



# St Joseph's College Knowledge Organisers Year 8

**Half Term Two: 2020\_2021 - All subjects**

Name: \_\_\_\_\_

House: \_\_\_\_\_



# My timetable:



# St Joseph's College Knowledge Organisers

## Why do we have knowledge organisers?

Your knowledge organisers help you to be successful in many ways. Firstly, they make clear the key elements needed in a topic to have an excellent understanding of it. If you know these elements, your teacher will help you to understand them.

## What are my teachers' expectations of me?

In year 7 and 8 your teachers will give you homework based on your Knowledge Organiser. This means you will be spending time learning information from your Knowledge Organiser at home. Teachers will test you once a week to make sure that you are completing the homework and you are able to recall the information on the Knowledge Organiser. Your Knowledge Organiser exercise book is where you will complete your homework. It should show evidence of you practicing recalling the information on the Knowledge Organiser. Each time you complete your homework in the book, you should put the subject as the title and clearly write the date completed. Once complete put a ruler to show the end of the homework. Teachers and form tutors will be regularly checking that you are completing this homework. For some subjects you may be required to complete online questions such as Spark Maths to demonstrate your recall practicing. Knowledge Organisers must be brought to school everyday.

## How will my teachers use them?

Each core subject will set homework once a week that will help you to learn your knowledge organiser. They will also test you once a week on certain parts to see how well you have remembered it. Research tells us that this recall practising is a really good way of helping you make sure that the knowledge stays in your memory. Over time you will build on this knowledge to make sure that you know everything you need to for your subject. Sometimes you may have high stakes quizzes, where teachers will set a certain score that you have to reach to be successful.

## How will they help me revise?

When it comes to GCSEs, you have lots of information to remember. Your Knowledge Organisers will gradually build up this knowledge over 5 years to help support you in year 11 so that when you revise, you are just recalling knowledge that you have already stored. Also, you will have practised lots of revision techniques whilst using your knowledge organisers over the past 5 years, which will help prepare you for the final exams.



# Using a Knowledge Organiser Guide - for Parents and Carers

## What is a knowledge organiser?

A knowledge organiser contains all the important information from a particular topic, summarised in just a few pages. It includes key words, important facts, diagrams, methods and skills relating to the topic.

## Why is it useful?

A knowledge organiser helps students to organise the content they need to learn. This makes it easier for them to remember the information and access the facts from their memory when they need to answer an exam question.

## How can it be used?

The more memories are used, the stronger the memory becomes and the easier it is to access. For students, this means regular practice at retrieving the facts they have learnt and using them in a variety of ways. They could play games with the information, explain the facts to someone, apply the information to a new situation or organise the knowledge organiser into a different format.

## How can I help?

The knowledge organiser contains all the facts needed to test someone on the content from a topic. This is great because it means you can help someone revise content even if you haven't studied it yourself!

**- You could ask your child some questions on the content, for example the definition of a few key words, or challenge them to draw a diagram from memory. Testing their knowledge with one or two questions a day can make a big difference to how much information they remember. Perhaps it could become part of the after dinner or breakfast routine.**

- You could prompt your child to turn some of the information on the knowledge organiser into a different format; a word list could become flashcards, facts could be transformed into a mind map to show links between ideas, information could become a song, story or comic strip, a diagram could become a poster, a collage or a model.

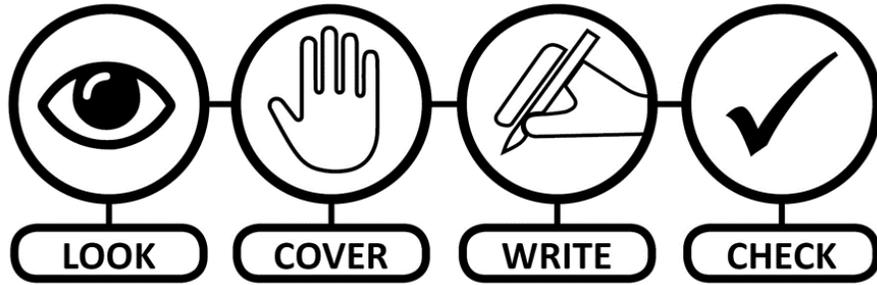
**- You could ask your child to teach you about something on the knowledge organiser. Having to explain information to someone else, and answer their questions about it, is a great way to reinforce their knowledge and identify areas they need to go back and revise again.**

- You could suggest turning the information into a multiple-choice quiz, either on paper or using a website. This task requires them to process the information to write questions and come up with correct and incorrect answers. You could then use it to test their knowledge or to host a quiz with family or friends, either at home or online.

