

## Curriculum Information – by Subject

A detailed look at all the subjects taught in the Brighton Steiner School Curriculum and their relationship to child development.

### Art

In the Nursery and Kindergarten the children use watercolours, watered down to begin with, as they represent the truest experience of colour for the child (and the least artificial ingredients). In Classes 1 to 3, they get to grips with the technicalities of using a paintbrush, respecting the paper surface and controlling the paint, and the relationships between the colours. Different tones and also the characters of the colours themselves are worked on: 'shining' yellow, 'strong' or 'intense' red, 'calm' blue and so on. The teacher links these exercises with the Main Lesson subjects, and brings out a mood from a creation story for instance, in Class 3, or a fable story in Class 2.

From Class 4, the children paint scenes from Main Lesson subjects (Norse mythology, for instance), whilst also looking at the seasons, festivals, animals, times of day (sunrise/sunset) and so on. By this age the paint is used drier and the children become very adept at controlling their strokes, working hard at producing a fairly detailed painting.

As well as the painting lessons in the Lower School, wax crayons are used for drawing, both in the Main Lesson book, and sometimes to illustrate in a subject lesson book. Pencils are used by the older children. Basic drawing skills are taught with the very versatile wax block and stick; pencil drawings follow on very naturally.

From Class 6, the mood changes again and the students start with black and white drawing and learn to perceive the equalities inherent in light and dark. They begin a new technique working on dry stretched paper in layers – this is called 'veil painting' and requires patience, maturity and care.

The light and dark theme continues in Class 7 with the exploration of shadows, symmetry, mirror image and observation, using charcoal, conté, pastel, pencil and some pen and ink work. Colour perspective, maps, mood paintings (for example, storm scenes – a wonderful example of their own inner turmoil) are also covered. The Renaissance Main Lesson is a wonderful chance to look at drawing, painting and modelling through the High Renaissance artists Leonardo, Raphael and Michelangelo, respectively. By Class 8 the students come out of the darkness and back to colour (this is reflected in their development, some are ready long before others). They return to painting, both wet and dry techniques, and look at nature moods, places, landscapes and the weather, very often working in a single colour or limited palette. Drawing skills also continue, and they usually end the year with a project – something they work on at home, a chance to really experiment!

In Class 9, as pupils mature through the enormous physiological and psychological changes facing them at this age, and as they learn to deal with the subsequent emotional stimulation and stresses, their art lessons attempt to nurture these processes. The keynote of these lessons is one of quiet, skilful sketching hence the predominant use of black and white, and more importantly, all the various greys that form between these two extremes. A variety of media are used to develop the skills of the class, such as charcoal, crayon, chalk pastels, Chinese ink, and block/lino printing. We explore the work of Albrecht Dürer in

detail, observing his mastery of light and shadow and the formative techniques he established as a printmaker. We look at more technical aspects of drawing, a review of perspective and creation of geometrical shapes with light and shade. Another major theme in this class is the aesthetic use of lettering and language, developing skills for the visual presentation of ideas. In the final term Class 9 complete a GCSE-style project brief, which demands self-discipline and a self-directed line of research, before arriving at a finished piece of artwork.

Class 10 students produce three GCSE projects to fulfil the course requirements. They explore still life through direct observation, and through the study of many artists' work, thus learning to place their work into the context of the art world. Pupils produce a range of work in various media, including a still life of their own in watercolours. They complete an individual artist project, providing an excellent opportunity to develop self-directed study and manage their time to a deadline. Other projects may branch out into printmaking, mixed media work, relief or sculptural work. If the student has a strong wish or inclination to work in an achievable direction, the teacher will support these explorations.

### **Classics**

Classical languages are taught to complement the Main Lesson studies of ancient civilisations. While Sanskrit and Hieroglyphs can be encountered through the Main Lesson, Greek and Latin are taught for a year in Classes 5 & 6 respectively.

'Why do we have to learn a 'dead' language?' is a common question. The languages were not dead at the point in history being studied and both languages, although no longer in direct use, have profoundly influenced the development of many European Languages, including English. Standard scientific and legal nomenclature is still in Latin, due to its universality.

The Greek course gives a flavour of Greek writing and thought in Class 5. The pupils learn to write the Greek Alphabet and to read and write simple sentences. Accompanying the language work is the story of the Iliad, one of the two Homeric Epics which tell the story of the Trojan War. The pupils draw images from the story and use some of the characters for simple language work. They recite in Greek and look at connections between Ancient Greek and English. There is opportunity for discussion about Greek political and cultural life and the relationship of the Greeks to their Gods.

