An Introduction to Roma Nobilis, the Curriculum for the 11/12 Year Old

At the age of eleven and twelve, something very new happens to the child: she or he takes a firm and determined step into the world. Great changes are beginning to happen in her and his body. As their bones subtly harden, children become much more aware of their gravity and weight. We accompany this process with the Waldorf curriculum. The curriculum weaves between leading the child from finding her or his inner self and own humanness, to finding her or his way into the world and in the world.

We study minerals and the structure of the earth, reflecting the physical human body. We study geography, reflecting the children's intentional stepping out into the world. While we also study the earth and its harmonious relationship to the other bodies in our solar system, in astronomy, echoing our striving for finding the higher path in life.

Basic concepts of physics are introduced this year, to demonstrate (amongst other reasons) cause and effect, as the children become increasingly aware of the consequences of their deeds ~ but also, to establish and become aware of the physical laws of our world.

In history studies, the transition from antiquity to the more modern medieval history, mirrors and guides the child through her and his inner transition from the more poetic consciousness to a search for the truth in the form of a more scientific approach. The development of human civilization, over those epochs, can be seen as parallel to the development of the 11 to 12 year old child. The fall of Rome also reflects the bravado of invincibility that we experience at this age, and how we may fall into the Dark Ages and be illuminated by the arrival of Christianity. In Arithmetic, the previously learned skills are deepened and then moves on to the study of percentage and ratio, the relationships between things.

Geometry becomes very accurate and precise now ~ after all the years of form drawing and freehand geometry, we are, finally, given a chance to be reassured by precision instruments and definite geometrical laws that we can rely on.

As a colleague from the East Bay Waldorf School once put it: "Sixth grade is the gateway to pre-adolescence and idealism. In their studies of Rome, the children are grounded so that, through their physical awareness, they can discover what "I" means for them. In the Middle Ages, they begin to venture out toward the unknown to find what, in the world they are asked to address. The stories of the Grail offer an introduction to their quest in life. In summary, this year is both an ending and a beginning."

The Block System

The block system is unique to Steiner education. Children can really deepen their experiences of the curriculum through this way of teaching: We teach one subject for three weeks, and then let it 'fall asleep and work on the child on a deeper level. We then recall the memory when we teach the continuation of the subject.

 The first block of three weeks is a Geometry block. The stories come from Roman History. Morning exercises will be spelling.
 The second subject block is Mineralogy & Geology.

The Roman History stories continue.

Morning exercises will be weather reports.
3 ~ Block three introduces Ancient Rome.
Morning exercises consist of mental arithmetic.
4 ~ During Advent the subject block is Arithmetic.
The stories continue to tell Roman History.
Morning exercises are dictionary work.

Supplies

Having a black board is a really nice idea - it will give you and your child the opportunity to practice to your heart's content, until you are ready to put your work onto paper. You could, alternatively, also get hold of a large role of paper for this purpose. It is important that you do not feel restricted by the space you practice on. The work that appears in the Main Lesson Book is the final product, so to speak; the preceding process is equally important.

Main Lesson Books are a Steiner Education specialty. They are wonderfully non-restrictive: there are no lines and they are nice and big. I recommend the A4 books, at this age.

A Possible Timetable

9am to 11am: Main Lesson Break 11.30am to 12.30pm Subject Lesson Lunch (cooking/preparing it together) Afternoon activities, in or out of the home (with other teachers and children), on some afternoons.

Subject Lessons:

Monday ~ Painting Tuesday ~ Maths Practice Wednesday ~ Handwork Thursday ~ English Practice Friday ~ Geometry

Art in Roma Nobilis

The paintings, this year, are all done using a slightly damp paper. This means, the paper is held under a tap and both sides get wet. It doesn't need to be soaked as in previous years. The water, remaining on the paper, then needs to be carefully removed by gently wiping it off with a special sponge. To prepare the paint, we pour a small amount into a small glass jar (the size of a baby food jar) and dilute it with water, stir it well and try it out on a piece of scrap paper, then dilute more or add more pigment if needed. The paints used in the given instructions are ready and waiting, and so is the brush, a sponge and one or two glass jars (the size of a jam jar) of water to clean the brush, before a painting verse is said: A Painting Verse (Author unknown) The sunlight shines into each day And sends the dark of night away. It brings the colours to my eyes, The bright green earth, the deep blue skies, The yellow sun, the red, red rose That in the gentle garden grows. And from within my loving heart The light always conquers the dark. So on my paper let it be Sunlight and water - joyfully.

I always find that these kind of verses create the most fruitful atmosphere, enabling the child (and the adult) to enter more fully into the moods of the particular topic and colours.

Two days of the Geometry Block:

Roma Nobilis, Michaelmas Term, Block One, Geometry

Day Four

~Welcome the Day

~Recorder Practice

~Morning Exercises

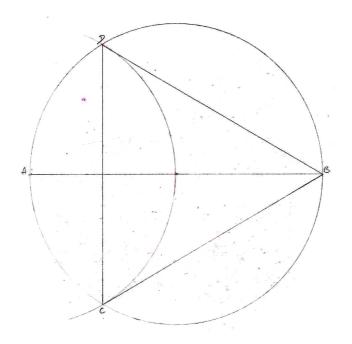
Spelling

Read through the following spelling words a few times, then write them down (read out by the adult):

element, elevator, emergency, employer, emptiness, encouragement, encyclopedia, entire, entrance, envelope, equator, especially, establish, example, excellent, excitement, exercise, experience, exterior, familiar

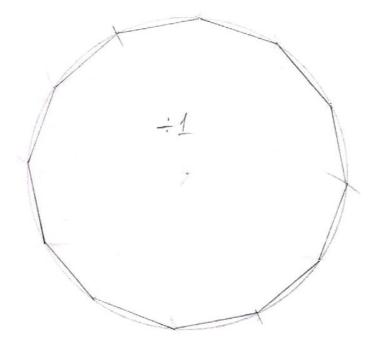
~Main Lesson

Look at the drawings from yesterday! Now construct an equilateral triangle in a circle: Draw a circle and a horizontal diameter and, using the same radius as the circle, mark off crosses on the circumference as shown below. Now join the three points of the triangle.

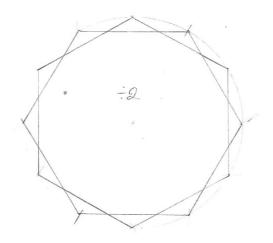


Now we will look at what happens when we divide our circle into twelve and select different points on the circumference. But first we must construct a circle and the twelve points: The first six points are as the compass-rose. Then find any ONE of the six remaining points by placing the compass point on two neighbouring points and forming a cross outside the circle (using the same radius!). Join this cross with the circle's centre and mark where it crosses the circumference. With the circle's radius mark the further five points off on the circumference. Now you have a circle with twelve perfectly spaced points on its circumference. This drawing needs to be repeated five times!