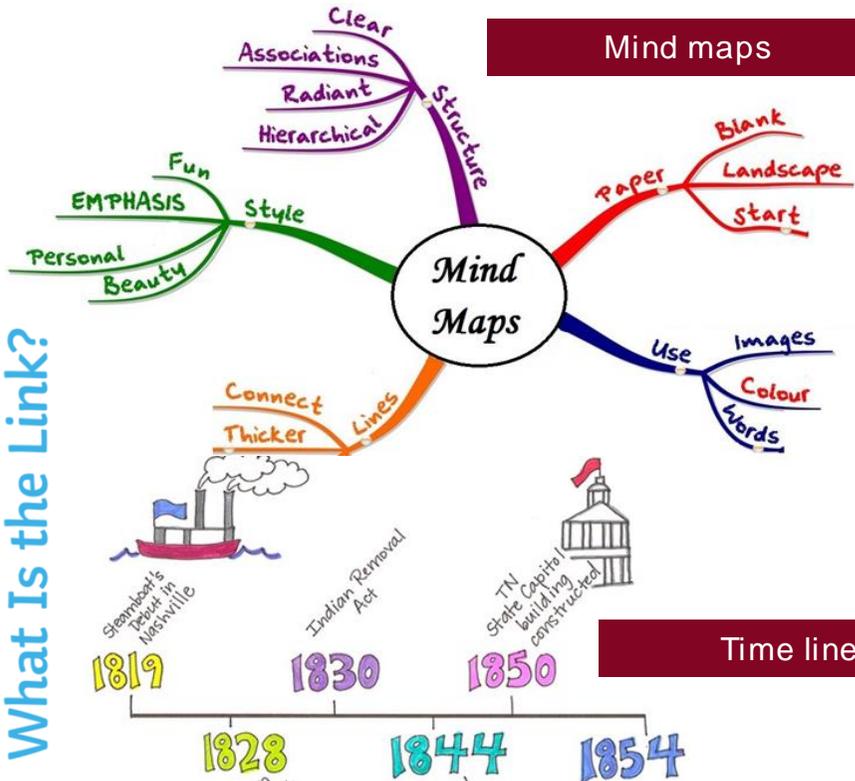


# Top tips for learning and revising the information in your knowledge organiser

Check the website for more subject specific revision information



## Mind maps



What Is the Link?

## Flashcards

Weight

$$F_g = m \times g$$

The gravitational force ( $F_g$ ) which acts on an object on/near the surface of a planet/moon.

★ Example

## Mnemonics

# FOIL

the **first** terms  
the **outer** terms  
the **inner** terms  
the **last** terms

**Example 1:**

$$(x + 4)(x + 7) = x \cdot x + x \cdot 7 + 4 \cdot x + 4 \cdot 7$$

Order of Operations! Show Your Work!

$$= x^2 + 7x + 4x + 28$$

$$= x^2 + 11x + 28$$

## Quotes

# Macbeth

**VALIANT**  
"his brandish'd steel [...] smoked with bloody execution"

**RESPECTED**  
"O valiant cousin! worthy gentleman"

**CURIOUS**  
"you imperfect 's, tell me more"

**NOT NATURALLY RUTHLESS**  
"... too full o' the milk of human kindness"

**LOVING**  
"My dearest partner of greatness"

**ADMIRED**  
"(Sergeant:) brave Macbeth-- well he deserves that name"

**HONOURED**  
"(Duncan:) With his former title greet Macbeth"

**PENSIVE**  
"This supernatural soliciting cannot be ill, cannot be good"

**OVERWHELMED BY IMAGINATION**  
"function is smother'd in surmise"

## DEFINITION

## Online flashcards





# St Joseph's College Art Department

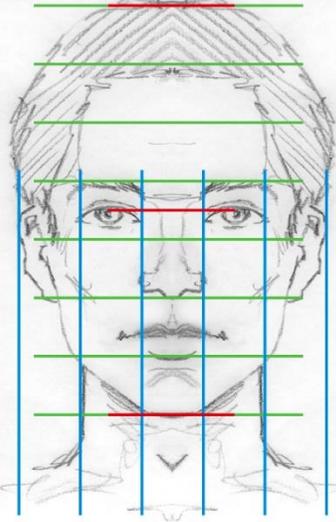
Year 8 Half Term 2 : Identity - Portraiture

This term we will be exploring portraits & key principles of Art & Design.

