## Knowledge Organisers for Year 7

## What is a Knowledge Organiser?

A Knowledge Organiser is a place to keep some key information for the topics we are learning about. This may include an important formula, vocabulary, dates or explanations. It is not a complete list of everything we are studying but it is a place where we can find the basic information. It is likely that when you first see the Knowledge Organiser you won't understand most of what it on it. Gradually, as you work on the content in lessons it will become more familiar and, over time, you should find that, not only do you understand everything on it, but that you can remember everything that is on it and, even better, know how this information relates to what you are studying.

## 

## How do we use our Knowledge Organisers?

We can use our Knowledge Organisers in many ways. The main aim is that we are able to memorise, understand and eventually apply all of the information in the Knowledge Organisers. We will do this by:

- using them to refer to in class to support our learning.
- discussing them at home with parents or carers to reinforce our learning and so that others may be involved in what we are learning too.
- using them as learning homeworks that we will have quizzes on in class.
- using them to refer to when completing homework.


## Where will I find the Knowledge Organisers?

Knowledge Organisers will be made available to you via the school website https://stjosephsbolton.org.uk (Follow the link under school information to Learning \& Teaching - Progression Scales) and your teachers will often send you links to them with your homework on epraise or in your class TEAMS. (You will find out more about these teams over your first year at St Joseph's).

## Art $=$ Spring 2

Year 7 Knowledge Organiser

| 'The Formal Elements' - Proiect 1 |  |
| :--- | :--- |
| The Formal <br> Element | Definition <br> The path left by a moving point, eqg. a pencil or a brush dipped in paint, that can take <br> many forms. eq. horizontal, diagonal or curved. |
| Line | The lightness or darkness of something. This could be shade or how dark or light a <br> colour appears |
| Tone | The surface quality of something, the way something feels or looks like it feels. <br> There are two types: Actual and Visual. |
| Texture | An area enclosed by a line. It could be just an outline, or it could be shaded in. |
| Shape | A design that is created by repeated lines/ shapes/ tones or colours. It can be <br> manmade, like a design on a fabric or natural, such as markings on animal fur. |
| Colour | There are 2 types including Primary and Secondary. By mixing any two primary <br> together we get a secondary. |




## Colour Theory

Primary Colours are the 3 main colours. They cannot be made, but are used to make all other colours.
Secondary colours are made mixing 2 primary colours.
Tertiary colours are made by mixing a primary and secondary colour together. Complimentary colours are opposite on the colour wheel.
Harmonious colours are next to each other on the wheel.
Tint - When you add white to a colour to make it lighter.

Shade- When you add black to a colour to make it darker. $\square \square \square \square$


Blending stumps are used to blend tone in smoothly.

Grades of Pencils-
Pencils come in different grades, the softer the pencil the darker the tone.
You will use HB and 6 B in your work.


Art Technique Key Words

| Media/Medium | The naterials and tools used by an artist to create a plece of art |
| :---: | :--- |
| Technique | The way an artist uses tools and naterials to create a plece of art |
| Composition | Where you place objects on the page |
| Highlight | The bright or refiective area on an object or plece of art |
| Shadow/shade | The darker areas within a piece of art or object |
| Proportion | The size relationship between different parts - eg height compared to width |

Making objects look 3D
To prevent your drawings from looking flat, you
should use a range of tones and marks. Pressing
harder and lighter and layering with your pencil
creates different tones. Use the direction of your pencil to help enhance the 20 surface, and you can also include shadows which will also
help objects appear 30
ha

## B-ICT Knowledge Organiser

## 



ABSOLUTE \& RELATIVE CELL REFERENCING
Using the \$ symbol to fix part of a formula onto a single cell.


CALCULATIONS USING BASIC FORMULAE



WISDOM HAS BUILT
HERSELF A HOUSE.
Department of Design and
Technology.

## Design and Technology - Digital D\&T. One of four carousel modules.

In this module pupils will be learning the basics of computational thinking, programming and computer systems to ensure a shared level of understanding. They will learn how these thinking concepts can be applied to everyday life as well other subjects within school. Learners will learn how to program different applications on the Micro: bit using a graphical based coding language. For the main practical element learners will also work in teams to design and prototype their own health tech innovation using the Micro: bit.


Computational Thinking


## Questions

How did you use the $X$ computational thinking concept? Where else can you think of where this concept may apply? What are the benefits of using a prototype?

What is an innovation?
What problem is it trying to solve? How does it try to solve the problem?

Who are the target users?
What are the possible benefits?
What are the possible problems?

Language for Learning
Decomposition
Abstraction
Pattern Recognition
Algorithm
Evaluation
Variable
Conditional
Pseudocode
Flow Chart
Iteration
Selection



What is the Eatwell Guide? The Eatwell Guide is a guide that shows you the different types of food and nutrients we need in ou diets to stay healthy.
Why is the Eatwell Guide important? The Eatwell Guide shows you how much (proportions) of food you need for a healthy balanced diet

What are the consequences of a poor diet? A poor diet can lead to diseases and can't stop us from fighting off infections.