In Class 6, the eye turns to Rome, and so Latin is offered. This is a more practically-based course looking at Roman family and social life with the help of Caecilius, a Roman businessman from Pompeii (courtesy of the Cambridge Latin Course). In addition to stories and exercises based on Caecilius we play games and look at some examples of Roman literature. There is an opportunity for spoken Latin in games and even short plays.

Connections are made between Latin and English and other European languages, looking at which words share common forms and which are derived from other sources. This helps to give pupils a feel for the development of language. We also look at the construction of language, and by observing Latin grammatical forms we can compare them with English grammar and deepen the understanding of how language works structurally.

### **Cooking**

As part of a wider commitment to healthy eating, cooking is a vital ingredient in the Steiner Curriculum. From the first days in Kindergarten the children help to prepare their morning break. They knead dough for their bread, chop vegetables for their soup and help tidy up. They use a different grain for every day of the week, which ensures a balance in their diet and a rhythm in their days.

As they become older pupils are taught to build on these skills. In Class 3 the children do a great deal of baking, as they are learning about weighing and measuring, and discover that one needs to be very accurate to obtain good results! Again, in Class 7, when the students are 12 or 13 years, they study physiology and how the digestive system works. Nutrition is obviously a basic principle and alongside this they learn the basics of good cooking – how to interpret a recipe, create a balance of colour and texture and how to choose and prepare the best quality ingredients. They produce delicious results!

In Class 8 they undertake a project to produce a menu for an entire day that needs to be costed, timed, nutritionally balanced and appealing. The aim is to equip our students with the skills, knowledge and interest to be able to create balanced, nutritious meals throughout their lives. In addition, several of our recent graduates have gained enough knowledge to become employed in part-time jobs in the catering industry to support their studies.

## **Eurythmy**

Eurythmy is an art of movement that engages the whole human being, integrating bodily movement with movements that arise within the soul. It creates a harmonious relationship between the inner self and the physical body.

In simple terms Eurythmy is often described as 'visible speech' and 'visible music'. It comprises a language of gestures representing each sound (vowel and consonant) and each musical tone and interval.

As an essentially artistic process, it is more closely related to dance than to gymnastics. This relatively new art form is, at present, taught only in Steiner schools and is often little known in the wider community. However, its aims lie at the heart of the Steiner Curriculum. Practising the elements of Eurythmical movement helps the children to become more graceful, co-ordinated, alert and at ease with themselves.

Through learning the gestural vocabulary of sounds and tones, the children form an inner connection to the qualities inherent in the elements of language and music, which supports their development of linguistic and musical literacy. The work on choreography and interpretation of literature and music deepens the children's aesthetic appreciation of those subjects experientially.

Working with geometrical forms in three-dimensions helps to cultivate an inner sense of orientation and increase spatial awareness. Working in groups the children develop the social capacity to sense the movement of the group as a whole and become able to move with others in a harmonious and co-ordinated way. Awareness of social processes is a quality that Eurythmy cultivates at many levels.

In the Kindergarten, Eurythmy lessons are shaped primarily by a story, which leads the children into the movements in an imaginative way. The Eurythmy gestures are simple and pictorial and are integrated into the narrative so the children are able to imitate them unconsciously. Finger games and rhymes form

the basis for developing fine motor skills and these are woven into the overall structure as seamlessly as possible.

The archetypal form of the circle is the starting point for the Eurythmy lessons and in Class 1 it is experienced through the imagination as the 'sun' or the 'castle garden'. Simple forms, straight lines and curves are practised through the pictures that arise out of the stories and poems: 'The Golden Bridge' or 'The Dragon's Tail'. The distinction between right and left, forward and back is made. Agility exercises such as hopping, skipping and jumping games are played. Ideally, as in the Kindergarten, all the elements of the lesson should flow into one integrated whole.

In their ninth year the children begin to experience a stronger differentiation between themselves and their surroundings. In Eurythmy this is accompanied by rhythmic exercises: contraction and expansion, hopping and clapping rhythms, and awareness of major and minor moods in music. The speech sounds, vowels and consonants, begin to be recognised individually and practised consciously in poems and spelling games.

In Class 4 copper rods are thrown, caught, passed from hand to hand, twirled and handled in many ways. These exercises encourage alertness and dexterity; precision is now required of the children in their movement and they enjoy the challenge of difficult co-ordination exercises. Alongside their Norse Myths Main Lesson they learn to step exact 'Walls of Asgard' and step alliterative Viking poems. During the grammar main lesson the parts of speech are brought into movement, deepening the children's understanding of nouns, verbs and adjectives experientially.