- AO1 Developing idea-Thought shower, artist research
- AO2 Using Resources- testing out ideas/media
- AO3 Recording ideas-photos and drawings
- AO4 Making a personal response- final ideas



## PROPORTION



## DISTORTION

### Keywords:

- Portrait
- Contrast
- Shape
- Proportion
- Structure
- Texture
- Tone
- Form
- Composition
- Observation
- Balance
- Colour
- Detail
- Collage
- Blending
- Shade
- Oil pastel
- Symmetry
- Profile
- Background
- Mid-ground
- Foreground
- Composition

## David Hockney



## Luke Dixon



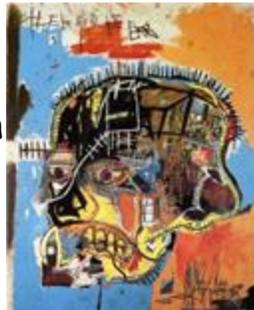
## Nikki Farquharson



## Alexander Calder



## Jean Michel Basquiat



## Jenny Saville

## Pablo Picasso



### Grid Technique



## Frida Kahlo



## FEATURES





This term we will be exploring portraits & key principles of Art & Design.

### Cold Questions.

- What is proportion of the face?
- Where are your eyes on the face?
- Where are the ears positioned on the head?
- What is the coloured bit in the eye?
- What do you notice about your skin?
- What is the black circle in the eye/what is its purpose?
- How many eyelashes do you think you have?
- Where would you position the hair line on your portrait?
- Describe pop art in 5 words?
- Describe Manga art?
- What is distortion?
- How can you make the portrait look real?
- How does Catherine Campbell do her work?
- What can you use a grid for?

### HOT QUESTIONS.

- How could shading make your portrait better? Discuss with a partner where you think the lighter and darker tones are.
- Discuss what the main differences are between pop art portraits and Manga portraits, how do they differ from realistic work?
- Why do you think portrait paintings have been so important in art history? Which ones do you already know?



JOHANNES VERMEER (1632-1675)  
 Girl with the Pearl Earring, 1665 (oil on canvas)  
 Describe this piece in detail to your partner. Think of colours, tones, shapes.  
 How has Vermeer used tone in this piece to create depth?  
 What do you think this girl is thinking? What sort of mood is the artist trying to create?

Andy Warhol (1928-1987) was a key figure in Pop Art, an art movement that emerged in America and Elsewhere in the 1950s to become prominent over the next two decades.

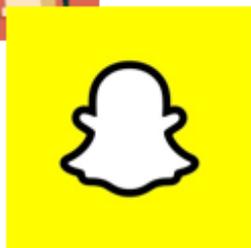


Apply the same questions above to this Paintings.  
Which portrait do you prefer?



## Keywords:

- Debate
- Rebuttal
- Opinion
- Social Media
- Safety
- Cyberbullying



## Debate:

- ✓ The structure of a debate
- ✓ Forming a rebuttal
- ✓ Expressing opinions
- ✓ Using evidence to form an argument
- ✓ Using debate in your schoolwork
- ✓ Debating skills in wider life

## Inspiration and Research...

MPs in the House of Commons - how debate forms the world we live in.



## Social Media:

- ✓ How we use social media
- ✓ The difference between social media platforms
- ✓ How to be safe when using social media
- ✓ Social media and 'fake news'
- ✓ Cyberbullying and its impacts
- ✓ Using social media kindly and wisely

## Questions:

- What is effective debating? How do we structure a debate?
- How can you use debating skills in school and wider life?
- What are the advantages and disadvantages of social media?
- How can we use social media in a safe and kind way?



# St Joseph's College Drama Department

## Year 8 Term 1.2: Script project

In this topic we will be improving our skills at performing scripts.



**Context**- The background to a play is called its context, and this includes when and where the play is set. It is important to understand the context of a play, eg what would have been happening in that place and time. Knowing a play's context will influence the choices made in acting, costume and set design and as such how the play is brought to life on stage.

**Choosing a script**- When you pick your script you need think about what roles you perform best. You also need to think about what genre and style you would like to perform for this project.

### Tasks:

1. Attempt listening to your script.
2. Write down the cues for your script.
3. Try a line run with someone at home.

**Good Rehearsal**- Learning a script can be challenging, especially in early **rehearsals**, but there are ways of making the lines easier to remember. By experimenting with different methods of learning lines, a performer can select the techniques that they find most suitable for them.

**Line run** - Line runs focus on simply running through the lines, without any acting, to help performers to practice and remember their lines. This process can assist the technical and design teams, as well as performers. It will identify if performers are engaged and 'acting' at all times, reacting to each other's lines as opposed to just waiting for their own.