What are the sections on the Eatwell Guide? Fruit and vegetables
Potatoes, bread, rice, pasta and other starchy food
3. Dairy and alternatives
4. Beans, pulses, fish, egg, meat and other proteins Oils and spreads

Eat 5 portions of Fruit and Vegetables a day. One portion is 80 g

Design and Technology - Food. One of four carousel modules.

Heat Transfer and Cooking methods

| Heat Transfer |
| :--- |
| The way in which heat energy is passed into food |
| Conduction - Transferring heat through a solid object |
| into food |
| e.g. Frying bacon in a pan, using a pan on the hob, a |
| metal spoon in water |
| Convection - Transferring heat through a liquid or air |
| into food |
| e.g. |
| Raking a cake, boiling water, cooking -Transferring heat by infra-red waves that |
| heat up what they come into contact with |
| e.g. griling sausages or bacon, making toast |

## Storage

To prevent cross contamination (the spreading of bacteria), foods must be stored separately. Follow the rules of food storage within a fridge:


Most bacteria grow rapidly at body temperature $\left(37^{\circ} \mathrm{C}\right.$ ), but can grow between $5^{\circ} \mathrm{C}$ and $63^{\circ} \mathrm{C}$. This is known as the danger zone. The more time food spends in the danger zone the greater the risks of harmful bacteria growing. Therefore it is vitally important that we try to keep food out of the danger zone during the production processes.

| Cooking methods |  |  |
| :--- | :--- | :--- |
| Dry Heat | Moist Heat | Frying |
| Baking | Steaming | Deep fat frying |
| Grilling | Boiling | Shallow frying |
| Roasting | Poaching | Stir frying |
| Barbequing | Stewing | Sautéing |
| Basting | Simmering |  |
|  |  |  |

Drinks, fruit and vegetables, soup.

| Function <br> Controls body <br> temperature. <br> - <br> Gets rid of <br> waste in the <br> body. |
| :--- | :--- |

## Fibre

## Function:

It helps with digestion
It helps to get rid of waste

## Source:

Wholegrain,
Whole wheat,
Wholemeal cereals,
Peas and beans

Too Little

- Constipation
- Bowel Cancer



## Dairy

Function: Needed for CALCIUM which is laid down
in bones and teeth to make them strong. Needs Vitamin D to work properly


Design and Technology - Resistant Materials. One of four carousel modules.
Department of Design and Technology.

In this module pupils will be designing and making a holder for a tea light, this must link to techniques and be expected to work in a safe manner at all times.

## Language for Learning

 Physical Properties Working PropertiesTemplate Prototype Manufactured Boards Ferrous Metals Non-Ferrous Metals Malleable
Recycling

Sacred Space and the prayer life of our school. They will combine traditional and modern


## Questions.

Can you name the tools and equipment shown? Why is a prototype often made before the final product? What is the difference between ferrous and non-ferrous metals? Give two examples of ferrous metals.
Give two examples of non-ferrous metals.
What is the original source of metals?
What is CAD in relation to Design and Technology?
What is the benefit of using CAD when designing products?
What is cyanoacrylate commonly known as?


## Design and Technology - Textiles. One of four carousel modules.

Technology

In this project you will learn what Textiles is and why it is important to learn to sew.
You will complete a hand embroidery sample and learn to use the sewing machine safely. You will learn about mechanisms, forces and practical techniques such as tie dye and sublimation printing.
Using the knowledge and practical skills you will design and make a tote bag.


Health \& safety
Follow teacher instructions
Move slowly around the room do not run
Tie long hair back
Hold scissors or shears correctly when walking around the room.
Report any injuries or breakages to the teacher immediately


Stitch Number 1 for straight stitch

Stitch Number 8 for zig zag stitch


Fabric


Heat Press

## Areas for Assessment

| Areas for ASSESSMEnt |  |
| :---: | :--- |
| Creating | The ability to work within a group to create and develop <br> performance work. |
| Performing | The ability to present a character using physical and vocal skills. |
| Evaluating | The ability to discuss the qualities of a performance using <br> dramatic language. |

## Posture, Facial Expressions, Eye Contact, <br> Proxemics, Gestures

## Elements of Drama

Script: the text of the play
Cast of Characters: all of the characters, usually portrayed by actors

Narrator: the person who tells what happens during the play

Setting: the time and place in the play
Act: a chapter in a play that contains more than one scene
Scene: the action that take place in a
single setting
pialogue: the words said by the characters
Stage Directions: written instructions
telling the actors what to do


| DO'S of mime | DON'TS of mime |
| :--- | :--- |
| DO Exaggerate <br> characteristics | DON'T Turn your back on the <br> audience |
| DO Face the audience | DON'T Laugh on stage |
| DO Be confident! | DON'T Look at the floor |
| DO Carry on if things go <br> wrong | DON'T Rush through your <br> lines |
| DO Make eye contact with <br> the character you're <br> talking to | DON'T Be nervous, just try <br> your best! |


| Dramatic Mediums to consider when Performing |  |
| :--- | :--- |
| Facial <br> Expression | Consider the direction of your eyes and what they say to an <br> audience. What position is your mouth in. Do you need to <br> demonstrate control if this is in slow motion? |
| Body <br> Language | Open or closed? Are you portraying a strong character who is <br> outwardly focused or a nervous inwardly character? |
| Gesture | What are they doing with their hands? Can it help the audience <br> understand what is going on? |
| Use of <br> Voice | Have you considered the words you are going to say? The <br> volume, tone, pitch and use of pause to convey meaning. |
| Proxemics <br> (space) | Where do the performers stand in the space? Does the distance <br> between characters tell us anything about their relationships? |
| Audience <br> Awareness | Are the performers positioned in places where the audience can <br> see them fully? |

You will be enrolled into Spy School and be given weekly missions to develop your vocal and physical skills and understanding of drama through techniques of Konstantin Stanislavski.

