons, dodecagons, octagons. They hear that, in the ancient Egyptian calendar, there

were 360 days in the year. Our words 'day' and 'degree' both come from the Egyptian word for day, hence, one degree is one 360th of a circle.

We can find geometry in the natural world, to connect with the Man and Animal and Botany blocks this year, but also just to think about the wonderful order and pattern that exists in the world. Geometry was a sacred art in the ancient world and the children's experience of it in Class 5 should give them an idea of the wisdom of ancient cultures, to develop respect for, and interest in other people and other ways of looking at things. It's amazing how the simple drawing of some lines on paper can have such far-reaching effects.

Natural Science

As human beings, we have less in common with plants than we do with animals, so it's possible to be more objective in our approach to them. In Class 5, the children are ready to turn a more scientific eye on the world.

It's interesting to see which children gravitate more towards animals and which towards plants. This is a block in which we can set the children projects on their own choice of plants, to see what they can do on their own out of their own interest, and how well they are able to work independently.

The aims of this block are to bring an awareness of the relationship between the plant world and the seasons; to see how the plant stands between the mineral and animal kingdoms; to look again at the geometry in plants and begin to practise observation skills. We might draw the life cycle of a typical flowering plant, as well as the various parts of the plant and flower. In both cases, we are looking at what flowering plants have in common, so that the children have an idea of what is typical before beginning to look at individual species and how they deviate from the 'norm'. This gives them a cohesive, basic picture and then they are able to notice when something isn't like that, and to ask why.

Classroom discussions can go into how the environment affects plants, what you would expect to find under certain conditions and why. Then, when we go out and look, we can see that, sure enough, flowering plants like to grow in sunny places; mushrooms like dark, damp places where there is something rotting for them to feed on; when flowers grow in shady places they are often blue; that bulb plants have finished flowering before the hot weather comes, while herbaceous plants are only just beginning to come up.

So we have begun to study the kingdoms of nature - the animals that fly over and walk on the earth's surface and, moving one step closer to the earth itself, the plants that spring out of it. As the children become more aware of, and more at home in their own growing bodies, the science blocks provide a reflection of their changing inner experience. Next year we will penetrate the earth itself, with Mineralogy.

Class 6

The twelfth year of a child's life is a kind of limbo; he is no longer really a child, but he is not yet a teenager, and adulthood is still a long way off. After the challenge of the tenth year, comes the struggle to establish some balance and order, which is more or less achieved during Class 5. Then comes puberty, bringing another onslaught of emotions and physical changes that are difficult to deal with, both for the children themselves and the adults around them. What they have learned from their earlier experience is that the situation needs to be controlled, so, in Class 6, this is their response. But, as with everything at this age, it is somewhat heavy-handed and naïve.

As always, this finds its reflection in the curriculum. Think of the Romans marching in uniform stride across the known world, everywhere encountering rebellious tribes with their varied and colourful histories, cultures and traditions, not engaging with them, but offering only two choices: surrender or be crushed. There you have a picture of the situation in the child's soul life at this time. Each one is a Roman emperor trying to maintain control of the realm of his own feelings by laying down the law. The world, other people, himself, everything is categorised and labeled: 'Things I like', 'Things I don't like', 'Things that are cool', 'Things that are rubbish', 'Things I will never do', 'Things I must do', 'Things I am good at', 'Things I am bad at', etc. In true Roman style, once the categories are fixed (and at this point he sees no reason why they would ever change) he compares his list with those of his peers, for reassurance, and adjusts it as necessary. Belonging to the group *matters*, and there is no room for variation in the group; its judgements are absolute. In this way, he finds a safe place for himself in the world. His question, for the moment, is 'Who are we?', not 'Who am I?' Although this is uncomfortable for us, (from our adult perspective, our children are submitting to peer pressure) it is just as it should be and we have to understand that they will come through it.

Once the twelve-year-old has found where he fits, he believes that he has grown up - that he understands how the adult world works and that he will get older, but otherwise life will go on just as it is now. For some, and at times for all, this brings reassuring stability. Confidence comes from knowing what the rules are and abiding by them. But for everyone there is an underlying feeling of disappointment - a feeling of 'Is this really all there is?'

At this moment, we take a file of something boring and familiar off the shelf (of course they groan as we do it), blow off the dust and open it up. They get ready to add some dull facts to their collection, resigned to the prospect of spending their remaining school days in this way. But instead we take them into a completely dark room, turn on a torch and *they can't see it*; how is that possible? They find that they can *hear* the difference between cold water and hot water; but temperature is something you *feel*, not *hear!* That a small piece of wire can ring like a church bell, as long as the sound doesn't have to travel through the air; so everything we hear is muffled?? We show them that everything they thought they knew is just a signpost to something greater and more fascinating than they could ever have imagined. We start to open up the familiar world so that it fills again with the wonder it held for them when they were very small and everything was new; to plant the seed of a thought in their minds: 'There is no end to what I can discover. I could go on being surprised and delighted by the world for the rest of my life!'

All of this is a background to the curriculum in the Middle School - Classes 6, 7 and 8 - but it is this bringing, *at every stage*, of things to which the children can relate directly

out of the experience of their own inner lives that makes Steiner Waldorf education unique and powerful.

After the twelfth year, the faculties of judgement and objectivity develop as a counter-balance to the emotional turmoil of adolescence, and we can look with clarity at the physical world. In Class 6, we do this through Physics, Geometry and drawing from observation. We also consider the different ways in which people have dealt with the world, worked with it, changed it and thought about it through History, Geography, Art, Literature, Maths. These examples and experiences model for the children how the world can be interpreted and the many ways in which it is possible to enter into life.

Geography

European Geography comes in Class 6. It is important that the children don't focus straight away on nations and political borders, but that they first see Europe as a single land mass whose mountains and rivers run together and have a relationship with each other. Then they are able to understand better why at least some of the cities and boundaries between countries are where they are. To become familiar with the shape and landscape of Europe, they can be asked to sketch it freehand, from memory. This is very informative for the teacher and reveals, in some cases, that they know it fairly well and, in one or two, that they really have no idea what it looks like! More importantly, the process makes them aware of what they know and what they don't. They can then look at a map and see the parts they didn't know. The next day, as recall, they can instruct the teacher while s/he draws it on the blackboard and together they will come up with a very good map, which they can draw in their Main Lesson books.

Later in the block, they can model the continent with clay, again from memory, putting in the mountains as best they can and, in most cases will be pleasantly surprised by how successful they are.

The next step is to look at where the first cities were situated and why and how human life is related to the landscape through the need for water, food, shelter and security.

Then the children can study a particular country as a project and present it to the class. In this way, a picture of Europe is built up, spreading a little beyond its borders into Asia and Africa, so that it forms the stage for the history blocks to come: Alexander's epic expedition east to India and the inexorable westward expansion of Rome.

History

The two stories of ambition and empire that form the history curriculum in Class 6 reflect the children's personal experience at this age perfectly. There is a difference between them, however, that illustrates a monumental shift in the development of human civilisation, the repercussions of which are still felt today. Both Alexander and the Romans were ruthless in their desire to conquer and dominate everyone who tried to stand in their way, but, whereas Alexander was also hungry for knowledge and understanding of other cultures and devoured and immersed himself in everything he encountered, the Roman gesture was to replace everything with Rome. All over Europe, little replicas of Rome were established, regardless of geography, climate or local traditions, and because what the Romans built - physically, socially, morally - was intended to endure for all time, two thousand years later, much of what they established still exists and the world has had to develop around it.

There is usually a trip related to Roman History in Class 6. Hadrian's Wall is a popular destination. Some classes have also gone to Nîmes in the south of France.

The Roman sites in this country have a very different feeling from those in France. 'The Romans in Britain' is an interesting subject in itself, but to understand how incredibly powerful the Roman empire was, France offers a grander experience. The Pont du Gard is the most amazing piece of engineering. An aqueduct built to bring water from the river Gard to Nîmes, its stones held together for 2000 years without being cemented. When you stand on it, you feel the Romans' understanding of the laws of physics; that their grasp of everything to do with the material world was awe inspiring; that they could have achieved anything they set their minds to in this field. It is a monument to human will.

