Introduction to Liberté, Égalité, Fraternité, Michaelmas Term (13 ~ 14 Years Old)

"Waldorf Education is not a pedagogical system but an art ~ the art of awakening what is actually there, within the human being."
Rudolf Steiner

This course is for families who would like to home educate the Waldorf way. It can be used as a day by day, easy to follow, programme, as a rough guide with own ideas enriching and altering the given lesson plans, or, simply, as a source and inspiration for an already existing method.
The term is divided into four subject blocks, each of which has its own 'welcome the day' made up of a subject related song and poem. A CD, featuring each of these, is included. This 'welcome the day' time originates in the Waldorf class room and is equally suitable for younger and older children. As the years go by, the circle times become shorter and more time is spent on the academic work.
Each day begins with a 'welcome the day' time and is followed by the review of what was learned on the previous day. From there the new subject is introduced as a natural progression.
Drawing or writing (or both) then deepens the understanding of the given subject. At the end of the lesson, which lasts about 2 hours, a story is told. These stories are the basis on which much of the subject teaching is built.
Ideally there would be a two-day rhythm (at least), so that the child can really live into the images, before storing them in her or his memory. Of course this does not mean that only one thing can be taught at a time ~ it is more like weaving several colourful threads into a beautiful pattern.
Ideally, the stories are told from memory, however, if the educator cannot find the time to learn them in advance, it is better to read the story than not to have one at all.

The Child in the Eighth Academic Year: Liberté, Égalité, Fraternité

Liberté, Égalité, Fraternité is the last year of our elementary education. We aim to complete a well rounded picture of human life and the world. The journey of the previous seven years has been leading up to this crowning year that enables the child to enter fully and confidently into life. As the young person is transitioning from, predominantly, feeling ~ to the life of thinking and scientific reasoning, truth becomes their main pursuit. The child experiences a yearning for independence, authority is openly and critically questioned and parents are challenged accordingly. The student is increasingly called upon to take initiative and responsibility for self-directed learning and individual judgment.

In history, the time of revolutions are studied intensively, mirroring the inner struggle this transition presents to the youngster. As guiding stars, outstanding individuals like Ghandi, Albert Schweitzer, Martin Luther King and other heroes from the twentieth century are studied. The last history lesson ends with the newspaper of the day ~ completing the incredible journey that started with fairy tales, led through legends, ancient mythologies to ancient history and, finally, modern history.
Although the periods of time we will study are much shorter than the broad spans measured by Ancient History or the Middle Ages, the complexity of issues that are

raised and the intensity of the lives of those who made that history will make for a very rich experience.

Music, Art and Poetry spanning these times, are explored and practised on a weekly basis.

Geography and Anthropology lessons introduce parts of the world that haven't been touched on, so that students gain a sense for each of those cultures. We also look more closely at the relation of mineral resources and plant and animal life to the life of human beings in those various regions of the world. We also consider global perspective surveys of land forms oceans, atmosphere, climates and ecosystems, as well as the changes caused by our modern industrial civilisation.

In Meteorology, we will begin with the careful observation of clouds over a number of days, learning about the development of the barometer, and Goethe's ideas about barometric pressure as the foundation for understanding weather. We will look at cooling and warming trends in the earth's atmosphere and hydrosphere that lead to such phenomena as "fronts", sea breezes and land breezes, and the spiralling thermals utilized by hawks and gliders. We will study hurricanes, tornadoes and waterspouts, and their role as "pressure regulators" in the world's weather system, and look at how air and water pollution may affect future weather patterns.

English studies are developed and practised by students taking accurate notes and writing compositions based on main lesson topics. Different aspects of a subject can be looked at and compared. Grammar will be taught once a week during an English language period.

Physics lessons explore the new knowledge of physical science, through hydraulics, pneumatics, aeromechanics, and electromagnetism.

In the Organic Chemistry block, we will study sugars, starches, proteins, fats & oils and carbohydrates. We will learn how to use reagents to test for various substances in foods, consider the use of artificial sweeteners, synthetic flavours, preservatives, hardened and processed foods. We will explore the distillation of alcohol, its relationship to plant sugars and to human blood, the connection of plant alkaloids to protein and the role that these organic chemicals play in substance abuse. As laboratory demonstrations aren't always possible in a home setting, we will observe some experiments on YouTube instead.

Mathematics emphasizes the practical applications of arithmetic, algebra and geometry. Demonstrations in plane and solid geometry, measurement of surfaces and volume are included.

The Human Being is studied through physiology of the human organism, skeleton, muscular systems, and the senses. At this age, the students are experiencing a period of intense growth. To understand this growth-spurt, we consider the skeleton as a work of art in which form and function are united; the interplay of the straight line and the curve, appears as the underlying dynamic in the form of the bones. Studying the structure, arrangement, and action of muscles, will lead us to the complex interworking of the muscles with tendons, ligaments and jointed bones. In the fourth week we will study the reproductive system and procreation.

In Handwork, machine sewing, develops new imagination, skills and techniques in sewing clothing for both practical and decorative purposes, culminating eight years of handwork.

In the weekly art lessons, painting moves away from the wet-on-wet techniques, to veil painting. Main lesson subjects will be painted and drawn throughout the year. We will also keep practising our perspective drawing skills.

In Main Lesson Book work, the expectations for the breadth and depth of the student's involvement and commitment, are raised considerably this year. Students are expected to contribute individualized content to their books ~ both in terms of their grasp of the subject and their creative response to it. Main Lesson Books are not only a beautiful record of their learning but also useful for reference throughout their lives. It is not unusual for Waldorf students to include pages from their Main Lesson Books with scholarship and college admission applications.

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.

***1** ~ The first block of three weeks is Geometry. The reader is The Ravenmaster's Secret by Elvira Woodruff. Morning Exercises consist Maths: Sequences.*

***2** ~ The second subject block is History. The reader is 'At the Sign of the Star' by Katherine Sturtevant. Morning Exercises will be Grammar & Spelling.*

***3** ~ Block three is Geography. The stories are 'A Book of Discovery' by M.B. Synge. Morning exercises will be Cartography.*

***4** ~ During Advent the subject block is Maths. All maths lessons come from David Rayner's 'Essential Mathematics Book Eight' this year, which is used in most Steiner schools as well. The reader is Ghost Hawk by Susan Cooper. Morning exercises consist of book reports.*

Supplies

<u>The books needed this term are:</u>

'Essential Mathematics Book Eight' by David Rayner.

'The Age of Revolution' by Charles Kovacs.

'The Ravenmaster's Secret' by Elvira Woodruff.

'At the Sign of the Star' by Katherine Sturtevant.

'A Book of Discovery' by M.B. Synge (continued from last year).

'Ghost Hawk' by Susan Cooper.

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 for this age group.

Books needed during the Michaelmas Term:

History main lesson book (A4, no lines)
Geometry main lesson book (A4, no lines)
Geography main lesson book (A4)
English Language & Grammar exercise book (A5, with lines)
(You will need several of these throughout the year.)
Mathematics exercise books (A5)
(You will need several of these throughout the year.)

Much of the writing is, ideally done with a fountain pen. At times soft colour pencils (I recommend the Stockmar Colour Giants) will be needed for titles, borders and drawings.
They (and all other supplies) can be obtained from:

Mercurius UK
Kings Langley, Herts WD4 9JT
fon: +44 1923 261646
fax: +44 1923 261646
info@mercurius-uk.com

Paper for water colour painting is also best when it is A4. Yet, it would be great if you also had a smaller pad of water colour paper and box of paints to take along on walks, this year.

You will also need an atlas to follow the lessons this year.
I also recommend that you go to the library before each block and find some books that reflect the lessons.
It's often a great idea to look in the children's section first. We always found what we were looking for there. In the adult section one finds books more suitable for university.

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.

<u>Subject Lessons:</u>
Monday ~ Art
Tuesday ~ Maths Practice
Wednesday ~ Handwork
Thursday ~ English Practice
Friday ~ Art Appreciation

Liberté, Égalité, Fraternité, Michaelmas Term, Block One, Geometry

Day Nine

~Welcome the Day

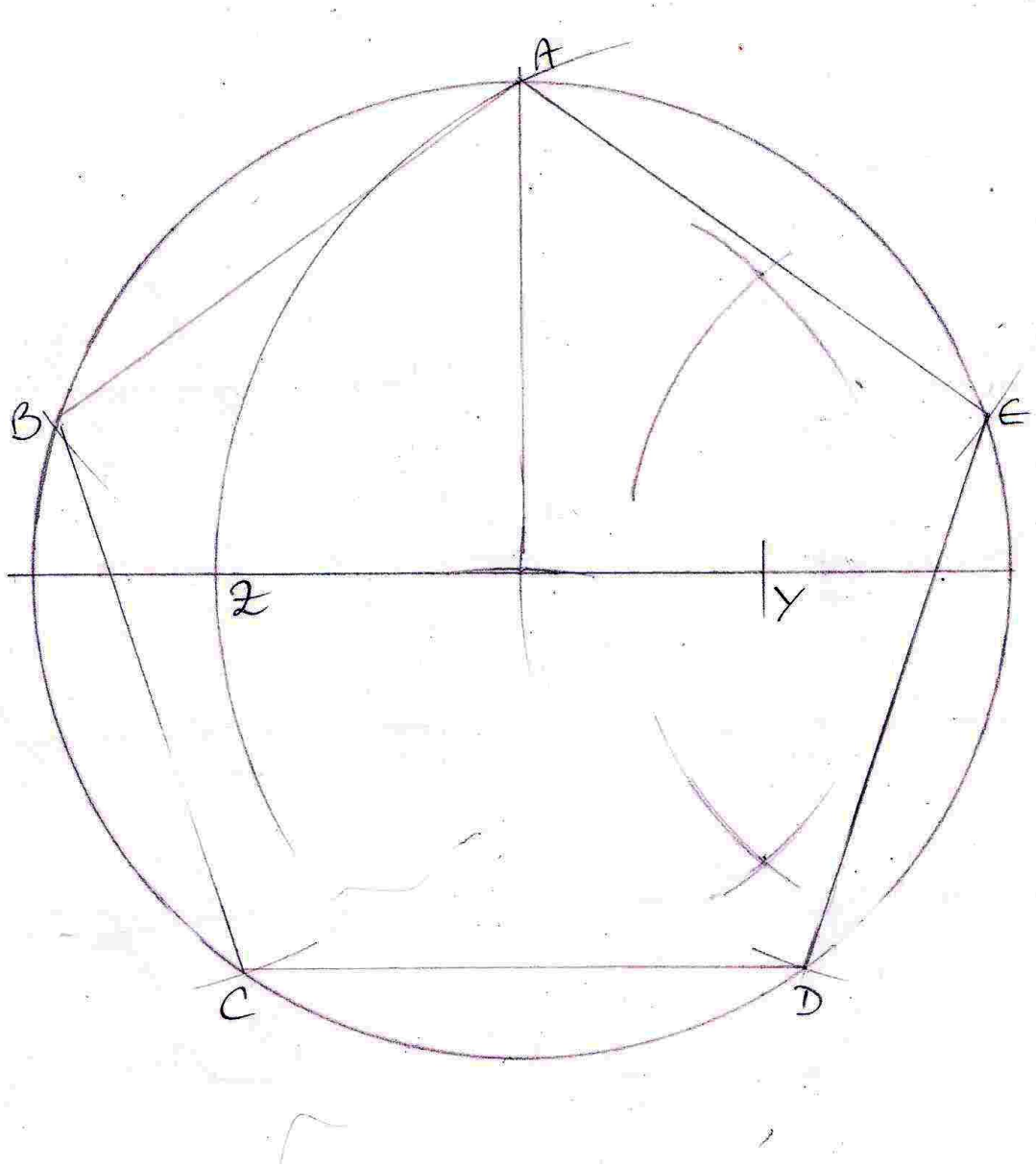
~Recorder Practice

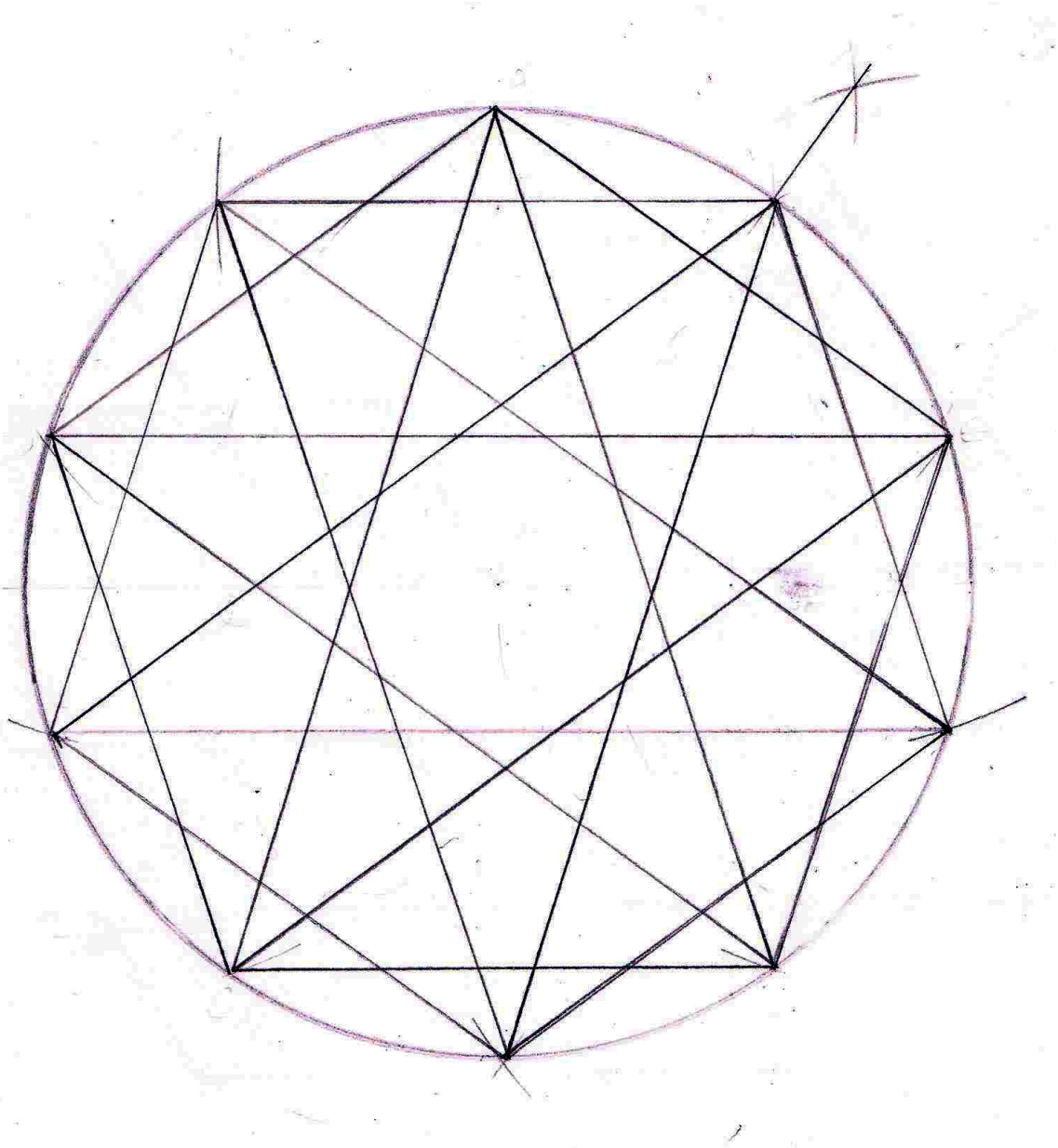
~Morning Exercises

Maths: Sequences.

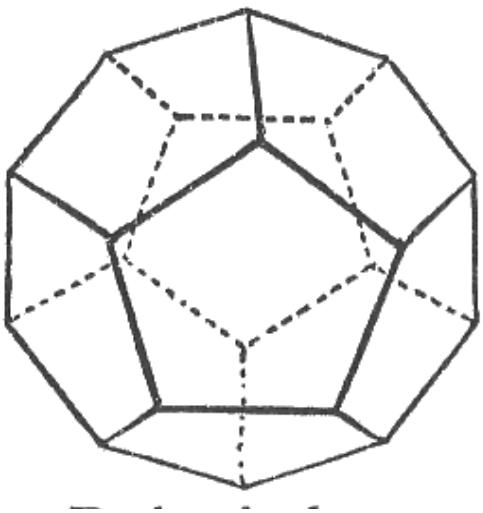
Do exercise 11 on page 3, in David Rayner's book Essential Mathematics Book Eight.