## What will I study?

In this unit, you will begin by learning about William Shakespeare and the world he lived in! You will explore what life was like during the Elizabethan period and begin looking at some of Shakespeare famous work. In class, you will look at Shakespearean sonnets and study one of two plays: The Tempest or A Midsummer Night's Dream.

## Characters in The Tempest

- Alonso - King of Naples
- Sebastian - Alonso's brother
- Ferdinand - Alonso's son
- Antonio - Prospero's brother. Antonio stole Prospero's title as Duke of Milan. Gonzalo the old counsellor to the King
- Trinculo - a jester
- Stephano - a drunken butler
- Prospero - the rightful Duke of Milan
- Miranda - Prospero's daughter
- Ariel - an airy spirit; a slave of Prospero's who earns his freedom
- Caliban - a slave of Prospero's

The Tempest: Plot Overview
Alonso, the King of Naples, is on a ship with his son Ferdinand and his companions Sebastian, Antonio, Stephano and Trinculo. They are struck by a terrifying, howling storm. They abandon ship and swim to a nearby island but are washed ashore in different places. The island seems to be abandoned. After the Storm, from a nearby island, Miranda watches the huge tempest. She lives with her father Prospero and has little memory of her life before the island. Prospero tells his daughter of their past: he was the Duke of Milan twelve years ago, but he was so involved with his books and secret studies that he did not realise his brother Antonio was stealing power from him. Antonio usurps Prospero and Prospero finds himself stuck on an island with his daughter Miranda and seeks revenge on Antonio.

## Core Skill: Applying Contextual Information

Shakespeare was born in the Elizabethan era, named after Elizabeth I. After she died, James I became king. This period of history is called the Jacobean era, because Jacob is the Latin for James. Shakespeare lived and worked in both eras. During the Elizabethan and Jacobean era, Italy wasn't one unified country, but a number of small independent city-states. Sea exploration was booming in the Elizabethan era as people 'discovered' new parts of the world. Queen Elizabeth I was obsessed with their discoveries and was happy to pay for their travels. Led by her example, the rest of the country was also fascinated by their stories and goods.

| Key Vocabulary |  |
| ---: | ---: |
|  | A system in which members of an <br> organization or society are ranked <br> according to relative status or authority |
| Monarchy | A state or country that has a monarch <br> (King or Queen) at the head |
| Betrayal | Breaking someone's trust |
| Forgiveness | Ending a line with an identical or similar forgiving <br> sound to another: |
| Couplet | A pair of lines in verse, typically rhyming. |
|  |  |

## What will I study?

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## Characters in A Midsummer's Night's Dream

- Theseus - Duke of Athens
- Hippolyta - Queen of Amazons/Theseus fiancé
- Egeus - Nobleman from Athens
- Hermia - Daughter of Egeus
- Lysander - Man in love with Hermia
- Helena - friend of Hermia
- Demetrius - engaged to Helena
- Titania - Queen of the fairies
- Oberon - King of the fairies, married to Titania
- Puck - mischief maker, fairy jester
- Bottom - silly, goofy character


## A Midsummer's Night's Dream: Plot Overview

 This play tells the story of the events surrounding the marriage of Theseus, king of Athens, and Hippolyta, Queen of the Amazons. It follows the lovers Hermia and Lysander as they attempt to run away but are stopped by Demetrius, who is also in love with Hermia, and Helena, who is in love with Demetrius. Whilst all this is happening, we also see the story of Titania and Oberon, King and Queen of the forest, who have their own problems! Puck, their fairy jester, tries to fix the fight between Titania and Oberon by using a love potion. However, lots of things go wrong and lots of characters end up falling in love with the wrong people because of Puck's love potion. The play ends with a happy ending and with lots if marriages between loving couples.| Writing to persuade |  |
| :--- | :--- |
| Direct Address | Speaking directly to the audience using <br> "you" or "we" |
| Alliteration | Multiple words starting with the same <br> sound |
| Facts | A true piece of information |
| Opinions | Someone's thoughts or beliefs on a topic |
| Repetition | Saying the same word/phrase over and <br> over again |
| Rhetorical Questions | Asking a questions which does not <br> require an answer |
| Emotive Language | Using language to create a specific <br> emotion |
| Statistics | Use of numerical data to support a point <br> (fractions/percentages) |
| Triple | Three related words used together. |

## Core knowledge: Shakespeare's world

William Shakespeare is widely regarded as one of the greatest writers in the English language. He was born on or around 23 April 1564 in Stratford-upon-Avon, the eldest son of John Shakespeare, a glove-maker, and Mary Arden, the daughter of a wealthy farmer. There are no records of William's education, but he probably went to King's New School - a reputable Stratford grammar school. At 18, William married Anne Hathaway, and the couple had three children over the next few years. However, in 1596, Shakespeare's eleven-year-old son, Hamnet, died. Between about 1590 and 1613, Shakespeare wrote at least 37 plays and a famous collection of sonnets. In the 1590 s, Shakespeare joined and became a shareholder of the Lord Chamberlain's Men who performed before Queen Elizabeth on numerous occasions. When Queen Elizabeth died in 1603, her successor, King James I, announced that the Lord Chamberlain's Men would now be the King's Men. Shakespeare died on 23 April 1616 and was buried in Holy Trinity Church.