In Class 5 the children are poised between childhood and the beginning of adolescence. It is a harmonious point in their development and the graceful movements of Eurythmy come naturally to them at this age. The beauty, rhythm and form of language can be experienced and understood and the perfection of the human form is consciously discovered. In their Main Lesson throughout the year the children are studying ancient cultures: India, Persia, Egypt and Greece. The moods of these epochs are evoked in Eurythmy through the characteristic styles of movement and poetry belonging to each culture. In music, the two part melodies are introduced and work on the musical scales continues.

The Roman theme of structure and law which characterises the Class 6 curriculum is reflected in Eurythmy by a strong emphasis on geometrical forms and their transformations. Everything is practised to a high degree of accuracy and the social aspect of the Eurythmy exercises is consciously cultivated. The Latin language brings another dimension to the children's experience of the Eurythmy sounds and dramatic elements in poetry can be introduced and used to enrich the children's soul life. At a time when rapid physical growth and change can lead to a loss of physical boundaries, copper rod exercises are especially valuable in helping the children to form a coherent inner image of their own spatial dimensions.

In Class 7 Eurythmy lessons, more subtle shades of mood are explored through poetry and music, and the children begin to develop a fine sense for different inner qualities and their expression in movement. Exercises for upright posture and good spatial awareness become more conscious and the concentration and rod exercises provide stimulating challenges. With the skills and knowledge required in the previous classes the children can begin to contribute artistically to the choreographies of both music and poetry and are encouraged to take an active part in the creative process.

## **French**

The teaching of foreign languages is an essential part of the Steiner curriculum and its success is reflected in GCSE results well above the national average. Children are taught from an early age and by native speakers in ways that make language learning fun.

Children at the Brighton Steiner School learn French from Class 1, beginning with narrative songs and verses, often involving actions and finger games. By the end of Class 1, the children's active vocabulary includes colours, classroom objects, parts of the body and numbers up to 20 and they are able to respond to simple commands and basic questions. This knowledge is built on in Class 2 so that children are able to follow a story, apply simple structures, answer basic questions about themselves, count up to 60 and recite the alphabet. Vocabulary for clothes, food, time and places is consolidated in Class 3 and through acting out and learning individual parts of a dramatised story, children begin to take a more active part orally. They begin to recognise question words, spatial prepositions, pronouns and possessive adjectives and become aware of gender. Up to this point, all work is done orally.

From Class 4, simple reading and writing is introduced. Vocabulary covers the weather, the home, money and shopping and by the end of Class 4 pupils should feel comfortable with all the vocabulary covered so far, along with its gender, and be starting to construct simple sentences of their own. In Class 5, reading and writing begin in earnest; grammar is now explained and the rules written down. Pupils should now feel comfortable using regular and irregular verbs with different personal pronouns.

From Class 6 to Class 9, when the GCSE syllabus begins, lessons incorporate a flavour of France and introduce poetry, plays and songs, which become more challenging as pupils' abilities increase. Vocabulary covers interests, hobbies and plans as well as travel and tourism, jobs, work experience, social issues and relationships. Grammatical structures learnt include adjectives, adverbs, tenses, reflexive and impersonal verbs, forms of address, passive forms and direct and indirect objects. By the time students begin their GCSE course they have a good grounding in the oral and written language, and continue to study French literature and current affairs.

## **Games and Sport**

In Classes 1 and 2, games are part of the Main Lesson with the class teacher. By Class 3 the children have a specialist teacher. During this year the children start to experience the world as separate from themselves. This can be explored through movement to help them adjust. Almost all the games played are imagination games - games that are explained with a story and tend to be themed. Imagination games help them to understand why a rule is there rather than just being told they are not allowed to do something. One of Class 3's favourite games is *Bunnies and Burrows*. The rules are as follows:

*Three children are foxes, the rest are bunnies. Around the play area are five areas dedicated as burrows. In the centre of the play area is the fox's lair. When the bunnies are in their burrows they are safe. The foxes try to tag the bunnies when they are running between burrows. When a bunny is tagged they are taken by the fox to the lair. The bunny must then wait to be freed*

*by one of his fellow bunnies. A bunny can free a friend by taking the captured bunny's hand and running back to a burrow together.*

Around the age of 9 or 10 children are well on their way to feeling fully aware of their separateness from others. This can lead to a more conscious awareness of other people in relationship to themselves. It is of particular importance that at this age the children experience both winning and losing roles. Games still need to have an imaginative side to them, but more of a push is made to experience the games in an individualised way.