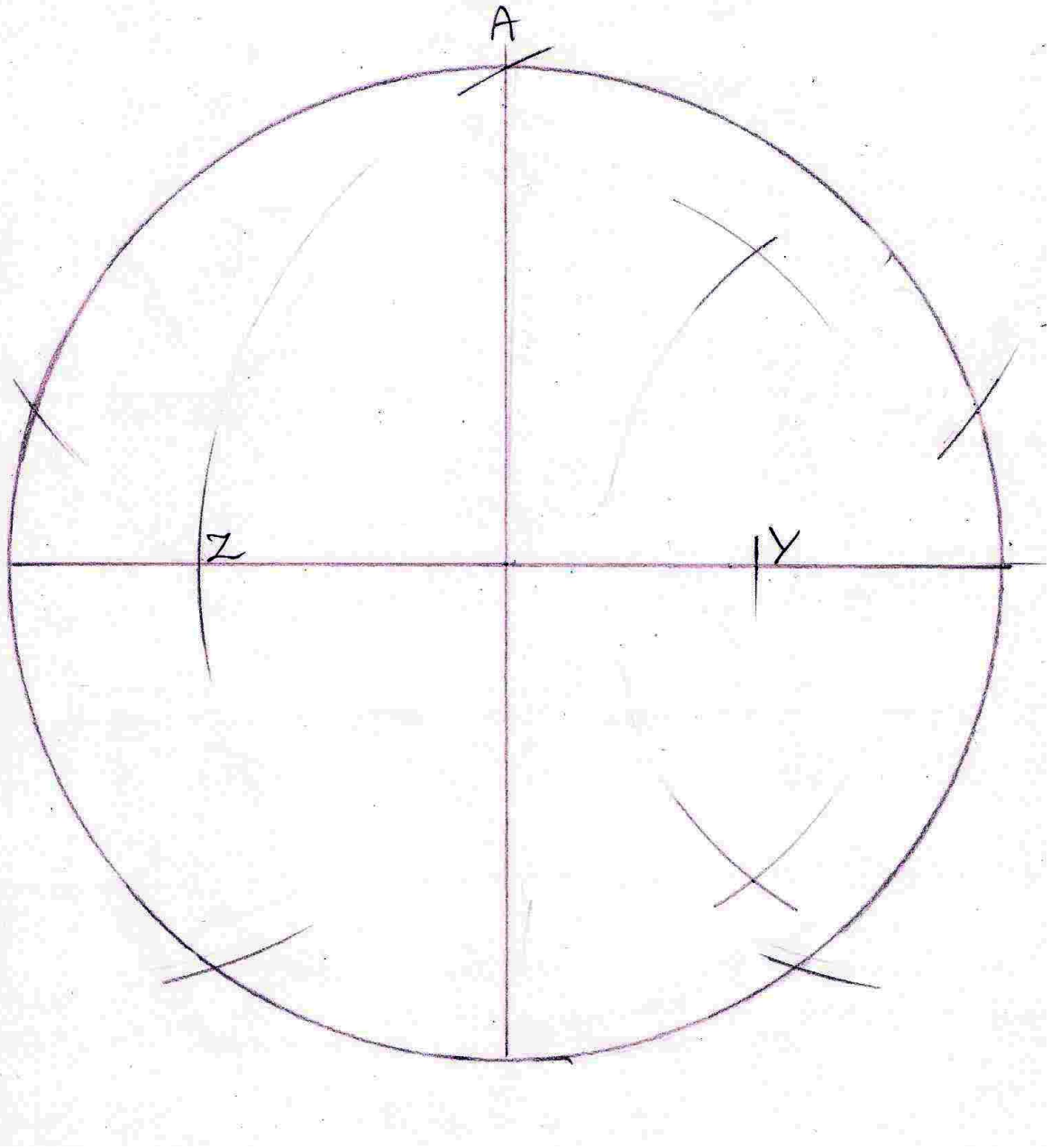
~Main Lesson

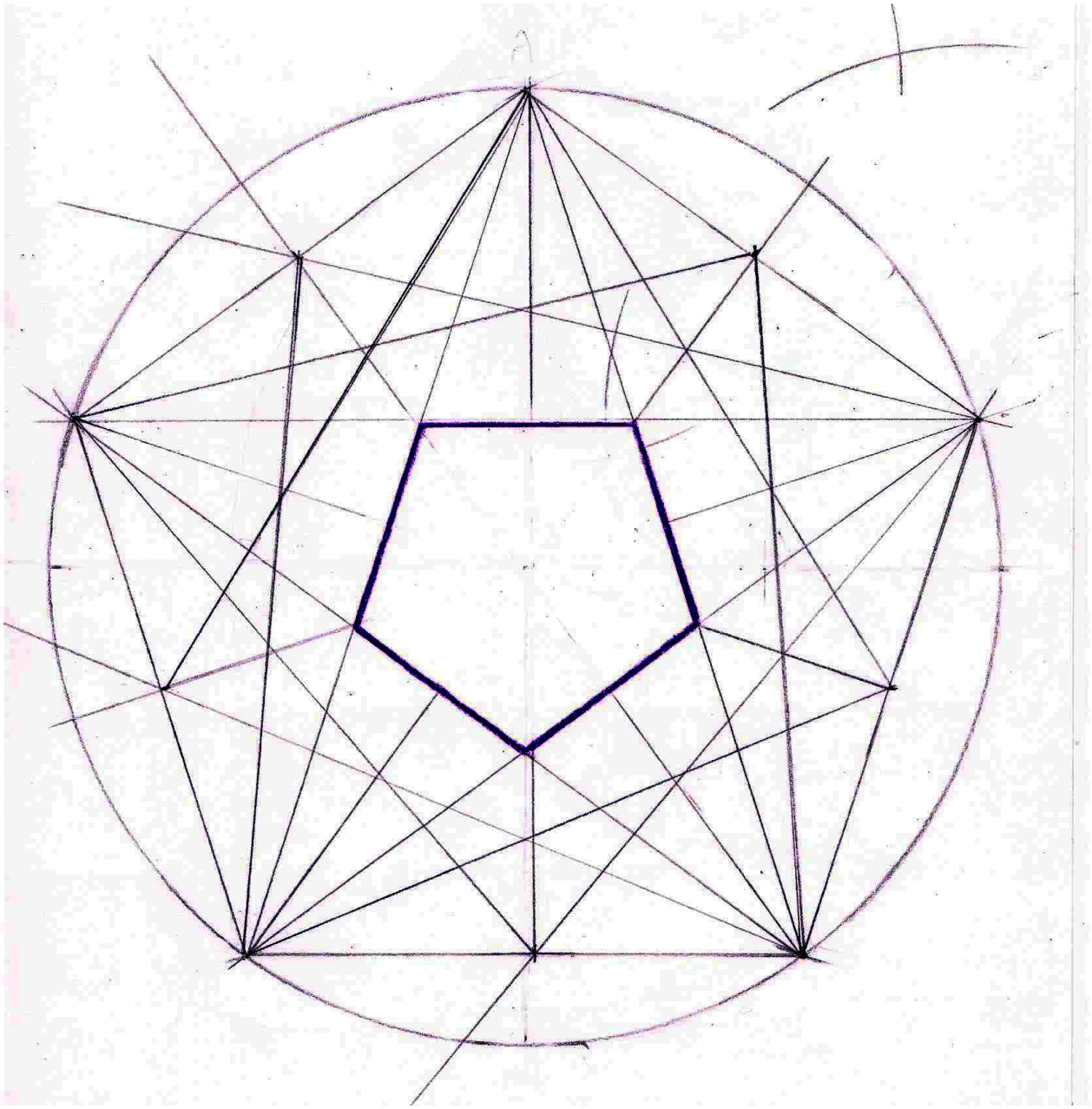


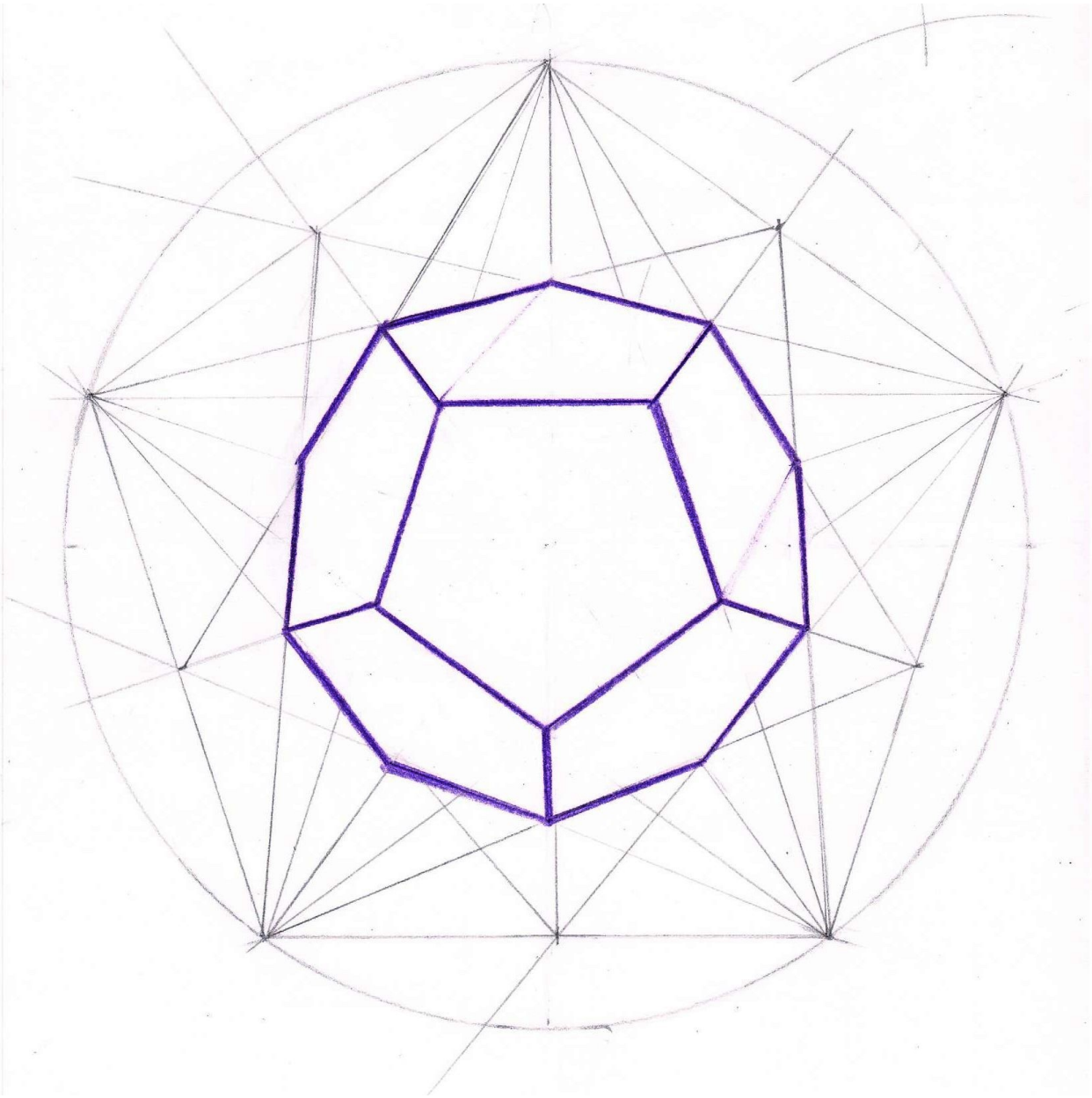


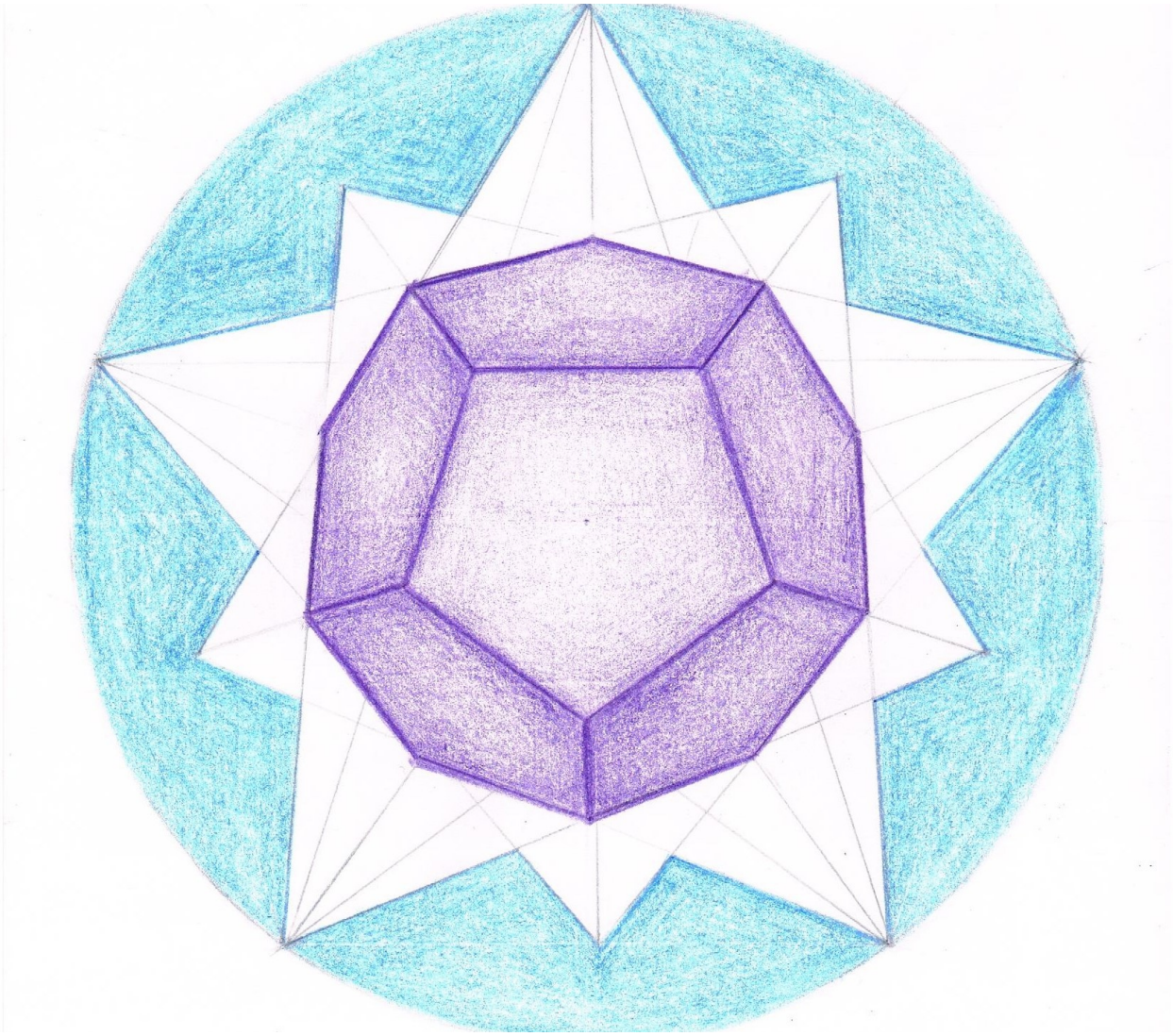
Let's draw the dodecahedron today. Follow the step by step instructions overleaf:




A
Z
Y







Study 2.5 'Circles' Circumference on page 51 and 52. Then do exercise 1 on pages 52 and 53, in David Rayner's book Essential Mathematics Book Eight.

~Story Time

Read about fifteen pages from The Ravenmaster's Secret by Elvira Woodruff.

~Snack Time & Break

~Maths Practice

Study 'Differences in Sequences' on page 4 in David Rayner's book Essential Mathematics Book Eight and do Exercise 3: 1 to 3 on pages 5 and 6.

Liberté, Égalité, Fraternité, Michaelmas Term, Block One, Geometry

Day Ten

~Welcome the Day

~Recorder Practice

~Morning Exercises

Maths: Sequences.

Do exercise 4 on page 6, in David Rayner's book Essential Mathematics Book Eight.

~Main Lesson

Liberté, Égalité, Fraternité, Michaelmas Term, Block One, Geometry

Day Ten

~Welcome the Day

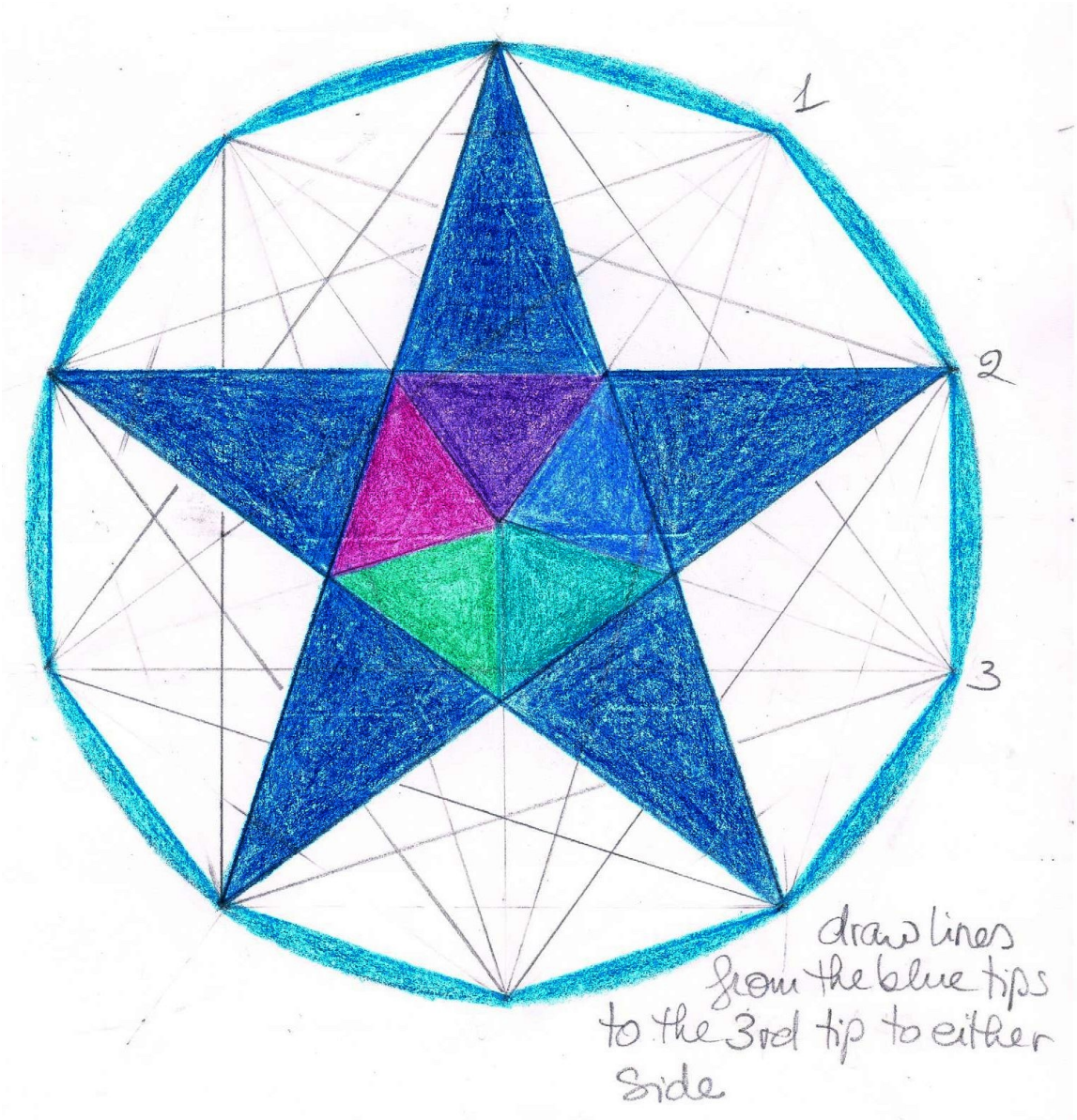
~Recorder Practice

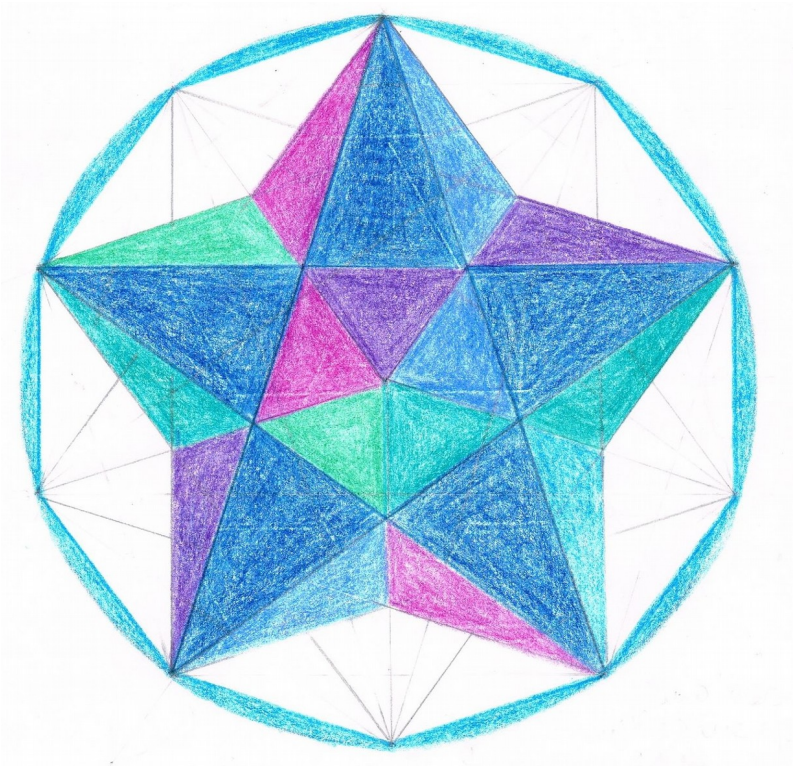
~Morning Exercises

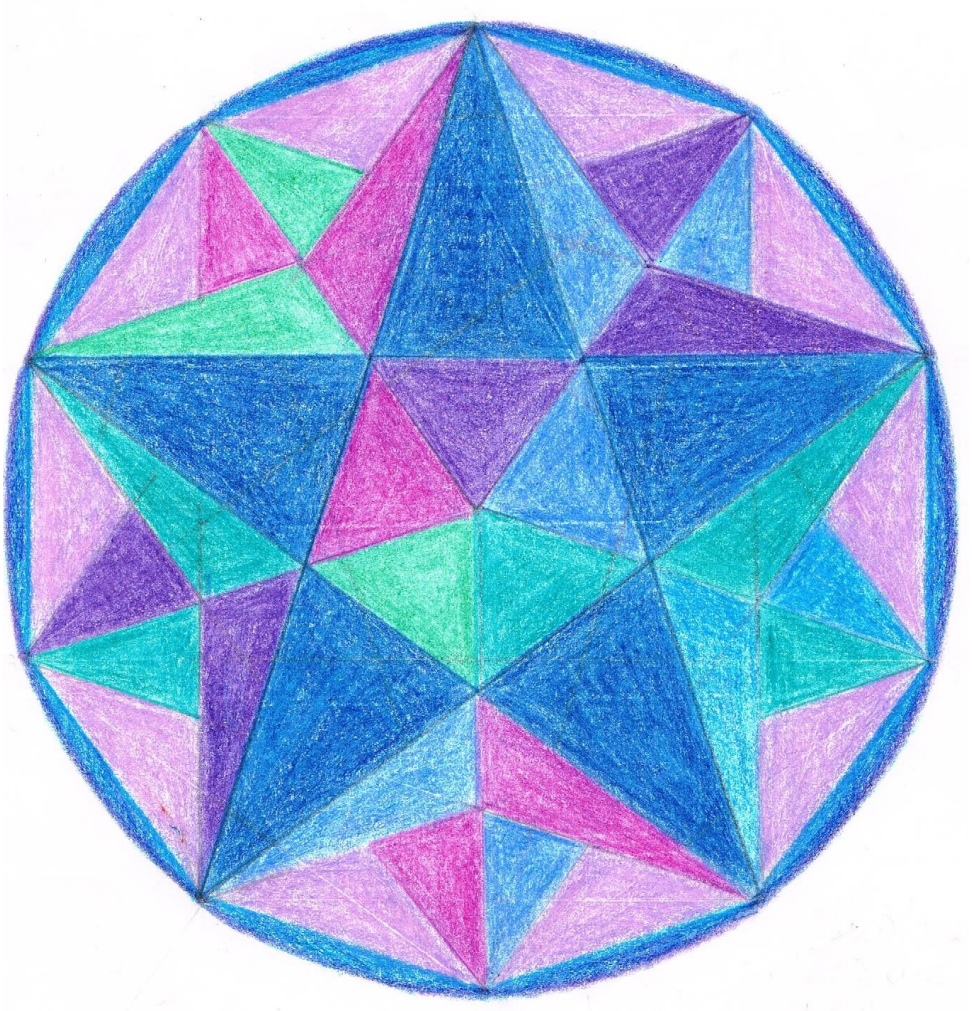
Maths: Sequences.

Do exercise 4 on page 6, in David Rayner's book Essential Mathematics Book Eight.