English

In English this year we continue to work with punctuation and verb tenses and descriptive writing generally, as well as conditional and relative clauses and other ways of connecting sentences to make writing more fluid. English is the medium through which we communicate and work in every lesson, so much of the work takes place in other blocks, for example, finding words to express temperature or light and dark in the Physics block. Classes work with recitation almost every day, with dynamics in speech as well as meaning, form and mood in poetry. There is also often a play, which provides an opportunity to look at how different characters can be expressed through language.

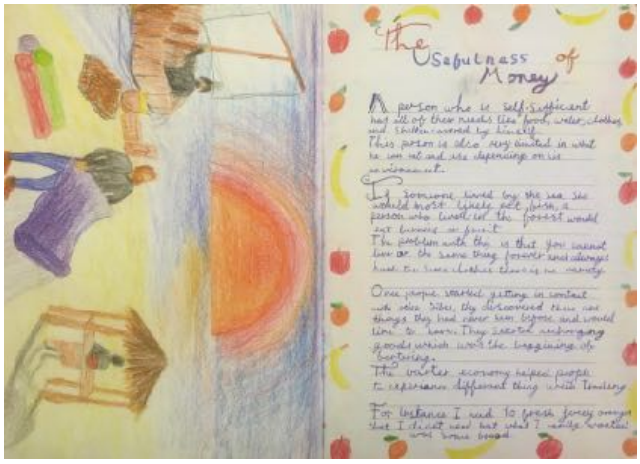
> "During the block, I asked the children why people write things and why they read. They came up with many very good reasons, including 'to escape into another world' and 'to find out about things', but perhaps the most important one was 'to see into someone else's world'."

Novels, for example 'Song for a dark Queen' by Rosemary Sutcliff, about life in Britain towards the end of the Roman occupation, can be read and used as the basis for short pieces of writing: prose or poetry; descriptive or narrative. Sometimes they are given strict rules, such as a particular poetic form, or there has to be an adverb in every line, or it has to be written mainly in the future tense, or the past continuous or the present, or they can be asked to narrate the events of a chapter from a different character's point of view.

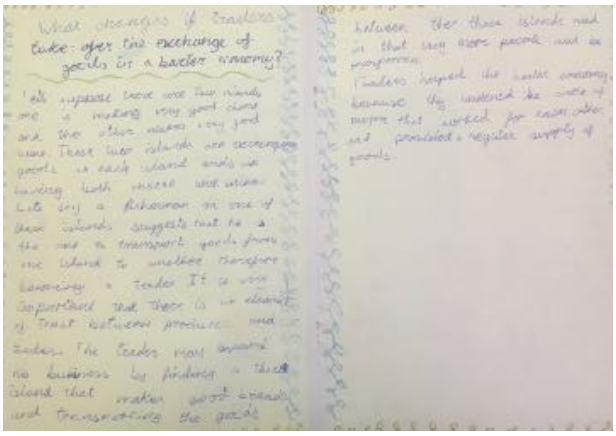
> "At one point in the story with the Roman army advancing on them, Boudicca has to decide whether to try to make an alliance with the Romans, thereby securing her people's safety, or to join forces with their long-time enemies the Catuvellauni and try to drive the Romans out of their land, leaving the British tribes with both their dignity and their freedom.
>
> I divided the class into two groups who then had to discuss the two choices. The next 45 minutes saw the classroom filled with debate about freedom, comfort, hatred, cowardice, fear, courage, revenge and many other powerful emotions, culminating, at least for me, in an argument between two children: "Of *course* they should join the Romans, the Romans are much stronger, otherwise they'd all be killed. They'd be stupid not to. Anyone would. Why wouldn't you? What have they got to lose?" to which the other child replied "They wouldn't be FREE!!"

Maths

In Maths we work with the relationship between percentages, fractions and decimals and relate these to charts and graphs. We also look at money - interest, currency exchange, profit and loss and the three uses of money: buying and selling, borrowing and lending, giving and receiving. We look at how money circulates in society and talk about the moral implications of this.



In Geometry, we variously practise and learn the basic constructions of right angles, triangles, squares, pentagons and other regular figures, how to bisect angles and lines and how to draw parallel lines. This leads to the relationships between opposite, alternate, adjacent and corresponding angles. We then look at the internal angles in figures, beginning with the internal angles in a triangle, which always add up to 180°, and use this to find the sum of the internal angles of any figure - regular or irregular - arriving finally at a formula: n = 180(s - 2)



By drawing a hexagon contained within a circle, we discover what Pi really is, and then use it in circle theorems to calculate the circumference and area of circles. We also touch on other formulae and work out how to express familiar processes in this way, for example, n (the current year) - b (the year I was born) = a (my age). Formulae and Algebra will be explored further in Class 7.

Physics

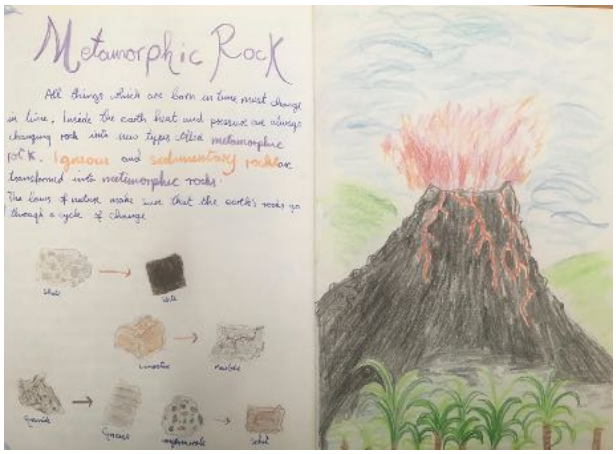
After Zoology and Botany, Physics is the next part of the science curriculum to be brought as a separate subject. We move from the study of living things, to which the children can relate through their feeling life, to that of natural phenomena, which they come to understand more through direct experience and thinking.

We look at the nature of Sound, Light and Heat, considering also their counterparts, Silence, Darkness and Cold. We also experiment with Magnetism and Electricity. Phenomena are experienced and characterised through language and art as well as through experiments to discover their nature and how they behave. This is not about proving known theories, as so much science education is, but about getting them to use and trust their own senses to learn about the world; we do not tell them what they ought to see or hear, but ask them and help them to be aware of what they actually experience. A lack of trust in our own ability to learn from direct experience leads to a dependence on authority in all its forms, and thereby to a lack of freedom to think, judge and decide things for ourselves, so the way in which these lessons are conducted has a value and importance beyond the bounds of scientific investigation.

Astronomy

As well as studying the phenomena of the Earth, we can look up to the stars this year. This is just a beginning, using the naked eye (again, our own senses) and looking at the sky from a geocentric point of view: how does it look from where we are and how does it change over time? We begin by learning how to find the North Star between Ursa Major and Cassiopeia. Then we look at how the whole sky rotates around this more-or-less stationary point and how the stars closest to the North star rotate in small circles during the night, but are always in the same region of the sky, while those far from it, like Orion, hurtle around, disappearing completely and then reappearing in a completely different place. We also relate this to navigation, for which the North Star has proved invaluable in the Northern hemisphere over centuries. This block, or an additional one, is often taught in Class 7, in relation to the Discoverers and navigation.

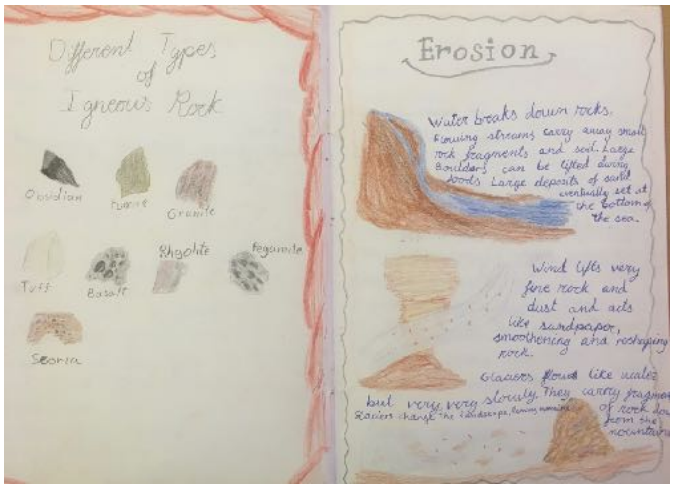
Mineralogy



In this Main Lesson, the children learn about the mineral kingdom which follows on from the animal and plant kingdoms that were studied in Classes 4 and 5. We start by looking at the land and how it is formed, what supports the plant and animal life, and the landscape features of hills, cliffs, mountains, valleys and water.