One of Class 4's favourite games is *Sluggabed*. The rules are as follows:

*There is a bed (a gym mat) in the centre of the room. Around the bed is marked out a circle (preferably 20 steps in diameter). On the bed Sleepy Head lies, she cannot move from the bed but is able to move around on it. Sleepy Head has a helper who is able to run around the area inside the circle.*

*The object of the game for everyone else is to drag Sleepy Head's mattress out of the circle without getting tagged by either Sleepy Head or her helper. When a child is tagged they must sit it out and wait for the next round.*

Class 5 is the year for the Greek Olympics. The class will be led through all aspects: running, jumping, wrestling, javelin, discus etc. The Brighton Steiner School Class 5 has a tradition of walking to the Olympics held by Michael Hall Steiner School in Forest Row, East Grinstead every year.

By Class 6, children have finally got to know what their body can do and can start to push the limits, gaining in agility, speed and strength. They are still young and have a lot of developing yet to do, but some people would call this the 'Golden Age' of growing up, not yet inhibited by the gravity of adolescence.

At this in-between stage the pressure to grow up is strong. However, children will still appreciate games that maybe would not suit a person of just two years older. For this reason, games are played that can be applied to mainstream sports, but in reality are more relaxed and easy to get to grips with. A good example of this is Wall Ball. Wall Ball is the basic training for sports like basketball and netball, but can help in any team sport in terms of becoming more spatially aware.

In Class 7 we look more closely at formation. We look at receiving passes and looking for other players, separating the players into offensive and defensive and swapping them around during the game. This stops over-crowding of the ball and leads to tactics being formed. Various professional sports are tried at a basic level. Games such as Wall Ball build up skills for basketball and we also play Unihoc, a simple version of hockey.

Class 8 is the time to boost the basic level of knowledge and skills and begin to play more in-depth tactics. Rules which may have been more relaxed in Class 7 now become a lot stricter.

In Classes 9 and 10 children have a lot of potential to become very fit and able sports men and women. They are still growing and vigorous exercise should be undertaken at least once a week, if not more. Regular training will help in later life by establishing routines to keep them healthy. It is sometimes a struggle to convince less active pupils to take part, but focusing upon the benefits of their achievements can help. Softball, basketball, volleyball and hockey are played

and pupils often go swimming if it is too wet to play outside. We also have access to a gym.

## **Geography**

Geography is one of the most important subjects in the Steiner Curriculum and encompasses many aspects of the world around us. It widens out as the children go through the school. In the earlier years the children are helped to become aware of their close surroundings, the kingdoms of nature, the elements, and the seasons.

In Class 3, aged 8 to 9, things broaden out and there are Main Lessons about farming, building and other local trades with as much hands-on experience as possible. The children learn about basic traditional work as well as modern methods – the horse-drawn plough and the tractor.

Local geography in Class 4 brings to the children a more concrete source of knowledge. In Brighton they are fortunate and can explore the downs and the beaches as well as many sites and activities in the city. They make models and draw simple birds-eye maps. Building on the local geography, in Class 5 the children study the British Isles. They become acquainted with maps, observing our position on the edge of the continent, and in the following year Europe is studied. This gives scope for the children to understand the huge and fascinating differences between the countries of this continent: their people, languages and occupations; the vegetation, rocks, the great rivers and the varied climates. They will learn the contrast between the flat Netherlands and Alpine Switzerland, for instance, or the lives and traditions of a land-locked country such as the Czech Republic compared with Norway, so connected with the sea.

In Classes 7 and 8, with the children entering their teenage years, the curriculum widens out to all the other continents. There will also be stories of the great explorers in the history Main Lesson which link with the study of the world. In the Upper School the aim is for the students to experience the world as a whole organism and to develop true ecological thinking; to cultivate a sense of responsibility for the earth and its intimate relationship to human life and economic activity.

## **German**

From the age of 7, children are taught German by native speakers. In the earlier classes the main aim is teaching through the spoken word, through stories that are acted out and poems and songs. The lessons are taken almost entirely in German. Younger children imitate easily and develop a perfect pronunciation. There is great emphasis on games, and through these much can be learned and understood. And they are fun! The children are introduced to a large vocabulary such as things in the classroom, the seasons, the natural world, colours, parts of the body and clothes and so on.