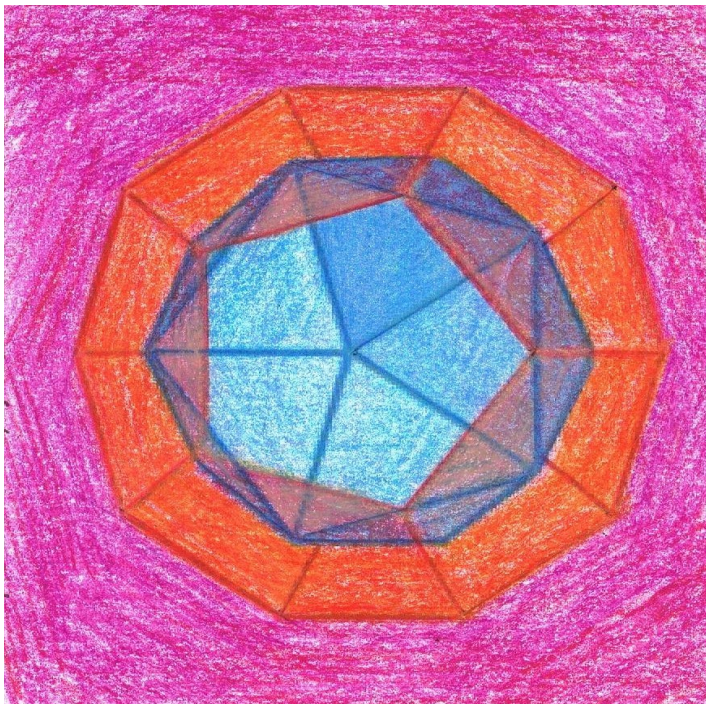
~Main Lesson







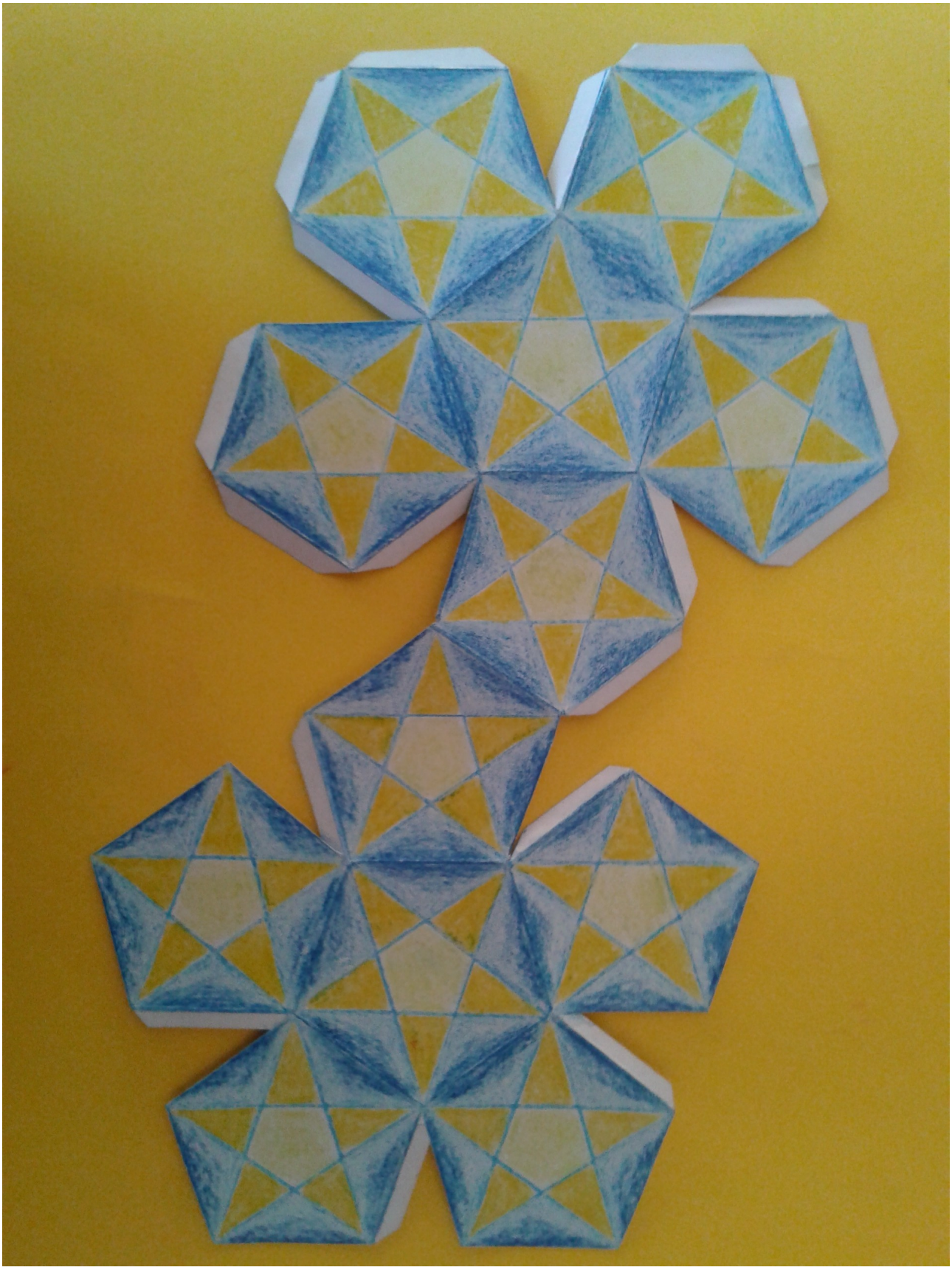
When we push in the vertices of the dodecahedron, what do we get? Can you picture it? It's, of course the icosahedron:

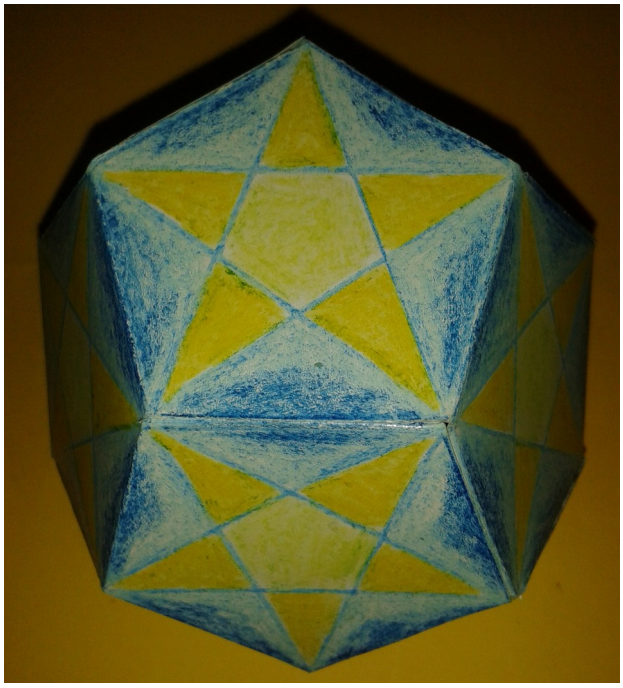


Maybe you could do a freehand drawing of it, copying this image.

If you like, you could watch this little video on the Platonic Solids, it sums them up very nicely: https://www.youtube.com/watch?v=RbbaGGmaO6U

Do exercise 2 on pages 53 and 54 (up to Perimeters), in David Rayner's book Essential Mathematics Book Eight.





~Story Time

Read about fifteen pages from The Ravenmaster's Secret by Elvira Woodruff.

~Snack Time & Break

~Art Appreciation

English Sonnets are a form of poetry that was created during the renaissance. English sonnets consist of 14 lines; three, four line stanzas accompanied by a two line closing stanza. The rhyming scheme for an English Sonnet is:

abab
cdcd
efef
gg

This means that the first and third lines of each four line stanza rhyme and the second and fourth lines of each four line stanza rhyme. The two lines of the closing stanza should rhyme as well.
Each line of the stanza should have no more and no less than ten syllables.

William Shakespeare (1564 – 1616) is widely regarded as the greatest writer in the English language. We studied his life and some of his plays last year (one can never do enough of that!). Although he is most renowned for his plays, his poetry also remains to be popular. He wrote sonnets throughout his career for a private

readership. He also wrote two long narrative poems, which were published in the 1590s, and a few other verses.
Shakespeare's collection of 154 sonnets was first published in 1609. Almost all the sonnets follow the structure of three quatrains, or four-line stanzas, followed by a final couplet. The beginning of the third quatrain, at times, introduces an unexpected sharp thematic "turn", the volta. The couplet usually summarizes the theme of the poem or introduces a fresh new look at the theme. This form is known as Shakespearean Sonnet, not because he was the first to use it, but because he became its most famous practitioner.
Have a read of the following four sonnets and see if you can discover this pattern. By all means, if you feel inspired, do write your own Shakespearean sonnet.
There are also a couple of his poems, below.

Sonnet 18 ~ Shall I compare thee to a summer's day?

Sonnet 18 is the most famous poem written by William Shakespeare and among the most renowned sonnets ever written.
Shakespeare starts this Sonnet with a flattering question to the beloved: "Shall I compare thee to a summer's day?" He goes on to list some negative aspects of summer to establish that his beloved is better. In the last part of the poem, he states that the beauty of his beloved will never fade as he will make it eternal though the words of this poem which will remind the world of him "so long as men can breathe or eyes can see".

Sonnet 18 (XVIII)

Shall I compare thee to a summer's day?
Thou art more lovely and more temperate.
Rough winds do shake the darling buds of May,
And summer's lease hath all too short a date.
Sometime too hot the eye of heaven shines,
And often is his gold complexion dimmed;
And every fair from fair sometime declines,
By chance, or nature's changing course, untrimmed;
But thy eternal summer shall not fade,
Nor lose possession of that fair thou ow'st,
Nor shall death brag thou wand'rest in his shade,
When in eternal lines to Time thou grow'st.
So long as men can breathe, or eyes can see,
So long lives this, and this gives life to thee.

Sonnet 29 (XXIX)
When, in disgrace with fortune and men's eyes,
I all alone beweep my outcast state,
And trouble deaf heaven with my bootless cries,
And look upon myself, and curse my fate,
Wishing me like to one more rich in hope,

Featured like him, like him with friends possessed,
Desiring this man's art and that man's scope,
With what I most enjoy contented least;
Yet in these thoughts myself almost despising,
Haply I think on thee - and then my state,
Like to the lark at break of day arising
From sullen earth, sings hymns at heaven's gate;
For thy sweet love rememb'red such wealth brings
That then I scorn to change my state with kings.

Sonnet 55 (LV)

Not marble, nor the gilded monuments
Of princes, shall outlive this powerful rhyme;
But you shall shine more bright in these contents
Than unswept stone, besmeared with sluttish time.
When wasteful war shall statues overturn,
And broils root out the work of masonry,
Nor Mars his sword nor war's quick fire shall burn
The living record of your memory.
'Gainst death and all-oblivious enmity
Shall you pace forth; your praise shall still find room
Even in the eyes of all posterity
That wear this world out to the ending doom.
So, till the judgement that yourself arise,
You live in this, and dwell in lovers' eyes.

Sonnet 71 (LXX)
No longer mourn for me when I am dead
Then you shall hear the surly sullen bell
Give warning to the world that I am fled
From this vile world, with vilest worms to dwell:
Nay, if you read this line, remember not
The hand that writ it; for I love you so
That I in your sweet thoughts would be forgot
If thinking on me then should make you woe.
O, if, I say, you look upon this verse
When I perhaps compounded am with clay,
Do not so much as my poor name rehearse.
But let your love even with my life decay,
Lest the wise world should look into your moan
And mock you with me after I am gone

A Madrigal (by William Shakespeare)

Crabbed Age and Youth
Cannot live together:
Youth is full of pleasance,
Age is full of care;
Youth like summer morn,
Age like winter weather;
Youth like summer brave,
Age like winter bare:
Youth is full of sports,
Age's breath is short,
Youth is nimble, Age is lame:
Youth is hot and bold,
Age is weak and cold,
Youth is wild, and Age is tame:
Age, I do abhor thee;
Youth, I do adore thee;
O! my Love, my Love is young!
Age, I do defy thee,
O sweet shepherd, hie thee,
For methinks thou stay'st too long.

The Seven Ages of Man (by William Shakespeare)

All the world's a stage,
And all the men and women merely players;
They have their exits and their entrances,
And one man in his time plays many parts,
His acts being seven ages. At first, the infant,
Mewling and puking in the nurse's arms.
Then the whining schoolboy, with his satchel
And shining morning face, creeping like snail
Unwillingly to school. And then the lover,
Sighing like furnace, with a woeful ballad
Made to his mistress' eyebrow. Then a soldier,
Full of strange oaths and bearded like the bard,
Jealous in honour, sudden and quick in quarrel,
Seeking the bubble reputation
Even in the cannon's mouth. And then the justice,
In fair round belly with good capon lined,
With eyes severe and beard of formal cut,
Full of wise saws and modern instances;
And so he plays his part. The sixth age shifts
Into the lean and slippered pantaloon,
With spectacles on nose and pouch on side;
His youthful hose, well saved, a world too wide

For his shrunk shank, and his big manly voice,
Turning again toward childish treble, pipes
And whistles in his sound. Last scene of all,
That ends this strange eventful history,
Is second childishness and mere oblivion,
Sans teeth, sans eyes, sans taste, sans everything.

Liberté, Égalité, Fraternité, Michaelmas Term, Block One, Geometry

Day Fifteen

~Welcome the Day

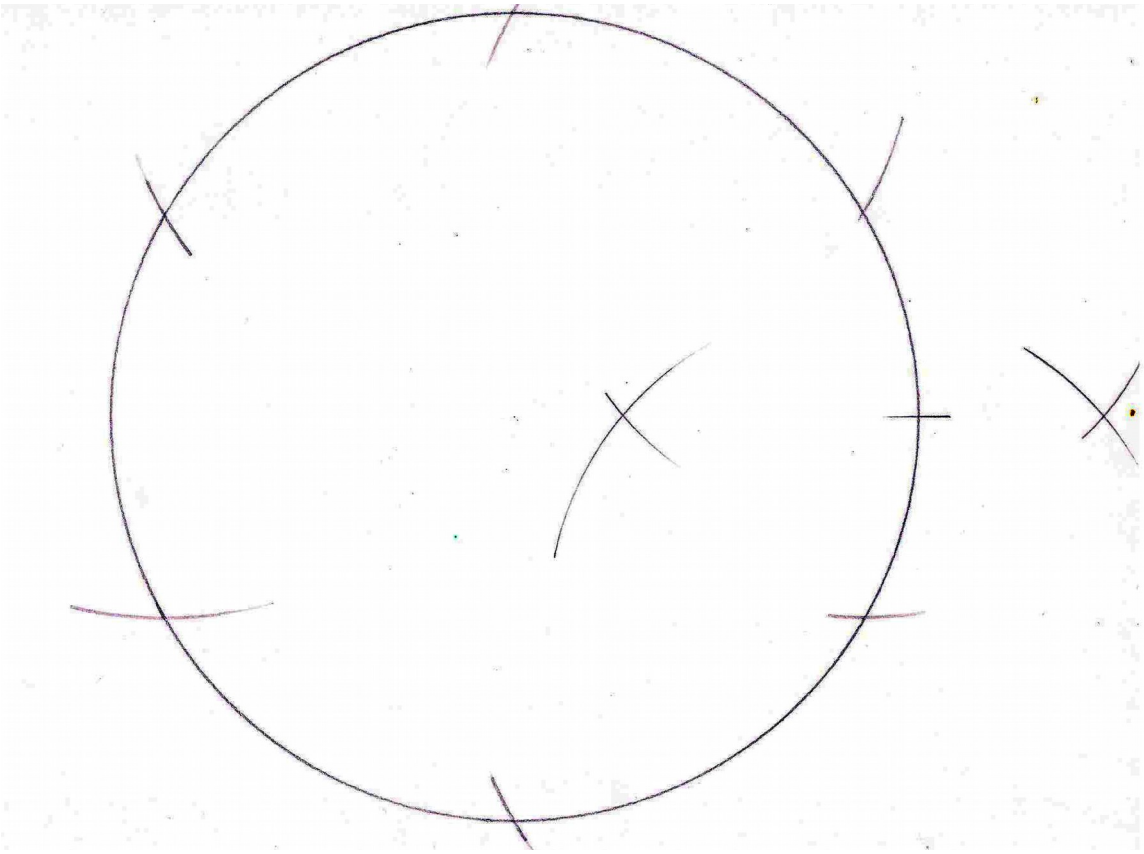
~Recorder Practice

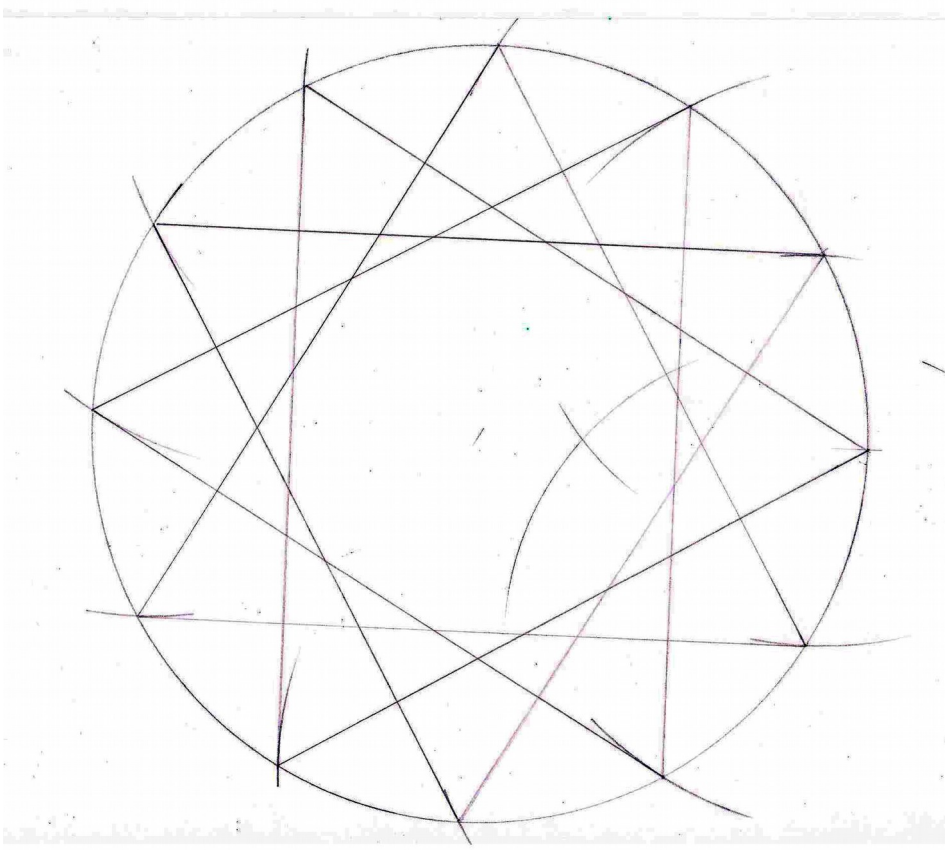
~Morning Exercises

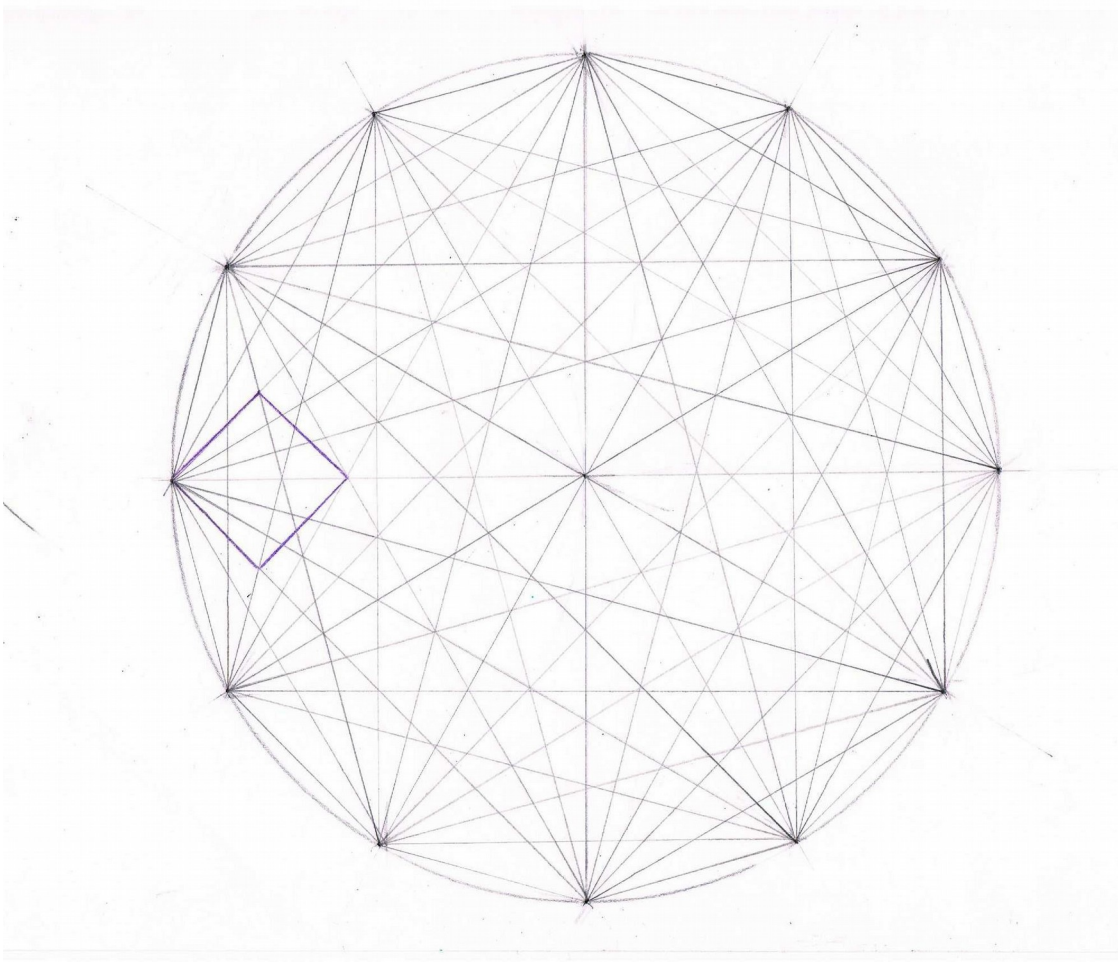
Maths: Sequences.

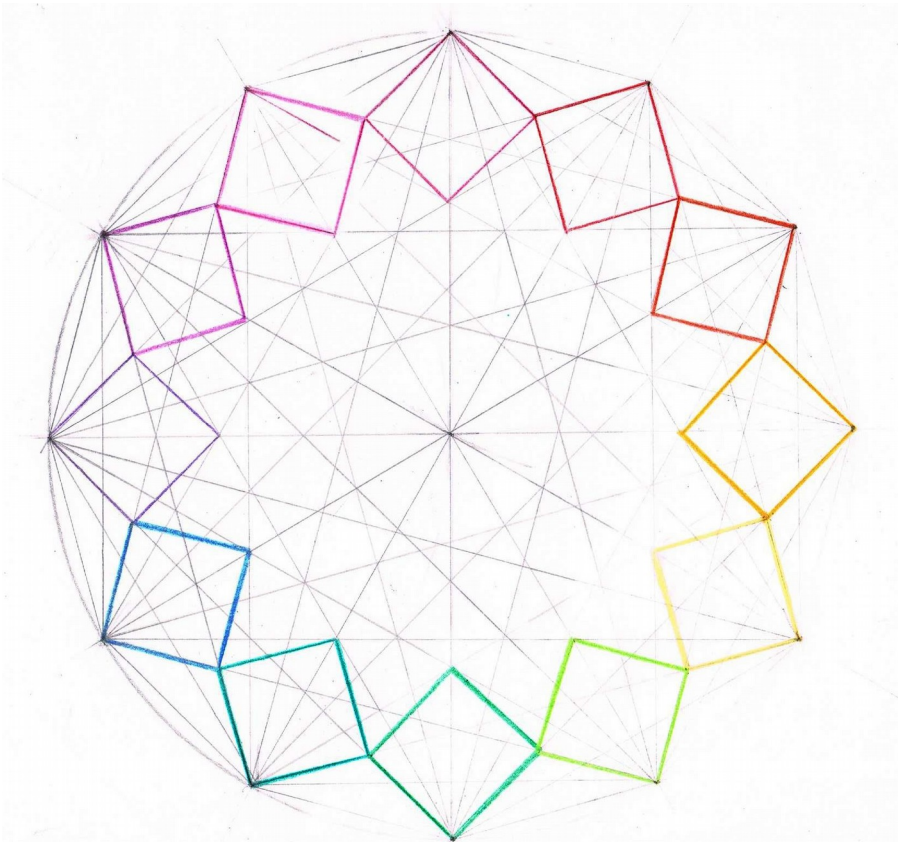
Do exercise 34 on page 9, in David Rayner's book Essential Mathematics Book Eight.