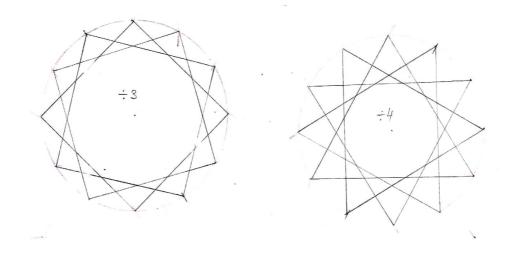
On the first drawing join the neighbouring points:



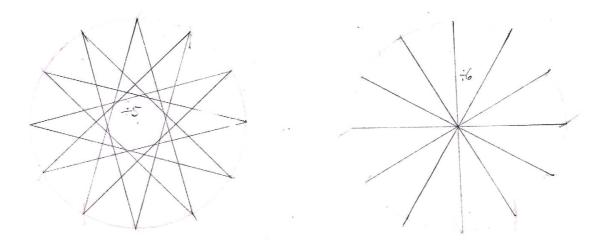
On the second drawing join every second point:



On the third drawing join every third point and on the fourth every fourth.



On the fifth drawing join every fifth point and on the sixth every sixth point:



As you can see from the drawings, we have effectively divided the 12 points on our circle by 1 then 2 then 3 then 4 then 5 and finally 6: with all six drawings we get a different kind of twelve pointed star.

~Story Time Read chapter four of H.A. Guerber's book 'The Story of the Romans'.

~Snack Time & Break

~English Practice

Work through the text below and write the rule into your English Grammar and Spelling book.

Subject & Predicate

The castle is very old. The river is rushing along. The dog keeps barking.

To be complete and correct, every sentence needs a subject and a predicate. The subject tells whom or what the sentence is about (The castle, the river, or the dog, for example), and the predicate tells what the subject is or does (is very old, is rushing along, keeps barking).

In the sentences below, determine which parts of the sentences are the subject (underline in blue) and which are the predicate (underline in red):

The cow grazed in the meadow. My neighbours are having a party Dad asked me to fix the bicycle. Toni takes riding lessons. The clowns did a great juggling act. Our kitten loves climbing up the curtains. Mary's uncle drives a bottle green Jaguar. I wish you liked to play chess.

What type of word is it that makes the predicate a predicate? And what type of word is needed to make the subject?

You can make a two-word sentence by using one of each:

I sing. You dance. Muffin meows. Mum smiles. Etc,

<u>Rule:</u>

Subject & Predicate

To be complete and correct, every sentence needs a subject and a predicate. The subject tells whom or what the sentence is about, and the predicate tells what the subject is or does. The subject always contains a noun or pronoun, and the predicate always contains a verb.

Roma Nobilis, Michaelmas Term, Block One, Geometry

Day Five

~Welcome the Day

~Recorder Practice

~Morning Exercises

Spelling

Read through the following spelling words a few times, then write them down (read out by the adult):

facet, fierce, fireproof, following, forgetting, forgiveness, fossil, freight, frighten, fuel, further, gallon, gaze, gesture, governor, graduation, grateful, grief, halves

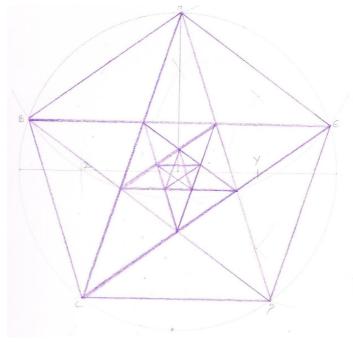
~Main Lesson

This morning we will make a pentagon and a pentagram! For both we need to divide the circle into five, and this takes a little time:

Divide the right hand half of the horizontal diameter into two, creating point Y (below). Put the point of the compass in Y and mark off the distance to A on the horizontal diameter, creating point Z. Now put your compass point in A and use the distance to Z to mark off B and C, and from B and C, using the same radius, mark off D and E.

You can join the points A, B, C, D and E in two ways, one way producing a pentagon and the other a pentagram!

You can then construct further pentagons and pentagrams inside the first, and then inside the second!



As we are at the end of our first week in the Geometry main-lesson, take a look at all of your drawings and look if they are accurate! Your drawing skills have improved, so you may find that you are able to improve some of your drawings. If you have time, write a brief text explaining what all the drawings are and how they were constructed.

Then you can construct the following drawing - you will find four spirals. You need to construct a square and then join the mid-points to construct another square inside it, and repeat until you can't see what's happening! Colouring is really important!



~Story Time

Read chapter five of H.A. Guerber's book 'The Story of the Romans'.

~Snack Time & Break

~Art

Carving a wooden spoon: Every Friday, the subject lesson will be Geometry; however, as we are already doing geometry in main lesson, we'll do some woodwork during this block, in fact, we will make a wooden spoon. You will need:

A piece of hardwood ~ walnut is a good choice, for example (the length and width and thickness you want your spoon to have ~ maybe 10 inches long, 4 inches wide and 2 inches deep, for example)

A pencil

A Wood Rasp

A Gouge (best a spoon gouge)

Rough sandpaper and fine sandpaper

A woodwork clamp

A suitable table ~ sturdy and strong

Begin by drawing the spoon shape onto your piece of wood: on top, on the back and on the sides. Do you want your handle to be slightly curved? Do you want it to be thicker at the end? Imagine your spoon's shape first, before drawing it.

With the clamp, fasten your piece of wood securely to the table before you start. Remembering, at all times, that the blade on a gouge is very sharp, carefully begin to carve the concave of your spoon. Start in the middle, taking off just small chips. Gradually, work your way further out, until you reach the pencil line.

Don't carve too deeply right away ~it is too easy to go all the way through the bottom!

Once you have the inside roughly carved out, use your rasp to round the back into the convect shape, complementing the other side. You can leave it quite rough still at this stage.

Then rasp the curved, long handle of your spoon, rounding the end off nicely. Keep the handle quite strong ~ so it does not, suddenly, break in two.

When you are satisfied with the rough shape of your spoon, go back to the inner bowl of your spoon and create a smooth surface with your gouge, just chipping away small pieces.

When the concave is nice and smooth, take up your rasp again and work on perfecting that shape some more ~ before taking the finer wood file and making it really smooth.

Then, when it is as smooth as you can get it with the file, move onto the sandpaper ~ first the rough, then the smooth.

When you are completely happy with the end result, you may rub some food safe oil into it (sesame, flax seed or walnut oil are the best ~ olive oil tends to go rancid quite quickly). Once you have oiled your spoon, it will need some time to cure or a few days. Really well done! If this has taken you less than the three weeks of the geometry block ~ why don't you make another one?!