Physical description
J'ai - Il have Il/Elle a - he/she has Je porte - I wear
IIIVIle porte - he/she wears Les cheveux...- ... hair

les yeux

boucles
Gan you write your
own rules regarding
the spelling of the adjectives?

Je voudrais = I would like

Create some flashcards with the keywords. $\qquad$ $5-2$

My life - my friends, my family and myself

| Family members |  |  |
| :--- | :---: | :---: |
| Ma mere - my mother $\quad$ Mon père - my father |  |  |
| Ma soeur - my sister |  |  |
| Ma tante - my aunt |  |  |$\quad$ Mon frèe - my brother

Ma grand-mere - my grandmother
Mon grand-père - my grandfather
Dans ma famille - In my family
II $y$ a - there is / there are

Dröle - Funny Bavard(e) - Chatty Créatif/ive - Creative

Sportiffive - Sporty Courageuxleuse - Brave Paresseuxleuse - Lazy Travailleurleuse - Hard-working

Intelligent(e) - Smart
Actiffive - Active

Useful adiectives

Family members
Animals


Families come in different shapes and sizes - show your integrity and be sensitive to the diversity in our school.
What sort of things do we want to say about ourselves and others to identify ourselves? Age? Birthday? Our family? What we look like?

You will often hear or see the word 'your' (ton, ta or tes) in a question. When you answer, remember to use 'my' (mon, ma or mes) instead.



The United Kingdom (UK) is an Island country located in the continent of Europe, it is made up of four countries: England, Scotland, Northern Ireland and Wales.


## MAP STMBOLS

Symbols are useful for lots of reasons including, space saving on a map, multi-lingual (all languages can understand them), saves time, clear.
from left to right


| The first two <br> numbers give <br> ne eastings. | The second two <br> numbers give <br> the northings. |
| :--- | :--- | :--- | :--- |

Remember... eastings then northings!





## ATLAS SKILLS

There are generally three main types of maps shown in an atlas:


PHYSICAL MAPS these show topography/relief (the shape of the land) and other physical features such as rivers and lakes.

## POLITICAL MAPS these show

 country borders, cities, transport links etc.THEMATIC MAPS these show information such as climate data, agriculture types etc.

## 6 FIGURE GRID REFERENCES

We can use six-figure grid references to find an exact location within a grid square, so they are much more accurate The grid square is divided into tenths. Example:
 The first three
numbers give the easting which includes the
number of tenths.

## The last three

 numbers give the northing which includes the number of tenths.
## HEIGHT AND RELIEF

RELIEF the difference between the highest and lowest heights of an area. TOPOGRAPHY the surface features of the earth like hills, mountains, valleys etc.


Areas of different heights are shown using different colours. A key is used
to show how high the land is.


The exact height of a place
above the ground is measured and written onto


Contour lines are lines on a map which join up places of the same height. Everywhere along a contour line is the same height.

## SCALE AND DISTANCE

OS maps have a scale. On some smaller maps, Icm on the map equals 250 m in real life. On some larger maps, Icm on the map equals 500 m . Different maps might have different scales, so check on your map to find its scale.


Using a line scale on a map is as easy as

> using a ruler. The important thing to
remember is that a line scale shows
measurements in km and the measurements on a ruler are in cm

## WORD SCALE

One centimeter on the map represents 3 kilometers on the ground. ( $1 \mathrm{~cm}=3 \mathrm{~km}$ )

Using the scale above, if we measure the distance on a map between two places with our ruler. The measurement is 4 cm We then have to multiply that measurement by 3 to calculate that the real distance between the two places is 12 km

## History: Spring2- The Romans

## Key Knowledge

$\checkmark$ What was the Roman Empire
$\checkmark$ The Roman Army
$\checkmark$ Roman Britain
$\checkmark$ The Revolt of Boudica

## Who were the Romans?

Rome is a city in Italy. 2000 years ago it was the most powerful and important city in the world. The people from Rome owned and controlled a massive EMPIRE

## Summary of your learning:

* We will investigate the Roman Empire and the chronology of Rome
* We will investigate why the Roman Army was so


## Key Vocabulary

Empire - A group of countries ruled by a more powerful state or country
Emperor - The ruler of an Empire
Chronology - The arrangement of dates or events in the order in which they occurred
BC - Before Christ. A way of dating years before the birth of Jesus. The bigger the number BC , the longer ago in history is was, because $B C$ numbers decrease in size.
AD - Anno Domini - "in the year of our Lord". AD is used to show dates after the birth of Jesus. This year is 2019 AD
Invade / Invasion - to take control of another country often by violence
Revolt - When a group of people refuse to be ruled \& take action against their rulers
Legion - A group of 5,000 men under the command of a Legate.
Cohort - each legion was divided into ten cohorts
Centuries - each century had 80-100 men
Barbarians - the name the Romans gave to the people who lived outside the Roman Empire
Trade - making money by buying and selling goods
Legionary - A Roman soldier Centurion - in charge of a century Testudo or tortoise - a defensive tactic