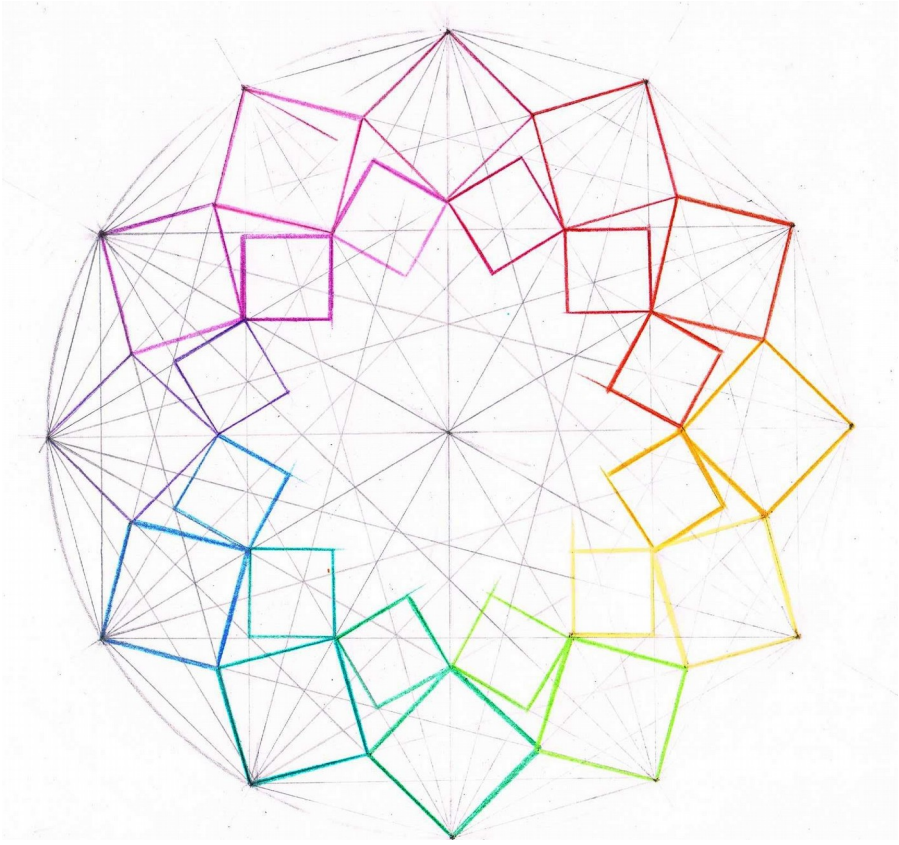
~Main Lesson

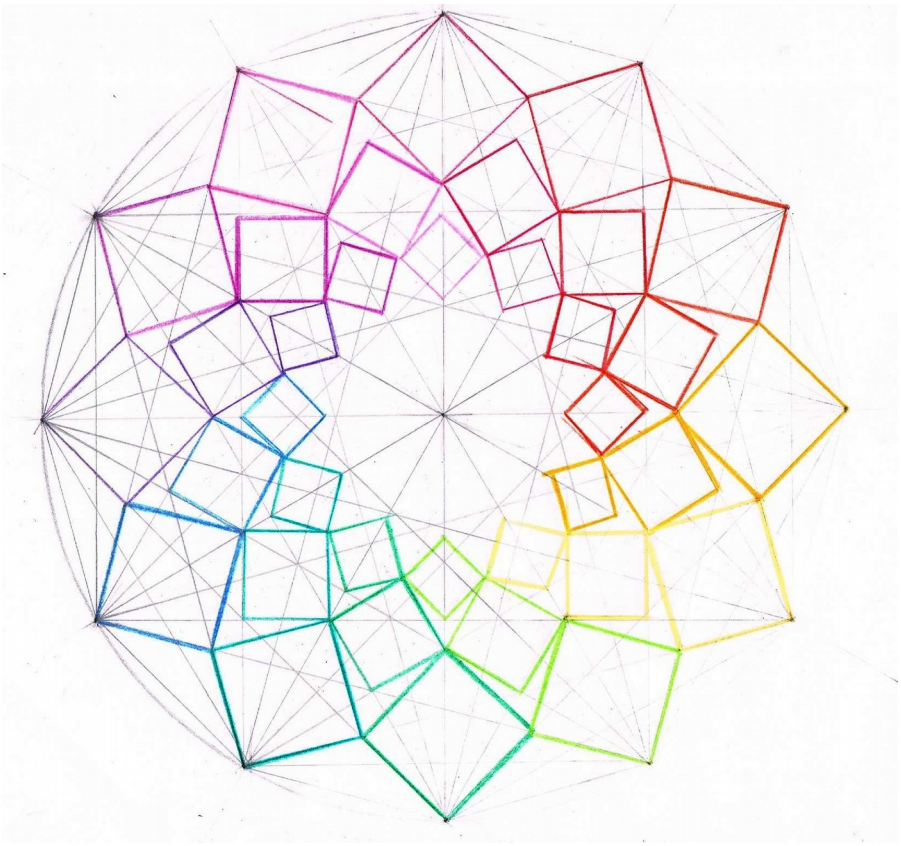










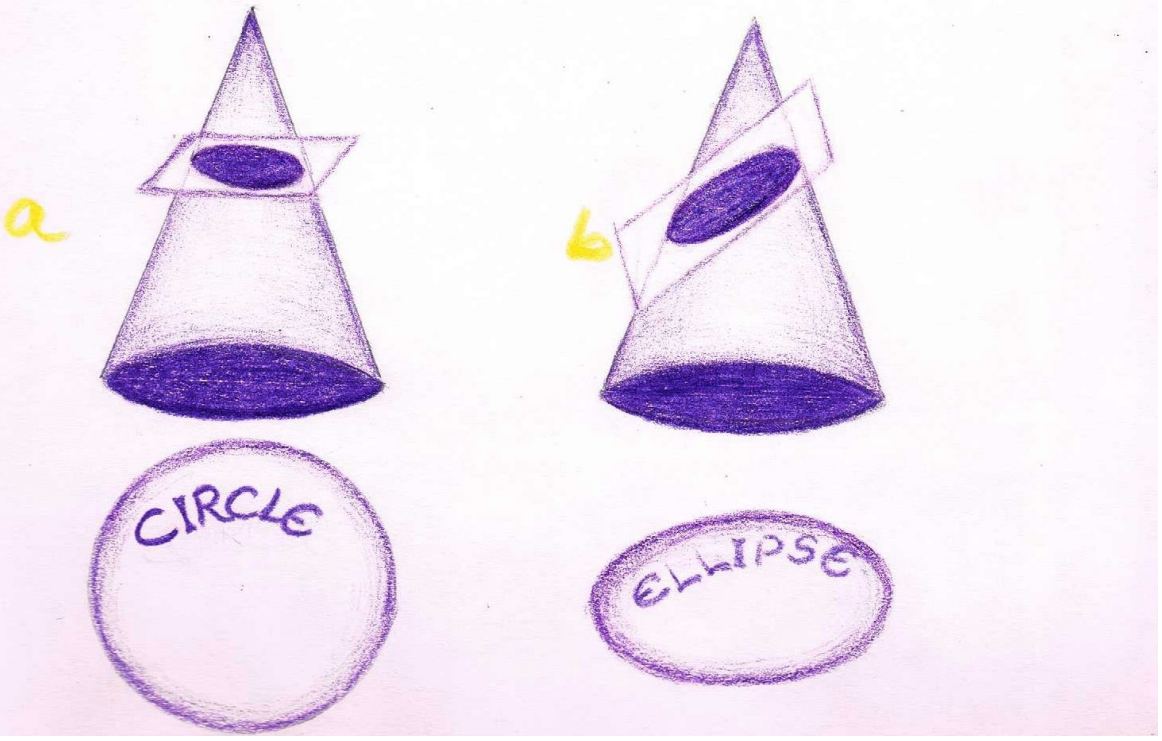


Conic Section

The ellipse, the parabola and the hyperbola are called conic sections because they can be cut from a cone.

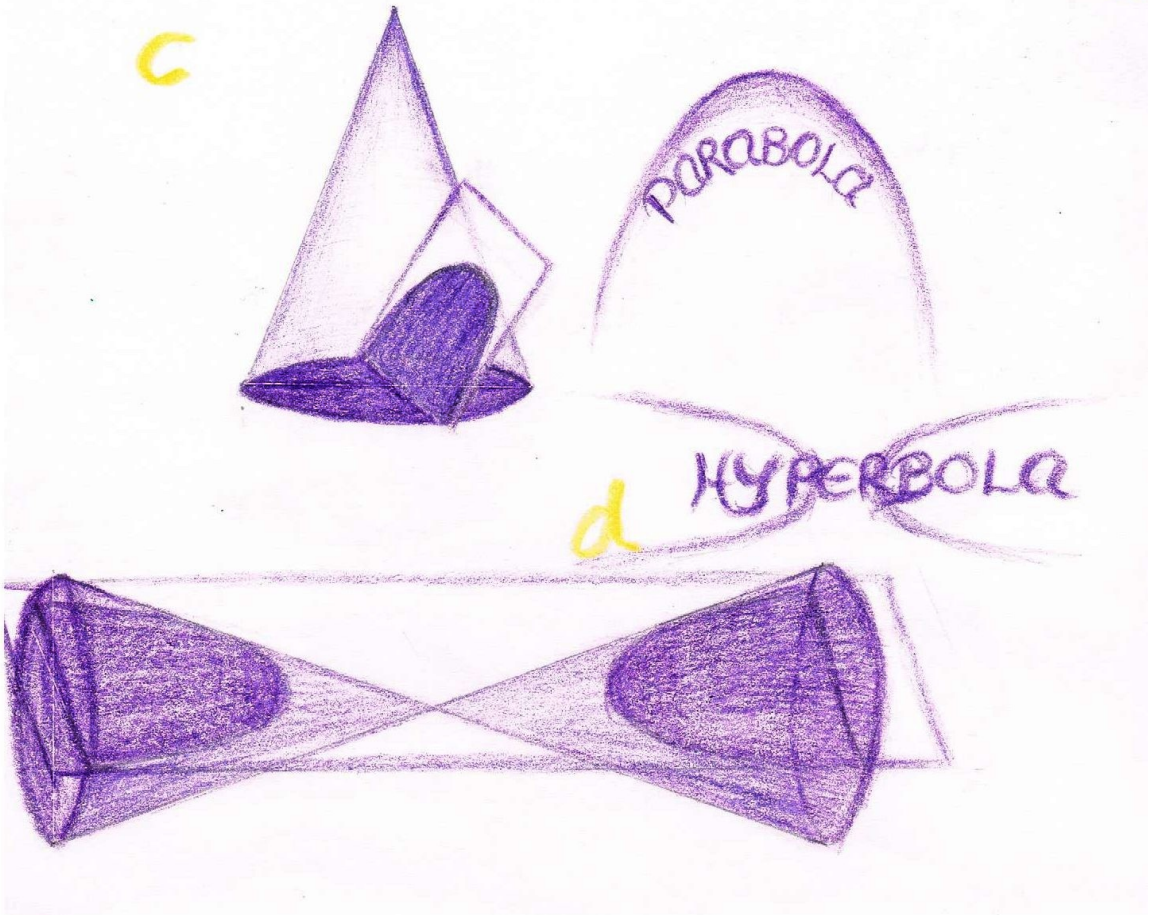
If one cuts across it, parallel to the base, one will get a circle, which is also a conic section. a

Slicing it across at an angle will create an ellipse. b



When one slices off one side of the cone, cutting parallel to the standing outside of the cone itself ("the line of generation"), one gets a parabola. c

Finally, slice straight down parallel to the vertical axis of the cone – and stand another cone upside down ontop of the first one and slice it the same way – and the two curves of the hyperbola are created. d



It wasn't until the 17th century, that the great astronomer Johannes Kepler discovered his famous law that the path of each planet around the sun is actually an ellipse.

In the same century Galileo proved that a cannon ball or any missile shot into the air will travel a path that is a parabola. A thrown ball traces a parabola, as does a jet of water that rises from a fountain as it falls back into the pool beneath.

As Newton himself said: "I could not have seen so far, had I not stood on the shoulders of giants."

Meaning, that his work and discoveries are entirely based on the work and discoveries of those early Greek geometers.

Do the remaining exercises on pages 100 and 101, in David Rayner's book Essential Mathematics Book Eight.

~Story Time

Read the end of The Ravenmaster's Secret by Elvira Woodruff.

~Snack Time & Break

~Art Appreciation

Elizabethan Musicians composed music for musical instruments and the voice. The Elizabethan Golden Age saw the emergence of the Anthem, the Madrigal, the Masque and Opera. Great Elizabethan Composers such as William Byrd (1543-1623), Thomas Campion (1567-1620), John Dowland (1563-1626), John Farmer (1570-1601), Orlando Gibbons (1583-1625), Robert Johnson (1500-1560) and Thomas Tallis (1505-1585).

Combinations of musical instruments, as in the modern orchestra, were still in the experimental stage but provided the opportunity to create unusual and creative music. Queen Elizabeth was a patron of all the Arts and encouraged Elizabethan Composers . Music and Song lyrics were printed during the Elizabethan era but these were sold as separate documents. The Elizabethan composer John Dowland (1563-1626) published his ' First Booke of Songes or Ayres' in 1597. Other popular composers followed suit!

William Blitheman (1525 - 1591) was organist to Elizabeth I's Chapel Royal and a composer of church and virginal music. https://www.youtube.com/watch?v=QXD95mmhWYk

William Byrd (1543-1623) was Queen Elizabeth's favourite composer who wrote church, consort and vocal music. Byrd and Thomas Tallis were granted an exclusive license to print and publish music by Elizabeth I. https://www.youtube.com/watch?v=Ql6Gm2-LmnA

Thomas Campion (1567-1620) was a physician, poet and composer of over 100 songs for the lute. https://www.youtube.com/watch?v=LwrWpskL3qg

John Dowland (1563-1626) was a University Graduate in Music who published his ' First Booke of Songes or Ayres' in 1597. https://www.youtube.com/watch?v=ycE7UbDe6jc COME AGAIN by JOHN DOWLAND - STEVON RUSSELL, guitarist with The PINK SINGERS https://www.youtube.com/watch?v=kT3xzcnp9IQ

John Farmer (c.1570-1601) composed one of the most popular pieces of this period, the madrigal "Fair Phyllis I saw sitting all alone". https://www.youtube.com/watch?v=8eeVMEMxlkc

Liberté, Égalité, Fraternité, Michaelmas Term, Block Two, History

Day Five

~Welcome the Day

~Recorder Practice

~Morning Exercises

Suffixes

Complete the incomplete words below with either 'ible' or 'able':

Your behaviour was incred.....

It's poss..... that she made a mistake.

What a thoroughly enjoy..... evening we had!

He felt utterly miser.....

Jack is a very rel..... chap.

Their story sounded rather unbeliev.....

Bella was feeling terr.....

Your cooking it completely ined.....

Your voice was hardly aud.....

Who's respons..... for this mess?

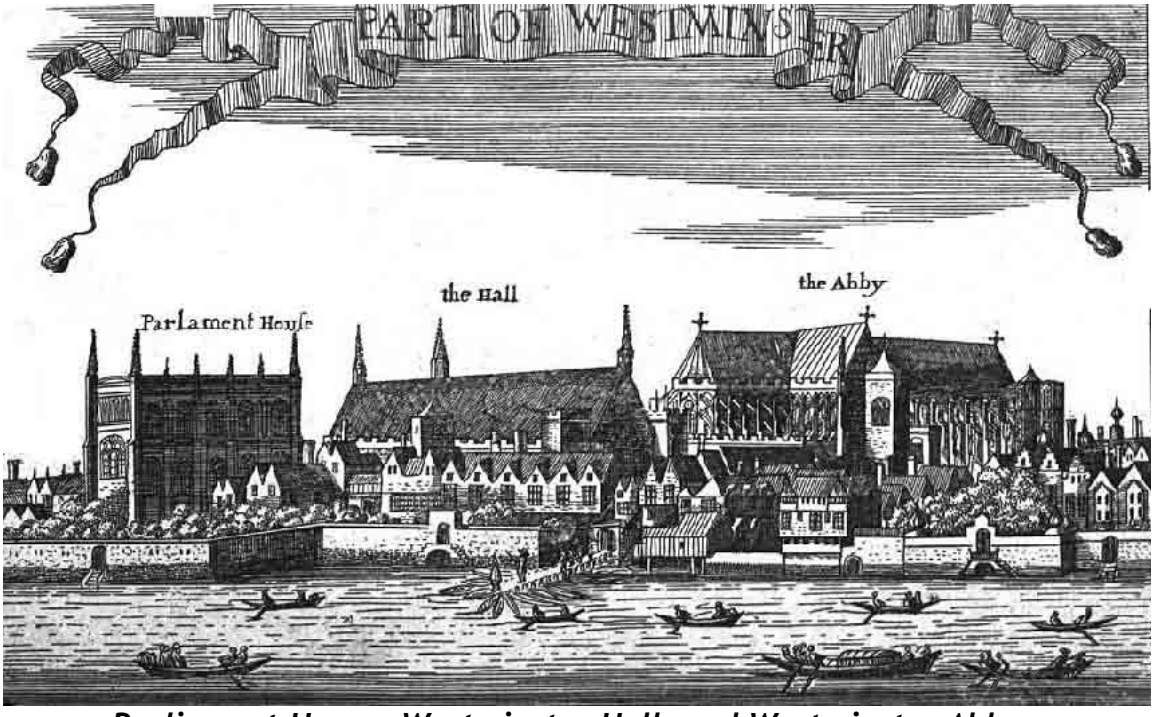
This book is over a thousand years old, it is barely read.....

~Main Lesson

Charles I.

Charles I. was much more "kingly" in his manner than James I.; but he also held high ideas of his rights, was far more impractical, and less inclined to give way to Parliament where the rights of the Church were concerned. His untruthfulness made it impossible to bind him to any promise. As a result, he was even less successful than his father in dealing with the problems of his time.
King James' favourite, the Duke of Buckingham, was also in favour with King Charles. From a humble position, he had risen to the highest ranks of the English nobility, and had a high income. His father, mother, brothers, and sisters had also been enriched and ennobled.
Until Buckingham's death, in 1628, the government was entirely in his hands. But the war with Spain fared badly, and remembered the glorious victories of Elizabeth with regret. His hurried war with France, was also mismanaged. Men who refused

to pay illegal taxes, were illegally punished. In addition, he showed favour to an anti-Puritan party, which now began to rise in the Church of England.
Buckingham was rightly held responsible, and named in Parliament as "the grievance of grievances." To save him from "impeachment", Charles was obliged to dismiss his second Parliament. In the next Parliament he called, decided not to renew their attack on him, but to pass a petition of Right, in which such arbitrary taxation and imprisonment as Buckingham and Charles had used were declared illegal. Charles was forced to give his consent. It was the most important act limiting the power of the crown which had been passed since the granting of the Great Charter, by King John, 413 years before.
Although Buckingham was slain by a private enemy, the quarrels between King and Parliament continued.
In 1629 the third Parliament of King Charles' reign, broke up in great disorder. While the King's messenger knocked loudly upon their locked door, to summon them for dismissal, the leaders of the House of Commons forcibly held their Speaker in his chair, and passed this set of defiant resolutions: Anyone who advised the King to bring in anti-Puritan charges in religion, or to collect the taxes which were in dispute, should be considered "a capital enemy of the commonwealth", and be worthy of punishment by death.



Parliament House, Westminster Hall, and Westminster Abbey

For the next eleven years, the King carried on the government by his "absolute" power ~ without Parliament.
The statesman Sir John Eliot had played the chief part in opposing the King's measures, and the King's wrath now fell on him now. In violation of the rights of free speech, granted to Parliament, the leaders of Parliament were imprisoned in the Tower of London. Others made their submission and were released, but Eliot's brave spirit refused to gain freedom for himself, by surrendering the principle of liberty for the nation and was placed in a room which was dark, cold, and wretchedly uncomfortable; and none but his sons were allowed to visit him. Under

the weight of this punishment his health, but not his spirit, gave way, and he died in November, 1632. He was truly a martyr to the cause of constitutional liberty.
Yet, the King angered the nation even more deeply by his religious policies.
He appointed as Archbishop of Canterbury, William Laud, and allowed him to carry out changes in the Church, which seemed to the Puritans to pave the way for a restoration of the Catholic faith. Men who spoke against the power of the bishops, were made to stand in the pillory, had their ears cut off, were branded on the cheek with hot irons, were fined ruinous sums, and were cast into prison. Finally, to complete his folly, Laud and the King tried to "reform" the Church of Scotland, in the same way that they had already "reformed" the Church of England.
In Scotland, almost the whole nation banded themselves together to resist the changes. The result was a rebellion, called the "Bishop's Wars," in which Charles was defeated. The Scots then advanced into England and Charles was obliged to agree that the Scots' army should stay in England until the changes which he promised should be carried through, and that he would pay its expenses.
To raise the money, he had to, at last, summon his Parliament, which sat from 1640 to 1660.
Charles could not rid himself of the, so called, Long Parliament, when it opposed him, because it was backed by the army of the Scots.
Both the House of Commons and the House of Lords there was against Charles' policies and the leaders set to work to undo the misgovernment of the last eleven years, to punish Charles' ministers, and to pass laws which should make such abuses impossible for the future.
Their hatred was chiefly directed against the Earl of Strafford, who had become Charles' principal adviser after Buckingham's death.
Charles had promised Strafford that he should not suffer in person or in honour, for aiding him. But the outcry of the London mob against Strafford was so great that the King was terrified for the safety of his Queen and children, and, with tears in his eyes, he at last consented to Strafford's execution.
"Put not your trust in princes!" cried Strafford when this news was brought to him and met his death bravely as he was a pure man, loyal to what he believed to be his duty.
After this, King and Parliament drifted ever farther apart.
Two questions separated Charles from his Parliament. One was the government of the Church by bishops, which the Puritans wished to cast out. The other was the appointment by Parliament of the officers who commanded the county militia.
Troops were now being raised to put down a rebellion in Ireland, and members of Parliament were fearful lest Charles should use these to put down Parliament itself.
To the demand for the right to appoint the militia officers, Charles replied: "That is a thing with which I would not even trust my wife and children."
On the religious question, he was equally steadfast. Feeling ran so high that swords were actually drawn on the floor of the House of Commons, and bloodshed was narrowly prevented.
The question really at issue was this: Should the King or Parliament control the government?
It was a question which could neither be evaded nor compromised. Matters grew steadily worse and worse; and finally, in 1642, the two parties drifted into civil war.