**Listening to a script** - Some performers prefer to record their own voices speaking the lines and then listen back to it. Others will record other characters' lines and leave spaces or pauses where their own lines would be, so they can practise remembering their own part.

**Reading or writing** - Some performers prefer to write out or speak their lines repeatedly. This process of repetition helps them to learn their lines as a grounding before they add movement.

**Cues**- When learning a script, it is important for a performer to also learn their **cues**. For example, a character's first line may follow a lighting change at the start of the play and even if they are on stage prior to the lighting change they must not speak until they have seen or heard their cue. Performers also need to respond or react to others on stage, and considering how a character might react to the lines or actions of others in the play is very useful.

**Deciding a dramatic intention**- The aim of performing is to ensure that the **playwright's** intentions can be communicated to an audience. Knowing what these intentions are will help a performer choose how to perform. It is a performer's job to interpret and perform a character as appropriate to the demands of the performance. The way the actor sets out to do this is their dramatic intention.



**Applying Units, objectives, super objectives and actioning**- Last term we went through all of different techniques for naturalistic acting. These can all be applied to script work. These will be used better when you understand the context of the play and the playwright's intentions.



### Keywords:

**Genre** - a style or category of literature

**Trope** - a significant or recurrent theme

**Motif** - a dominant or recurring idea

**Feminist theory** - understanding of gender inequality

**Suspense** - a state or feeling of anxious uncertainty about what may happen

**Atmosphere** - the pervading feeling of a place or piece of work

**Structure** - the organisation of something according to a plan

**Symbolism** - the use of symbols to represent ideas

**Omen** - an event regarded as a portent of good or evil

**Supernatural** - A force beyond scientific understanding or the laws of nature

### The 10 Gothic Conventions

1. **Mystery and Fear** - creating a sense of danger
2. **Omens and Curses** - foreshadowing danger ahead
3. **Atmosphere and Setting** - spooky settings and bad weather
4. **Supernatural and Paranormal Activity** - Events and creatures beyond scientific explanation
5. **Romance** - There is often a doomed romance involved
6. **Villain** - there is often a complex and dark villain in the story
7. **Emotional Distress** - Writers describe high emotion to show how their characters are feeling
8. **Nightmares** - A characters' nightmares are used to show their true emotions
9. **Anti-hero** - A protagonist with a flawed personality
10. **Damsel in Distress** - A woman who suffers at the hands of a villain

### Gothic Writer's Toolkit

**Pathetic fallacy** - When the weather reflects the mood - in Gothic literature, usually dark and stormy

**Setting** - Gothic novels are usually set in castles, dark forests, or other creepy places

**Creating atmosphere** - Using language that relates to darkness, a sense of unease, or imminent danger

**Emotive language** - Show your protagonist's fear by describing how they feel with powerful vocabulary

**Varied sentence length** - Long sentences for description, short for impact

**Building Suspense** - Slowly introduce the idea of danger

**Structural Techniques** - Use description of setting, zooming in on key details, and shifts in tone to keep your reader interested

### Key Gothic Texts:



### Questions:

- What are the conventions of Gothic Literature?
- How can you use the writer's Gothic toolkit to create your own Gothic fiction?



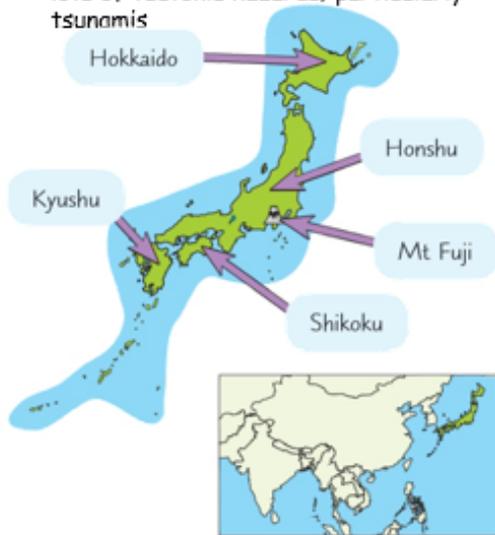
This term we will complete a country study of Japan, looking at its population, climate, economy and geographic location.