In Class 4, once the children have developed a good sense for the sounds and structure of the language, writing and reading begin. A familiar text is written out and the children then learn to read what they have written. They also begin to study grammar more consciously and take that further in Class 5. By the time the children reach Class 8 they have a large stock of familiar poems and songs behind them and they should, by now, know all the main grammar points in the German language.

In Classes 9 and 10 the emphasis is on the culture and history of Germany, looking particularly at current events and the modern political situation. The students also prepare to take GCSE German, the results of which have been very successful.

Teaching German in England is a different experience from teaching English in Germany. The German language is not as pervasive here as English is in German culture. So, to bring German to life, from Class 6 onwards, modern media are used in some lessons to help form a relationship to the language in its true context and create a feeling for the country and the people of Germany. Throughout the classes new children might join the school and these children are included in German lessons. If they are not acquainted with the language they are invited to join the German Club for beginners for six months to catch up. The language department is trying to arrange for children to be taught in a group to encourage interaction and also to keep the extra tuition fees low.

## **History**

In the earlier years history is not taught formally though often the stories that are told bring pictures of people in many other lands and times, of peasants and kings, holy people and knights.

In Class 5, at age 10, history proper begins with ancient mythology and a vast spectrum of early civilisations. Starting with Ancient India, the children are taken through Ancient Persia, Mesopotamia and Egypt. Greek history is taken from Homer's time and touches on Oriental culture through the conquests of Alexander the Great. Wonderful tales from the mythologies are told and Greek lessons are introduced during this year.

By the age of 12 the children are ready to be taught causality in history. Now they have Latin lessons which helps them to grasp the influence Roman culture has on our present civilisation: the law, the idea of the citizen, the engineering skills, and so on. Many years are covered from the founding of Rome, with the story of Romulus and Remus, to the rise of the Roman Empire. Stories characterising the Caesars and other outstanding personalities are told. Later comes the spread of Christianity, the gradual decline of Rome and the barbarian invasions.

Class 6 will also study the rise of Islam and the teacher will attempt to reach about 800 AD, the early Middle Ages and Charlemagne's founding of the Holy Roman Empire. From now onwards in the Lower School, the curriculum will stretch from the Middle Ages to modern day history. There will be the Norman Conquest and its implications for our country, the age of chivalry, the monastic culture and the Crusades, the battle of Agincourt, Joan of Arc. Technological innovations come in at this stage, cathedral building, guilds and city culture. Important changes are brought about by printing and modernising steps in banking. In astronomy, great discoveries are made by Galileo, Kepler and Copernicus at this time and all have fascinating biographies. The explorers moving around the world and opening up new vistas are an appropriate and fascinating subject for this age group (12-13 years).

Much history can be taught by colourful accounts of personalities whose lives have shaped their times and their stories arouse pupils' interest. The glories of the Renaissance in Italy and the Elizabethan Age (including Shakespeare) appeal to children of this age. They may well do a Shakespeare play in Class 8. The

story of Martin Luther and the English Reformation is studied as well as the Thirty Years War. The English Civil War, with its divisions and contrasts of character, gives a strong picture of human characteristics. The journey of the Pilgrim Fathers and its enormous repercussions is also discussed.

For Class 8, with the children in their teens, there is a Main Lesson on Revolutions. Right up to the present time history shows how human lives have been changed by the Industrial Revolution and this will be studied in depth. Projects, for instance on the great inventors, will be written and illustrated. The French, American and Russian Revolutions come in at appropriate times.

Later subjects such as the First World War and life in the trenches, Third World issues, and the biography of Nelson Mandela are introduced. By the time students have reached the Upper School, history lessons have depicted the progress of humanity from mythical and pre-historical cultural times through to the development of a material civilisation, with consequences of a social, political and ecological nature. History is now taken at a deeper level. Rather than giving the students finished images, they are encouraged to understand ideals and the moving forces in history. The Evolution of Human Consciousness is one of the most important history Main Lessons at this time.

### **History of Art**

History of Art is an Upper School subject only. In Class 9 a study of the development of Western art is undertaken, from the earliest art work of ancient Egypt to the fine basilicas of the Italian proto-Renaissance. The development of temple architecture is the main vehicle for this artistic exploration, but a much wider source of material is drawn on to support this work.

The journey from the profoundly simple pit burials of the early Egyptians, to the great processional temples of the Middle Kingdom, through Greece to the Christian Catacombs in Rome, and lastly to the mosaics at Ravenna in Northern Italy, represents a remarkable sequence of cultural development.