## Chronology

54 BC Julius Caesar attempts to invade Britain.

43 AD Romans invade and conquer Britain under Emperor Claudius.
49 AD Roman London founded.
60 AD Boudica's revolt against the Romans fails.
84 AD Romans conquer Wales and Scotland. 133 AD Construction of Hadrian's Wall to keep the Picts of Scotland out of England.
306 AD Constantine the Great proclaimed Emperor in York.
409 AD The last Roman troops withdraw from Britain.


## History: Spring2- The Norman Conquest

## Key Knowledge

$\checkmark$ The four contenders in 1066
$\checkmark$ The Battles of 1066 and the events of the Battle of Hastings
$\checkmark$ Norman castles
$\checkmark$ The Feudal System
$\checkmark$ The Domesday Book

## Summary of your learning

* January 1066 the King of England, Edward the Confessor dies with no heir.
* Four men had claims to the throne.
* The first one to be crowned King was Harold Godwinson.
* Harald Hardrada, the King of Norway, invaded to try to take the throne from Harold Godwinson.
* Hardrada and Godwinson fought at the Battle of Stamford Bridge. Hardrada lost.
* William of Norrmandy then invaded and Harold Godwinson fought a second battle at Hastings.
* Harold lost and William became King of England.
* William built castles all over England and established the Feudal System.
* In 1086-7 he had a grand survey of England carried out.


## Key Vocabulary

Anglo-Saxon England: Early medieval England
Edward the Confessor: King of Anglo-Saxon England from 1042 to 1066.
Heir to the throne: the next King,
Witan: The most powerful men in Anglo Saxon England, who could choose the next king if there was no accepted heir to the throne.
Fyrd: The Anglo Saxon army.
Housecarls: A professional soldier who fought for his Earl in the King's army.
Harold Hardrada: The king of Norway 1046 to 1066. Tostig Godwinson: The brother of Harold Godwinson. Tostig was exiled by his brother Harold and fought against him at Stanford Bridge. Tostig was killed there.
Vikings: Scandinavian warriors who would raided and pillaged northern Europe, attacking by boat.
Stamford Bridge: This is where Harold Godwinson fought and Harald Hardrada and Tostig
Battle of Hastings: The Battle of Hastings was the battle between Harold Godwinson and William of Normandy, which William won
Shield Wall: A defensive strategy used by the AngloSaxons at the Battle of Hastings.
Motte and Bailey Castle: Built by William to conquer England.
The Harrying of the North: William's brutal attack on the people of Northumbria in the North of England.
Feudal System: The way William organised English society, with the King at the top and the Peasants at the bottom.
Domesday Book: A written record of the Great Survey, ordered by William, to find out what his kingdom was worth.
Bayeux Tapestry: An embroidered cloth showing the events of the Norman conquest.

## Contenders in 1066

In 1066 Edward the Confessor died without having a child. This meant there was no heir to the throne. 4 men thought they should have the throne:

## Harold Godwinson

Most powerful earl in England and Commander of the army. Was Edward's Brother-in-law. Acted as 'sub-regulus', (Deputy King), for Edward. Supposedly promised to help William become King. Claimed when Edward was dying, he promised him the throne. Supported by the Witan and many of the people of England.

## William of Normandy

Fierce fighter from France who claimed Edward promised him the throne. Was friends with Edward. Already Duke of Normandy and related to Edward's
mother, Emma of Normandy. His claim was supported by the Pope.

## Harald Hardrada

Viking ruler from Norway whose ancestors had been Kings of England previously. Was a fierce warrior who many feared. Many in England did not want another Viking ruler. Supported by Harold Godwinson's brother, Tostig

## Edgar the Atheling

Edward's great-nephew, grandson of Edward's brother, Edmund. Nearest relative. Had lived with Edward for many years. He was only 14 and had no supporters.


## What should I be able to do?

- Perform calculations that cross zero
- Carry out the 4 calculations with directed number
- Evaluate algebraic expressions
- Solve two step equations
- Use order of operations with directed number

Addition/Subtraction with directed numbers


In general, adding negatives lowers an answer, so +

Subtracting negatives increases an answer, so

## Subtract, Negative,

 Commutative, Product, Inverse, Square Root,Square, Expression

Year 7 Knowledge Organiser
Maths Spring Term 2a
EQUATIONS AND DIRECTED
NUMBER


Similarly, $-5 \times-7=35$ is the negative of this, so the sign in the answer is changed again

This is the negative of the previous question, so the answer must be the negative of the previous answer

## Dividing and multiplying follow similar rules with the signs

## Multiplication/Division with directed numbers:



This question is the negative of $5 \times 7=35$ so the answer will be the negative of 35
positive $\div$ positive $=$ positive negative $\div$ negative $=$ positive negative $\div$ positive $=$ negative positive $\div$ negative $=$ negative

$$
\text { positive } \div \text { negative = negative }
$$

Evaluate algebraic expressions:
Substitute $x=-3$ into each expression
$3 x+4$
$3 \times-3+4$
$=-9+4$
$=-5$