We then observe different rocks and consider questions such as: where did they come from, how were they formed, and what were they made of? This leads to a comparison of Limestone and Silica and to the three kinds of rocks: igneous, sedimentary, and metamorphic.

We look at where limestone and silica are found (caves - stalactites and stalagmites; volcanoes) as well as where they are found within the human physical body. This is followed by studying volcanoes and earthquakes.



The value of minerals in practical life is taken up, including oil drilling, coal mining and gas production. Finally, we consider metals and precious stones: what they are, how they are formed, and what they are used for.

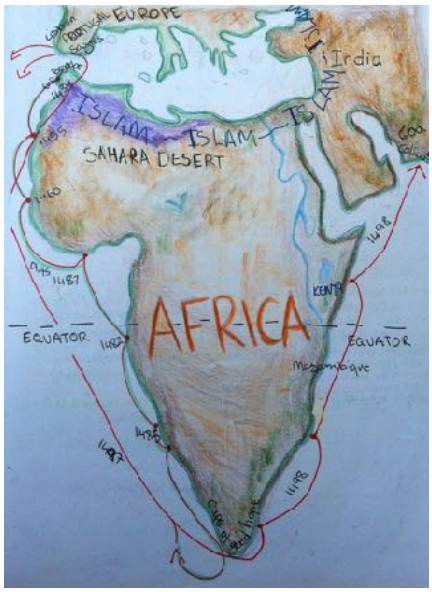
The main aims of this Main Lesson are for each child to understand more of his/her own nature through the study of the mineral world and to develop a feeling for the place of the mineral kingdom in nature and its importance to our modern way of living.

Class 7

In their thirteenth year, the children's thinking is developing rapidly. There is a hunger to find out for themselves. As a reflection of this, 'Discovery' is a strong, central theme in Class 7. It runs through the year as we examine the goings-on inside our own bodies, the chemical processes at work in everyday substances and phenomena, the origins of things we take for granted, and emerges explicitly as we follow the Portuguese and Spanish explorers of the so-called 'Great Age of Discovery', to Africa and America.

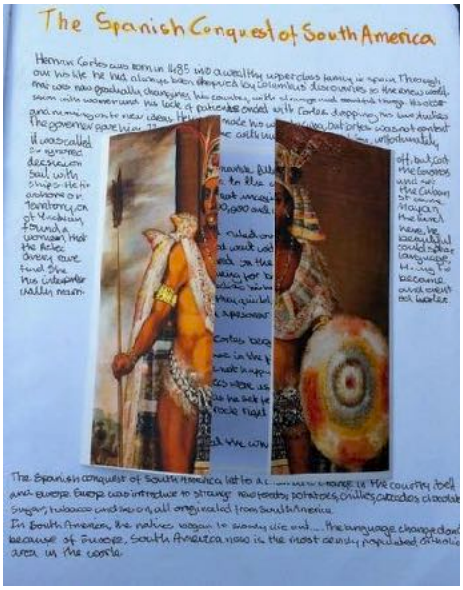
Generally, this year we work on developing the students' independence in thinking and in their work and behaviour. They have more freedom in many ways, but also more guidance in how to make the right choices. For example, they are asked to include their own views in their writing, and to pick out aspects that appeal to them from what they hear or read, but only after we have had a comprehensive class discussion, so that they have a more rounded picture, made rich by a variety of different points of view. Without this, the strong wish to form judgments that began to develop in Class 6 can lead to prejudice and unconsidered opinions.

History



In History, we begin to connect the ancient and modern worlds, a process that will continue next year, to try to understand how the modern world came to be as it is: how the social structures that were laid down by the Romans became incorporated into the forms of government and society that developed in Europe in the centuries after the division and then fall of the empire; to come to some understanding of how and why Greek culture was preserved and developed in the east for a thousand years - and what might have happened to it if it had remained only in the west as the Catholic church rose to power in Europe.

From this, we can bring a picture of how the idea of nationhood arose in Europe and how this went hand in hand with a questioning of the authority of the church. Once the veracity of church law was called into question, an unstoppable force was set in motion and all 'knowledge' and belief came under scrutiny. We look at how the Catholic church caused its own decline by trying to suppress this impulse and see how the human being's desire *to know*, once awakened, cannot be put to sleep again. People endured torture and were prepared to die for it. We go more deeply into the personalities of the Renaissance and Reformation, asking what motivated them, what they were interested in and what kind of people they were. In the Art lessons, we draw portraits of them, work with perspective and draw objects from observation, just as the Renaissance artists did. When you compare paintings and sculptures from the end of the 14th century with those from the end of the 15th, you can see the dramatic and sudden change in focus - in



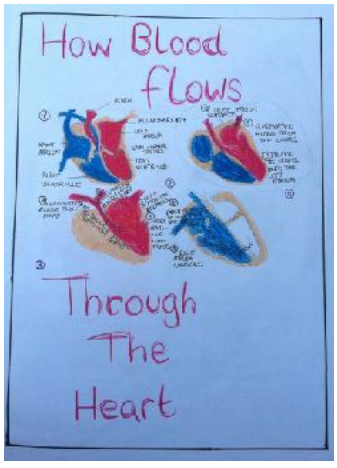
human consciousness - that took place during this period.

The close examination of the world around him awakened in 15th century Man the desire to know what lay beyond the horizon. We can loo at the expanding world through the eyes of the Europeans of the 15th and 16th centuries: what led to the impulse to explore beyond the known world? Did scientific and engineering advances bring new possibilities, or did the advances come about because the desire to explore arose in human beings? How did the Europeans respond to what they found? and how did the indigenous people in the 'new world' respond to being 'discovered'? Our focus here switches to some of the history and culture of the 'discovered' countries before the Europeans came; how amazing it must have been for each to find that there were completely unknown continents and cultures as sophisticated as their own; every bit as unexpected and wonderful as finding 'life as we know it' on another planet would be today.

This develops into a study of how being 'discovered' and settled by Europeans has affected those countries since, up to the present - the establishment of Catholicism and the Portuguese and Spanish languages in South America and Asia, French, English, German and Dutch in Africa and North America. Children in the class, parents and staff members who come from some of those countries can contribute a great deal here through their personal stories of growing up there.

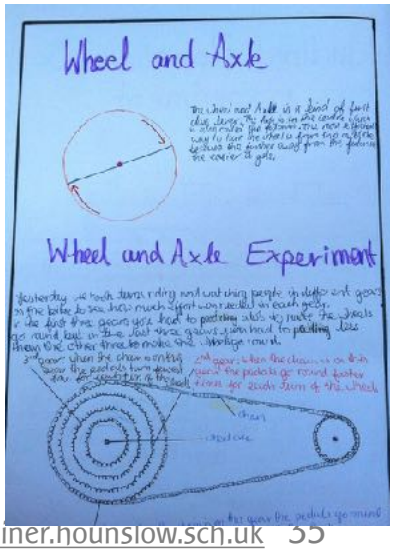
Natural Science

Natural science is differentiated further this year, into Physiology, Physics and Chemistry. In Physiology, we begin with a study of the physiological structure of organs of the human body and an introduction to the three main bodily systems: breathing, eating and reproducing.



We look at the different food types and nutrition, expanding on what we learned about carbohydrates in Botany last year, and how the body processes, uses and stores food. We look at respiration; how the body takes in oxygen, what it's for and what happens if we don't have it, leading to blood circulation and the heart. We then go on to the reproductive organs and how they work. Part of the study of each system is discussion about the effects on the body and mind, as well as some of the social implications of smoking, drugs, alcohol, food, sex, music and art.