And three days from the Mineralogy Block:

Roma Nobilis, Michaelmas Term, Block Two

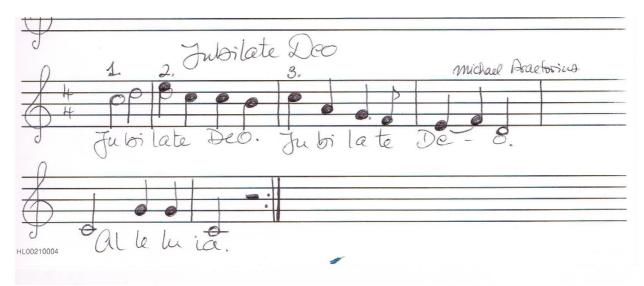
Welcome the Day

Morning Verse (by Rudolf Steiner)

I look into the world Wherein there shines the sun' Wherein there gleam the stars, Wherein there lie the stones. The plants they live and grow, The beasts they feel and live, And man to spirit gives A dwelling in his soul. I look into the soul That living dwells in me. God's spirit lives and weaves In light of sun and soul, In height of worlds without, In depth of soul within. To Thee, o Spirit of God I seeking turn myself That strength and grace and skill For learning and for work In me may live and grow.

Jubilate Deo (by Michael Praetorius





Precious Stones (by Christina Rosetti)

An emerald is as green as grass, A ruby red as blood, A sapphire shines as blue as heaven, But a flint lies in the mud.

A diamond is a brilliant stone To catch the world's desire, An opal holds a rainbow light, But a flint hods fire.

The Sun Orb Sings (by E. Crusius & J.W.v. Goethe)

The sun orb sings in emulation, 'Mid brother spheres his ancient round. His path predestined through creation He ends with step of thunder sound.

The angels from his visage splendid Draw power whose measure none can say; The lofty works uncomprehended Are bright as on the earliest day.

The Sun Orb Sings ECourius J.W. a goethe	
The sun orb sings in emulation ' mid brother spheres The angels from his visage spleudid draw pow'r Whose mea-	
his ancient round. His path predestined through sure none can say, the log - ty works un - com-	
creation, he ends with steps of thunder sound. pre-hended are bright as on - the earliest day.	

Over the Misty Mountains (by J.R.R. Tolkein)

Far over the misty mountains cold To dungeons deep and caverns old We must away, ere break of day, To seek the pale enchanted gold.

The dwarves of yore made mighty spells, While hammers fell like ringing bells In places deep, where dark things sleep, In hollow halls beneath the fells.

For ancient king and elvish lord There many a gleaming golden hoard They shaped and wrought, and light they caught To hide in gems on hilt of sword.

On silver necklaces they strung The flowering stars, on crowns they hung The dragon-fire, in twisted wire They meshed the light of moon and sun.

Far over the misty mountains cold To dungeons deep and caverns old We must away, ere break of day, To claim our long-forgotten gold.

Goblets they carved there for themselves And harps of gold; where no man delves There lay they long, and many a song Was sung unheard by men or elves.

The pines were roaring on the height, The winds were moaning in the night, The fire was red, it flaming spread; The trees like torches blazed with light.

The bells were ringing in the dale And men looked up with with faces pale; The dragon's ire more fierce than fire Laid low their towers and houses frail.

The mountains smoked beneath the moon; The dwarves, they heard the tramp of doom. They fled their hall to dying fall Beneath his feet, beneath the moon.

Far over the misty mountains grim To dungeons deep and caverns dim We must away, ere break of day, To win our harps and gold from him! Roma Nobilis, Michaelmas Term, Block Two, Mineralogy

Day One

~Welcome the Day

~Recorder Practice

~Morning Exercises

During this Mineralogy block, we will write weather reports each morning. We will go outside, establish where east, west, north and south are, and determine from which direction the wind is blowing, if, indeed, there is any wind (there is an easy way to do this: wet your pointing finger and hold it up in the air; the wind will blow on it and make its side feel cold).

Is the whole sky covered in a thick blanket of cloud, are there big heavy rainclouds, are there tiny clouds, are there just a few fluffy ones, are they high up or low down, or is the sky completely cloudless and blue?

Is there mist or thick fog?

What is the temperature like ~ also compared to yesterday? Is it unusual for the time of year?

Prepare a special little book for this.

Here is an example:

The Weather on Monday, 16th April 2012 The sky is mostly clear blue, with a few very high up small, fluffy clouds. The temperature, at 10am, is very mild for the time of year: 21C degrees.

~Main Lesson

Read 'The Children of the Earth', the first chapter of Charles Kovacs' book ' Geology and Astronomy'.

Discuss what you have read and compare it to your own experiences when travelling.

Now prepare your new main lesson book. On the title page, write in big and beautiful letters: MINERALOGY.

On page one, draw the picture of a high mountain, illustrating the change that occurs in nature, as one ascends it.

On page two, make the contents page: write CONTENTS at the top, and PAGE in the top right corner.

As we go through the next three weeks, add each chapter and page number below this title.



~Story Time Read chapter sixteen of H.A. Guerber's book 'The Story of the Romans'. ~Snack Time & Break ~Painting

Painting of a Crystal Cave

Begin by painting a ultramarine blue background on your damp paper, darker on the outside, getting lighter towards the centre.

Wash your paintbrush very clean and squeeze it dry, then, by removing some of the blue, create the crystal shapes.

Mix some ultramarine blue and red on a piece of scrap paper and, carefully define the sharp angles of the crystals.

Use the purple/magenta also for some of the surfaces of the crystals, especially on the outer, darker ones.

Take your time, with the adding and removing colour, until you are happy with the result.



Roma Nobilis, Michaelmas Term, Block Two, Mineralogy

Day Two

~Welcome the Day

~Recorder Practice

~Morning Exercises

Observe today's weather and write a weather report as described on day one of this block.

~Main Lesson

Read 'The Story that the Mountains Tell', the second chapter of Charles Kovacs' book ' Geology and Astronomy'.

Discuss what you have read, write a summary and draw the picture of it. Here is a list of the most important points of the chapter. Can you put it into a short summary?

- ~ mountains are mostly found in groups or rows, called mountain ranges
- ~ there are young (e.g. the Alps) and old mountains (e.g. the Urals)
- ~ the moon's mountains are old, unchanging and dead
- ~ on earth, the youngest mountains are the tallest
- ~ old mountains have been worn down and rounded off

 \sim the earth is still very much alive \sim there is always some destruction going on, as well as new creation

~ there is a pattern to the changes of mountains

untain building Top of austher Miss part at what he and thrusting are and by E AB. unour in Rea

~Story Time

Read chapter seventeen of H.A. Guerber's book 'The Story of the Romans'.

~Snack Time & Break

~Maths Practice

Today we will look at multiplication. We'll start of with positive numbers which always give a positive answer, because plus times plus equals plus, remember?