### Keywords:

- Population density** - number of people living per square km
- Distribution** - where something is spread
- Densely populated** - lots of people living per square km
- Sparsely populated** - few people living per square km
- Birth rate** - the number of live births each year per thousand of the population in an area
- Death rate** - the number of deaths each year per thousand of the population in an area.
- Natural decrease** - achieved when there is a higher death rate than the birth rate
- Natural increase** - achieved when there is a higher birth rate than death rate
- Ageing population** - high proportion of older persons in their population
- Life expectancy** - average number of years a person is expected to live
- Migrate** - move from one area to another
- Precipitation** - rain/snow/hail

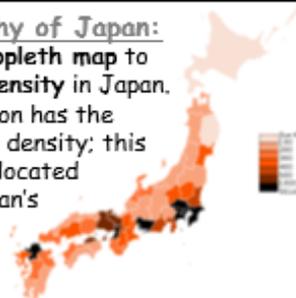
### Physical Geography of Japan:

- Japan consists of more than 6000 islands, most of which are uninhabited.
- The majority of Japan's population live in the four main islands: **Honshu, Hokkaido, Kyushu and Shikoku**
- About 80% of Japan is mountainous
- The longest river is the Shinano River on Honshu, which is 367km long
- Japan lies close to where the Pacific, Philippine and Eurasian tectonic plates meet - this means they experiences lots of tectonic hazards; particularly tsunamis



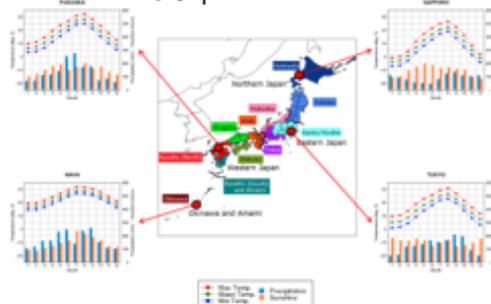
### Human Geography of Japan:

- We use a **choropleth map** to show **population density** in Japan.
- The Kanto region has the highest population density; this is where Tokyo is located (home to 1/3 of Japan's population)
- Towns and cities are mostly found on flatter plains, near the coast.
- The number of people living in **rural areas is decreasing** - people are **migrating** to cities like Tokyo, for jobs



### Climate of Japan:

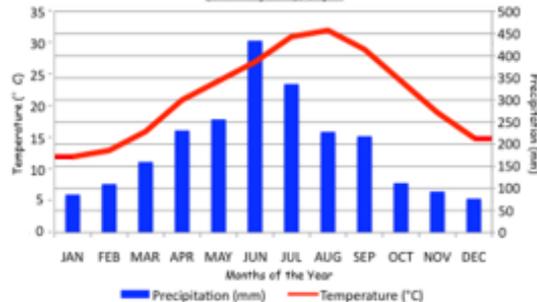
- Japan has a **temperate climate** - winters are cool, summers are warm, and rain occurs throughout the year
- Hokkaido is **subtropical**, so is colder than the rest of Japan



### Climate Graphs Success Criteria:

- X axis along the bottom should show months on the year
- Y axis on the left should show temperature
- Y axis on the right should show precipitation
- Line graph for temperature
- Bar chart for precipitation
- Bars should not touch
- Connect Jan/Dec line graph horizontally to Y axes
- Add a formal title: "A Climate Graph to Show..."

A Climate Graph to Show the Average Precipitation and Temperature in Kagoshima (South Kyushu, Japan)



### Interpreting Climate Graphs:

- Look for **patterns/trends** in the data
- Work out the **range, mean, median, mode, annual totals**
- Describe the patterns in temperature and rainfall, including how they relate

### Questions:

- Name two of Japan's large islands, and explain their location. Use at least **THREE** physical factors in your description (i.e. N/S/E/W, Pacific Ocean, Sea of Japan, USA etc.)
- Explain what happens at the type of plate boundary Japan is located on, and state what hazards Japan is most likely to experience as a consequence of its location.
- Write a paragraph (30-50 words) about why someone might want to live in Tokyo as opposed to rural Kyushu - try to refer to young children, as well as adults.
- Follow the prompts under 'Interpreting Climate Graphs' to analyse the Climate Graph for Kagoshima.
- Write a paragraph (30-50 words) comparing the different climatic conditions in each of the four main islands of Japan: Honshu, Hokkaido, Kyushu and Shikoku.





Industrial Revolution, was the transition to new manufacturing processes in Europe



### Keywords:

**industrial:** relating to factories, the people who work in factories, or the things made in factories

**Enclosure** was the legal process in England of closing small landholdings into larger farms.

**Luddites** - These are people who fear changes in technology as it damages their lively hood. These people were lead by Ned Ludd in 1811 - 1817.

**Urbanization** is a word for becoming more like a city.

### Key knowledge:

In 1750, more people worked on the land than lived in cities and therefore the landowners had a lot of power

Tenant Farmers rented land from a lord and then hired people to work on their land - these people were called labourers.