~

Read chapter six:'Cromwell and the Civil War' in Charles Kovacs' book The Age of Revolution.

~Story Time

Read about ten pages from 'At the Sign of the Star' by Katherine Sturtevant

~Snack Time & Break

~Art Appreciation from 1649ish

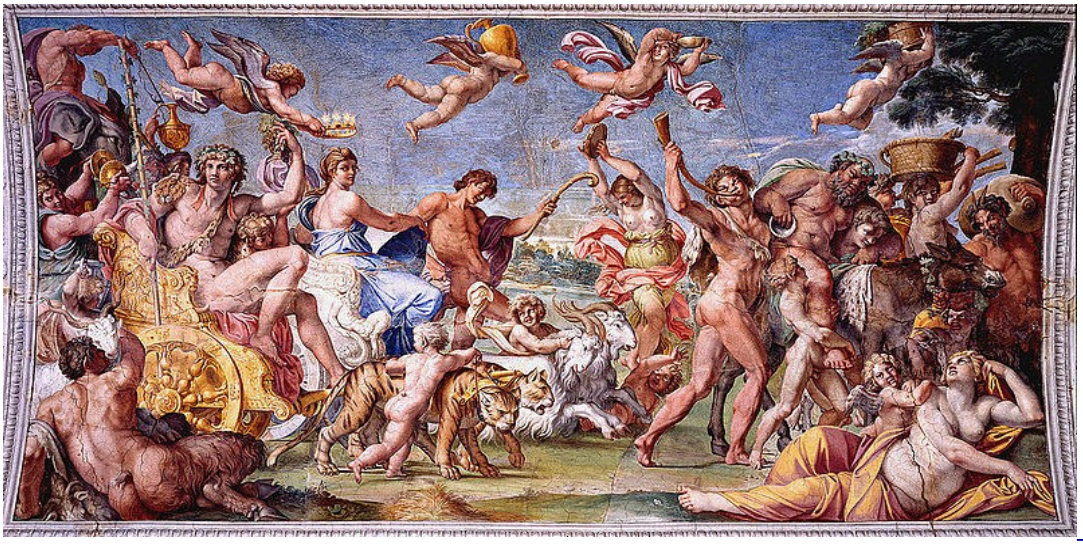
Baroque

We heard much about the Reformation last year, how the northern half of Europe turned away from Catholicism and the Pope. The Baroque is the artistic side of Catholicism making its comeback during the Counter-Reformation (the Council of Trent 1545-1563). Baroque art and architecture attracted people back to the Catholic church with its opulent, sumptuous magnificence.
After the Renaissance, which inspired quiet contemplation, Baroque art reached out to people and inspired action with its dramatic movement. There were saints in ecstasy or pain, charging horses and turbulent skies of strikingly contrasting light and dark, and vivid colours.

The Italian Annibale Carracci (1560-1609) was one such Baroque painter. Along with his brothers, he was, in fact, one of the founders of a leading strand of the Baroque style, borrowing from styles from both north and south of their native city, and aspiring for a return to classical monumentality, but adding a more vital dynamism. Painters working under Annibale at the gallery of the Palazzo Farnese would be highly influential in Roman painting for decades.

Annibale Carracci, Christ Appearing to Saint Peter on the Appian Way

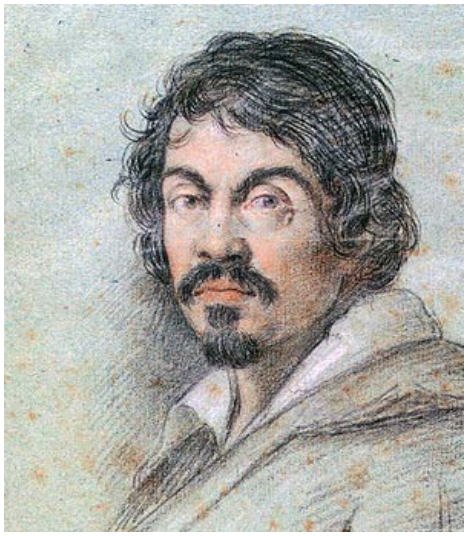
Annibale Carracci, Christ



Annibale Carracci, Farnese Ceiling

Caravaggio (1571-1610) was the greatest and most influential Baroque artist.
His arrival was revolutionary. The art of painting, used to consist of reproducing the appearance of nature ~ but as 'nature' is full of defects, adjustments had to be made, in the interests of 'b***eauty'.***

Thus there is a perpetual reconciliation to be made and a balance to be struck between realism and beauty.



The harsh light in which Caravaggio's figures are seen, however, is dramatic enough to impress the beholder and to make even an awkward gesture significant. But what must have made him seem particularly revolutionary to his contemporaries was his choice of the characters themselves and his emphasis on what the High Renaissance would have called their physical defects.

To us, this frank acceptance of men and women as they are is not at all disturbing; but to refuse, at the end of the sixteenth century, to ennoble or idealize humanity as Titian and Raphael had done, seemed both shocking and irreverent. Peasants with gnarled hands and wrinkled brows ~ painted in all sincerity, for that, surely, was the true physical appearance of the simple men whom Christ chose as His disciples ~ or young men whose elegance was rather that of a fashion-plate than of a hero, take the place of the demigods of an earlier generation. It is a democratic invasion, an inevitable sign of the times.

The Calling of St Matthew

In The Calling of Saint Matthew, the cellar light slashes across the backwall and illuminates the faces of some of the men crowded around a wooden table where Matthew counts his money. Three of Matthew's companions regard Jesus who has just entered and stands in the shadow. The cellar lighting streaming through the window, almost traces the line of Jesus' pointing finger which points at Matthew. But the future apostle resists, avoiding Jesus' eyes and staring stubbornly at the coins on the table. The painting illustrates the tension within Matthew, using light and dark, between pointing finger and gazing eyes staring in the opposite direction.
And in spite of Matthew's reluctance, Jesus' feet are already turned toward the door to the future.

The Entombment of Christ

Caravaggio, Doubting Thomas

The first of Carravaggio's followers was Orazio Gentileschi who, at some time in the late 1570s or early 1580s went to Rome, where he, together with the landscape painter Agostino Tassi, painted frescoes in churches.
Orazio Lomi Gentileschi (1563–1639) was an Italian painter. Born in Tuscany, he began his career in Rome, painting in a Mannerist style, much of his work consisting of painting the figures within the decorative schemes of other artists. After 1600, he came under the influence of the more naturalistic style of Carravaggio. He received important commissions in Fabrianp and Genoa before moving to Paris to the court of Marie de Medici. He spent the last part of his life at the court of Charles I of England. He was the father of the painter Artemisia Gentileschi.
In the first years of the 17th century Gentileschi came under the influence of Caravaggio who was also in Rome at the time. His paintings of this period (David and Goliath and Saint Cecilia and an Angel) employ Caravaggio's use of dramatic, unconventional gesture and monumental composition, his uncompromising realism and contemporary representation of figure types, and to some extent his strong light-and-dark contrast.

Shortly afterwards, Gentileschi developed a Tuscan lyricism foreign to Caravaggio's almost brutal vitality, a lighter palette. From 1621 to 1623 Gentileschi was in Genoa, where he painted his masterpiece, The Annunciation, a work that shows a weakening of Caravaggio's influence. The composition still depends on dramatic gestures, here of the Virgin and the angel but the mood is more restrained and lyrical than in his earlier works, and the colours are lighter with less contrast.

Artemisia Gentileschi (1593 –1656) was an Italian Baroque painter, today considered one of the most accomplished painters in the generation following that of Caravaggio. She was Orazio Gentileschi's daughter and pupil ~ although some say that she, soon, became a much more accomplished painter that her father. In an era when female painters were not easily accepted by the artistic community or patrons, she was the first woman to become a member of the Accademia di Arte del Disegno in Florence and had international clientele.

Artemisia Geneleschi ~ Self Portrait

She specialized in painting pictures of strong and suffering women from myths, allegories, and the Bible ~ victims, suicides, warriors. Some of her best known themes are Susanna and the Elders, Judith Slaying Holofernes and Judith and her Maidservant.

Judith and her Maidservant

She was known for being able to convincingly depict the female figure, anywhere between nude and fully clothed. Artemisia was also famous for her skill and talent in handling colour, both overall in the composition but also in building depth. For many years she was regarded as a curiosity. Today she is regarded as one of the most progressive and expressive painters of her generation.

Gian Lorenzo Bernini (1598 – 1680) was an Italian sculptor and architect. While a major figure in the world of architecture, he was, also and even more prominently, the leading sculptor of his age, credited with creating the Baroque style of sculpture. As one scholar has commented, "What Shakespeare is to drama, Bernini

may be to sculpture. In addition, he was a painter and a man of the theater: he wrote, directed and acted in plays (mostly Carnival satires), for which he designed stage sets and theatrical machinery. He produced designs as well for a wide variety of decorative art objects including lamps, tables, mirrors, and even coaches.
As architect and city planner, he designed secular buildings, churches, chapels, and public squares, as well as massive works combining both architecture and sculpture, especially elaborate public fountains and funerary monuments and a whole series of temporary structures (in stucco and wood) for funerals and festivals. His broad technical versatility, boundless compositional inventiveness and sheer skill in manipulating marble ensured that he would be considered a worthy successor of Michelangelo, far outshining other sculptors of his generation. His talent extended beyond the confines of sculpture to a consideration of the setting in which it would be situated; his ability to synthesize sculpture, painting, and architecture into a coherent conceptual and visual whole has been termed by the late art historian Irving Lavin the "unity of the visual arts".

Bernini self-portrait

David by Bernini

Blessed Ludovica Albertoni

Here is the link to a very good clip about Baroque art:
https://www.khanacademy.org/humanities/monarchy-enlightenment/baroque-art1/beginners-guide-baroque1/v/how-to-recognize-baroque-art

Liberté, Égalité, Fraternité, Michaelmas Term, Block Two, History

Day Ten

~Welcome the Day

~Recorder Practice

~Morning Exercises

Complete the following comparisons:

…..	*smarter*	*…..*
…..	*sillier*	*…..*
fat	*…..*	*…..*
…..	*later*	*…..*
funny	*…..*	*…..*
…..	*…..*	*bravest*
…..	*further*	*…..*
…..	*madder*	*…..*

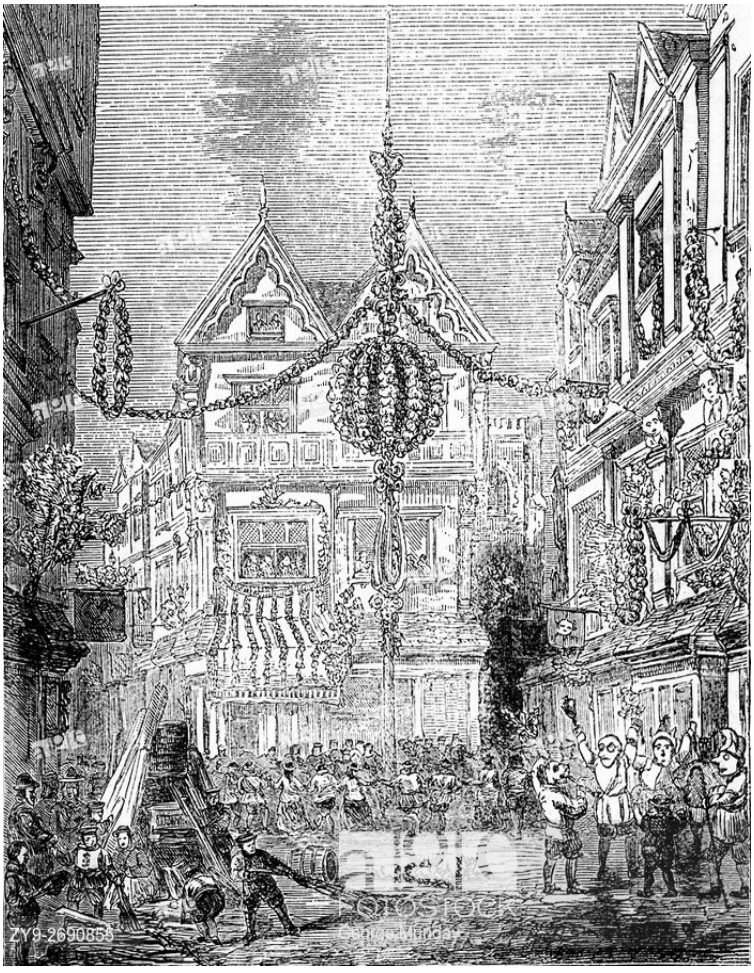
~Main Lesson

Charles II. And the Restoration (1660-1685)

The joy which greeted Charles II. when he entered London on his thirtieth birthday was great. He was an abler and worldlier man than his father had been. But his morals were bad, and he had none of the loyalty to principle which caused Charles I. to uphold the Church of England.
He was as much resolved to rule absolutely as his father. His ready wit and pleasant manners disguised his real plans, and he seemed to be wholly given up to leading a jolly life. The court and society took their tone from the King, and a great reaction against Puritanism set in. The theatres, which had been closed, were re-opened and, with that, came back bull-baiting, bear-baiting, cock-fighting, the May-pole dance, which characterized "Merry England." Pleasant vice and profitable corruption replaced the Puritans' endless psalm singing, sermons, and prayer.
It was in the time of Charles II., also, that the drinking of coffee, tea, and chocolate came to use in England. The first was introduced from Turkey, the second from China, and the third from Central America. Coffee houses, or places for drinking coffee, became the chief meeting places for fashionable society, where the latest news could always be heard.
Charles was wise enough to let Parliament settle the questions which the restoration raised.

Thirteen persons who had taken part in the trial and execution of Charles I. were put to death, but most of those concerned in the rebellion were pardoned, or were lightly punished.

Charles' second Parliament, which sat from 1661 to 1679, was as "Cavalier" as his heart could wish. It re-established the Church of England, and expelled two thousand Puritan ministers from their pulpits. By later laws, it forbade the dispossessed ministers from earning a living by teaching, or from holding religious assemblies, or from even residing five miles of a town.
From this time there exists, along with the established Episcopal church, a large body of Protestant "Dissenters": the Presbyterians, the Baptists, the Quakers, and the like as well as a considerable body of Roman Catholics. One of the chief needs of the time, was to secure, for these Dissenters, religious toleration, that is, the right to worship peaceably, in their own way, without punishment by the state.



Street parties on the restoration of the English monarchy began in 1660 when the English, Scottish and Irish monarchies were all restored under Charles II after the Interregnum that followed the Wars of the Three Kingdoms.

~

Read chapter eleven:'The Merry Monarch' in Charles Kovacs' book The Age of Revolution.

~Story Time

Read about ten pages from 'At the Sign of the Star' by Katherine Sturtevant

~Snack Time & Break

~Art Appreciation

Famous Poets During the Late Renaissance and Baroque

During the Baroque period in England, the Metaphysical poets were particularly popular, and they share many characteristics with Baroque literature. Baroque writers include John Milton, John Donne, and George Herbert. Although Shakespeare wrote his plays during this period (from about 1592 until he died in 1616), he is typically thought of as a Renaissance writer; although he does share some Baroque characteristics such as similes and metaphors, but not the religious themes.

Literature of the Baroque period is full of metaphor, emblem or symbols and hyperbole. The purpose of baroque period literature was to move the reader into an emotional state, to lift the reader out of the mundane.

Baroque literature was very complex very much like baroque art and architecture. This very same period in English literature is known as the metaphysical period which focused on the "unnatural" or "adverse to nature" rather than supernatural. Either...

William Congreve 1670 – 1729

John Locke 1632 – 1704

Sir Isaac Newton 1642 – 1727

Jonathan Swift 1667 – 1745

John Milton's poem "On His Being Arrived to the Age of Twenty-Three" (1631) shows the concerns that Milton had about his career when he was young and still hadn't chosen his own way in life. He calls time a "subtle thief of youth" and according to him, it is time that has stolen his twenty-three years.

How soon hath Time, the subtle thief of youth,
Stolen on his wing my three and twentieth year!
My hasting days fly on with full career,
But my late spring no bud or blossom shew'th.

Perhaps my semblance might deceive the truth,
That I to manhood am arrived so near,
And inward ripeness doth much less appear,
That some more timely-happy spirits indu'th.
Yet be it less or more, or soon or slow,
It shall be still in strictest measure even
To that same lot, however mean or high,
Toward which Time leads me, and the will of Heaven,
All is, if I have grace to use it so,
As ever in my great Task-master's eye

'Death, Be Not Proud' is one of the most famous 'holy sonnets' written by John Donne (1572-1631). What follows is the poem, followed by a short introduction to it, including an analysis of its more interesting imagery and language.

Death be not proud, though some have called thee
Mighty and dreadfull, for, thou art not soe,
For, those, whom thou think'st, thou dost overthrow,
Die not, poore death, nor yet canst thou kill mee.
From rest and sleepe, which but thy pictures bee,
Much pleasure, then from thee, much more must flow,
And soonest our best men with thee doe goe,
Rest of their bones, and soules deliverie.
Thou art slave to Fate, Chance, kings, and desperate men,
And dost with poyson, warre, and sicknesse dwell,
And poppie, or charmes can make us sleepe as well,
And better then thy stroake; why swell'st thou then?
One short sleepe past, wee wake eternally,
And death shall be no more; death, thou shalt die.

George Herbert (1593-1633) is widely regarded as one of the greatest religious poets in all of English literature. His work is also associated with the Metaphysical Poets. 'The Pearl' is a tricky poem to decipher and analyse, but the effort is worth it.

The Pearl

I know the wayes of Learning; both the head
And pipes that feed the presse, and make it runne;
What reason hath from nature borrowed,
Or of itself, like a good huswife, spunne
In laws and policie; what the starres conspire,
What willing nature speaks, what forc'd by fire;
Both th' old discoveries and the new-found seas,
The stock and surplus, cause and historie;
All these stand open, or I have the keyes:
Yet I love thee.

I know the wayes of Honour; what maintains
The quick returns of courtesie and wit;
In vies of favours whether partie gains
When glorie swells the heart and moldeth it
To all expressions both of hand and eye,
Which on the world a true-love-knot may tie,
And bear the bundle wheresoe're it goes;
How many drammes of spirit there must be
To sell my life unto my friends or foes:
Yet I love thee.

I know the wayes of Pleasure, the sweet strains ,
The lullings and the relishes of it;
The propositions of hot bloud and brains;
What mirth and musick mean; what love and wit
Have done these twentie hundred yeares, and more;
I know the projects of unbridled store:
My stuffe is flesh, not brasse; my senses live,
And grumble oft, that they have more in me
Than he that curbs them, being but one to five:
Yet I love thee.

I know all these and have them in my hand;
Therefore not seeled but with open eyes
I flie to thee, and fully understand
Both the main sale and the commodities;
And at what rate and price I have thy love,
With all the circumstances that may move.
Yet through the labyrinths, not my grovelling wit,
But thy silk twist let down from heav'n to me
Did both conduct and teach me how by it
To climbe to thee.

Liberté, Égalité, Fraternité, Michaelmas Term, Block Two, History

Day Eleven

~Welcome the Day

~Recorder Practice

~Morning Exercises

Draw line to match up each word-beginning with the correct ending:

residen-	*-cial*	*artifi-*
cau-		*preten-*
impar-	*-tious*	*fero-*
deli-		*so-*
essen-	*-cious*	*cru-*
cons-		*suspi-*
	-tial	

~Main Lesson

Charles' foreign policy was at first chiefly concerned with the "United Provinces," or 'Dutch Republic'. These provinces, situated about the mouth of the river Rhine, had become rich and prosperous states through commerce and industry. While Elizabeth ruled over England, they had become Protestant, and thrown off the cruel government of Spain. For a time, the greater part of the commerce of Europe was carried on in Dutch vessels. They established a colonial empire which included the Cape of Good Hope, in Southern Africa; Java, Ceylon, and the Moluccas, in the East Indies; and New Amsterdam, in America. The jealousy which their commercial success aroused in England had led Cromwell to pass a Navigation Act, which took from them most of their trade with that country. A war followed (1651-1654); and although the Dutch Admiral, Van Tromp, for a time, sailed "with a broom at his masthead," as a sign of his intention to sweep the English fleet from the sea, he had at last been defeated and slain, and the Dutch had made peace.
Under Charles II., two new wars were fought with the Dutch. In the first of these (1665-1667), Prince Rupert and Admiral Monk won some victories. Then Charles, thinking that peace would be made, laid up his fleet in the harbours of the river Thames, in order that he might save money to spend on his pleasures. But the Dutch got together a new fleet, and sailed up the Thames and burned three of the English ships which lay at anchor. They then blockaded the river for two weeks. Men murmured that such things had not happened in Cromwell's day.
The only gain which England made from the Dutch, by this war, was New Amsterdam, which was conquered, and renamed New York, in honour of Charles'

brother, the Duke of York (1664).
Charles' second war with the Dutch came in 1672. He attacked them in alliance with Louis XIV. of France, who was seeking to extend his kingdom at the expense of his neighbours. By a secret treaty, Charles promised Louis that he would declare himself a Catholic whenever the time seemed ripe for it. In return, the French King again and again gave large sums of money to Charles, to make him independent of Parliament. He also promised to send soldiers to his aid, in case rebellion broke out in England.
The war which Charles and Louis waged went badly. On land, the brave Hollanders defended themselves against Louis XIV. by cutting the dykes, which protected their low-lying land against the sea, and flooding the open country. On the sea, the English felt that they were left by the French to do all the fighting. Charles' nephew, William III. of Orange, was now at the had of the Dutch government, with the title of Stadtholder; and the English Parliament soon forced King Charles to conclude a peace. Thenceforth, William III. was free to give all his attention to saving free government and the Protestant religion, in Europe, from the ambitious designs of Louis XIV.