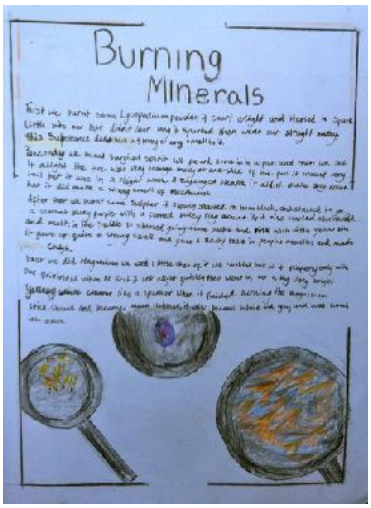
If there is time, we can begin to explore the senses of hearing, sight, taste, smell and touch, and how they connect us with the world.



In Physics, the children use their developing observation skills to study the 'Six Simple Machines' - the Lever, the Wedge, the Inclined Plane, the Wheel and Axle and the Screw. Experiments are carried out to discover how each one makes work easier, by spreading effort over either a longer time or a longer distance. The children make detailed measurements to work out which were most effective and noted the advantages and disadvantages of each one.

Once they understand how the simple machines work, they can be asked to think about how they could be improved, or why this one worked better than that one.

To bring this work into relationship with their own lives, it is illustrated with examples of each in everyday life, so that it was easy to see why, for example, the door handle is at the opposite edge from the hinge and how many of the things we use incorporate two or three of these principles.

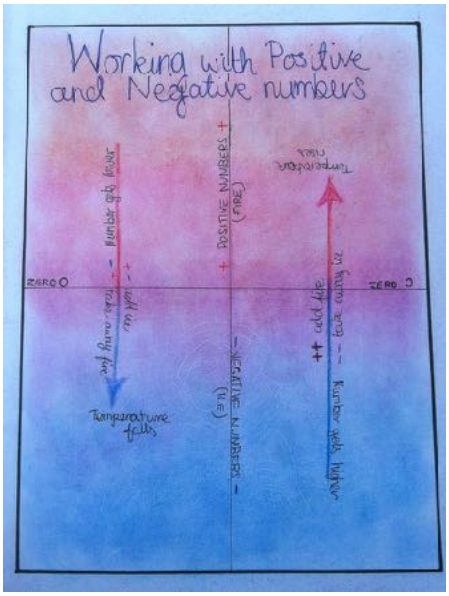


In the Chemistry Main Lesson we begin by exploring the phenomena of combustion. Different materials are closely observed as they burn. The children are encouraged to be aware of what they can see, smell and hear throughout the whole process and to come to understand what is happening when something burns. Working with what we experience through our senses and honing our observation skills are important parts of science lessons in Waldorf education.

We then study acids and bases through testing a variety of materials sometimes using a universal indicator which can be made from red cabbage juice, before using litmus paper. Making soap is a practical experience of combining acids (the oils) with a base (sodium hydroxide).

As the culmination of their Chemistry Main Lesson, Class 7s often build a lime kiln out of willow wattle and daub or bricks. Coal and limestone are poured into this structure and a fire is built underneath. The coal and limestone burn at an extremely hot temperature for about ten hours and in the morning, after camping out to follow the process, we can extract the limestone, now changed into quicklime from the firing. We add water to 'slake' it, and then it can be used to mortar bricks into place in the garden wall. Through this activity, the class is able to experience the lime cycle.

Maths



In Maths, we introduce negative numbers and how to work with them using the four processes. We look again at formula - for area, and volume of different forms for example. This is carried forward by looking at how certain formulae and algorithms came to be, including something about the people who first worked them out. Biographies are an important part of the curriculum in every subject in Class 7; there is a strong tendency at this age, when the faculty of judgment is developing, to argue with and refute other people's ideas, simply because they are 'someone else's' but a biography is what it is; this real person did these things in this real situation, because of who he was, with these real results. We can look with interest at how this particular person solved this problem and it's easy to imagine ourselves in that position and ask what we would have done. In this way, it becomes clear that human beings have always had to engage with problems - that *we all* have to engage with problems - in order to discover something new; that problems are not obstacles but opportunities for growth, and that there are still - always - new things to discover. The Maths Main Lessons should, as much as any other,

bring these wider 'life questions' so that even children who are not particularly talented in maths can see that it is relevant to them and is connected with everything in their lives.

The idea of discovery - finding 'x', the unknown element - appears again in algebra at this age. We work with algebraic equations and look at how they can be useful. We also re-examine some of the things learned in earlier classes in order to come to a deeper understanding of them. For example, what the Muslim world was doing with maths during the Middle Ages; where the so-called 'Arabic' numerals came from, what they made of the work of Archimedes, Euclid, Aristotle and Pythagoras, combining it with what they found in India and Persia before it came back into Europe in the 13th century. We also look at other numerals and number systems used in different parts of the world, which leads to the question 'why do we count in tens?' and on to working with other number bases.

The Maths of Al-Khwarizmi and others from the schools of the Middle East came to Europe through Venetian traders who found the Arabic system of accounting far simpler to use than the Greek and Roman, so that, even though the church forbade its use, it spread across the continent in a very short time. Perhaps the most important discovery brought to Europe via the Arab world, was the concept of zero and its counterpart, infinity. The imaginative connection between these, the first use of perspective in art and the question 'What lies beyond the horizon and behind the stars?' is obvious. In Maths, when you start to deal with vast numbers, you have to find new ways just to write them down. Assigning place value is the beginning of the process of 'number shorthand', and it is interesting to look at how the Mayans and the Persians did this in different ways. The words 'googol' and 'googolplex' come up; these are unimaginably large numbers. A googolplex is 10 to the power of 10 to the power of 100, which is so large there is not enough space in the known universe to write it down using only place value. Then we looked at powers, calculating, as far as we could, what relatively tiny numbers like 23^6 really are, (148035889) and how to begin to work with them.

English

In Class 7, the children have a block of Creative Writing. This can be approached in many ways. We could look at the kingdoms of nature with the question: 'How do they experience the world?' Plants grow towards the light and take in carbon dioxide and oxygen from the air and minerals and water from the soil not because they have decided to, but because they cannot *not* do it. What animals do is also guided by their needs and dictated by the form of their bodies, but they are also driven to act out of desire. Plants don't experience hunger or fear or pleasure and so they don't respond to these things - to emotions - but animals do - higher animals more than lower ones. The question here is how much choice animals have about whether to respond to their desires, which leads us to the same question about ourselves. Higher animals can also act out of motive. They can begin to understand that if they do *this*, that will happen, so they are beginning to be capable of anticipating the consequences of their actions. In animals, this is mainly the result of experience - they have tried something and they remember what happened - but it's interesting to consider what might have made them try something new in the first place.

All of these things are, however, responses to something that happens or some outer need. Human beings can also respond in this way, but they are capable of more. We can imagine things that have no relationship to hunger or pain or safety or greed or anything to do with our physical desires. We can wonder at, ponder and question what we observe about the world; we can be amazed, surprised; we can hope and wish. We

can have ideas about how things could be different. After the idea or the wish, comes the intention - a commitment to do something - followed by action.

The writing exercises in this block can work with these ideas, as well as developing and refining writing skills, building vocabulary, finding the *best* word or phrase in each case. In writing and reciting poetry, we also looked at the tradition of inventing verbs and adjectives to better describe what we want to say, honing a sensitivity to language that is so vital if we want to communicate our thoughts and ideas to other people.

Class 8

Class 8 is the culmination of the 'Class Teacher years' and in the subjects and topics that are taught, there is a kind of completion, on one level, of a survey of the world that began in Class 1. In their fourteenth year, the children/students have learned enough about the world to be able to orientate themselves in it - to begin to think about their place in it - even to live independently, if necessary. They understand, at a basic level, how things work; they are thinking about the future.