2 times 3, or 2 multiplied by 3, or $2 \times 3 =$

I hope you don't have any problem finding the result 6, but it's worth remembering that multiplication is a kind of short hand: 2×3 is the same is 3 + 3 (ie 3 taken 2 times). Another example: $4 \times 7 = 4 + 4 + 4 + 4 = 28 \dots 7$ taken 4 times.

So, your turn:

4 x 8 =	15 x 8 =
7 x 9 =	23 x 7 =
12 x 6 =	203 x 5 =

If we multiply three numbers together then we can choose which pair to take first and then multiply the result with the third number:

 $2 \times 3 \times 4 = (2 \times 3) \times 4 = 2 \times (3 \times 4) = 24$ - the result is the same whichever way you do it!

Now try these:

4 x 8 x 5 =	15 x 8 x 12 =
7 x 8 x 9 =	23 x 7 x 19 =
12 x 9 x 6 =	203 x 5 x 123 =

Roma Nobilis, Michaelmas Term, Block Two, Mineralogy

Day Three

~Welcome the Day

~Recorder Practice

~Morning Exercises

Observe today's weather and write a weather report as described on day one of this block.

~Main Lesson

Read 'Young and Old Rocks: Granite', the third chapter of Charles Kovacs' book ' Geology and Astronomy'.

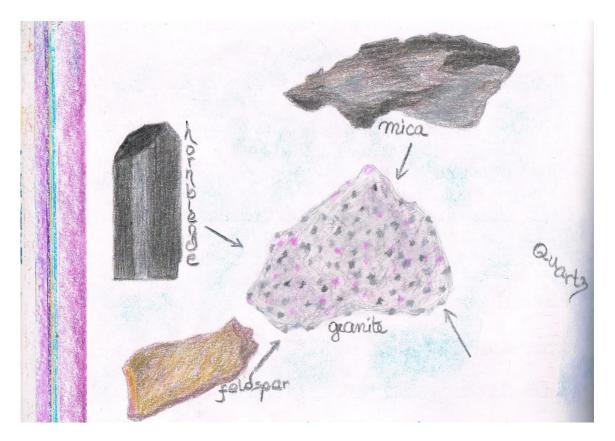
Discuss what you have read, summarise it and make a drawings of it.

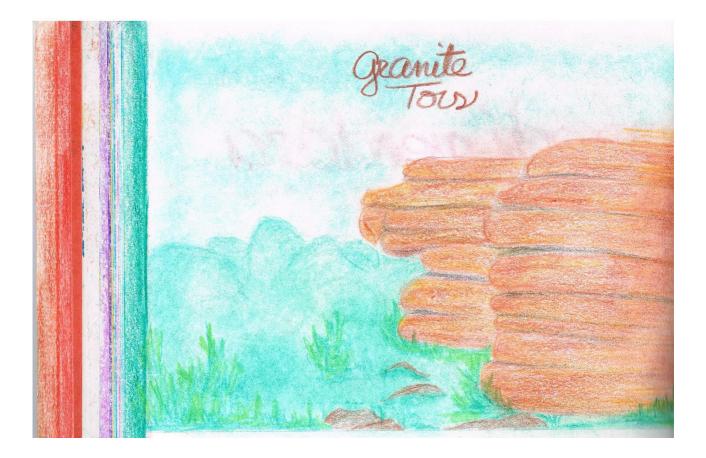
Here are the most important points again:

~ the oldest rock, deep down in the earth, is granite ~ wherever you go, it lies beneath all the other layers of rock

~ granite can also be found at great heights ~ the highest peaks of the Alps are of granite

~ granite consists of quartz (the clear stone of wisdom), of mica (the black or white stone of energy and strength) and of feldspar (the pinkish, white or greenish stone of warmth).





~Story Time Read chapter eighteen of H.A. Guerber's book 'The Story of the Romans'.

~Snack Time & Break

~Handwork (as described)

And a couple of days from the Roman History Block:

Roma Nobilis, Michaelmas Term, Block Three, Roman History I

Day Six

~Welcome the Day

~Recorder Practice

~Morning Exercises

What is three halves as a decimal? What is three halves as a mixed fraction? What is three halves plus three quarters plus three eighths? What is nine eighths as a decimal? What is one third plus one half?

What is one half minus one third?

~Main Lesson

The Etruscans

Not all the tribes of Italy lived as simply at that time. The Etruscans live just north of the River Tiber. They had taken over a lot of what the Greeks had achieved before. They could write and read, and they loved beautiful things; they had dancers and musicians, painters and sculptors, and they had gifted and skilled metalworkers who made beautiful ornaments and jewellery out of gold and silver and bronze. They also had established trade routes with Babylonia, Persia, Egypt and Greece.

As they were so much more civilised than the Romans, they were invited into Rome to teach the king's children and to advise the government.

In time, they even chose an Etruscan for their next king. During Etruscan rule of Rome, it grew and spread and became a great city. The Romans learned to build better houses and beautiful arches, to write and read, and to use money.

The Romans were happy and content under Etruscan leadership ~ until the last of them, King Tullus, was stabbed to death by his cruel son-in-law Tarquinnius the Proud. He did not feel like waiting until he would inherit the crown ~ so, he killed the king.

Tarquinnius Superbus would not endure any criticism, when people spoke up against him (and many were upset at his stabbing his father-in-law), he would simply have them killed as well. Also, if he fancied anything in his kingdom that wasn't his, he would simply take it and declare it his own. No one was safe. His two sons were even worse, they would just walk into a house, take what they wanted and leave again, even if it was the wife or the daughter of the house owner.

Once, one of the sons tried to take someone's wife away, but she stabbed herself, rather than go with him. He just left her lying there, slowly dying. When Brutus, Tarquinnius' nephew heard about this, he took her to the forum and told the other Romans about it. This started a rebellion. They swore they would never let Tarquinnius or his sons rule Rome again.

They decided to have no more kings but a republic: Every year, two men were chosen who ruled and made laws and keep the justice. These two men were called Consuls. The first two Consuls of the brand new Roman Republic were Brutus and Collantinus, the husband of the woman who had stabbed herself, rather than go with Tarquinnius' son.

Write a summary of this part of the story, in your own words, into your main lesson book, under the title The Etruscans.

Dictation

The Etruscans

The Etruscans live just north of the River Tiber. They could write and read, and they loved beautiful things. They had already established trade routes with Babylonia, Persia, Egypt and Greece.

They were invited into Rome, to teach the king's children and to advise the government.

In time, they even chose an Etruscan for their next king, under whose rule, Rome grew and spread and became a great city. They learned to build better houses and beautiful arches, to write and read, and to use money.

The Romans were content under Etruscan leadership ~ until King Tullus, was stabbed to death by his son-in-law, Tarquinnius the Proud.