~

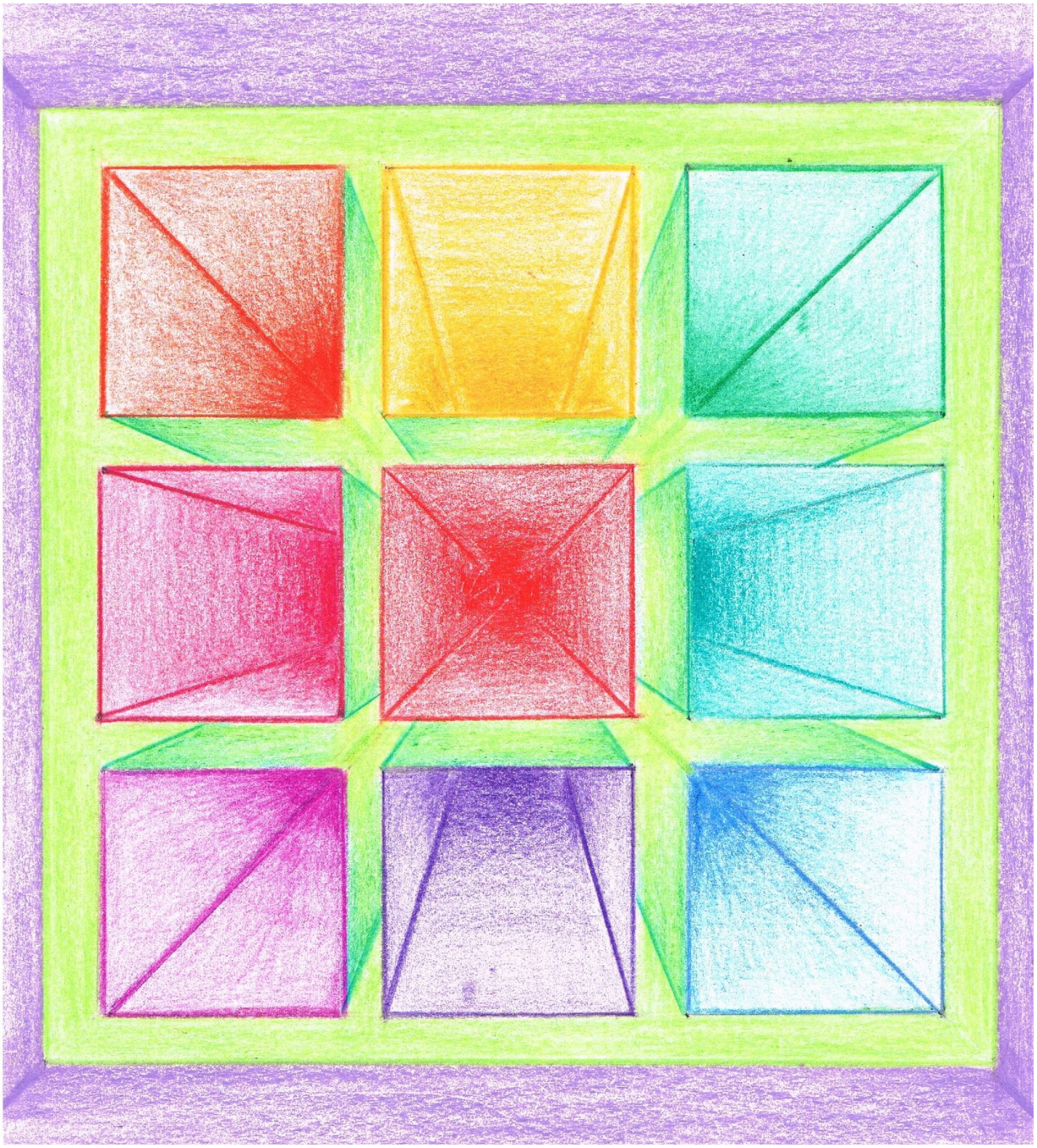
Read chapter twelve:'The Plague and the Great Fire' in Charles Kovacs' book The Age of Revolution.

~Story Time

Read about ten pages from 'At the Sign of the Star' by Katherine Sturtevant

~Snack Time & Break

~Art



~

Liberté, Égalité, Fraternité, Michaelmas Term, Block Three, Geography

Day Four

~Welcome the Day

~Recorder Practice

~Morning Exercises

Hot Countries and Cold Countries

At one time of the year the north pole is turned a little towards the sun, and at another the south pole, yet the earth's axis never slants so much as to turn away the broad middle part, where the equator is, from the sun's rays.
That middle band of the earth, at the equator and north and south of it, is always the hottest part because it is nearest the sun, and his rays fall upon it straight, rather than sloping. Therefore in this part there is no winter cold nor summer heat, no seasons like ours, but hot weather all year long.
Here are the hot countries, where the palm trees grow; where there are beautiful flowers of every colour, and large juicy fruits; where the feathers of the birds are crimson and purple and gold and green; and where huge wild beasts, both fierce and gentle, roam about in the forests.
This part of the earth's surface is called the torrid zone; the word "torrid" means burning, and it is easy to see why the name is suitable. These hot countries are also spoken of as within the tropics.
From the equator up towards the north pole the world becomes colder and colder the farther we go, until at last, near the pole, there is perpetual ice and snow. There are few living creatures, and huge masses of ice, called icebergs, larger than whole rows of houses, float about where the sea is not altogether frozen. We will be studying these areas at toward the end of the Geography block.

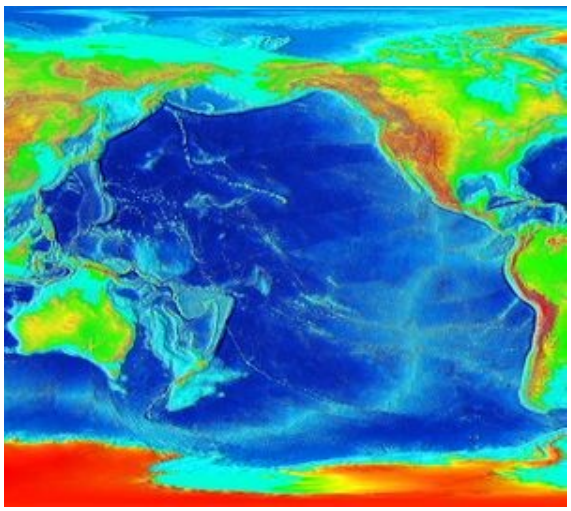
This dreary part of the world is called the frigid, or cold zone, and well deserved its name. Even when the north pole is turned towards the sun there is never enough sunshine to melt the ice. But that part of the year is the summertime in those regions, as with ourselves, and, for the people who live near the pole, is a joyful time.

~Main Lesson

The Atlantic Ocean

Stretching from the shores of Asia and Australia to the Americas and Antarctica, the Pacific Ocean is the world's largest and deepest ocean. In fact, it covers one third of the earth's surface. Scattered across its vastness, there are about two thousand volcanic and coral islands.

Find the largest picture of the Atlantic Ocean in your atlas and follow the description below by finding every place that is mentioned.



The Pacific Ocean is ringed by many volcanoes and oceanic trenches. It is the body of water between Asia and Australia in the west, the Americas in the east, the Southern Ocean to the south, and the Arctic Ocean to the north. It is the largest ocean and it covers one-third of the surface of the entire world.
It joins the Atlantic Ocean at a line drawn south from Cape Horn, Chile and Argentina to Antarctica, and joins the Indian Ocean at a line drawn south from Tasmania, Australia to Antarctica.
As the Atlantic slowly gets wider, the Pacific is slowly shrinking. It does this by folding the sea floor in towards the center of the Earth ~ this is called subduction. This bumping and grinding is hard so there are many earthquakes and volcanoes when the pressure builds up and is quickly released as large explosions of hot rocks and dust.
When an earthquake happens under the sea, the quick jerk causes a tsunami. That is why tsunamis are more common around the edge of the Pacific than anywhere else. Many of the Earth's volcanoes are either islands in the Pacific, or are on continents within a few hundred miles of the ocean's edge. Plate tectonics are another factor that makes Pacific Ocean smaller.

Universalis Cosmographia, the Waldseemüller wall map dated 1507, depicts the Americas, Africa, Europe, Asia, and the Pacific Ocean separating Asia from the Americas, by the Italian Amerigo Vespucci.

Made in 1529, the Diogo Ribeiro map was the first to show the Pacific much closer to its proper size.

Maris Pacifici by Ortelius (1589) was one of the first printed maps to show the Pacific Ocean.

Map of the Pacific Ocean during European Exploration, circa 1702–1707

Sunset over the Pacific Ocean as seen from the International Space Station. Anvil tops of thunderclouds are also visible.

Ulawun stratovolcano situated on the island of New Britain, Papua New Guinea, issuing passive steaming.

Tahuna Maru Islet, French Polynesia

Take this Pacific Ocean Quizz ~ some of the questions you will be able to answer after studying today's and past lesson, others you will have to research yourself:

1 ~ Who named the Pacific Ocean?
A Ferdinand Magellan
B James Cook
C Charles Darwin

2 ~ What percentage of the Earth's does the Pacific Ocean cover?
A ¼
B ½
C 1/3

3 ~ About how many islands are in the Pacific Ocean?
A 5000
B 15000
C 25000

4 ~ How salty is the seawater in the Pacific Ocean?
A the same as the water in the Atlantic Ocean
B more than "
C less than "

5 ~ How deep is the deepest point in the Pacific Ocean?
A 3 miles deep
B 5 miles deep
C 7 miles deep

6 ~ How often does El Niño occur?
A every 2 to 7 years
B every 5 to 10 years
C every 7 to 12 years

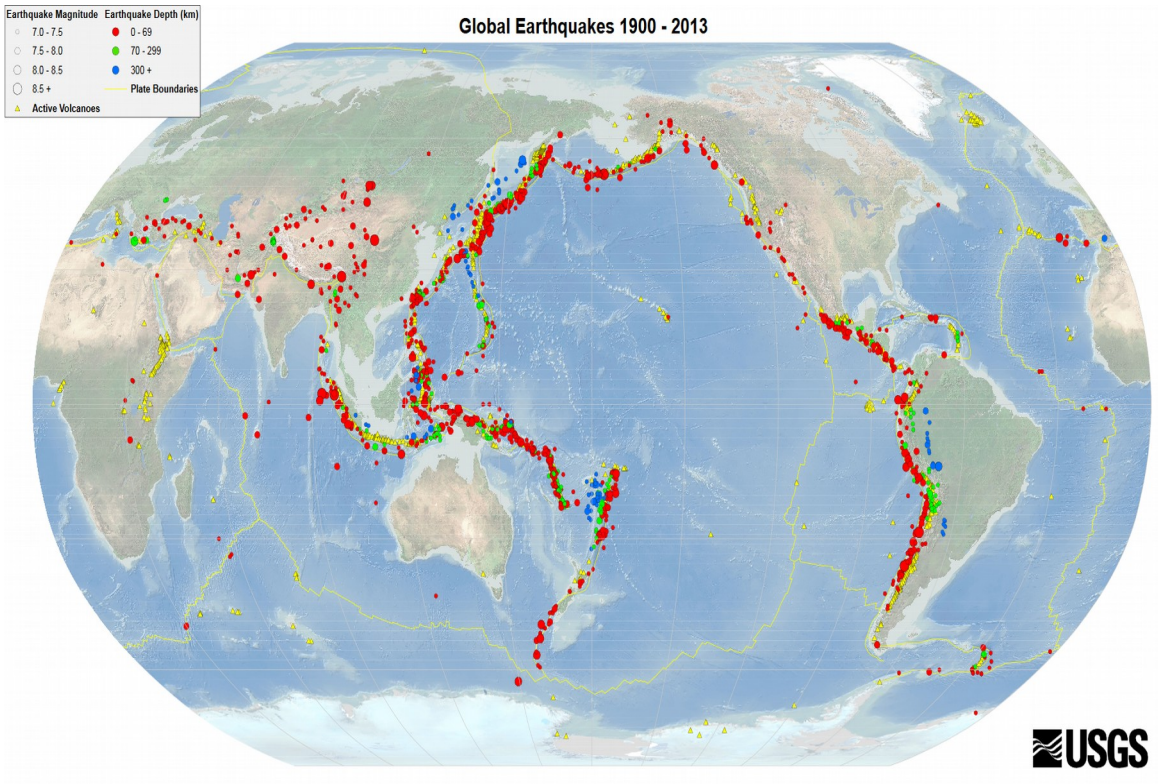
7 ~ How much of the world's corral reefs are found in the Pacific Ocean?
A more than 60%
B " 75%
C " 90%

8 ~ How many of the world's volcanoes are located along the renowned "Ring of Fire"?
A 40% of the world's volcanoes
B 60% "
C 80% "

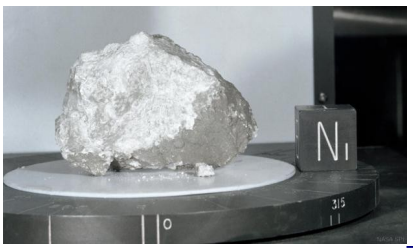
9 ~ Is it possible for the Pacific Ocean to ever run out of fish?
A impossible
B likely
C hard to say

10 ~ How big is the, so called "Great Pacific Garbage Patch"?
A almost three times the size of Great Britain
B same size at Switzerland
C half the size of Germany

Find the answers after the story.



Last but not least, have a read of the following theory:
Our ancestors did as much pondering where the moon came from as we do. The Italian astronomer, physicist and philosopher Galileo Galilei made an early contribution when he succeeded in making a powerful telescope that showed the Moon in far greater detail than had been possible before.
In the early 1600s, Galileo showed that the Moon had a landscape similar to that of Earth. It was rugged, with mountains and plains. This was the first hint that the Earth and Moon somehow formed together.
In 1800s however, Charles Darwin's son George suggested that, when the Earth was young it rotated very quickly, and as a result part of it flew off into space and formed the Moon. One of the theories about the origin of the "Ring of Fire" is that the Moon used to be a part of the Earth and the Pacific Ocean is supposedly the scar from this "fission".



A sample of moon rock brought back by the Apollo 15 astronauts

To everyone's surprise, the samples of lunar rock and soil revealed that the Moon is almost chemically identical to the Earth.
The rocks also showed that the Moon formed about 29 million years later than other similar-sized objects in the solar system.
It appears to have had a fiery beginning. The dark areas of its surface suggest it was once covered all over by a deep ocean of liquid magma.
The Earth and Moon are very similar chemically.

A full moon as seen from Earth

Many theories have been spun as where the moon came from. One that seems to recur is that the Moon left the Earth from the Pacific Ocean, and that the Ring of Fire is still in turbulence from this event.

~Story Time

Read the first half of chapter XLV Cook Discovers New Zealand from page 319 to 324 in 'A Book of Discovery' by M.B. Synge.

Answers:

1 ~ Who named the Pacific Ocean?
A Ferdinand Magellan

2 ~ What percentage of the Earth's does the Pacific Ocean cover?
C 1/3

3 ~ About how many islands are in the Pacific Ocean?
C 25000

4 ~ How salty is the seawater in the Pacific Ocean? "
C less than

5 ~ How deep is the deepest point in the Pacific Ocean?
C 7 miles deep

6 ~ How often does El Niño occur?
A every 2 to 7 years

7 ~ How much of the world's corral reefs are found in the Pacific Ocean?
B " 75%

8 ~ How many of the world's volcanoes are located along the renowned "Ring of Fire"?
C 80%

9 ~ Is it possible for the Pacific Ocean to ever run out of fish?
C hard to say

10 ~ How big is the, so called "Great Pacific Garbage Patch"?
A almost three times the size of Great Britain

~Snack Time & Break

~Maths Practice

Study 1.4 'Negative Numbers' Adding and Subtracting on page 20. Then do all exercises on pages 20 and 21, in David Rayner's book Essential Mathematics Book Eight.

Liberté, Égalité, Fraternité, Michaelmas Term, Block Three, Geography

Day Twelve

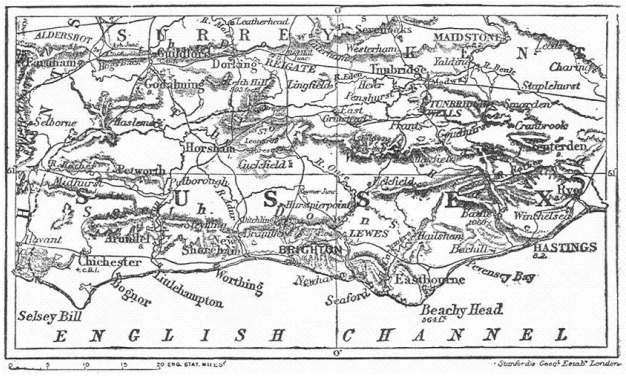
~Welcome the Day

~Recorder Practice

~Morning Exercises

Maps

A map shows the chief things in the county: towns dotted about here and there; perhaps a row or range of hills running across the county, past town after town; a great stream of water, called a river, making its way to the sea, and little streams running along to join the big river: the sea on one side, it may be, running into the land here and there and making curious patterns. In a map of a county there is no room to mark the streets and buildings of each town. Indeed, the town itself is only marked by a dot to show where it is, and its name is written near the dot.



Hills take up a good deal more room than towns, because they generally run over a great piece of country. They are marked on maps by shaded lines, as when the sun shines on one side of a hill the other sides look dark and shady. Rivers are marked by a wavy line; thick, if the river is wide across; thin if it is narrow.
When we draw a map of your own county,we must first make a scale, as our map should show how large your county is. Perhaps each measure of the scale will stand for ten miles; then, if the county be thirty miles long and twenty broad, the map will be three measures long and two broad.
We will next show upon what part of the earth's surface your county is by putting in the parallels and meridians. If the 52nd parallel runs through it, you know it is 52 degrees north of the equator; if the 2nd meridian, you know it is two degrees west of Greenwich.
Then we must draw the shape of our county as accurately as we can. At this time, the only way we can find out the shape is by copying it from another map.

The line showing the north of the county is to be the top of our drawing; the bottom, the south; the right hand, the east; the left hand, the west. Maps are always made with the north at the top; so, as we look towards the north or top, we have the east on your right and the west on your left. The bottom of the map is the south.

Perhaps a range of hills runs across the north of our county for twenty miles, which we will mark by a shaded line two measures long. Then there may be a little river of eight and a long river of thirty miles, winding in and out till they get to the sea. These go into the map as wavy lines so many measures long.
Then come dots for the towns. These are put north or west as they may lie, and half a measure or one or two measures apart according as they are five or ten or twenty miles distant from one another. There is no room on small maps for little villages.
Next put in the names of the counties that border your county all round; or if it is bordered on one side by the sea, the name of the sea.
By looking at the map and scale now it is finished we can tell several facts about our own county.
We see its shape. We can find out its size and its distance from the equator. We may name the hill ranges and rivers in it, and say where they run and how long they are. We may name, also, all the towns, and say how far they are from one another, and what direction, north or west, a man must go in to get from one town to another. We also see what county we would get into if we went out of ours on the south or east or north side.

~Main Lesson

Japan

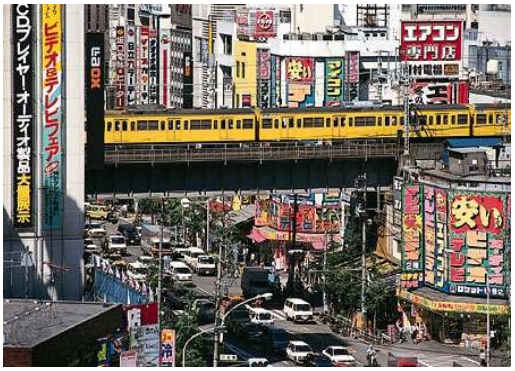
With the aid of your atlas, follow the description of Japan.

Japan, an island country lying off the east coast of Asia. It is made up of a great string of islands in a north-east-south-west arc that stretches for approximately 1,500 miles through the western North Pacific Ocean. Nearly the entire land area is taken up by the country's four main islands; from north to south these are Hokkaidō, Honshū, Shikoku, and Kyūshū.
Honshu is the largest of the four, followed in size by Hokkaido, Kyushu, and Shikoku. In addition, there are numerous smaller islands, the major groups of which are the Ryukyu (Nansei) Islands (including the island of Okinawa) to the south and west of Kyushu and the Izu, Bonin (Ogasawara), and Volcano (Kazan) islands to the south and east of central Honshu.
The national capital, Tōkyō, in east-central Honshu, is one of the world's most populous cities.

The Japanese landscape is rugged, with more than four-fifths of the land surface consisting of mountains. There are many active and dormant volcanoes, including Mount Fuji (Fuji-san), which, at an elevation of 12,388 feet, is Japan's highest mountain. Abundant precipitation and the generally mild temperatures throughout most of the country have produced a lush vegetation cover and, despite the mountainous terrain and generally poor soils, have made it possible to raise a variety of crops.

Mount Fuji from its northern side

The Kinkaku Temple (Golden Pavilion) in Kyōto originally built in the 15th century.



Train of the Sōbu Line passing through Akihabara, a district of Tokyo

Japan is bounded to the west by the Sea of Japan (East Sea), which separates it from the eastern shores of Korea and south eastern Siberia: to the north by La Perouse Strait, separating it from Russian Sakhalin Island, and by the Sea of Okhotsk; to the north-east by the southern Kuril Islands (under Soviet and then Russian administration); to the east and south by the Pacific; and to the south-west by the East China Sea, which separates it from China. The island of Tsushima lies between north-western Kyushu and south-eastern Korea and defines the Korea Strait on the Korean side and the Tsushima Strait on the Japanese side.