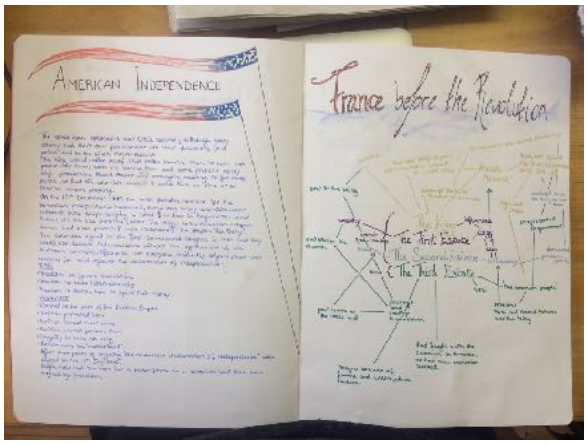
English

In the English lessons this year, we study a modern novel, such as 'The Pearl' by John Steinbeck, looking at the imagery and language used in creative writing, in very much the same way that we have studied poetry over the last three or four years.

The Class 8 play has become a tradition in Waldorf schools and the students look forward to it with great excitement and a little trepidation. For many, this is the first time they perform a full-length play on a stage in front of a public audience. St Michael's Class 8 plays are usually performed at Rudolf Steiner House and have included 'Murder on the Orient Express', 'Macbeth' and 'A Midsummer Night's dream'.

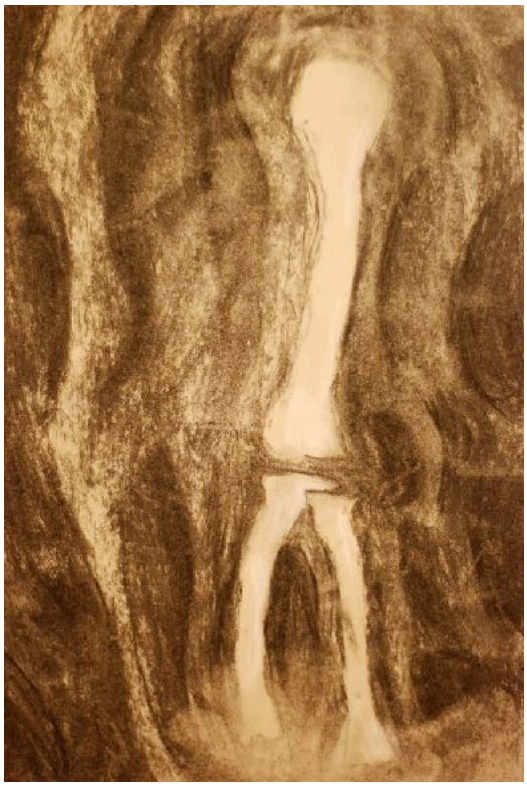
History & Geography

In History, the students learn about the social upheaval that has characterised the last two hundred and fifty years; how the convention and security of feudal life finally gave way to ideas about human rights and the dignity of all people, culminating in the statement, in the American Declaration of Independence, that *'We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.'*, a thought that echoes in the French Declaration of the Rights of Man and in revolutions against tyrannical and unjust governments up to the present day. In Class 8, history is essentially the story of how the rights and freedoms of the individual have battled with nationalist, tribal, commercial and personal interests.



In Geography, we look at climate and weather systems and how these have affected trade and the wealth of nations in modern times.

Natural Science



In Physics, we study the properties of fluids. Having characterised compressible fluids, incompressible fluids and flow and defined pressure, they investigate: the properties and effects of air pressure and the relationship between atmospheric pressure and altitude which led into the work of Torricelli and Pascal on vacuum, atmospheric pressure and barometers; the increase of pressure with depth in a liquid, surface tension and the density of liquids; the effect of pressure on melting and boiling temperatures. In Class 9, the topic of fluid dynamics will be expanded into Thermodynamics.

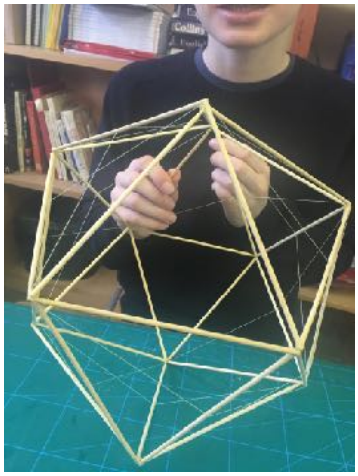
In Chemistry, they begin from the mineral world of salts, reduction to the metals, the character, influence and uses of copper, iron, mercury, lead, silver, tin and gold. Oxidation and reduction leads from hydrogen to oxygen and photosynthesis with the chemistry of the plant: from carbohydrates, oil and protein.

In Human Science, we consider the whole shape of the human body and the skeleton that supports it; how the weight falls on the sacrum and is distributed over the feet; the details of bone joints and the leverage they give all our bodily movements as well as learning the names of many individual bones. They describe, they discuss, they draw and they have the unique opportunity to see a real human skeleton..

This phenomenological approach to science develops in the students the attitude, even the habit, of approaching the world with the intention of gathering evidence to form a picture based on reality rather than jumping to conclusions based on pre-conceived ideas, received knowledge or first impressions. This attitude can, of course, be applied to every subject taught, and every sphere of life and enables them - us - to look at issues from many points of view. This, together with the development of practical skills that bring an understanding and appreciation of how the things we use are produced, provides our students with a rich connection with other people, places and times - something that is badly needed in a world where everything - the things we buy and the information we are given - is sorted, edited and packaged for us.

Maths

We take the experiential approach with the geometry of regular solids, making the forms in card - constructing perfect figures using compasses and then working out (imagining) in two dimensions, the map of the three-dimensional figure before cutting it out (accurately!) and gluing it together, is one way of exercising the thinking. A second approach is to cut a certain number of bamboo sticks to the same length, fit them all to ether and see what the result is. This is much harder at first, but enables the students to understand the inevitability of these figures - that they are not ‘made up’ or arbitrary, but are the certain and only possible result of a combination of numbers and rules, and that we can work out mathematically that there cannot be more than five of these regular



solids - that the Greeks found that out and we can be certain no-one will ever discover another one. By finding the centre of each face of each figure and connecting these, new regular solids arise, and the relationships between the forms and the numbers involved is self-evident.

A biography of the Medieval Arab Mathematician, Abu Ja'far Muhammad ibn Musa al-Khwarizmi leads into his life and work in more detail before progressing with some of the mathematical discoveries and processes that derive from his work: Identity – the Idea of 'Sameness'; laws of addition and multiplication: associative law and commutative law; the laws of indices; integers (positive and negative numbers): the grammar' of the + and – signs, rules for addition and rules for multiplication and division; mathematical sentences: terms, forming expressions and forming equations; solving simple linear equations (using al-Khwarizmi's principles of opposition and reunion); collecting 'like terms'; the distributive law of multiplication over addition, leading to expanding brackets; graphs of linear equations: plotting points, the idea of gradient, the intercept on the y-axis, equations of graphs from the y-intercept and gradient, and graphs of equations using the y-intercept and gradient.

The Class 8 Project

In Class 8, the students undertake a personal project on a topic of their own choice. They are usually expected to learn a new skill and practise it during the year, documenting the process as they go along. Towards the end of the year, they present their projects to an audience of parents and Class 7 students. Topics presented have included ice skating, making a ballet tutu, learning to play the melodion, and printmaking.

The Class 8 Trip

The trip is another tradition that has continued in the school. This is the culmination of their time with their Class Teacher and an opportunity to spend some time together in a different setting. Many class 8 trips involve some physically challenging activities, and places visited have included Norway, Hungary, Switzerland and Northern Ireland.

SUBJECT LESSONS

After the Main Lesson, there is a regular, weekly, year-long timetable of lessons in a variety of subjects that need a 'little and often' approach. These include eurythmy, games, music, form drawing, foreign languages and religion from Class 1 onwards, sometimes taught by the Class Teacher and sometimes by specialist teachers. These subjects are introduced gradually and develop as the children get older; woodwork, gardening, gym, sports and other things that are considered beneficial in individual cases are introduced later, each at an appropriate age.

Foreign Languages

From doing to understanding

Steiner maintained that within every language lies a distinct and characteristic way of looking at the world. Therefore, there is no single correct way to form and to express a thought. By learning a foreign language one can empathise and have an intellectual understanding for other cultures while cultivating tolerance between nations.