Villages also had three or four open fields or common land for poorer people to use. As time went on more and more enclosures were eating into this land, turning them into smaller fields and surrounding them with fences

This was very bad news for the poorest people, they had nowhere to graze their animals and the small money they had raised from milk, butter and cheese dried up.

Before 1700, most clothes were made out of wool and were made at home. This was called the **Domestic Industry**. As a result of the Industrial Revolution and a growing population, clothes were increasingly made in factories. As more factories were being built, more and more workers were needed. Factory owners began to realise that **children and poor women were cheaper to employ than healthy men**. As a result more and more children began to work long hours in factories and mills.

In 1840 the government set up a royal commission to investigate the conditions in the mine.

In 1842 - the report was published but mine owners said that it was exaggerated.



### Key Individuals:

George II is the King of Great Britain

Henry Pelham is the Prime Minister

Victoria is the Queen of Great Britain

Lord Salisbury is the Prime Minister

Jack the ripper

### I can:

1. Explain the reasons why Britain was able to industrialise so quickly.
2. Evaluate the most important impact of the industrial revolution on British society.
3. Evaluate the usefulness of primary sources in understanding the living conditions in city slums.
4. Explain the reasons why the British government started to improve living conditions for the working class.
5. Identify the key features crime during the industrial revolution.

### Prove it:

- 1.) The main reasons why the Britain was able to industrialise so quickly were....
- 2) Decide what was the most important impact of this was... **80%: The most important impact was..... I think this because**
- 3) **This source is useful to a historian because( provenance) from my own outside knowledge I know...**
- 4) **The Main reasons why British government began to improve living conditions for the working class were...**
- 5) 30%: The main crimes committed in Victorian London were...

### Questions:

Why did England industrialise faster

How did the Agricultural revolution start?

How did factories develop?

What was life for workers in the factories?

What was life like for children in in the factories?

How did people protest against the upper class?

How did parliament improve the conditions in cities slums?

What was crime link in Victorian London?

### Key dates:

he spinning mule became self-acting (automatic) in 1830s.

In 1833, the government passed a law to protect children in factories,

In 1854, government officials in Newcastle-upon-Tyne found that about 50 per cent of families had only a single room

1865- working class men get the right to vote

The Public Health Act of 1875



# St Joseph's College IT / Computing Department



Respect for FAITH

Respect for LEARNING

Respect for OTHERS

Respect for COMMUNITY

Respect for SELF



Holidays - Talking about weather, how you travel, where you like to go and where you have been.

### The past tense using 了:

To create the past tense in Mandarin is straightforward. Placing the simple character 了 **le** after a verb, indicates that an action is completed:

我去中国 **wǒ qù zhōng guó** I go to China

我去了中国 **wǒ qù le zhōng guó** I went to China

To make a negative, you need to use 没 **méi** not 不 **bù**.

我没去中国 **wǒ méi qù zhōng guó** I did not go to China

我没看电影 **wǒ méi kàn diàn yǐng** I did not watch a film

With a verb-objects such as 打网球 上网, you put 了 **le** after the verb, before the noun:

### Modes of Transport:

火车	<b>huǒ chē</b>	train
汽车	<b>qì chē</b>	car
公共汽车	<b>gōng gòng qì chē</b>	bus
出租车	<b>chū zū chē</b>	taxi
自行车	<b>zì xíng chē</b>	bike
飞机	<b>fēi jī</b>	plane
船	<b>chuán</b>	boat

### Modes of Transport:

地方	<b>dì fāng</b>	place
海边	<b>hǎi biān</b>	seaside
山区	<b>shān qū</b>	mountains
农村	<b>nóng cūn</b>	countryside
城市	<b>chéng shì</b>	city

### Key Verbs:

说	<b>shuō</b>	to speak
去	<b>qù</b>	to go
散步	<b>sàn bù</b>	to walk
滑雪	<b>huá xuě</b>	to ski
坐	<b>zuò</b>	to sit/go by
骑	<b>qí</b>	to ride on

### Weather:

天气	<b>tiān qì</b>	weather
风	<b>fēng</b>	wind
雨	<b>yǔ</b>	rain
雪	<b>xuě</b>	snow
云	<b>yún</b>	cloudy
雾	<b>wù</b>	fog
晴天	<b>qíng tiān</b>	clear day
热	<b>rè</b>	hot
冷	<b>lěng</b>	cold