Tarquinnius Superbus would not endure any criticism, he would simply have them killed as well. No one was safe. His two sons were even worse.

In time, a rebellion started.

The Romans decided to have no more kings but a republic: Every year, two men Consuls were chosen who ruled and made laws and keep the justice.

Today we will explore what Roman medicine and healthcare was like.

In Ancient Rome, Greek doctors were considered to be the best. They had great knowledge of the healing powers of herbs with which they were able to cure most common illnesses. Surgery was still very primitive and often ended up in the death of the patient. It was also extremely painful because there was no real anaesthetic yet ~ patients were just given some poppy juice which did not really help.

The most common operations were amputations on soldiers that had been injured on their arms or legs. They did use an ointment made of thyme, to disinfect the wounds but it wasn't very effective.

Sick people could attend a small private hospital or spend the night in a temple, hoping and praying that the gods would cure them.

Romans were quite superstitious; they believed that ill health was a curse from the gods who had been offended somehow. Sneezing, tripping or hearing an owl hooting might all be signs of bad luck or impending illness. Because of this, many people sought cures by visiting health shrines and temples, or by carrying lucky talismans to ward off evil spirits.

Ancient Romans knew that hygiene was important and that keeping clean would help them stay healthy. Roman baths were more like a swimming pool. They were often built on hot springs. Romans would visit a bath every nine days,

approximately, where they would clean themselves, relax, sweat away their aches and pains in a steam-room, have a massage, have a haircut, meet their friends, or read in the bath's library. Men and women did not use the same bath at the same time.



Battlefield Surgery



A Roman Bath

~Story Time

Read chapter forty and forty-one of H.A. Guerber's book 'The Story of the Romans'.

~Snack Time & Break

~Painting

The Seven Hills of Rome

Like last week, paint a lemon yellow wash over the entire, slightly damp page. Then paint the sun with golden yellow.

With Prussian blue, paint the hills softly now ~ begin with the tallest, furthest away one.

Then paint the one in front of that and the one in front of that, until the seventh one, right at the front.

Mind the way the light shines onto these hills and make that part lighter. You can do this after you have painted the first design of them: add more Prussian blue on the darker side in the shadow, and add a little lemon yellow on the lighter sunny side.

When your painting has dried, you could write the names of the hills on them, if you like, and 'The Seven Hills of Rome', in the sky.



Here are the names again, starting from the back: English: Latin: Quirinal Hill Collis Quirinalis Viminal Hill **Collis Viminalis Esquiline Hill** Collis Esquilinus Capitoline Hill Collis Capitolinus **Palatine Hill Collis Palatinus** Caelian Hill Collis Caelius Aventine Hill **Collis Aventinus**

Roma Nobilis, Michaelmas Term, Block Three, Roman History I Day Seven

~Welcome the Day

~Recorder Practice

~Morning Exercises

What is 1.5 plus 2.4 plus 3.3? What is 5.5 minus 4.4? What is 7.8 plus 8.7? What is 19.25 minus 17.13? What is 20.12 minus 19.90?

What is 31.98 plus 2.52?

~Main Lesson

When Tarquinnius, the seventh and last king of the Romans, Rome became a Republic ~ no longer ruled by a king but by its own citizens. The Etruscans were conquered by the Romans, and Rome became a great city, spread out over seven hills.

The lanes were narrow and crowded with horse riders and donkey carts loaded up with fruits and vegetables, with meat and fish, with grains and honey going to and from the market place, the Forum.

There were many temples, each dedicated to one particular god. The Romans had the same gods as the Greeks, but they were given different names:

<u>Greek</u>	<u>Roman</u>
Ares	Mars
Apollo	Apollo (sun god)
Artemis	Diana (goddess of the moon)
Aphrodite	Venus (goddess of love)
Hermes	Mercury (god of trade and business)
Zeus	Jupiter (father of the gods)

Persephone	Prosapine
Hesta	Vesta
Demeter	Ceres
Hephaestus	Vulcan
Hera	Juno
Cronus	Saturn
Poseidon	Neptune
Athena	Minerva
Dionysus	Bacchus

In the forum, there were Romans wearing tunic and togas, woollen cloaks. Slaves were only allowed to wear tunics, but every Roman was given his or her first toga at the age of fourteen.

Although Rome was first inhabited by robbers and bandits, they had grown very wealthy now and had become the higher class, called the Patricians. New comers were considered common and were called Plebeians.

Senators, members of the government, were, of course, only chosen from the Patricians.

All standards, borne into battle, and all public buildings were inscribed with the letters SPQR, short for 'Senatus populus que Romanus', which is Latin for 'the Senate and the people of Rome'. During war times, the Senators chose Consuls from amongst the Patricians and made them the leaders, during peaceful times they were responsible for the law and order in Rome.

The Patricians were the officers on horse back, in war times, and the Plebeians were the common soldiers who marched and fought on foot.

The Forum was also the place where the Senators and consuls met. Here the laws were made. And once a law was made in Rome, it could not be changed (in contrast to the Greeks who changed their laws quite frequently).

Consuls wore special togas, edged with purple. When he went to the Forum to judge, twelve men marched before him, carrying a bundle of twelve wooden rods, surrounding an axe ~ this was meant to remind all Roman citizens that he had the power to flog an evil doer with the twelve wooden rods, or, indeed, chop off his head with the axe.

Write a short summary of the above and write the lists of gods in beautiful colour. Also, draw a Roman Consul in his purple-edged toga, carrying a banner wit SPQR on it.

Dictation

Tarquinnius was the seventh and last king of the Romans, Rome became a Republic ruled by its own citizens. Rome became a great city, spreading over seven hills. The Romans had the same gods as the Greeks, but they were given different names:

<u>Greek</u>	<u>Roman</u>
Ares	Mars
Apollo	Apollo (sun god)
Artemis	Diana (goddess of the moon)
Aphrodite	Venus (goddess of love)
Hermes	Mercury (god of trade and business)
Zeus	Jupiter (father of the gods)
Persephone	Prosapine

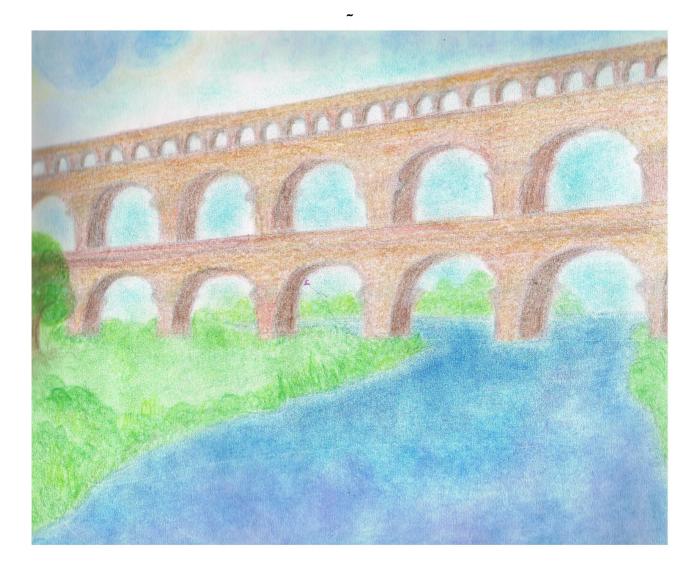
Hesta	Vesta
Demeter	Ceres
Hephaestus	Vulcan
Hera	Juno
Cronus	Saturn
Poseidon	Neptune
Athena	Minerva
Dionysus	Bacchus

In the Forum, there were Romans wearing tunics and togas, they had grown very wealthy now and had become the higher class, called the Patricians. Newcomers were considered common and were called Plebeians.