From lower school, two foreign languages are taught from Class 1. These lessons are timetabled from Monday to Thursday in blocks of three to four weeks, and last 30 minutes for Class 1 and 2, and 40 minutes from Class 3 onwards. The two foreign languages alternate in blocks, leaving the children time to rest from one language while focussing on the other.

Children from Classes 1 to 3 will learn by pure imitation with an emphasis on movement: rhymes, songs, poems, verses, short stories and games. No grammar is consciously taught, although of course it is unconsciously practised, while a feel for the language, in character, melody and rhythm is the key factor. As in their mother tongue, the children learn the meaning of words from the coherence between gesture and mood. During the lesson, only the new language is spoken. Children become familiar with the language by concentrating on the oral aspects of the learning during these three years.

The complexity of the language used gradually increases, and in Class 4, the children start writing and reading, which is the main source of learning in the following years. This process of learning is called 'inductive' and is one of the main ways in which language teaching in our school differs from conventional schooling.

From Classes 4 to 8. the children gradually write and read folk tales, study history, geography, short stories and articles to cultivate an interest in the world while cultivating and awakening a passion for literature.

Religion & Global Issues

In classes 1 to 3 the underlying theme of the Religion lessons is the Father or Creator Principle - the Divine in nature. We try to maintain the natural feeling in the young child of gratitude and love for the natural world around us, the feeling that they are safe and secure in the world, which is a good place to be.

The religion lesson is more than just another story. The teacher tries to preserve the undefinable element of the guide or comforter who stays with us through life; to engender in the children the feeling "Isn't it wonderful that there are such good people

in the world." We try to build their natural connection with the rhythms of nature and their sense of unity with the world around them.

In Classes 4 to 8, the theme is the divine within the human being on the earth. Stories told in these classes are about individuals engaged in inner battles, to show that all people struggle with questions of courage, ideals, their own frustrations and limitations.

In Classes 6, 7 & 8, the children can also discuss moral issues, such as homelessness or bullying, which are also about the way people treat each other. Sometimes the discussions take place in these lessons

By Class 8 the critical faculties are sharpened, rules are questioned and the feeling life emerges; the students are searching for new authorities and role-models. The stories in these lessons try to bring a picture of the human being as a striving, ethical individual in a rapidly changing world. Biographies of individuals who embody these qualities are shared.

Outdoor Curriculum

Outdoor curriculum work takes place in every class and is about being in nature, working with it, understanding it, and enjoying it. Each student also has an opportunity to make our school grounds look more beautiful and help manage this large area.

We develop new spaces, such as the herb garden, kitchen garden and allotments, which can be used and the students learn skills, according to their age and ability, along the way. They also take care of those areas which we have inherited: woodland, lawn, driveway and courtyard.

The students see them change, and experience that these spaces develop through their own hard work, and then pass them on to the next class.

We work with the biodynamic calendar planting and sowing on seed, flower, leaf and root days. Work in the gardens, typically ~ 45-50 minutes per week per class depends on the seasons. We are out in all weathers and students come prepared with suitable clothing, gloves and footwear.

This is an overview of the academic year for each Lower School class:

Class 2; We have beautiful woodland on site which means lots of trees which shed their leaves every Autumn. So our grassed spaces need to be kept clear of leaves. Class 2 have the important task of raking leaves from the grounds putting them on the compost heap. Later on in the year they will have the chance to feed some of the flower beds with compost they made, and so the cycle goes on.

Sometimes Class 2 is involved with planting young hedgerow whips and clearing bramble and nettles from areas where whips were planted. In the hot months, all the flower beds and whips need watering. These weekly duties give the students an ownership of the place they play in, allowing them to take pride in looking after it.

Class 3 is the year of farming and building. They have their own garden to work in, preparing beds, making and using compost, building a fire, sowing seeds and looking after the plants. Then they harvest the fruits of their labour.

Class 4 work in the kitchen garden and greenhouse. A variety of fruit/vegetables/herbs and flowers are grown here and nurtured. Some produce every week may go to our school meals. This is an ongoing project where various groups of students are involved with developing this area further for the herb spiral, flowform waterfall and chicken run. Team work here is important, use of tools and working in a communal space.

Class 5 work in the medicinal herb garden/dye garden where they are also creating a pond and a bug hotel. They embrace looking after this entrance way to the school setting new beds into the ground by the car park with lavender and bulbs. A group each week keeps the steps to the school clean. Here a focus is for the students to be around flowering plants and see how they change through the seasons, which supports their Botany Main Lesson..

Class 6 come back to working in the kitchen garden and greenhouse. They continue clearing the back space to develop this area further for the herb spiral, water feature and chicken run. The garden gives the student space to work together as a team or individually on weeding and planting in preparation for taking on their own allotment next year.

In **Class 7**, each student has his/her own allotment space which they will keep for two years. They choose their planting and look after the area around them. They help plant hedgerow whips in the winter and look after the trees. They also help Class 2 with the raking of the leaves and turning of the compost; Outside in the summer, as part of their chemistry lesson they build and fire a lime kiln.

Class 8, from the experience of looking after their allotment last year, will be able to continue this work, taking account of what worked and what didn't. In their chemistry block this year they make soap and use some of the herbs from their own gardens.

Games and P.E.

In Classes 1 and 2, the children do not have formal games lessons but have free play most afternoons and play games with their Class Teachers.

Class 3 marks the beginning of a more formal education in movement and the start of a Games lesson where previously movement and games formed part of each day's main lessons. As such, a transition is made to the teaching approach and the foundations of good habits are laid for the subsequent years of games lessons.

In Class 3, the emphasis is on the experience of "we". The tasks are given using verbal pictures, strong in imagery which enhance their experience of a game and can be highly

effective as an approach to discipline. The stories provide simple rules and bring warmth, humour, excitement and imagination to the children's play.

Class 4 : At this time, the emphasis shifts from the group to the individual "I". "You are there, I am here" is what the children are experiencing. The breathing element, the polarities between being awake and asleep, safety and danger, weak and strong are emphasised in games as a rhythm for contraction and expansion. At the same time, children at this age start to challenge adult authority or feel isolated from the group context and the social and moral aspects of learning and respecting the rules become very important.

Games are still introduced with a story to give an overall picture but the principle of separation becomes stronger and often involves one against the group. There is more tension and the children must wake up if they are not to get caught or tagged!

Class 5: The overall aim of the movement curriculum for the 11 to 12 year old is to work with rhythm in movement, to find a balance between levity and gravity, between imagination and intellect and between individual and group challenges.

The children need to be challenged and show both courage and caution. The children enter a brief golden age of harmony and balance – within themselves and also with those around them. Their sense of justice and fairness is developing and the children pull together to sort things out amongst themselves, creating a strong bond of friendship.

The games we play at this age are not yet sports and at the same time no longer the games of younger children. There is an important transition stage before team games are introduced. The children need to hold their centre, to stay in their own space. The Bothmer exercise, the "light beat" is used to help the children find this middle point, holding the centre in a rapid alternation of rhythms.

The Ancient Greek Olympics stand as a leitmotiv for Class 5 and we will therefore strive to permeate each games lesson with the ideals of truth, beauty and goodness, the ideals of the original games in which the individual sought to give expression to the creative powers of the Gods.

Class 6: The children have reached a stage when physical processes of puberty cause rapid growth to their limbs, leading to clumsiness and a greater diversity of physique than at any other age. Uprightness is important and that requires an inner balance of forces. The play element of earlier years now gives way to the need for specific exercises which require the need to strive for exactness, form, order and structure. When teaching, it is now important to use the element of objectivity, through measurement, keeping scores in games as well as gaining their acknowledgement as referee/umpire.

Class 7: the pupils have the strength and supple flexibility to move quickly from one activity to another. They have the ability to separate themselves from the group and enough personal standing in the world to be ready for the challenge of competitive sport. They are capable of the individual standpoint and this allows them not only to take a position but also to oversee the game and its tactics.

By the time the pupils reach **Class 8**, they encounter the full weight of their physical bodies. They feel both burdened by the new weight of theirs bodies as well as energised by the new physical strength. They need opportunities to explore and feel this new combination of weight and strength. Outdoor pursuits are encouraged at this age.