### Countries

中国	<b>zhōng guó</b>	China
英国	<b>yīng guó</b>	England
法国	<b>fǎ guó</b>	France
德国	<b>dé guó</b>	Germany
美国	<b>měi guó</b>	USA
日本	<b>rì běn</b>	Japan
西班牙	<b>xī bān yá</b>	Spain
印度	<b>yìn dù</b>	India
巴基斯坦	<b>bā jī sī tǎn</b>	Pakistan
澳大利亚	<b>ào dà lì yà</b>	Australia

### Doing something with somebody:

To say you do something with somebody, remember the structure:

person A 和 (hé) person B 一起 (yì qǐ)+ verb

Peter 和 Paul 一起滑雪 **Peter hé Paul yì qǐ huá xuě**

Peter and Paul together ski i.e. Peter goes skiing with Paul

### When do you use 坐 zuò and 骑 qí?

For most means of transport you use 坐 'to sit / take'

You use 骑 which means 'to ride on the back of' for horses, bikes, etc.

我坐飞机。 **wǒ zuò fēi jī** 'I sit on a plane' - I go by plane

我骑自行车。 **wǒ qí zì xíng chē** 'I ride on the back of a bike' - I cycle

### Countries / Nationalities / Languages:

To talk about nationality in Chinese, you simply add '人' **rén** after the name of the country.

中国 becomes 中国人 **zhōng guó rén**

To say the name of the language, you normally replace '国' **guó** with '语' **yǔ**

英国 becomes 英语 **yīng yǔ**

For countries without '国' you normally add '语' after the country. 西班牙 becomes 西班牙语 **xī bān yá yǔ**

China is the exception with:

中文 **zhōng wén** and 汉语 **hàn yǔ**

### Holiday Questions:

1. 英国天气好不好? **yīng guó tiān qì hǎo bù hǎo?** What is the weather in the UK like?
2. 你是哪国人? **nǐ shì nǎ guó rén?** What nationality are you?
3. 你昨天去哪儿? **nǐ zuó tiān qù nǎ er?** Where did you go yesterday?
4. 你怎么去? **nǐ zěn me qù?** How did you get there??

### Holiday Answers:

1. 英国天气... **yīng guó tiān qì...** The weather in the UK is...
2. 我是... **wǒ shì...** I am...
3. 我昨天去... **wǒ zuó tiān qù...** Yesterday I went to...
4. 我们坐骑... 去 **wǒ xiǎng** We went by...





Unit 3 topics includes: Interpreting and drawing charts, Stem and leaf diagrams, Scatter graphs.

**Key Words**

**Frequency:** Total.  
**Mean:** Total of data divided by the number of pieces of data.  
**Mode:** The value that occurs most frequently.  
**Median:** Middle number when they are in order.  
**Range:** Difference between the largest and smallest values.

**Worked example**

Here are the heights of some tomato seedlings (in cm).  
 2.8, 3.4, 4.5, 4.1, 4.3, 2.7, 1.6, 3.2, 1.9, 2.5  
 Construct a stem and leaf diagram for this data.

1	6, 9
2	8, 7, 5
3	4, 2
4	5, 1, 3

Decide on a stem. For decimals use the whole-number part. Write in the leaves as you work along the data list.

1	6, 9
2	5, 7, 8
3	2, 4
4	1, 3, 5

Write out your diagram again, putting the leaves in order.

Key: 1 | 6 means 1.6 cm

Give your diagram a key.

**Key point**

A stem and leaf diagram shows numerical data split into 'stem' and 'leaves'. The key shows you how to read the values.

**Tips**

- There can be more than one mode.
- Range is a measure of spread, not an average.
- Bar charts have gaps between the bars.

**Key Concept Pie Charts**

There are 360 degrees in a pie chart. So you need angles that add to 360°.

Eye colour	F	$\frac{360}{90} = 4$
Blue	15	$\times 4 = 60$
Brown	43	$\times 4 = 172$
Other	32	$\times 4 = 128$
Total = 90		= 360

**Key point**

A two-way table divides data into groups in rows across the table and in columns down the table. You can calculate the totals across and down.

**Representing data in two-way tables**

Two-way tables represent discrete information in a visual way that allows you to make conclusions, find probability or find totals of sub groups

There are 2 green squares

There are 5 green shapes

	Squares	Circles	Total
Green	2	3	5
Red	2	1	3
Total	4	4	8

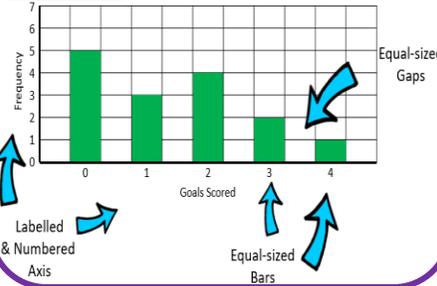
There are 8 items in total

Using your two-way table

To find a fraction e.g. What fraction of the items are red?  $\frac{3}{8}$  red items but 8 items in total =  $\frac{3}{8}$