## Order of Operations:



Brackets
Indices or roots
Multiplication or Division
Addition or Subtraction

## What should I be able to do?

Numerator, Denominator,
Year 7 Knowledge Organiser
Equivalent, Mixed
Numbers, Improper
Fractions, Substitute, Place Value

Maths Spring Term 2b

- Convert between mixed numbers and improper fractions
- Add/Subtract fractions in all forms
- Use fractions in algebraic contexts


## Representation of Fractions:




Mixed Numbers and Improper Fractions:


## 

人 SUBTRACTION OF FRACTIONSCalculate with common denominators:

$$
2 \frac{1}{4}=\frac{4}{4}+\frac{4}{4}+\frac{1}{4}=\frac{9}{4}
$$

$$
\frac{3}{7}+\frac{6}{7}=\frac{9}{7}=1 \frac{2}{7}
$$



With the same denominator, only the numerators are added or
subtracted

Addition/Subtraction of any Fractions:
Work out $\frac{1}{8}+\frac{2}{3}$ The LCM of 3 and 8 is 24

$$
\frac{1 \times 3}{8 \times 3}=\frac{3}{24} \quad \frac{2 \times 8}{3 \times 8}=\frac{16}{24}
$$ denominators

$$
\frac{3}{24}+\frac{16}{24}=\frac{19}{24}
$$

Use equivalent fractions to find a common multiple for both

- | Convert to |
| :--- |
| improper |
| fractions |
| Calculate with |
| a common |
| denominator |

$=\frac{2 \frac{1}{2}-1 \frac{1}{5}-\frac{6}{5}}{}=\frac{25}{10}-\frac{12}{10}$
$=\frac{13}{10}=1 \frac{3}{10}$

## Fractions in algebraic contexts:

If $m=3$, work out the value of this expression. Give your answer as a mixed number. $\frac{7}{m}+\frac{2}{m^{2}}$

$$
\begin{aligned}
\frac{7}{3}+\frac{2}{3^{2}} & =\frac{7}{3}+\frac{2}{9} \\
& =\frac{21}{9}+\frac{2}{9} \\
& =\frac{23}{9}=2 \frac{5}{9}
\end{aligned}
$$

Music: Spring 2-Reggae

| Pitch | High | The highness or lowness of a sound. |
| :---: | :---: | :---: |
|  | Low |  |
|  | Stepwise | Moving one note at a time |
|  | Leap | Jumping to the next note. |
| Articulation | Smooth | Playing notes in a long, smooth way |
|  | Legato |  |
|  | Detached | Playing notes in a short, detached, spiky way. |
|  | Staccato |  |
| Dynamics | Loud | The volume of the music. Italian music terms are used to describe this. Very quiet |
|  | Soft |  |
|  | $\begin{array}{\|c\|} \hline p \boldsymbol{p} \\ \text { pianissimo } \\ \hline \end{array}$ |  |
|  | $\begin{gathered} \hline p \\ \text { piano } \end{gathered}$ | Quiet |
|  | $\begin{gathered} m p \\ \text { mezzo piano } \\ \hline \end{gathered}$ | Moderately quiet |
|  | $\begin{gathered} m f \\ \text { mezzo forte } \end{gathered}$ | Moderately loud |
|  | $\begin{gathered} \boldsymbol{f} \\ \text { forte } \end{gathered}$ | Loud |
|  | $\begin{gathered} \text { ff } \\ \text { fortissimo } \end{gathered}$ | Very loud |
|  | Crescendo | Gradually getting louder |
|  | ${ }^{\text {Diminuendo }}$ | Gradually getting quieter |


| Tempo | Fast | The speed of the music. Italian musical terms are used to describe this. |
| :---: | :---: | :---: |
|  | Slow |  |
|  | Lento | Slow |
|  | Andante | At a medium (walking) pace |
|  | Moderato | At a moderate speed |
|  | Allegro | Fast |
|  | Accelerando (accel) | Getting faster |
|  | Rallentando (rall) | Getting slower |
| Duration | Long | The length of a sound or note |
|  | Short |  |
| Texture | Thin texture | A solo or small number of instruments |
|  | Thick texture | Lots of instruments. |
| Timbre | Sonority | Instrumentation - the unique sound or tone quality of different instruments, voices or sounds. |
|  | Instrumental sound |  |

## Chord charts



## WWW

What went well...

Self-reflection
What step are you working at?
What do you need to do to achieve the next step?