Music

In Classes 1 and 2, the Class Teachers sing and play the recorder with their own classes. Music lessons with a specialist teacher begin in Class 3.

In Class 3, round singing is introduced and the class also sings 'call and response' type songs with 1 group echoing the other group . Songs with simple ostinato parts are then sung as preparation for singing rounds. Rhythm exercises include listening to and imitating rhythmic patterns, switching clapping and stamping and doing rhythmic rounds. Vocal exercises help the children separate their singing from their speaking voices. Listening games develop the children's ability to listen carefully to pitches and sounds. Melody training is done through singing of songs in a foreign language so that the children hear and experience the rise and fall of the melody line and its shape. From there, the children can guess the meaning of the songs by listening to the melody.

As a prelude to introducing musical notation, the children practise drawing melody lines of songs for them to see and experience the rising and falling of the notes. We now move away from pentatonic songs into minor pentatonic and modal folk songs, to lead towards diatonic songs. If the children are ready, 3 part rounds can be sung to create a richer harmonic experience for them.

Sight-singing and playing of recorder from written music continues. Children also learn to write simple melodies on the stave from what they hear.

Listening is practised by allowing the children to listen to students playing pieces on various instruments which they have learned during their own private lessons. These and various percussion instruments are integrated with the recorders and the class take turns in playing and listening, and creating soundscapes such as a blacksmith's workshop or a market, for example.

In Class 4, rhythmic exercises now include swaying from left to right and back while clapping various rhythmic patterns to create an awareness of how rhythmic patterns fit on top of the beats.

Spinning circular rounds with moving harmonies are sung, as well as other rounds in modal tonalities. Children begin to walk around singing their own part to strengthen their own listening and holding of their own melody. Slowly the children will begin to sing solo, holding their part in the round on their own.

Musical notation is practised by writing down simple melodies played on the recorder, so that when the children see the music, they can hear the melody in their heads.

First studies of the intervals begin, played on the diatonic lyre.

Note values are introduced when the fractions are being worked with in the Main Lesson. Children then try to write down various clapped rhythms. Simple musical metres like 4/4 and 3/4 are introduced and children learn to conduct them.

Singing of rounds, playing of various instruments and vocal exercises continue throughout the whole year. We continue working towards becoming confident in sight reading and sight singing simple melodies. Recorders and bowed instruments now accompany the singing and 2 or 3 part playing on the descant recorder can also begin. In addition, children with other instruments start playing in the class ensemble.

Short stories from lives of composers can also be shared with the children.

In Class 5, the class ensemble begins in the first term to prepare to play in the school orchestra. We also help the children find the instrument which they want to play

personally. The harmonic progression of I, V, VI, IV is used to help the children experience how these chords strengthen the tonal centre and how various melodies can be created from just these 4 chords.

Interval studies with identification of intervals played are done to strengthen the children's listening.

Indian, Greek and other ancient modes/scales are introduced to the children to let them experience how different ordering of the notes can create various cultural expressions of music alongside the Class 5 Ancient History block. Some of the songs from these cultures will also be played and sung in the class ensemble.

There is more singing of 3 part homophonic songs and sight-singing are also practised.

The class ensemble continues to play the songs based on the 4 chords of I, V, VI, IV but now with the focus on the form/ structure of the song.

New key centres are introduced to the class (G, D and F major scales). The Children also practise transposing songs which they have been playing in the class ensembles to the new key centres.

The class also tries improvisation of simple melodies based on the 4 chords which they have been working on for a while on their own instruments.

From class 6, the children have a greater connection and resonance with the downbeat. For rhythm, the class works on the 'rumba carrioca' groove. They also come up with their own rhythmic patterns ; 3 or 4 different rhythmic patterns can be strung one after the other and clapped.

The singing of rounds and quodlibets at the beginning of the term gradually develop into more choral and homophonic singing which the children are drawn to because of the vertical chord bracing. The class sing for one lesson and play their instruments in the class ensemble in the other.

There is more practice of sight reading and sight singing to prepare the children for the choir and orchestra. Homophonic singing continues but is now also contrasted with monophonic Gregorian songs in order to introduce the Western scale system and the various modes that are derived from the major scale.

Study of intervals coincides with the acoustics Main Lesson block; the children are asked to sketch their inner imagination of the 5th, 3rd and octave interval.

Major and minor tonalities are introduced through songs which are sung and played in the class ensemble. Common chord progressions are played by the children to allow them to hear how the melodies can sit above these harmonies.

Familiar songs are revisited with the goal of having the children invent/compose new melodies over the songs' harmonies through an improvisational process.

The children also practise transposing melodies which they have composed. As the study year concludes, the class play and sing the music from various epochs like Gregorian, classical, pop, musical drama and identify 1 or 2 musical motifs which made them unique for their epochs.

In Class 7, the children are introduced to songs from Japan, Taiwan, Brazil, the sacred harp repertoire and also from the Baroque period. This falls in line with the spirit of exploration on which class 7 now embarks in their Main Lessons.

We look more into music theory, uncovering the scale systems and musical motifs of different cultures: Japan, Chinese, India, Greek, Western classical. The aim is to discover the musical grammar of songs from various parts of the world. These various scales are then presented as part of the chromatic scale system which the children will listen to and play.

We look at the biographies of some composers from different parts of the world and musical epochs to discover whether, and how their biographies affected the music they produced.

In Class 8, we look at various musical styles: Bach, Bossa Nova, Amazing Grace (sacred harp), rap and pop. With the students' rising inner subjectivity, the cultivating of musical appreciation and judgement is now possible. The question of musical style and character is discussed, as well as what genre of music they like listening to and why.

As they approach the High School, we need to supplement, expand, create resonance with the vibes and impulses that come from the students themselves. This is important so that they can follow and develop their passion.

With this in mind, the class steps into the process of writing a rap together. This starts with laying out a rap groove and then writing the words to sit over the groove. This is a good chance for them to create something meaningful for themselves.

The class continued also to play their instruments in the class ensemble, working with one piece for a long time, taking turns to improvise their own part to truly create something new each time they play. The class also works on polyrhythms where 4 separate rhythms are played at the same time on the percussion.

Sight reading is practised. The chord progression of I, V, VI, IV is introduced to the class as a common progression used in pop music. This chord sequence is played over a period of time for them to experience the harmonic motion.

Various chord sequences are introduced and played by the class to focus on harmonies. These chord sequences provide the emotional landscapes for the students to move between different moods and feelings. The next phase is creating melodies out of the chord sequences which the students have been playing for a while, and from there to create a rhythmic groove for the melody to sit over.

The class looks at biographies of composers and musicians from different musical genres, and also work on the class play music.

Handwork and Crafts

In Classes 1 - 5, wax or clay modelling are part of the Main Lesson and/or are taught by the Class Teacher in dedicated lessons. In handwork lessons, the children are taught to work with soft materials using traditional techniques. In Class 6 they begin to work with wood and, later, with metal.

The aims of handwork lessons in **Classes 1 and 2** are to enable the children to use their hands in a practical and constructive way; to learn to use simple tools safely; to develop an eye for colour and design; to develop will power, concentration, and perseverance in seeing a project to completion; to develop finger dexterity, left and right coordination, logic and sequencing; to develop an appreciation for the raw materials and the process of making handmade objects

Lessons begin with finger games and then the children knit. At the beginning of Class 1, they make their own knitting needles from wooden sticks. They then learn the knit stitch, casting on and casting off, sewing knitted projects together with yarn (butterfly stitch, running stitch), and 4-Finger finger-knitting to make thick strings. Projects in Class 1 include balls, stuffed animals, pouches, bags, scarves, and recorder cases; in Class 2, the children learn the purl stitch, thread beads to make necklaces, wrist bands, dolls' clothes and make lanterns for Martinmas.

When new children join any class, they learn to knit before moving on.

Knitting continues in **Class 3** with two-colour knitting - fair isle and intaglio. Projects include pencil cases and flute cases. In Class 3 the children have a double lesson for the first time and it is difficult for some of them to work for an hour and a half on one project. Second projects include origami, weaving, embroidery and seasonal crafts. Gifted children are challenged with different sized needles and wool, new stitches and patterns. Children who struggle have more one to one time as the rest of the class becomes more competent.