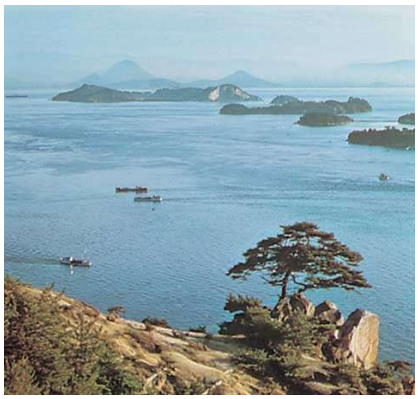
Cliffs at Tōjimbō Point on the coast of the Sea of Japan (East Sea)

The mountains are divided into many small land blocks that are separated by lowlands or deep saddles; there is no long or continuous mountain range. These land blocks are the result of intense faulting and warping (bending of the Earth's crust); the former process is regarded as dominant. One consequence is that mountain blocks are often bounded by fault scarps and flexure slopes that descend in step formation to the adjacent lowlands.
Consequently, Japan is one of the world's most geologically unstable areas. The country experiences some 1,000 tremors annually, most of them minor, though major quakes, as in Tokyo-Yokohama in 1923 and Kobe in 1995, cause considerable loss of life and widespread destruction. Violent volcanic eruptions occur frequently, and at least 60 volcanoes have been active within historical time. Volcanoes born since 1900 include Showa Volcano on Hokkaido and Myōjin Rock off the Bayonnaise Rocks in the Pacific.
The country's abundant hot springs are mostly of volcanic origin. Many of the gigantic volcanoes are conical in shape (e.g., Mount Fuji), while others form steep lava domes (e.g., Mounts Dai and Unzen).
One of the characteristics of the volcanic areas is the prevalence of calderas (large, circular, basin-shaped volcanic depressions), especially in the north-east and south-west, many of which are filled with water, such as Lakes Kutcharo, Towada, and Ashi.

Mount Fuji

The cause of this instability, indeed, the reason for Japan's existence, is the tectonic movement of several of the Earth's major crustal plates in the vicinity of the archipelago.

Taishō Pond in Kamikōchi Valley & Mount Hotaka,
highest in the Hida Range



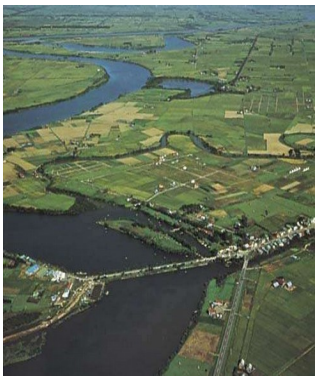
Coast of the Inland Sea

Limestone outcroppings on the Akiyoshi Plateau, south-western Honshu

The caldera of Mount Aso in central Kyushu

Waterfall in Yamanashi prefecture, east-central Honshu

Japan's rivers are generally short and swift-running and are supplied by small drainage basins. The most significant rivers are the Teshio and Ishikari rivers of Hokkaido; the Kitakami, Tone, Shinano, Kiso, and Tenryū rivers of Honshu; and the Chikugo River of Kyushu. Some of the rivers from the volcanic areas of north-eastern Honshu are acidic and are useless for irrigation and other purposes.



Ishikari River, western Hokkaido

Lake Biwa, the largest in Japan, covers 259 square miles of central Honshu. All other major lakes are in the north-east. Most of the coastal lakes, such as Lakes Kasumi and Hamana of Honshu, are drowned former valleys, the bay mouths of which have been dammed by sandbars. Inland lakes such as Biwa, Suwa and Inawashiro of Honshu occupy tectonic depressions of geologically recent fault origin. Lakes of volcanic origin outnumber all other types.

Ukimi Temple, Lake Biwa

In general, Japan's climate is characterized as monsoonal:

In winter the high pressure zone over eastern Siberia and the low pressure zone over the western Pacific result in an eastward flow of cold air (the winter monsoon) from late September to late March that picks up moisture over the Sea of Japan. The winter monsoon deposits its moisture as rain or snow on the side of Japan facing the Sea of Japan and brings dry, windy weather to the Pacific side. The pressure systems are reversed during the summer, and air movements from the east and south (the summer monsoon) from mid-April to early September bring warmer temperatures and rain.
Cyclonic storms and frequent and destructive typhoons occur during late summer and early fall, especially in the south-west.
Temperatures are generally warmer in the south than in the north, and the transitional seasons of spring and autumn are shorter in the north.

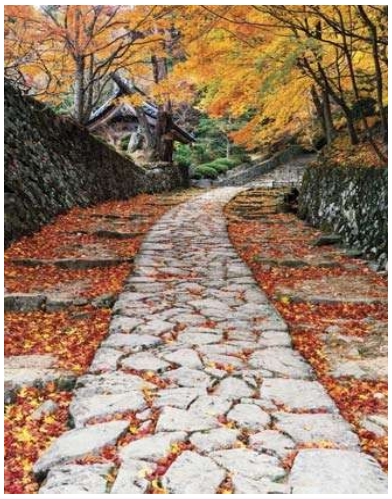
Rain and snow are plentiful throughout the islands. Maximum precipitation falls in the early summer, and the minimum occurs in winter, except on the Sea of Japan coast, which receives the country's highest snowfall. The summer rainy season occurs through June and July; it is known as the baiu ("plum rain") because it begins when the plums ripen. The typhoons are accompanied by torrential rains .

Much of the original vegetation has been replaced by agriculture or by the introduction of foreign species to the islands. Semitropical rainforest prevails in the Ryukyu and Bonin archipelagoes and contains various kinds of mulberries, camphor, oaks, and ferns (including tree ferns); madder and lianas are found as undergrowth. In the Amami Islands this type of plant life occurs only on lowlands, but it grows at higher elevations to the south. There are a few mangrove swamps along the southern coast of Kyushu.

Spring cherry blossoms surrounding a pagoda in Kyōto ~ by Korbis

The laurel forest zone of evergreen, broad-leaved trees extends from the south-western islands northward to the lowlands of northern Honshu. Camphor, pasanias, Japanese evergreen oaks, camellias, and hollies are typical trees, with various kinds of ferns as undergrowth. In Kyushu, the evergreen zone reaches elevations above 3,300 feet , but its vertical limit decreases north-eastward across Honshu. In general, camphor dominates in the littoral lowlands, pasania in sunny and well-drained sites, and Japanese evergreen oak in the foggy and cloudy inlands. In the south-western Hondo region the ficus and fan palm can be found.
The coastal dunes are dominated by pine trees.
Typical trees are beeches, katsura trees, maples, oaks, and birches, rising above an undergrowth of various species of bamboo. All these trees, but especially the

maples, are admired for their beautiful autumn colours. The deciduous trees have been occasionally replaced by larches, false cypresses, false arborvitaes, Japanese cedars, Japanese red pines, Japanese black pines, and other coniferous species.



Autumn foliage along a stone path, Shiga

The cherry tree (sakura), celebrated for its spring blossoms, long one of the symbols of Japan, is planted throughout the country. Many varieties have been cultivated, and natural stands are also found in the mountains.

Despite the country's large human population, the land mammals of Japan are relatively numerous in the remote, heavily forested mountain regions. These animals include bears, wild boars, raccoon dogs (tanuki), foxes, deer, (including sikas), antelopes, hares, and ; some species are distinct from those of the neighbouring Asian continent. Wild monkeys (the Japanese macaque) inhabit many places; those found at the northern tip of Honshu represent the northern limit of monkey habitation in the world.

Japanese sika

Japanese macaques groom each other

Japanese macaques (also known as snow monkeys)

Reptiles include sea turtles, freshwater tortoises, sea snakes, and lizards. Apart from two species of poisonous snakes, most of the snakes, including the 5-foot-long Japanese rat snake, are harmless. Toads, frogs, and newts are common, and the endemic Japanese giant salamander of Kyushu and western Honshu can attain a length of four feet or more.
Insect life is typical of a temperate humid climate; several species have seasonal associations in literature and popular culture, such as cicadas and dragonflies in the summer and crickets in the autumn.

Japanese giant salamander

The Japanese archipelago constitutes a major East Asian fly-way, and some 600 bird species are either resident or transitory. Water birds are abundant and include gulls, auks, grebes, albatrosses, shearwaters, herons, ducks, geese, swans, and cranes. The cormorant is sometimes trained to catch fish. There are about 150 species of songbirds as well as eagles, hawks, falcons, pheasants, ptarmigan, quail, owls, and woodpeckers.

Red-crowned cranes in Kushiro Shitsugen National Park, eastern Hokkaido

The confluence of cold and warm ocean currents near Japan has produced a rich sea life. Japanese waters are inhabited by whales, dolphins, porpoises, and fish

such as salmon, sardines, mackerel, tuna, trout, herring, grey mullet, smelts, and cod.
Crustaceans and mollusks include crabs, shrimp, prawns, clams, and oysters. The rivers and lakes abound in trout, salmon, and crayfish. Carp (koi) are often kept in ponds, both for commercial food production and for decorative purposes.

Carp in a garden pond in Matsue

~Story Time

Read chapter LX Ross Makes Discoveries in the Antarctic Seas on page 428 in 'A Book of Discovery' by M.B. Synge.

~Snack Time & Break

~English

Open the book: A New English Course by Rhodri Jones'.
We'll move on to 'Topic Sentences' on page 24 today. Read and complete all the exercises up to the end of Unit Three on page 28.

We'll move on to 'Unit Four', next.

Liberté, Égalité, Fraternité, Michaelmas Term, Block Three, Geography

Day Fourteen

~Welcome the Day

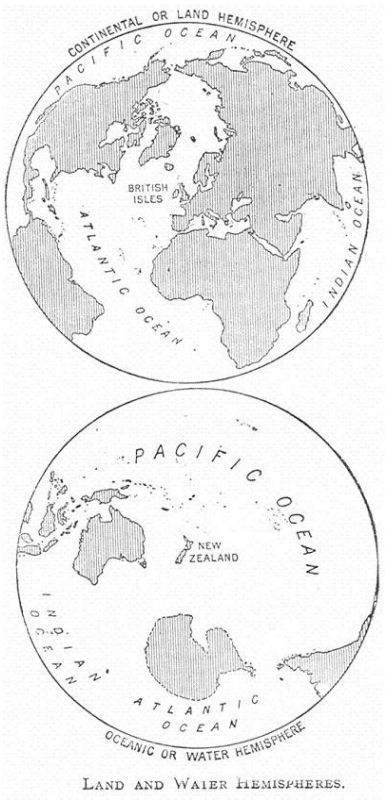
~Recorder Practice

~Morning Exercises

Today's and tomorrow's morning exercises should be studied with the map of the world open by your side.

The Surface of the Earth

Wherever we go upon our earth we find ourselves upon one of two things; we are either upon land or upon water. The surface of the earth consists of land and water. We say the surface because it is only of the surface or outside of this huge ball, our world, that we are speaking. But how are the land and water divided? Does all the land lie together in one place, and all the water in another? And which is there the most of, land or water?
Look at a map of the world: most likely it is divided into two hemispheres: not northern and southern, which we have spoken of, but eastern and western. That is, the earth is supposed to be divided as an orange would be if you cut it through the middle between the two flattened ends, and spread out the outer skins of each half side by side.



LAND AND WATER HEMISPHERES.

The first thing that strikes us is that there is a great deal more water than land; that about three quarters of the earth's surface is covered with water, while only one quarter is land. Perhaps we would expect that most of the earth's surface was be land for men to live upon, and for the plants they need for food to grow on. But men could not live, nor green things grow on the earth, unless there were far more of what seems waste water than of fertile land.
The water, we will see, runs into the land here and there, and gives it many irregular shapes. Indeed, the shape of the land depends entirely upon the water which borders it.
In the western hemisphere, there is a great mass of land, or, rather, there are two great masses joined together: North America and South America.
In the northern of these, or North America, there are four great breaks on the eastern side, made by the sea running in; the southern mass of land, or South America, is nearly unbroken. The two together stretch a great way from north to south between the poles.
There are no more masses of land in the western hemisphere; but there are many small pieces dotted about here and there in the water. There is a great deal of water in the western hemisphere, far more than in the eastern.

~Main Lesson

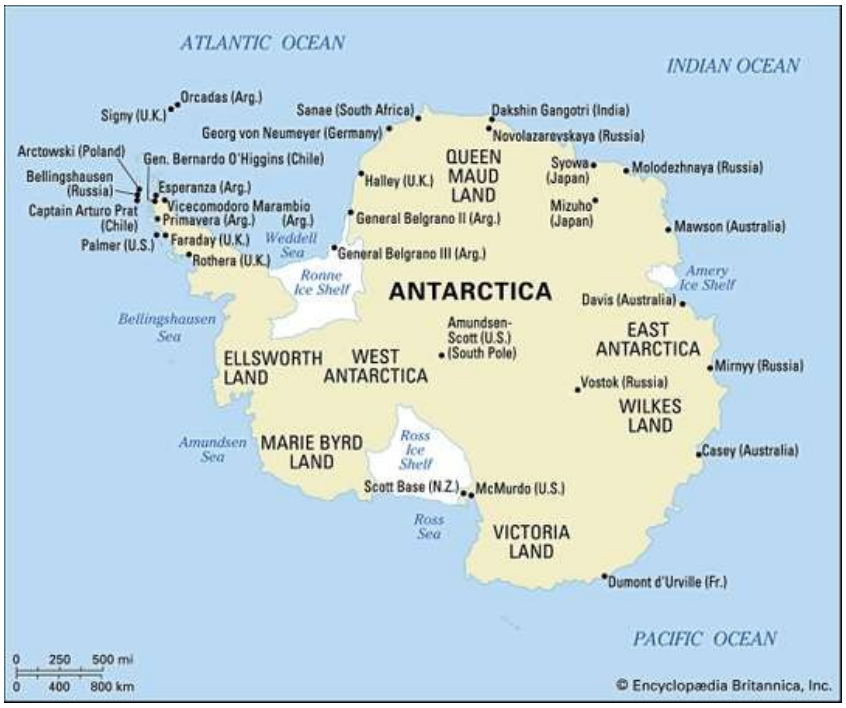
Antarctica

Find the page of Antarctica in your atlas and find all the places mentioned in the following description.
Antarctica's landmass is almost wholly covered by a vast ice sheet.

Paradise Bay, Antarctica

Lying almost concentrically around the South Pole, Antarctica, meaning "opposite to the Arctic", is the southernmost continent. It covers about 5.5 million square miles, and would be essentially circular except for the outflaring Antarctic Peninsula, which reaches toward the southern tip of South America, about 600 miles away, and for two principal embayments, the Ross Sea and the Weddell Sea. These deep embayments of the southernmost Pacific and Atlantic oceans make the continent somewhat pear-shaped, dividing it into two unequal-sized parts. The larger is generally known as East Antarctica because most of it lies in east longitudes. The smaller, wholly in west longitudes, is generally called West

Antarctica. East and West Antarctica are separated by the approximately 2,000-mile-long Transantarctic Mountains. Whereas East Antarctica consists largely of a high ice-covered plateau, West Antarctica consists of an archipelago of mountainous islands, covered and bonded together by ice.



Map of Antarctica highlighting the major geographic regions, ice sheets and sites of several research stations

The Transantarctic Mountains, northern Victoria Land ~ by H. Grobe

The continental ice sheet contains approximately 7 million cubic miles of ice, which is about 90 percent of the world's total. The average thickness is about 1.5 miles. Many parts of the Ross and Weddell seas are covered by ice sheets floating on the sea. These shelves, the Ross Ice Shelf and the Filchner-Ronne Ice Shelf, together with other shelves around the continental margins, constitute about 10 percent of the area of Antarctic ice. Around the Antarctic coast, shelves, glaciers, and ice sheets continually "calve," or discharge, icebergs into the seas.

Iceberg in the waters off Antarctica

Because of this vast ice, the continent supports only a primitive indigenous population of cold-adapted land plants and animals. The surrounding sea is as rich in life as the land is barren. With the decline of whaling and sealing, the only economic base in the past, Antarctica now principally exports the results of scientific investigations that lead to a better understanding of the total world environment.

Amundsen-Scott South Pole Station, South Pole, Antarctica

Antarctica, with an average elevation of about 7,200 feet above sea level, is the world's highest continent. The vast ice sheets of East Antarctica reach heights of 11,500 feet or more.
Without its ice, however, Antarctica would probably average little more than about 1,500 feet. It would then consist of a far smaller continent. And areas that are now called "lands," including most of Ellsworth Land and Marie Byrd Land, would be beneath the sea.

Vinson Massif, in the Ellsworth Mountains, Antarctica's highest range

Ice-scarred volcanoes, many still active, dot western Ellsworth Land, Marie Byrd Land, and sections of the coasts of the Antarctic Peninsula and Victoria Land, but principal activity is concentrated in the volcanic Scottia Arc. Long dormant, Mount Erebus, on Ross Island, showed increased activity from the mid-1970s. Lava lakes have occasionally filled, but not overspilled, its crater, but the volcano's activity has been closely monitored because Antarctica's largest station lies on its lower flank.

Mount Erebus, Ross Island, Antarctica ~ by G. Rowell

By far the coldest continent, Antarctica has winter temperatures that range from −89.2 °C, on July 21, 1983, to 15 °C.
Wind chill, the cooling power of wind on exposed surfaces, is the major debilitating weather factor of Antarctic expeditions.
Rain is almost unknown and, despite the tremendous volume of potential liquid water stored as ice, Antarctica must be considered one of the world's great deserts; the average precipitation is only about 2 inches per year over the polar plateau, though considerably more, perhaps 10 times as much, falls in the coastal belt.
Many factors determine Antarctica's climate, but the primary one is the geometry of the Sun-Earth relationship. The 23.5° axial tilt of Earth to its annual plane of orbit, or ecliptic, around the Sun results in long winter nights and long summer days alternating between both polar regions. On midwinter day, about June 21, the Sun's rays reach to only 23.5° from the South Pole along the latitude of 66.5° S, a line known as the Antarctic Circle.
Although "night" theoretically is six months long at the geographic pole, one month of this actually is a twilight period. Only a few coastal fringes lie north of the Antarctic Circle. The amount of incoming solar radiation, namely heat, depends additionally on the incident angle of the rays and therefore decreases inversely with latitude to reach a minimum at the geographic poles.
Great cyclonic storms circle Antarctica in endless west-to-east procession, exchanging atmospheric heat to the continent from sources in the southern Atlantic, Pacific and Indian oceans.
The South Pole is a unique astronomical location, as the Sun can be viewed continuously in summer with unequalled atmospheric clarity.

Pack ice in the waters off Antarctica

Ross Ice Shelf

The cold desert climate of Antarctica supports only an impoverished community of cold-tolerant land plants that are capable of surviving lengthy winter periods of total or near-total darkness during which photosynthesis cannot take place. Growth must occur in short summer bursts lasting only a few days, a few weeks, or a month or two, depending upon such factors as latitude, seasonal snow-packs, elevation, topographic orientation, wind and moisture, in both the substrate and the atmosphere. Moisture is the most important single variable and is provided mainly by atmospheric water vapour and by local melt supplies from fallen snow, drift snow, and permafrost. Stream run-off is exceedingly rare.
Extreme cold, high winds, and aridity inhibit growth even in summer in most areas. There are, however, certain areas at high latitude and high elevation that have local micro-climates formed by differential solar heating of dark surfaces, and these areas are able to support life.

Antarctic Hairgrass

Antarctic plants total about 800 species, of which 350 are lichens. Lichens, although slow-growing, are particularly well adapted to Antarctic survival. They can endure lengthy high-stress periods in dormancy and almost instantly become

photosynthetic when conditions improve. Mosses and liverwots, totalling about 100 species, predominate in maritime regions, but mosses can grow nearly everywhere that lichens grow. Liverworts are reported only from coastal and maritime regions. Numerous species of molds, yeast and other fungi, as well as freshwater algae and bacteria, complete the listing of Antarctic plants.

About 45 species of birds live south of the Antarctic Convergence, but only three, the Emperor Penguin, Antarctic Petrel, and South Polar Skua, breed exclusively on the continent or on nearby islands. An absence of mammalian land predators and the rich offshore food supply make Antarctic coasts a haven for immense seabird rookeries.
Penguins symbolize this polar region, though they live on sea-coasts throughout the Southern Hemisphere. Of the 18 living species, only the Adelie and Emperor live along the Antarctic coastline. The largest modern penguin, the emperor, standing between three and four feet tall. Other birds of the region include species of cormorants, pintails, gulls, terns, sheatbills and pipits.

Emperor Penguins

Gentoo Penguins in Antarctica

Emperor penguins in Antarctica

Adélie Penguins and Leopard Seals

Dependent upon seafood, most birds leave the continent each autumn and follow Antarctica's "secondary" coastline as the ice pack builds northward. The emperor penguins, however, are the exception, remaining behind as solitary guardians of the continent through the long winter night. The emperors, once thought rare, number about 600,000 birds in more than forty known colonies.

The fur seal and the elephant seal are now regenerating after near extinction. Weddell seals are thought to number about 1,000,000, the crabeater about 8,000,000, and the Ross seals between 50,000 and 220,000. Weddell seals are unique in being able to survive under fast ice, even in winter, by maintaining open breathing holes with their teeth.
The leopard seal, armed with powerful jaws and huge canines, is one of the few predators of adult penguins.

Whales and their cetacean relatives, porpoises and dolphins, range widely from Arctic to Antarctic waters and are found in all oceans and seas.
Among the fish- and squid-eating toothed whales are a few peripheral Antarctic porpoises and dolphins and the pilot whale. More typical of Antarctic waters are the killer whale, sperm whale and rare bottle-nosed, or beaked, whale.
Seven species of baleen, or whalebone, whales also inhabit Antarctic waters, subsisting on the plentiful krill; these include the southern right whale, the humpback whale, and four kinds of rorqual, the blue whale, fin whale, sei whale, and lesser rorqual, or minke.

The pygmy right whale is endemic to Antarctic and subantarctic waters. The killer whale, one of the most intelligent of marine animals, hunts in packs and feeds on larger animals, such as fish, penguins and other aquatic birds, seals, dolphins, and other whales. Despite its name, there have been no authenticated accounts of attacks on human beings near Antarctica.

A pod of killer whales (Orcinus orca) ~ by M. Hale

~Story Time

Read the second half of chapter LXXIII The Quest for the South Pole on page 540 in 'A Book of Discovery' by M.B. Synge.

~Snack Time & Break

~Maths Practice

Do all review exercises and Practice Tests on pages 24 and 25, in David Rayner's book Essential Mathematics Book Eight.