## Scheme of work key words

Syncopation -Off-beat rhythm
Ska - A style of fast, popular music which featured syncopated rhythms.
A musical genre that originated from Jamaica that influenced Reggae Music.
Accent - A beat or note that is louder than the rest.
Fret - The different segments that divide the neck of a guitar/bass/ukulele
Capo-A moveable bar placed across the strings to make the pitch higher




## Key Skills:

Controlling the ball - using different parts of the body - this could be the feet or thigh. Remember to cushion the ball.
Passing - there are 3 types of passes. Side foot pass, driven pass with the laces and a lofted pass. Using the side of the foot allows you to pass accurately over a short distance, a driven pass allows you to pass the ball on the floor, but a greater distance. Finally, a lofted pass allows you to lift the ball in the air over players and change direction. Remember to keep your standing foot next to the ball when you make the pass.
Dribbling - dribbling allows you to move the ball quickly around the pitch using the inside and outside of your feet and keeping the ball close to your feet and your head up.
Turning with the ball and outwitting a defender - turning with the ball allows you to change direction using different techniques, such as dragging the ball back with the sole of your boot. Outwitting and opponent allows you to beat a defender using different techniques such as a step over.
Shooting - there are different types of shots that allows you to score goals. You instep can be used to control and place the ball into the goal. If you use your laces then this allows more power to be produced. Heading - you can use an attacker header, a defensive header or a controlled header, which might be passing the ball back to someone with your head.
Attacking - keeping possession - making a number of passes allows your team to keep possession and advance up the field.
Tackling techniques - tackling, jockeying and forcing the player onto their weaker foot.


## Basic Rules

The game is started by kicking the ball from the centre spot. The U12 game has 9 players - goalkeepers, defender, midfielders and attackers.
Referee and two assistants who officiate the game.
If a ball goes over a touch line a throw in is taken (kick in on the Astroturf). If an attacker kicks over the goal line it is goal kick and if a defender kicks it over the goal line it is a corner. To score the ball must cross the opposition's goal line. The offside rule also applies where an attacker is in front of all opposing defenders when the ball is kicked.

## Spring 2 Holy Week and Easter

Sill

## Overview

This half term you will be investigating the events of Holy Week, the final week of Jesus' life before he was put to death on the cross. You will find out how key events from Holy Week are commemorated by Catholics today and why they are so important. You will also get to be a detective to investigate what the people at the time might have thought when Jesus' body was found to be missing from the tomb!


## Checklist of what you will learn this half term:

The events of Holy Week, including:

- Palm Sunday
$\square$ Maundy Thursday
$\square$ Good Friday
$\square$ Easter Sunday
$\square$ The significance of the crucifixion and resurrection of Jesus for Christians todayThe Stations of the Cross

Key Sources of Wisdom and Authority (Religious Teachings):

Jesus took bread and wine, gave it to his disciples and said "this is my body... this is my blood... do this in memory of me." (Luke 22)
"For God so loved the world he gave his one and only Son, that whoever believes in him shall not die, but have eternal life." (John 3:16)

Jesus said "I am the resurrection and the life. Those who believe in me will live, even though they die." (John 11:25)

Glossary of Key Vocabulary...
Easter - Christian festival celebrating the resurrection of Jesus.
Holy Week - the week before Easter, starting on Palm Sunday.
Hosanna - a word used to express praise, joy and adoration.
Eucharist - Christian ceremony that remembers the Last Supper.
Betrayal - disloyalty to a person or promise.
Crucifixion - execution on a cross, as done to Jesus.
Sacrifice - giving up something valued for someone or something else more important.
Salvation - being saved from sin. Resurrection - rising from the dead. Paschal Mystery - The last events of Jesus' life and how they save humanity from $\sin$ - his suffering, death and resurrection.

## Science - Spring 2 - Sound



- Sound is an example of a longitudinal wave
- The oscillations are in parallel to the direction of energy transfer


## Structure of the ear

The ear is a very sensitive organ. Below is a detailed diagram to show the parts involved with hearing.


Humans range of hearing is between $20-20,000 \mathrm{~Hz}$.
Dogs can hear up to $45,000 \mathrm{~Hz}$ and cats $64,000 \mathrm{~Hz}$.

Sound is described as longitudinal because it needs particles to transfer its energy from one point to another. Sound cannot travel through a vacuum (a place that contains no particles).

The closer the particles are together, the more efficiently the sound is transferred.


| Keyword | Meaning |
| :--- | :--- |
| Energy | What is carried on a wave as it travels from one point to another. |
| Longitudinal | A wave that travels parallel (back and forth) to the direction the <br> energy is travelling |
| Decibel (dB) | A measure of the loudness of a sound |
| Peak/Crest | Top point of a wave |
| Trough | Bottom point of a wave |
| Amplitude | The height of the wave from the midpoint to the crest/trough. <br> Determines the loudness of the sound. |
| Frequency | How many full waves pass a fixed point every second. Determines <br> the pitch of a sound. |
| Wavelength | The distance between the crest of one wave to the next |

## Frequency and pitch

- The frequency of a sound wave determines pitch of the sound
- Frequency is measured in Hertz (Hz)


Low frequency = low pitch


Higher frequency = higher pitch

Amplitude and loudness

- The amplitude of a sound wave determines loudness of the sound


Low amplitude = quiet
sound


Higher amplitude = louder sound

Science - Spring 2


## Physical changes

We have learnt about physical reactions already - these are changes of state (melting, freezing, evaporating, condensing). These are reversible.

## Chemical changes

When a chemical reaction occurs, atoms are rearranged and a new substance is formed. This is usually an irreversible change.

## Signs of a chemical reaction

- Fizzing
- Colour change
- Temperature change (it will get hotter or colder)
- A new substance is formed


## Metal + acid

Some metals react with acids. Copper, silver and gold do not.

$$
\text { metal }+ \text { acid } \rightarrow \text { salt + hydrogen MASH }
$$

We see fizzing and a temperature change in these reactions.