In Class 4, the children first create a small sample of work having been shown how to do cross stitch. There is then a choice of making slippers or a cushion. They are free to use any colours but make their designs symmetrical (cushion) or mirror image (slippers). The children use squared paper to work out elements of the design but not the whole design, as this can take a long time and it is better for them to work out the symmetry in their heads as they go along. Children are guided to make their designs more or less complex, depending on their ability. Children who struggle are helped one to one. If they continue to find it difficult they can try working in rows instead of round a central point. Stiffer canvas with larger holes can be used or in real difficulty a tapestry diagonal stitch can be used. There may be special crafts at Christmas or Easter.

In Class 5, the children are taught different techniques of working with string and will choose one to make a metre long belt with to wear at the Olympics. They learn by being

shown, but also by reading instructions. Techniques and projects include: cord bracelets, figure of 8; macrame techniques; flat ,twisted, split; friendship bracelets; striped and chevron; plaiting ; 3,4,5,6,9,10 etc strands; paracord knots; south American warped bracelets with writing; friendship knotted belts with writing.

In the summer they measure, cut, iron edges, hem, stitch together, smock shoulders and embroider hems on their Olympic tunics.

Class 6 are introduced to traditional leather work/saddlery skills, including designing, pattern making, laying out, cutting accurately, marking for stitching, gluing accurately, piercing, saddlery stitch, decorative stitching, finishing off. Projects include bracelets and key ring fobs.

Woodwork usually begins in Class 6. The children learn woodcarving techniques and how to use whittling knives, chisels and gouges. projects include spoons, spatulas, signs and animals.

Class 7 is introduced to traditional pottery techniques, modelling pinch pots first. They learn about the properties of clay and how important it is to wrap up work either in airtight plastic to keep it soft and workable, or loosely covered to let it dry slowly. They are shown how to store unwanted used clay; how to wedge clay; how to roll an even slab; how to make slip; how to roll even coils; how to build coil and slab pots.

Class 8 learn to use the sewing machine and make simple items of clothing such as aprons, simple skirts and trousers. Projects can be more or less complex depending on skill and ability. Sometimes students 'mass produce' items like crayon rolls and desk tidies to be sold for fundraising.

In Class 7 or 8, the students are introduced to iron forging. They make coat hooks or pokers. Basketry is also sometimes done at this stage.

Art

In Classes 1 - 6, drawing and painting are part of the Main Lesson and/or are taught by the Class Teacher in dedicated lessons.

From Class 7, the class often has Art lessons with a specialist art teacher.

In Class 7, the students are introduced to drawing techniques including black and white drawing. They learn to observe: the shape of the objects; the relation between the them is; whether they are touching each other or if there's a space between them; how big or small they are; the position of light and shadows; the darkest and brightest place in the composition.

They learn colour perspective and paint landscapes. They learn one-point perspective, and vocabulary like "vanishing point", "horizon line" and "orthogonal lines" "parallel lines" etc.

In Class 8, this work continues and the students learn two-point perspective and use it to draw geometric forms.

The development of drawing and painting skills continues in the High School.

Eurythmy

Eurythmy is a form of artistic movement that is taught throughout the school. Through the expression of forms that arise from and live in music and speech, it gives the children a deep relationship with both, and with their own movement in space and in relation to others. It supports their development in an age-appropriate way at each stage and is also offered as a therapy in the school, by a specially trained eurythmy therapist.

Assessment in the Lower School

The basis of the school's pupil assessment policy is progress and development, rather than perceived norms and benchmarks.

It is understood that a child's development does not follow a smooth upward path; that there are always pauses and spurts along the way, and each child will have a different journey. It is this individual journey that is assessed, to ensure that each child is developing appropriate faculties and skills and is achieving what is possible for him/her.

Children are not measured against each other, and, from discussions at interview, it is clear that very often this is one of the main reasons that parents choose to come to the school.

General Principles

- There is no formal testing in the Lower or Middle School.
- There is continuous, informal, formative assessment and monitoring of children's progress and needs throughout the school.
- Tracking of children's progress is monitored by the College via the mentoring system, and by the Trustee(s) with responsibility for Teaching, Learning & Assessment.

Marking and Feedback

- In the Lower and Middle School, Main Lesson work is checked daily and books are checked weekly as a minimum. In younger classes, marks are not usually made in the books (except practice books), but the books are checked to make sure work is finished and to point out corrections or improvements that can be made. Verbal feedback and advice is given on each piece of work on a daily basis.
- In Classes 1 - 3, where written feedback to children is not given, teachers keep notes about their progress and their work. These notes inform planning.
- From Class 4, marking in the children's books is usual and if possible they are expected to correct most of their mistakes themselves (i.e. the marking simply draws attention to the mistake).
- In language lessons, books are collected and marked after each block (blocks are between 3 and 6 weeks long). Vocabulary and verb tests etc. are given and checked in the lessons. From Class 5 onwards, homework and bookwork is collected and marked every week. Any issues are raised with the Class Teacher.
- In all classes, maths work is marked during the lessons by the teacher and/or by the children/ students themselves, who sometimes mark their own work and sometimes each other's. Where children have marked their own work, the marking is checked daily by the teacher.
- In Art, Handwork and craft lessons, work is monitored and discussed with students in every lesson. If younger children are working very slowly they are given easily achievable tasks requiring a little more work (quantity) as a challenge. The work itself is a good indicator of effort and skill.
- Main Lesson work is not graded in any part of the school.

Assessment of the progress, achievements and needs of our students is supported through several aspects of Waldorf education:

Child Study

Observation or study of children is a central tenet of Waldorf education; our curriculum and practice develop out of an understanding of child development and observation of individual children.

In the weekly pedagogical meetings, which take place in different departments (Kindergarten, Lower and Middle School, High School), studies of individual pupils are carried out. The Class Teacher or Main Lesson Teacher prepares a detailed description of the chosen child or student and s/he is discussed for about an hour.

Sometimes all faculties come together for a Child Study so that staff working in different areas get to know all of the pupils in the school. In the Summer term the rising Class 1 children are the subjects of these studies and are presented in small groups.

Subjects for these studies are chosen by the faculty, but usually a Class Teacher or Tutor will ask to bring someone. Often, but not always, the chosen subject will be someone who is experiencing difficulties, or someone with whom teachers are struggling. When new children join the school, they are usually studied within their first year.

The aim is to try to understand the child and find what help is needed. Studies are reviewed the following week and again after a few weeks, to see if there has been any improvement or if something else needs to be done.

The Class Teacher relationship

Between the ages of 7 and 14, the children have the same Class Teacher. This allows a strong relationship of mutual trust and interest to develop, so that the teachers get to know the children very well and can closely monitor their progress; Class Teachers know each of their children's strengths and weaknesses and notice very quickly if someone is struggling or needs a challenge.

Observation in classes

We operate an open-door policy so that teachers observe in other people's classes on request, whenever they have the time. This happens frequently, and is especially helpful for part-time, subject teachers or new teachers, who may not know the children so well. Watching their own classes being taught by someone else allows Class Teachers to observe individual children in a way that is not possible when teaching, and to see how they behave and work with other people, which informs practice.

Specialist Support

Our work in assessing and monitoring the children is supported by specialist professionals as and when needed:

School doctors

Dr Jenny Josephson, visits the school every term and sees between 5 and 9 children, chosen by the teaching faculty, on each visit. Dr Francisco Barcello comes once or twice a year and sees 9 children each time. He works with and advises staff about children with learning or behavioural difficulties and special needs.

Specialists and Therapists

In most cases, support can be provided by the teachers, based on the outcome of steps outlined above. Sometimes the school doctor will prescribe a specific therapy, in which case the school will either provide it, if possible, or recommend a practitioner to the parents.

When special educational or behavioural needs are identified or suspected, an assessment by someone from the Steiner Waldorf Association for Special Education Needs and Disability (SWASEND), an educational psychologist or other professional may be initiated.

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