Liberté, Égalité, Fraternité, Michaelmas Term, Block Three, Geography

Day Fifteen

~Welcome the Day

~Recorder Practice

~Morning Exercises

The Surface of the Earth continued

In the eastern hemisphere the land lies chiefly to the north of the equator; most of the water in this division is south of the equator. There is a great mass of land in the north, stretching from east to west, and broken into many places by the water. Joined to this mass by a little narrow neck of land are called 'continents."
A continent is the largest division of land. The continent in the western hemisphere, which is nearly in two separate pieces, is America, North and South. The mass of land which stretches from east to west in the eastern hemisphere, though it is really only one continent, has two names, and is generally spoken of as two. The larger part on the east is Asia, and the smaller division on the west is Europe. Both of these are much broken into by the water, but Europe more so than Asia.
The continent joined to Asia by a little neck of land is Africa, which, like South America, is not much broken by the sea.
The continent south of the equator with water all round it is Australia and still further south is Antarctica.
The smaller pieces of land surrounded by water are not called continents, but islands. Australia is sometimes called an island because it has water all round it. The part of the land which borders the water is called the coast or the coast line. Those continents into which the water makes its way in many places and for a great distance, have, as you would expect, the most coast or the longest coast line compared with their size.

~Main Lesson

The word "Arctic" is derived from the Greek word arktikos, which means "near the bear," in reference to the constellation known as Ursa Major, or the Big Dipper. The two stars on the end of the Big Dipper point to Polaris, or the North Star.
The Arctic is the polar region north of the Arctic Circle, or north of the latitude 66° 33' 44" (or 66.5622°) north of the equator. During the June solstice, there are 24 hours of sunlight in the Arctic and on the December solstice, the sun never rises. The eight countries of Finland, Sweden, Norway, Iceland, Greenland (under the Danish monarchy), Canada, the United States (Alaska) and Russia make up the Arctic. Temperatures average -40°C or -40°F in the winter and under 10°C, or 50°F, in the summer.

The Arctic region of the world is the northernmost area of the world covering approximately 5.5 million square miles.

The Arctic Ocean dominates the Arctic region. This ocean covers 6,006,977 square miles. Parts of the countries of the United States (Alaska), Canada, Greenland, Iceland, Norway, Sweden, Finland and Russia make up land of the Arctic, which is treeless permafrost.

Sunrise and sunset at the northern most tip of the globe, the North Pole, doesn't really happen. Just before the spring equinox, around 20 March, the sun stays on the horizon and is seen all day. The sun is in the sky at the North Pole for 186 days until just after the autumn equinox, when it sets on 24 September and doesn't rise until 18 March. A common misconception is that the entire Arctic is in total darkness throughout the winter. On the shortest day of the year in the northern hemisphere, 22 December, the sun is up at any location on the Arctic Circle for two hours, 11 minutes.

Plants of the Arctic regions include moss, lichen, shrubs and grasses that grow close to the ground. The term for this kind of geography is "tundra." Beneath the topsoil, the ground is permanently frozen. That's called permafrost. Summer areas of the tundra above permafrost develop bogs, lakes and marshes, which are ideal for berry shrubs, such as black bearberry and crowberry.

Since trees don't exist in the Arctic, winds pick up to 30-60 mph. With snow as precipitation through the long Arctic winter and a persistent wind, it seems like it's continuously snowing in the Arctic. Actually, precipitation levels are similar to a desert, at six to 10 inches each year. Plus, most of this low level of precipitation falls through the summer months. Water can't sink through the permafrost, thereby collecting in marshy areas that typify the look of the Arctic tundra.

Land animals of the Arctic include lemmings, Arctic hare, Arctic foxes, wolverines, ermines, Arctic ground squirrels, ptarmigan (a grouse-like bird), geese (that nest in summer), caribou, muskoxen and polar bears. Seals and walrus inhabit arctic waters, as do several species of whales and porpoises. Whales that live in the Arctic year round include narwhals, beluga and bowhead whales. Visiting summer whales included humpback, grey, minke and killer whales.

Of the approximate 13.1 million people who live in the Arctic, some are natives and others are more recent immigrants who mainly hail from Europe. Inupiat and Athabaskan Indians make up about 70 percent of Alaska's Arctic population. Fifty percent of the Canadian Arctic c*onsists of native populations, which are Métis, Inuit (Inuvialuit) and Athabaskan Indian peoples. The Inuit (Kalaallit) live in Greenland. Saami inhabit the arctic portions of Norway, Sweden and Finland. Of the two million people living in Arctic Russia, only 67,000 are native. Russia's indigenous arctic populations include Siberian Yup'ik Eskimos, Chukchi, Yukagir, Sakha (Yakut), Even, Evenk, Dolgan, Nganasan, Ket, Enets, Selkup, Nenets, Khanty, Izhma-Komi, Saami and Vepsians.*

Large portions of the Arctic hold underground reserves of oil and gas. Coal is another non-renewable arctic resource.

Increasing meltdown of summer polar ice in the Arctic Ocean is giving petroleum exploration of the Arctic a more probable possibility for nations of this region of the world.
Water is the Arctic's biggest resource. Twenty percent of all water of the earth is tied up in arctic ice and glaciers. Global warming shows significantly faster results in the Arctic, where scientists see substantial permanent sea ice shrinkage and estimate its total elimination by September as early as 2040. Melting ice floating on the Arctic Ocean won't raise sea levels. But, if glaciers on land, such as in Greenland, melt, then it would lead to big increases in the worldwide sea level and a shrinkage of coastal land throughout the earth.
Worldwide pollution is a concern for the fragile arctic environment. Sea and air streams at times transport pollutants into arctic regions to create a circumstance known as arctic haze, a red/brown springtime sky that can persist for a month in the northern atmosphere. In 1972, Dr. Glenn Shaw from the University of Alaska Fairbanks' Geophysical Institute attributed arctic haze to contaminants, such as carbon and sulfur from coal-burning power plants in northerly parts of Asia, that float in the air for thousands of miles. Today, scientists expect arctic haze to increase daily arctic temperatures by 3°C (5.4°F) by the end of the 21st century, which would contribute significantly to an arctic ice meltdown.

There are many plants in the Arctic, including lichens, moss, and even flowers. These plants need to be hearty because of the long, cold winters and short summers. When the snow melts in the spring the tundra comes alive with birds and plant and animal life.
Lichen and moss
One of the few producers that can pretty much survive the harsh Arctic weather year round, lichen and mosses are key to the Arctic food web. But they are only capable of growing during the summer. Primarily eaten by caribou, snow buntings, and Dall sheep, this plant is composed of algae and fungus acting in a symbiotic relationship.

Reindeer moss
A type of lichen and moss, is one of the primary producers in the Arctic food web. It's named after the reindeer, or caribou, which are the primary consumers but is also eaten by animals such as snow buntings. It is vital to the Arctic food web that this plant is plentiful because many animals depend on caribou as a food source.

Animal life in the Arctic, compared with that of warmer parts, is poor in the number of species but often rich in individual numbers. This is generally considered to be the result of at least two factors: the comparative novelty of polar glacial climates, allowing only a limited time for adaptation since their onset, and the much lesser variety of habitats available for colonization in the north as compared with the lower latitudes.
The fauna considered in this section is from the true Arctic Zone only. On the land, this is the zone north of the tree line; in the sea, it is the area in which the upper water is of Arctic Ocean origin, without admixture of Atlantic or Pacific water. This excludes most of the west Greenland waters and the waters of west and southern

Iceland, the Faeroe Islands, and Norway; it also excludes the Labrador Sea and the waters of the Labrador coast south of Hudson Strait.

The Arctic region is often confused with the North Pole, which unlike the Arctic is only a point on the map. Arctic Circle is an area around North Pole which has a circle shape and is located on 66 °33 North Pole. Arctic circle line is where roughly the polar night begin. Generally speaking, Arctic region is considered the area within the boundaries of Arctic Circle.
Countries that are part of Arctic region are: Russia, Canada, United States, Denmark (Greenland), Norway, Finland, Sweden, Iceland. All countries are actively disputing waters and resources in what used to be remote and covered with ice region.
By far the largest water body in the Arctic is Arctic Ocean. Below is a complete list:

Baffin Sea	*Chukchi Sea*	*Hudson Bay*
Baffin Bay	*David Strait*	*Kara Sea*
Beaufort Sea	*Denmark Strait*	*Laptev Sea*
Barents Sea	*East Siberian Sea*	*Nares Strait*
Bering Sea	*Greenland Sea*	*Norwegian Sea*
Bering Strait		

Arctic People
The Sami – the ancestors of the people who inhabit today's northern FinnoScandia. The Sami left various monuments and artifacts believed to be created as early as 2,000 B.C.

The Chukchi – reside in Russian Far East, in a region called Chukotka Autonomous Okrug. The current population does not exceed 15,000. Due to harsh repression in Soviet times and economic collapse in 1990s, many Chukchi people were forced to adopt to urban lifestyle and abandon their native villages. Those that are still residing in villages, are often subject to heavy humanitarian aid which is their main source for food and drugs.
The Inupiat- populate primarily Alaska and Yukon. The locals are heavily dependent on fishing and hunting and even distance relatives of hunters are entities to a portion of the animals killed in the hunt.
Other Arctic people are: Evenks, Khanty, Koryaks, Nenets, Yukaghir and Yupik.

Herbivores on the tundra include the Arctic Hare, lemming, musk ox and caribou. They are preyed on by the Arctic fox and wolf. The polar bear is also a predator, though it prefers to hunt for marine life from the ice. There are also many birds and marine species endemic to the colder regions. Other land animals include: wolverines, ermines, and Arctic ground squirrels. Marine mammals include seals, walrus, and several species of cetacean, baleen whales and also narwhals, killer whales and belugas.

Polar bear population continues to shrink, according to many studies conducted in the last decade. Also, less ice, typically means less ground and food. There is only

so much distance these powerful and heavy polar animals can swim. Over the past three decades, the climate change and the warming of the air and water temperatures in the Arctic region have caused severe ice melting, forcing many animals to change migration patterns and adopt to the new landscape with less or, at times, no ice.

White-tailed ptarmigan with brown mottled summer plumage ~ by C.A. Morgan

Two polar bear cubs playing in the Canadian Arctic

~Story Time

Edmund Hillary (1919-2008)
He took Everest by foot; the world by storm; the South Pole by Massey Ferguson', proclaimed banners advertising a 2002-03 museum exhibition on the life of Sir

Edmund Hillary. The legendary mountaineer, adventurer and philanthropist is the best-known New Zealander ever to have lived. His 1953 ascent of Mt Everest, the planet's highest peak, with Sherpa Tenzing Norgay brought him worldwide fame ~ literally overnight. Dozens of daring adventures followed, including the Commonwealth Trans-Antarctic Expedition of 1957–58 and a 1977 jet-boat journey up the Ganges River. International lecture tours, books and television documentaries cemented Hillary's status as a global celebrity.

Of greater significance, perhaps, was his humanitarian contribution to the Sherpa people of the Himalayas. For decades from the 1960s Hillary and supporters raised funds and built schools, hospitals and other facilities in the mountains. He also enjoyed a successful spell as New Zealand's High Commissioner to India in the 1980s.

Despite his remarkable achievements, and moments of personal tragedy, Ed Hillary is also remembered for his humility and generosity. The quiet Auckland bee-keeper who had stood on 'the roof of the world', as well as the North and South poles, seemed to be the quintessential down-to-earth Kiwi.

Sir Edmund Hillary died in Auckland on 11 January 2008, aged 88. He was farewelled at a state funeral, a rare honour for a private citizen, on 22 January. On 29 February, in accordance with his wishes, his ashes were scattered on the Hauraki Gulf by his wife, Lady Hillary, and children Peter and Sarah. On 2 April Queen Elizabeth II hosted a special memorial service for Hillary at Windsor Castle, near London.

Edmund Percival Hillary was born in Auckland on 20 July 1919, the son of Percival and Gertrude Hillary. His mother was a teacher; his father published a Dargaville newspaper, the North Auckland Times. Ed had an older sister, June, and a younger brother, Rex. The family moved to South Auckland in 1920 when Percy, who had served at Gallipoli during the First World War, was allocated land near Tuakau. Percy used returned servicemen's assistance to train as a bee-keeper, and he also established a weekly newspaper, the Tuakau District News.

The paddocks, hills and tidal creeks of Tuakau were fields of dreams for a young adventurer. Ed was soon reading the ripping yarns of Edgar Rice Burroughs, Rider Haggard and Zane Grey, and enjoying Saturday Westerns at the war memorial hall. He attended Tuakau Primary School and then Auckland Grammar, to which he commuted by daily train for more than three years. Ed was small and shy but gained confidence once boxing lessons enabled him to hold his own at school. Aged 16, he got his first taste of snow on a school trip to Mt Ruapehu. The same year the family moved to Auckland, and Percy founded a monthly magazine for bee-keepers: New Zealand Honeybee.

Ed studied mathematics and science at Auckland University College. He loved tramping much more than studying, and after two years he joined Rex to help his father with bee-keeping. In 1939 he climbed his first peak, Mt Ollivier, near Mt Cook. The family became followers of Herbert Sutcliffe, the founder of a liberal Christian philosophy of physical, psychological and spiritual health, Radiant Living. Though he eventually lost interest, his involvement with Radiant Living gave young Ed confidence in public speaking and widened his intellectual horizons.

Pacifism was one of Sutcliffe's key teachings. When the Second World War broke out Ed initially gained exemption from conscription because bee-keeping was a reserved occupation, but Rex spent four years in a detention camp as a conscientious objector. Ed eventually persuaded his father that he should be

released for war service, and in 1944 he was called up for the Royal New Zealand Air Force. Training in Marlborough brought more challenging climbing opportunities. His posting to Fiji and the Solomon Islands as a flying boat navigator ended abruptly when he was severely burnt in a motor boat accident. He convalesced in the Southern Alps, finding a mentor in Harry Ayres, New Zealand's outstanding climber of the period.
In 1948 Hillary made his first ascent of Mt Cook. Soon afterwards he took part in an epic five-day journey across the main divide, helping carry an injured climber to safety on the West Coast. In 1949 he accompanied his parents to England to attend his sister June's wedding, and he found time to climb the 4158-metre-high Jungfrau in the Swiss Alps. In 1951 he took part in a New Zealand expedition to the Garhwal Himalaya, which climbed five peaks over 6000 metres high. The reward was two places in Eric Shipton's British Everest Reconnaissance Expedition. When Ed and Earle Riddiford proved their worth, they were joined by George Lowe on the 1952 British Cho Oyu Expedition.

Hillary and Lowe were then invited to join John Hunt's 1953 British Everest Expedition. On 29 May, four days before the coronation of Queen Elizabeth II, the final pair, Hillary and the experienced Sherpa Tenzing Norgay, reached the summit of Mt Everest via the south face. They were the first men to stand on the 'roof of the world'. From the moment Hillary told Lowe that they had 'knocked the bastard off', his life was public property. Hillary was created KBE and fêted around the world. He married Louise Rose, a talented viola player, in Auckland on 3 September 1953, the bride's 23rd birthday. They were to have three children: Peter (born 1954), Sarah (1956) and Belinda (1959).

Trans-Antarctic expedition stamp

Hillary led the New Zealand component of the Commonwealth Trans-Antarctic Expedition in 1957–58, which was under the overall command of the British explorer Vivian Fuchs. The New Zealanders first set up Scott Base on the edge of the Ross Ice Shelf. In October 1957, driving modified Ferguson farm tractors, they headed south to establish food and fuel depots for the British crossing party. Then, against the instructions of the British Ross Sea Committee, they went 'hell-bent for the Pole, 'God willing and crevasses permitting'. On 4 January 1958, Hillary's party became the first to reach the South Pole overland since Robert Falcon Scott's ill-fated journey in 1912. Despite this success, he faced some criticism for allegedly putting adventure ahead of the expedition's scientific aims.
In the decade after his Everest ascent, Hillary published several best-selling accounts of his exploits, including High Adventure (1955), East of Everest (with George Lowe, 1956), The Crossing of Antarctica (with Vivian Fuchs, 1958) and No Latitude for Error (1961).

Ed Hillary and Tenzing Norgay, 1971
In 1960–61 Hillary led the Himalayan Scientific and Mountaineering Expedition, the main purpose of which was to study the effects of high altitude on the human body. An attempt to climb the 8340-metre-high Makalu without oxygen almost ended in disaster, and the expedition searched in vain for the fabled Yeti, the abominable snowman.
More fruitfully, he helped build a school at Khumjung in the shadow of Everest. The work of the Himalayan Trust, established in 1964, became Hillary's greatest contribution to the region he loved. Over the next thiry years, with the help of hundreds of enthusiastic volunteers from New Zealand and other countries, the Trust built more than a dozen schools, two airfields, two hospitals and several medical clinics, as well as repairing monasteries, replacing bridges, installing water pipelines and undertaking numerous other projects. These efforts helped earn Hillary the title 'Burra Sahib' (big in heart) among the Sherpa people.
Through the 1960s and 1970s Ed Hillary's life followed a familiar pattern of international travel, lecture tours and fund-raising for Sherpa projects, interspersed with expeditions in the Himalayas, Pacific, Antarctica and New Zealand.
Sadly, there was also wrenching personal loss. On 31 March 1975, his wife, Louise, and youngest daughter, Belinda, were en route to Phaphlu, where Ed was helping build a hospital, when their small plane crashed on take-off at Kathmandu. Their deaths were a shattering blow.
In 1977, emerging from several years of despair, Hillary led Ocean to the Sky, an expedition to the source of India's sacred Ganges River. Ed, his son, Peter, Graeme Dingle and others used New Zealand-made Hamilton jet boats to travel from the mouth of the river high up into the Himalayas through deep gorges and thunderous rapids. The party's subsequent climb to an unnamed peak, which they called Akash Parbat (Sky Peak), was achieved without Ed, who succumbed to altitude sickness and was evacuated with great difficulty.
Another bout of altitude sickness in 1981, during an attempt on the then unclimbed east face of Everest, forced Ed to accept that his 'big mountain days were over'. His son, Peter, meanwhile, became an accomplished climber in his own right, taking part in numerous alpine and Antarctic expeditions; in 1990 (and again in 2003) he followed in his father's footsteps by reaching the summit of Everest.
Tragedy struck again in 1979, when Hillary's close friend Peter Mulgrew, a member of the Commonwealth Trans-Antarctic Expedition of 1957–58 – was killed in the Erebus disaster. Both men had provided in-flight commentary on Air New Zealand's popular sightseeing flights to Antarctica, which began in 1977. On 28 November 1979 Mulgrew was making his fourth flight over the ice when TE901 crashed into Mt Erebus, killing all 257 passengers and crew.
In the mid-1980s Hillary's long association with the Indian subcontinent led to a new adventure. When the newly elected Labour government decided to reopen New Zealand's High Commission in India, Prime Minister David Lange convinced Hillary to become High Commissioner (and Ambassador to Nepal). He arrived in New Delhi in February 1985, accompanied by June Mulgrew (Peter's widow), with whom he had grown close. A household name in India, Hillary was an inspired choice. Despite his diplomatic duties, he still found time for the odd adventure, including a 1985 ski-plane trip to the North Pole with the former United States astronaut Neil Armstrong. He also attended Tenzing Norgay's funeral in 1986. Following their

return to New Zealand in July 1989, Ed and June married in Auckland on 30 November.
In 1987 Ed Hillary was among the first 20 people selected as members of the Order of New Zealand (ONZ), this country's highest honour. In 1995 he was appointed to Britain's oldest and highest order of chivalry, being made Knight Companion of the Most Noble Order of the Garter (KG). This order, founded in 1348, is limited to 26 living people (including the Queen and the Prince of Wales). Hillary's appointment was unique as he was the first non-Briton to be appointed KG for other than viceregal or political achievements.

The 50th anniversary of the Everest climb in 2003 brought further recognition, including honorary citizenship of Nepal, conferred at a special ceremony in Kathmandu, and the unveiling of a bronze statue outside The Hermitage, Mt Cook.

Edmund Hillary obituary on One News
Hillary visited Scott Base, Antarctica, in 2004 and again in January 2007. On the latter occasion, despite frail health, he travelled with a delegation that included Prime Minister Helen Clark to mark the 50th anniversary of the founding of the base.
In 2008 New Zealand Post issued a Sir Edmund Hillary commemorative five-stamp series to honour his 'status and achievements as a New Zealand hero'.
Despite his remarkable achievements as a mountaineer, adventurer, diplomat and philanthropist, Ed Hillary is perhaps best remembered for his humility and generosity. His own assessment of his life on his 85th birthday was typically modest: 'What a fortunate person I have been!'

~Snack Time & Break

~Art Appreciation

Meanwhile, in Europe

Giovanni Pierluigi da Palestrina (c. 1525 – 2 February 1594) was an Italian composer of sacred music in the late Renaissance. He is the best-known 16th-century representative of the Roman School of musical composition. He had a lasting influence on the development of church music, and his work is considered as the culmination of Renaissance polyphony (the style of simultaneously combining a number of parts, each forming an individual melody and harmonizing with each other). *https://www.youtube.com/watch?v=nRmkj19i4Yk and https://www.youtube.com/watch?v=VsPQFytWWHo*

Exsultate Deo – Palestrina: https://www.youtube.com/watch?v=nRmkj19i4Yk

Orlando di Lasso; 1532, possibly 1530 to 14 June 1594) was a Flemish composer of the late Renaissance, chief representative of the mature polyphonic style of the Franco-Flemish school, and considered to be one of the three most famous and

influential musicians in Europe at the end of the 16th century (the other two being Palestrina and Victoria). https://www.youtube.com/watch?v=wl51iST98hA

Tomás Luis de Victoria (sometimes Italianised as da Vittoria; c. 1548 – 27 August 1611) was the most famous composer in 16th-century Spain, and was one of the most important composers of the Counter Reformation, along with Palestrina and di Lasso. Victoria was not only a composer, but also an accomplished organist and singer as well as a Catholic priest. However, he preferred the life of a composer to that of a performer. https://www.youtube.com/watch?v=m11B9GuDUmM

Thoinot Arbeau is the anagrammatic pen name of French cleric Jehan Tabourot (March 17, 1519 – July 23, 1595). Tabourot is most famous for his Orchésographie, a study of late sixteenth-century French Renaissance social dance. https://www.youtube.com/watch?v=AMWvm4wtzi4