Senators and consuls, who made the laws, were, only chosen from the Patricians. Consuls wore special togas, edged with purple.

All standards, borne into battle, and all public buildings were inscribed with the letters SPQR, short for 'Senatus populus que Romanus', which is Latin for 'the Senate and the people of Rome'.

The Patricians were the officers on horse back, in war times, and the Plebeians were the common soldiers who marched and fought on foot.



Aqueducts

The Romans were great builders and the mighty Roman towns needed a huge water supply. Romans enjoyed many amenities for their day, including public toilets, underground sewage systems, fountains and ornate public baths. None of these aquatic innovations would have been possible without the Roman aqueduct. Aqueducts liberated Roman cities from a reliance on nearby water supplies and proved priceless in promoting public health and sanitation. On average, people used nine times more water each day than we use today!

The water supply and drainage did not go to the upper floors of the houses, so dirty water and waste was emptied from the windows into the street from where it was carried away by the drains. Strangers always admired the water supply and the drains.

The water mains or aqueducts (Aque=water, Duct=carry) were often many miles long from clean water sources away from the towns. The water flowed in a pipe that was very nearly level (the pipe would drop only 24 feet in every mile). Where the land dipped sharply the water pipe would be carried on a bridge with many arches, many of which still survive in Europe.

The oldest aqueduct, the Aqua Appia near Rome, is over ten miles long. It was built in 312BC.

And the highest and most beautiful one, still standing today, is the Pont du Gard in the South of France. It is over 50 yards high.

Ancient Rome had a complex system of eleven aqueducts built from 312bBC to AD 226.

~Story Time

Read chapter forty-two of H.A. Guerber's book 'The Story of the Romans'.

~Snack Time & Break

~Maths Practice

Today we will remind ourselves what happens when we subtract larger numbers, making the result negative.

What is 15 plus minus 20; 15 - 20 = Since the "larger" number is negative, so is the result. It's like taking more money out of your bank account than you have in it. 15 - 20 = - 5; it's the same as (-20) + 15... (-20) + 15 = -5

Now try a few problems: 22 - 32 = 86 - 168 =

Clearly both numbers can be negative... but since there is no other operator around we can avoid brackets:

173 - 198 =

234 - 288 =

-14 - 20 =	-99 - 101 =
-87 - 102 =	-287 - 476 =

And something from a Maths Block:

Roma Nobilis, Michaelmas Term, Block Four, Mathematics I Day Thirteen

~Welcome the Day

~Recorder Practice

~Morning Exercises

Today's words are:

invert

intrigue

intrepid

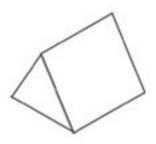
~Main Lesson

Let's check yesterday's answers:

Side 1	Side 2	Side 3	Volume of cuboid	
3 ст	5 cm	2 cm	30 cm ³	
4 ins	3 ins	5 ins	60 cubic inches	
5 mm	7 mm	6 mm	210 mm ³	
11 ft	2 ft	5 ft	110 cubic feet	
2 miles	1 miles	3 miles	6 cubic miles	
6 m	5 m	3 m	90 m ³	
9 ins	2 ins	5 ins	90 cubic inches	
4 ft	3 ft	2 ft	24 cubic feet	

So today we will look at the prism, which looks rather like a tent!

What is important is that one surface, in this case the end, is the same shape throughout the prism. It might be easiest to see this if the prism is standing on its end!



How do we calculate its volume and what do we need? Any ideas?

We need to know the height of the prism when it is turned on its side, or the length of the 'tent'. Then we need to know the area of the triangle, which forms top and bottom of the prism, or the ends of the tent! We can remember from last week how to calculate the area of a triangle, can't we: base x height x $\frac{1}{2}$ - but be careful... it must be the height and not two of the sides (unless they are at right-angles).

Let's look at an example:

The triangular base of the prism has base = 5 cm and height = 4 cmthis means that its area is $5 \times 4 \times \frac{1}{2} = 10 \text{ cm}^2$ Now we need to multiply this area with the height of the prism = 6 cmVolume = $10 \text{ cm}^2 \times 6 \text{ cm} = 60 \text{ cm}^3$

Now its your turn:

Base of Triangle	Height of triangle	Area of triangle	Height of prism	Volume
3 ст	2 cm		7 cm	
5 ins	6 ins		11 ins	
2 ft	1 ft		4 ft	
7 mm	3 mm		15 mm	
8 m	6т		16 m	
3 cm	4 cm		15 mm	

It's getting towards Christmas... after we have checked these results tomorrow we should do something Christmassy, right?

~Story Time

Read chapter sixty-nine of H.A. Guerber's book 'The Story of the Romans'.

~Snack Time & Break

~Handwork (as described) Roma Nobilis, Michaelmas Term, Block Four, Mathematics I Day Fourteen

- ~Welcome the Day
- ~Recorder Practice
- ~Morning Exercises
- Today's words are:
- intermediate
- integrity
- insignia

~Main Lesson

First we need to check the results from yesterday:

Base of Triangle	Height of triangle	Area of triangle	Height of prism	Volume
3 cm	2 cm	3 cm ²	7 cm	21 cm³
5 ins	6 ins	15 sq ins	11 ins	165 ins ³
2 ft	1 ft	1 sq ft	4 ft	4 cu ft
7 mm	3 mm	10.5 mm ²	15 mm	157.5 mm²
8 m	6т	24 m²	16 m	384 m³
3 ст	4 cm	6 cm ²	15 mm	9 cm ³

If you got the last one wrong then you probably didn't notice the change in units: 15mm = 1.5cm; $6 \ge 1.5 = 9 \ cm^3$

So, it's getting close to Christmas. We can look at the Christmas tree and try to calculate its volume. If you haven't got a Christmas tree, whether for religious or other reasons, I'm sure you'll have seen one, if only on TV! But we will assume that our Christmas tree is solid, and in the shape of a cone.



We haven't really got all the tools yet, but we can think about how we might calculate the volume of our tree.