Using a different acids forms different salts
e.g.
hydrochloric acid + sodium $\rightarrow$ sodium chloride + hydrogen
nitric acid + aluminium $\rightarrow$ aluminium nitrate + hydrogen sulphuric acid + zinc $\rightarrow$ zinc sulphate + hydrogen

## Displacement

- Some metals are more reactive than others - which we show in the reactivity series):
- More reactive metals will push out, or displace less reactive metals from a compound

Potassium
E.g.

Copper + iron $\rightarrow$ iron + copper
sulphate
sulphate
We see a colour change in these reactions, and a temperature change

## Extraction of metals - reduction

- Most metals are found as 'ores' rather than chunks of pure metals
- We extract the metal from the ore, so we can use the metal
- Metals below carbon in the reactivity series can be extracted using a process called smelting
- Metals above carbon in the reactivity series must be extracted using electrolysis

| Keyword | Meaning |
| :--- | :--- |
| Hydrogen | A gas made when metal reacts with acid |
| Displacement | When a more reactive metal pushes out a <br> less reactive metal from a compound |
| Chemical change | A process that makes a new substance |
| Physical change | A process that does not make a new <br> substance |


|  | Me gusta - I like <br> Me gusta mucho - I really like <br> Me encanta - I love <br> No me gusta - I don't like <br> No me gusta nada - I really <br> don't like <br> Odio - I hate | chatear en línea - to chat online escribir correos - to write emails escuchar música - to listen to music jugar a los videojuegos - to play videogames leer - to read mandar sms - to send text messages navegar por internet - to surf the net salir con mis amigos - to go out with my friends ver la televisión - to watch t.v |  |  | porque es <br> - because <br> it is... <br> porque no es because it isn' $\dagger$ | interesante interesting <br> guay - cool |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A veces - sometimes <br> De vez en cuando - From time to time <br> Nunca - never <br> Todos los días - everyday <br> Siempre - always | bailo - I dance <br> canto karaoke - I sing karaoke hablo con mis amigos - I talk with my friends monto en bici - I ride my bike saco fotos - I take photos salgo con mis amigos - I go out with my friends toco la guitarra - I play the guitar hago artes marciales - I do martial arts hago atletismo - I do athletics hago equitación - I do/go horse riding hago natación - I go swimming juego al baloncesto - I play basketball juego al fútbol - I play football juego al tenis - I play tennis juego al voleibol - I play volleyball |  |  |  | divertido/a - funny <br> estúpido - stupid <br> aburrido/a-boring |
|  | Cuando... - when <br> hace calor - it's hot <br> hace frío - it's cold <br> hace sol - it's sunny <br> hace buen tiempo-it's nice <br> weather <br> llueve - it's raining <br> nieva - it's snowing |  |  |  | entertaining <br> activo - active <br> sano - healthy |
|  | lunes - Monday <br> martes - Tuesday <br> miércoles - Wednesday <br> jueves - Thursday <br> viernes - Friday <br> sábado - Saturday <br> domingo - Sunday <br> Los lunes - On Mondays, every Monday <br> Los martes - On Tuesdays, every Tuesday <br> Los miércoles - On Wednesdays, every Wednesday etc... |  | n | ¿Qué haces en tu tiempo libre? - What do you do in your free time? <br> ¿Qué te gusta hacer? - What do you like to do? <br> ¿Te gusta...? - Do you like...? <br> ¿Qué haces cuando llueve/hace calor/nieva etc? What do you do when it rains/it's sunny/it snows? <br> ¿Qué haces en primavera/verano/otoño/invierno? What do you do in spring/summer/autumn/winter? |  |  |
|  |  |  | 4 <br> 4 <br> 0 <br> 3 <br> 0 <br> $\frac{1}{4}$ <br> 0 <br> $\vdots$ | Mañana voy a... - tomorrow I'm going... |  |  |
| $n$ 0 0 0 0 v | En... - in... <br> primavera - spring <br> verano - summer <br> otoño - autumn <br> invierno - winter |  |  | Siempre me ha <br> Me chifla - I'm <br> Quiero - I want <br> No quiero - I don |  | ado... I've al y about want | ys liked... |

Look at this model text about hobbies - do you think you could replicate it with your own information?

| En mi tiempo libre | In my free time |
| :--- | :--- |
| me encanta leer | I love reading |
| porque es interesante | because it's interesting |
| pero nunca hago equitación | but I never go horseriding |
| porque icuesta un ojo de la <br> cara! | because it costs an arm and <br> a leg! |
| Cuando hace sol juego al <br> fútbol. | When it's sunny I play <br> football. |
| Siempre me ha gustado el <br> fútbol | I've always liked football |
| porque es sano y | because it's healthy and |
| cuando llueve veo la <br> televisión. | when it rains I watch TV. |
| ¿Qué haces cuando llueve? | What do you do when it <br> rains? |
| Los sábados salgo con mis <br> amigos | On Saturdays I go out with <br> my friends |
| pero mañana voy a jugar a <br> los videojuegos. | but tomorrow I'm going to <br> play videogames. |

"What kind of hobbies do you have?"