If we consider the premise of Erwin Panofsky that the great '...funerary art has always carried the highest metaphysical and spiritual aspirations of humanity' and further that the human striving behind all creative endeavour is to make visible the invisible, we hold the reins of this complex of themes. The exploration of art becomes no less than a charting of the evolution of consciousness, from the gold-tipped pyramids of Egypt to the candle-lit interiors of Western Europe and Rembrandt van Rijn.

In Class 10 we study the progress of art from Giotto to Rembrandt, from the glittering mosaics of Byzantium, and the golden floor of Heaven depicted in so many Eastern influenced Icons, through the influence of gentle St. Francis to the superb frescoes of Giotto Bondoni. Then from the High Renaissance, out of the vaulting heights of the Sistine Chapel to the candlelit interiors of seventeenth century Holland and the limpid imaginations of Rembrandt.

The History of Art Main Lesson follows that of The Artistic Use of Language. This allows us to build an appreciation of poetry from the times of our artists into the rhythmical part of lesson. From the work of Mechthild of Magdeburg, an influence on Giotto's good friend Dante, we then look to the Humanist thoughts of Pico Della Mirandola and the poetry of Michelangelo. We round these themes off with Shakespeare and the new questions of the seventeenth century exemplified by

Hamlet's doubt, "What a piece of work is man....". Literature is an essential part of these explorations as it provides a keynote and wider context for these widely divergent times and cultural milieu.

## **Lifeskills**

In adolescence, as pupils make the transition from childhood to adulthood, lifeskills sessions create an atmosphere where each student can safely explore, express and challenge their inner views and opinions and discuss difficult issues. Students are in a period of readjustment with regard to both individuality and relationships with the world and other people and experience times of personal development when their emotional, intellectual and physical lives are transformed.

### *Drug Awareness*

Sessions raise awareness of both psychological and physiological addiction, what drugs are, how they work and the reasons why young people experiment. The subject matter covers tobacco, alcohol and illegal drugs. There is so much confusing and misleading information around that it is important to dispel myths and obtain factual and helpful information. Students have the opportunity to research and present findings to the whole group and practise essential research, presentation and communication skills.

### *Sex Education*

Sessions raise awareness of teenage pregnancy, STIs and HIV, safer sex practices, alcohol/drugs and sex. These issues are addressed through discussions, question and answer sessions, group workshops and role play.

### *Class 9 Work Experience*

After exploratory discussions about career ambitions and individual skills, local employers are contacted and placements are secured. Students are encouraged to keep their options open and learn from all experiences of the work place.

### *External Resources*

Guest speakers from a variety of health, social and business backgrounds are invited to elaborate on issues raised and discussed in previous workshops and lessons. Students also attend sessions in places of work to explore elements of particular organisations.

### *Debates*

Formally-managed debates around emotive topics help students to be aware of the differences between objective and subjective exchanges. Listening and questioning skills are practised. These sessions allow students to make public their (often very strong) ideals, challenge those of others and be challenged in a safe environment.

## **Mathematics**

To give children a sense of the wonder and beauty of the pattern of numbers is to sow the seed for a life-long love of mathematics. We must dispel any inherited fear of maths by introducing it from the very beginning through number games, pattern and rhythm; by demonstrating, for instance, the number 9 as it weaves, vanishes, reappears and repeats itself in the 9-times table.

With fractions, at the age of 9 or 10, we begin to take things apart and see how they go together again. With negative numbers and an understanding of decimals and percentages we not only bring important lifeskills, but lead into discussion of the morality of lending, borrowing and using money.

Art and mathematics come together strongly as we introduce geometry, at first freehand with pattern and colour. As they mature, we encourage the children in the use of instruments to bring an appreciation of the beauty and satisfaction of precision. Geometry makes visible the concepts of space and proportion and develops spatial awareness, vital in design, architecture and planning.

With the introduction of algebra in early teenage comes a new language of maths to be used to investigate new problems. Here are the beginnings of a feeling for the unknown and the invisible. A study of the five platonic solids at the age of 13 or 14 gives a further impetus to this and to a sense of the infinitely great and the infinitely small.

Working in the Upper School with statistics and the handling of data shows the students the social, economic and political uses of maths. Discussion can lead into the benefits it can bring to planning and to the distortions and deceptions when wrongly used. When imaginatively taught, maths goes way beyond the limited skills needed for prescriptive examinations. It brings an ability to think logically, a desire for enquiry and reaches into an understanding of the world and of life itself.