We need to know the area of the base. This is a circle, and we don't know how to calculate the area of a circle, so we will draw one on squared paper and count the squares! You should choose something of a suitable size that is round - a tray for example - and draw around it carefully on squared paper. Count the squares.

If you now measure the diameter of your 'tree' you will find that the area is approximately 34 of the diameter², in other words

area = ¾ diameter²

So now what happens to the volume? If we had a cylinder we could imagine that the volume would be area of base x height, as with our prism and the cuboid. But they don't have a point at the top.

It is one of the amazing facts in mathematics: the volume of an object with a point at the top is exactly one third of the volume of the same object with straight sides!

So we need to measure the height of our Christmas tree.

Once we have the diameter and the height we can work out its volume.

Volume =
$$\frac{1}{3}$$
 x area x height, where area = $\frac{3}{4}$ x diameter ²

You should work out your own Christmas tree, but for the sake of an example, let us assume that we have a cone with a diameter of 50cm and a height of 1.5m.

Let's see what its volume is, approximately:

Area =
$$\frac{3}{4} \times 50^2 = \frac{3}{4} \times 2500 = 625 \times 3 = 1875 \text{ cm}^2$$

Volume = $\frac{1}{3} \times 1875 \text{ cm}^2 \times 1500 \text{ cm} = 2812500 \text{ cm}^3$

Since this isn't quite accurate, but nevertheless a good approximation, we won't work with other examples; we'll wait until we understand the relationship between the diameter of a circle and it's area!

~Story Time

Read chapter seventy of H.A. Guerber's book 'The Story of the Romans'.

~Snack Time & Break

~English Practice

We learned about the present perfect tense, last week. ''I have seen the kitten already.'' You'll remember.

Today, let's look at the other two perfect tenses. Work through the two following examples before writing the rules into your English Spelling and Grammar Book (following last week's rule). Also conjugate a verb of your choice in both tenses and write them down: The Past Perfect

''It's so lucky that he had seen the announcement in the newspaper before bumping into her.''

Here, an event is described that happened a while ago but had an effect on something that followed. Both events took place in the past ~ one of them (the one in the past perfect tense) took place before the other.

Past Perfect: I had seen it. (The past tense of 'to have' plus the participle of 'to see'.)

I had expected it You had expected it He had expected it She gad expected it It had expected it We had expected it You had expected it They had expected it

The Future perfect

"The next time we see each other, we will have seen the outcome of the election."

Here we look forward to something that will happen when something else has already happened.

Future Perfect: I will have seen it. (The future tense of 'to have' plus the participle of 'to see'.)

I will have found out You will have found out He will have found out She will have found out It will have found out We will have found out You will have found out They will have found out

Now samples from the Mineralogy Block

Roma Nobilis, Michaelmas Term, Block Two, Mineralogy

Day Four

~Welcome the Day

~Recorder Practice

~Morning Exercises

Observe today's weather and write a weather report as described on day one of this block.

~Main Lesson

Read 'The First Rocks', the fourth chapter of Charles Kovacs' book ' Geology and Astronomy'.

Discuss what you have read and summarise it, then make the drawing of the various layers of the earth.

Here is a list of the main points:

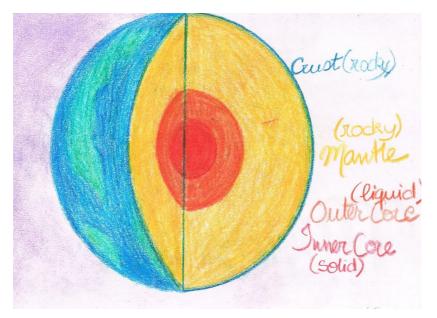
~ granite and its younger 'brother' basalt, form the foundations of the earth

~granite supports the continents and the, dark, iron containing basalt carries the oceans

~ the 'hot earth' theory: the surface of the earth used to be so hot that no rocks existed, only red-hot liquid, flowing like water. In time, the surface began to cool down, then deeper and deeper down, over thousands of years. The first hard crust of the earth was granite.

~ the 'cold earth' theory: the heat in the centre of the earth is created by the pressing down of the heavy weight of the oceans and mountains.

 \sim no one knows for sure how it was \sim but we know with certainty that granite is the oldest rock on earth



~Story Time

Read chapter nineteen of H.A. Guerber's book 'The Story of the Romans'.

~Snack Time & Break

~English Practice

Paula's bicycle has been stolen twice recently. She always leaves it outside the shop, thinking she'll be quite quick and it'll still be there when she gets back. If I had a bicycle, I would make sure I lock it every single time I take my eyes of it.

Now you: Put yourself in another's place, from the point of view of giving her or him some helpful advice, and write what you would do if you were she or he. Write it into your English Grammar and Spelling book.

From the Astronomy Block:

Roma Nobilis, Spring Term, Block Four, Astronomy

Day One

~Welcome the Day

Morning Verse (by Rudolf Steiner) I look into the world Wherein there shines the sun' Wherein there gleam the stars, Wherein there lie the stones. The plants they live and grow, The beasts they feel and live. And man to spirit gives A dwelling in his soul. I look into the soul That living dwells in me. God's spirit lives and weaves In light of sun and soul, In height of worlds without, In depth of soul within. To Thee, o Spirit of God I seeking turn myself That strength and grace and skill For learning and for work In me may live and grow.

A Summer Day (Florence Harrison)

Not by the city bells that chime the hours I'll tell this day, But by the bloom and fall of things in flowers And the slow way Of cloud shadows, and swathing sunshine wrapping The gorse-gilt plain; And little lifted leaves, and water lapping, And maybe rain.

A shaken bough, a circle on the water, A rose a-blush, A yellow iris crowned like a king's daughter, A piping thrush. Swift fiery dragon-flies, and brown bees humming, And tiny things Making strange music, and the twilight coming On measureless wings.

Verse (Rudolf Steiner)

May wisdom shine through me, May love glow within me, May strength permeate me, That in me may arise A helper of mankind A server of holy things, Selfless and true.

Hymn to the North Star (William Cullen)

Constellations come, and climb the heavens, and go, Star of the Pole! And thou dost see them set. Alone in thy cold skies, Thou keep'st thy old unmoving station yet, Nor join'st the dances of that glittering train, Nor dipp'st thine virgin orb in the blue western main.

In thy unfaltering blaze The half-wrecked mariner, his compass lost, Fixes his steadfast gaze, And steers, undoubting, to the friendly coast; And those who stray in perilous wastes by night Are glad when thou dost shine to guide their footsteps right.

Universe (Alexander Pope)

He who through vast immensity can pierce, Sees worlds on worlds compose new universe, Observe how system into system runs, What other planets, and what other suns; What varied being peoples every star; May tell why heaven made all things as they are.