## **Music**

The benefits of studying music are not all immediately obvious. Clearly, doing music in a group is fun and a social learning process. It is less visible how music improves functions of the brain and the whole development of children. But it does. Working with both brain sides, it includes motor senses, feeling or taste and needs a huge amount of abstraction skill.

Music is first introduced in Kindergarten in a playful way, with daily and seasonal verses and songs the children are quick to learn. By Classes 1 and 2, the children are already trained to hit the right pitch, to get a feeling of high and low notes and to feel different rhythms. Using music as an opportunity for learning social behaviour, pupils learn how to sing, drum and blow simple pipes within the class as an ensemble. In order not to fix the child's understanding too early on Western music (major/minor) we use some songs which do not emphasise our grown-up understanding of a central note to which everything relates. Some of the pentatonic songs fulfil these criteria.

All children learn the soprano recorder and have violin lessons in groups. Learning to read music provides one way of understanding music; another is composition. Already in Class 3 we read music and introduce basic composition (eg. improvising a melody on the recorder and fixing it on paper). We also start singing in more than one part and by Class 5 singing in more than two parts is standard.

In Class 5, at the end of the collective violin lesson, some of the pupils may stay with the violin, others choose something new. Everyone else is expected to learn a different individual instrument. Since our concept of education is child-centred we think that it is imperative to develop an understanding of the world as a whole system and learning an instrument encourages this.

In Classes 6, 7 and 8 we establish the class as an ensemble. In this way the pupils learn the very complex challenge of music and playing together in a group. The social aspect is very important. Since not everybody plays the same instrument it is necessary to rehearse with different subgroups of the class. This is a difficult exercise for everybody. It demands listening and accepting the successes and mistakes of others. It also demands courage to play in front of peers.

Music theory is emphasised. Composition and singing are increased. Instrumental players of a designated standard are part of the school orchestra. From Class 8 onwards the whole class is part of the school choir.

Students in the Upper School gain a historic understanding of music and a feeling for the different styles developed in different times. To develop the kind of joined-up thinking that questioning the world requires, Upper School students must locate the subject of music in relation to physics, history, philosophy and the personal questions of the individual. The process of individualisation is mirrored in advances in composition and solo performance. GCSE music may also be offered.

## **Pottery**

Pottery as a full subject with a specialist teacher is taught to Classes 8, 9 and 10. Prior to this, the children work with clay in their regular sessions with the class teachers.

Over the three years all aspects of the subject are covered from sculpture to surface decoration and a variety of techniques such as coiling, slabbing, press moulding and throwing are taught. Early emphasis is placed on developing technical ability so that students are able to create and design competently.

Learning about the material itself and developing abilities and techniques is achieved through projects that explore the plant and insect world. Different artists' styles are studied along with the work of ceramic artists both ancient and modern.

Overall the students learn how to control the material, discover its unique properties and use it to make a personal artistic response to the world around them. They gain an understanding of working in three dimensions and are provided with a necessary balance to the academic work. To become physically engaged in creating something out of any material, be it clay, wood, metal or cloth is essential for the balance of the whole.

## **Religion**

Religion covers the world's great stories and is non-denominational, with all faiths and spiritual traditions respected.

In the earlier years the emphasis is on the wonders of nature, how the divine lives in the earth, in every leaf of the tree, the sun, the clouds, the rivers, the beasts and in all human beings. All teaching is in story form with themes of courage, compassion, love, ingratitude, jealousy, self-sacrifice, hard-heartedness and countless other qualities common to human behaviour.

The six-year-olds in Class 1 feel very close to the natural world and many have no doubt that there are angelic beings or forces that guide us.

A favourite story for Class 2 is that of St Francis of Assisi with his simplicity and loving heart, his Canticle to Mother Earth, Brother Sun and Sister Rain expressing his closeness to all nature. The class sometimes perform a play from a story of one of the saints.

Throughout Class 3 the magnificent stories in the Old Testament are an outstanding part of the year's content. So many trials and aspects of the human character are evident: the willingness of the great leader Abraham to sacrifice his son because he believed it was God's wish, the dishonesty of Jacob which is later redeemed, the patience of Job, the faithfulness of Ruth, the anger, envy and betrayal of King Saul, David the hero and poet, the splendid but turbulent prophet Elijah and much more. The class teacher will tell these stories as a history and the religion teacher will bring deeper aspects.