The Twinkling Stars (German)

Can you say how many twinkling stars, With their light the night imbue? Can you say how many clouds there are, Sailing o'er the welkin blue? In heav'n each one is tended With care and radiance splendid: Both the greatest and the least, Both the greatest and the least.

Descant: How many twinkling stars in the night imbue? How many clouds are sailing the welkin blue? In heaven, in heaven, Both greatest and least, Both great and least, In heaven, in heaven Both greatest and least.

Can you say how many insects play In their swarms at eventide? Can you say how many scaly fish In the sparkling waters glide? In heaven each one has its number, Be it waking or in slumber: Both the greatest and the least, Both the greatest and the least.

Descant:

How many insects play at eventide? How many scaly fish in the waters glide? In heaven, in heaven, Both greatest and least, Both great and least, In heaven, in heaven Both greatest and least.

Dakota Hymn

Many and great, O God, are Thy things, Maker of earth and sky. Thy hands have set the heavens with stars, Thy fingers spread the mountains and plains. Lo, at Thy word the waters were formed; Deep seas obey Thy voice.

Grant unto us communion with Thee, Thou star-abiding One; Come unto us and dwell with us, With Thee are found the gifts of life. Bless us with life that has no end, Eternal life with Thee.

Peace on Earth (by William Carlos Williams)

The Archer is wake! The Swan is flying! Gold against blue An Arrow is lying. There is hunting in heaven ~ Sleep safe till to-morrow.

The Bears are abroad! The Eagle is screaming! Gold against blue Their eyes are gleaming! Sleep! Sleep safe till to-morrow.

The Sisters lie With their arms intertwining; Gold against blue Their hair is shining! The Serpent writhes! Orion is listening! Gold against blue His sword is glistening! Sleep! There is hunting in heaven ~ Sleep safe till to-morrow.

Deep the Silence (Welsh Air)

Deep the silence round us spreading, all through the night; dark the path that we are treading all through the night, still the coming day discerning by the hope within us burning, to the dawn our footsteps turning, all through the night.

Star of faith, the dark adorning all through the night; leads us fearless t'ward the morning, all through the night; though our hearts be wrapped in sorrow from the hope of dawn we borrow, promise of a glad tomorrow, all through the night. ~Recorder Practice

~Main Lesson

Prepare your new main lesson book: Make a beautiful title page, write ASTRONOMY in big, sweeping letters. Add your name at the bottom. On page one, write the beginning of Psalm 19, to introduce the new subject:

The heavens declare the glory of God, and the firmament showeth His handiwork. Day unto day uttereth speech, and night unto night showeth knowledge. (Psalm 19, 2/3)

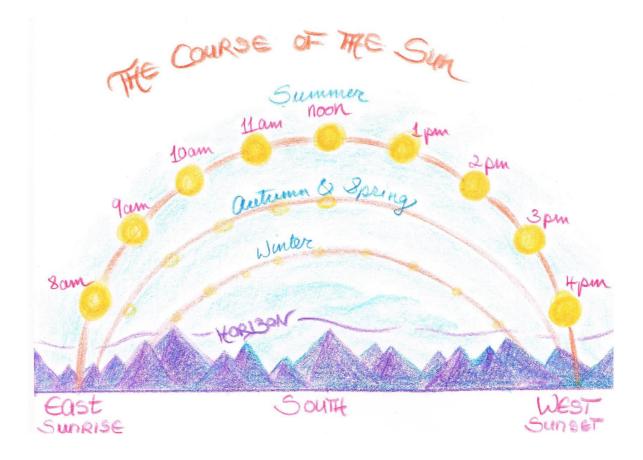
or "Where there is matter, there is geometry." (Johannes Kepler) On page two, make the contents page: write CONTENTS at the top, and PAGE in the top right hand corner.

And then, on page three, let's write the introduction:

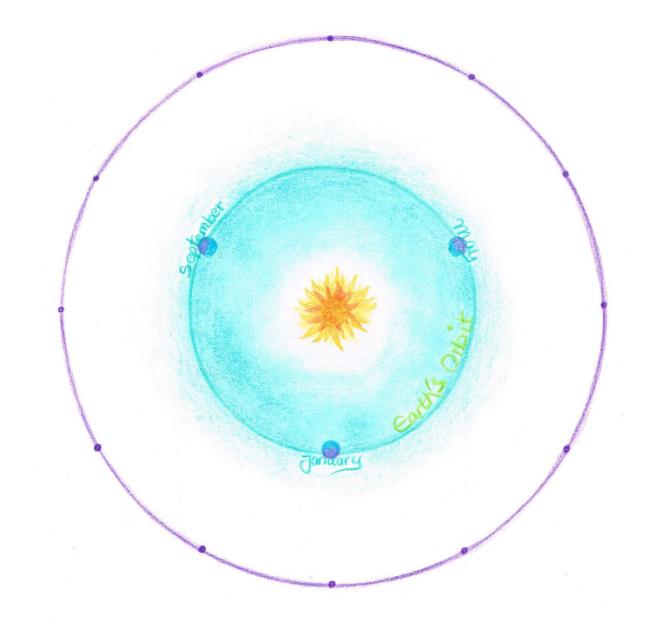
'We can have a wonderful feeling of strength and security when we stand on the earth with both our feet and when we accomplish our day's work with our hands. When we, however, turn our attention to our wider surroundings and become aware of the changing appearances of the distant lights in the starry skies, we are filled with reverence for the higher, incomprehensible. So swings our life up and down, between two poles without which we could not exist,

Water, air, warmth and light create the ladder that connects depth with the heavenly heights.

Every day, the sun, our main celestial body, rises from the eastern horizon, travels across the heavens and sets in the west. And as the moon with all her various faces draws her orderly orbit, so, apparently, do the distant stars also.'



On the very middle page of your astronomy main lesson book, the double page with the staples showing, draw a very large circle over both pages, leaving enough of a border for a few stars (we will add twelve constellations around this circle). Find twelve points on this circle and mark them with a dot (the same twelve points that you can see on a clock). Draw the sun in the very centre and the earth's orbit halfway between the sun and the large circle. Over the course of this astronomy block, we will add another constellation of the zodiac every day around this circle. Wait with the filling in of the blue sky until day fifteen.



We will also explore other astronomical phenomena, the sun, the moon, the planets and the stars.

~Story Time Read pages 97 to 102 of Isabel Wyatt's book ''Legends of King Arthur''.

~Snack Time and Break

~Painting

Paint the Sun Give most of the page a lemon yellow wash ~ leave it white where you want to paint the blue sky. Then add golden yellow and a tiny bit of orange to the sun and field.

Wit a little bit of Prussian blue, paint the trees and the background grass on the lemon yellow.

Now paint the sky with ultramarine blue, with varying strength, to suggest some clouds as well.

You may want to paint some more Prussian blue over some parts of the trees, to hint at some shady areas.