In Class 4 the stories are of the Norse gods. When the storm was blowing, people of those times knew that the great god Odin was riding through the sky. Yggdrasil, the Great Tree of Life, had under its roots the prophetesses of the Past, Present and Future. The vastness and energy of these stories have a great appeal at this age, as does the lively, entertaining and malicious god Loki who manages to slay the innocent god Baldur. These stories speak to the children rather as does, for example, The Lord of the Rings; they remember them for a lifetime.

Class 5 is rich with marvellous stories and mythology. The great ancient Indian epics, the Ramayana and the Mahabharata are told and the children are spellbound. These stories are highly moral and again they portray main aspects of human behaviour. During this Main Lesson the stages of life from birth to old age are spoken of, for example how an active young hunter becomes a responsible father and provider before retiring to the woods to lead a meditative life on his own. The life of Buddha and his Eightfold Path is told in a way children can understand and Zarathustra's wisdom is woven into the fascinating story of his life. Greek stories also have an important part to play.

As Class 6 leads beyond Ancient Greece into Roman times the birth of Christianity comes into history lessons and the life of Christ is taught. The rise of Islam is taught towards the end of Class 6.

Approaching the teens in Class 7 there comes the time for children to know of the chivalry and ideals of knighthood and the piety and discipline of the monastic orders in the Middle Ages. From this age onwards there is more emphasis on modern biographies such as Martin Luther King, Helen Keller, Captain Scott, Gandhi, Mother Theresa, Anne Frank and many others. There is much discussion on matters of destiny and all of life's questions.

With the older children, the story of Parsifal from the Arthurian legends is told as a Main Lesson because it has universality, taking a totally naïve and adventurous young man through the many difficult stages and experiences of life until he finally comes to compassion, reconciliation and wisdom.

## **Science**

The young child first encounters Science in the Kindergarten, not in a conscious sense but through being at one with the rhythms of the seasons and the unfolding of nature around him or her.

As the children move through the classes, their first contact with science is the Man and Animal Main Lesson in Class 4, followed by the Plant Study Main Lesson in Class 5. Here the approach is qualitative, working with the child's innate sense of wonder and concentrating on observing and describing phenomena from nature around them.

From Class 6 to Class 8 the science curriculum broadens to encompass astronomy, physics (magnetism, electrostatics, light, sound and forces), chemistry (combustion, salts, acids and bases, sugars, starch, cellulose and proteins) and human biology (health, nutrition and anatomy). The pupils' sense of wonder and mystery is still alive and observation of phenomena continues to play an essential part in science lessons. However, the approach gradually becomes more quantitative, requiring careful measurement and systematic recording.

In the Upper School science is taught through demonstration and experiment. A historical, moral and human connection is maintained through the study of the biographies of scientists. Accurate observation, precise measurement, rigorous recording and full, clear descriptions are required of the pupils. Where appropriate mathematical laws are derived from experimental results. The curriculum in Classes 9 and 10 covers geomorphology, climatology, oceanography, organic chemistry, physics, anatomy and embryology.

## **Woodwork**

The practice of woodwork in a Steiner school is not so much to develop the intellect but rather to develop the strength of will. The child's development is highly dependent on her or him building up their staying power.

The children are presented with a piece of wood, preferably a branch or a segment of a trunk, so that they can see the origins of the raw material. Then they begin the long task of shaping and carving the wood into a practical object. Over the months they will see the work develop but, all-importantly, they will learn to pace themselves by putting the work down at the end of a lesson knowing they have to come back to it the following week. This is an essential practice for approaching (and completing) any long-term project. Woodwork is an individual pursuit where each pupil is focused on their own project for many hours.

They have three years to complete a number of major objects: a darning egg, salad fork and spoon, a bowl and a wood carving or piece of carpentry. These main pieces are interspersed with smaller (and quicker) objects such as hair-pins, key-rings, paper-knives etc.

The amount the child completes depends on the physical strength and stamina of each pupil. The quality of the work depends on the teacher who is there to guide them to creating as perfect a finish as possible. Through the course of these years the pupils will discover an array of woodcarving techniques, will learn how to use and maintain their tools. They will learn the importance of safety in a

workshop environment and the basics of carpentry. If possible they will also go into the forest to become more aware of the raw materials they are using.

Woodwork also serves a purpose in allowing peaceful time for the absorbing and digesting of the information received during the day and in creating a space for individual artistic expression. The pupils can also put into practice the geometry lessons they have learned in maths and they may even be heard singing during these lessons!