**Hint:** Use your fraction, decimal percentage equivalence knowledge.

**Bar Charts** Goals Scored by Year 8 Football Team



Age	Frequency
11	17
12	11
13	8

**Scatter Graphs**

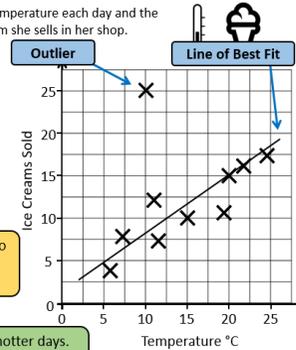
Ms Wilson records the temperature each day and the amount of ice cream she sells in her shop.

She plots each day on a graph.

Temperature (x)	Ice Creams Sold (y)
20	15
15	10
23	16

Can we expect a pattern in the data?  
 Ms Wilson plots more points.

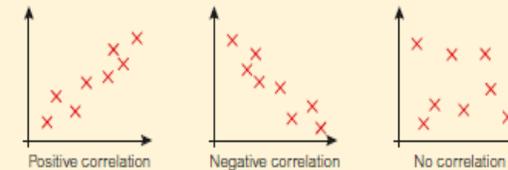
A scatter graph compares two variables to analyse whether there is a relationship between them.



We can see more ice creams are sold on hotter days. As one variable increases so does the other: there is a **positive correlation** between the variables.

**Key point**

A scatter graph plots two sets of data on the same graph to see if there is a relationship or correlation between them. This might be a **negative correlation**, a **positive correlation** or there might be **no correlation**.



**Questions:**

- Find the mean, mode, median and range of:
  - 3, 12, 4, 6, 8, 5, 4
  - 12, 1, 10, 1, 9, 3, 4, 9, 7, 9
- For the table:
  - Draw a pie chart to show the data.
  - Draw a bar chart to show the data.
  - Work out the mean of the data.

ANSWERS: 1) a) Mean = 9, Range = 8, Median = 4, Mode = 6, b) Mean = 9, Range = 5, Median = 5, Mode = 6, c) 11.75  
 2) a) Angles 170°, 110°, 80° b) Mean = 11, Range = 8, Median = 11, Mode = 11



**Algebra: Vocabulary** Match each word with its definition.

Variable	A letter used to represent numbers.
Expression	Any combination of letters, numbers and terms.
Equation	Shows equal expressions. To be solved.
Formula	Shows equal expressions. To be evaluated.
Identity	An equation true for all values.
Term	Separate parts of expressions, equations, formulae and identities.
Coefficient	A number expressing the quantity of a variable.

**Solving Equations**

For each step in solving an equation we must do the **inverse** operation

<p>Solve:</p> $12 = 3x - 18$ $+18 \quad +18$ $30 = 3x$ $+3 \quad +3$ $x = 10$	<p>Solve:</p> $7p - 5 = 3p + 3$ $-3p \quad -3p$ $4p - 5 = 3$ $+5 \quad +5$ $4p = 8$ $+2 \quad +2$ $p = 2$
---	---

**Key Concepts:**  
Simplifying expressions by collecting like terms

When collecting like terms involving addition or subtraction, add/subtract the numbers in front of the letters.

If the like terms are multiplied, multiply the numbers in front of the letters and put the letters next to each other.

If the like terms are divided, divide the numbers in front of the letters.

**Examples**

Simplify the following expressions:

- $4p + 6t + p - 2t = 5p + 4t$
- $3 + 2t + p - t + 2 = 5 + t + p$
- $f + 3g - 4f = 3g - 3g$
- $f^2 + 4f^2 - 2f^2 = 3f^2$
- $6a \times 3b \times 2c = 36abc$
- $\frac{9b}{3} = 3b$

**Tip**  
When expanding brackets be careful with negatives.

**Laws of Indices**

**Examples**

Simplify each of the following:

- $a^6 \times a^4 = a^{6+4} = a^{10}$
- $a^6 \div a^4 = a^{6-4} = a^2$
- $(a^6)^4 = a^{6 \times 4} = a^{24}$
- $(3a^4)^3 = 3^3 a^{4 \times 3} = 27a^{12}$
- $a^{-3} = \frac{1}{a^3}$
- $2a^{-4} = \frac{2}{a^4}$
- $a^{\frac{1}{2}} = \sqrt[2]{a^1} = \sqrt{a}$
- $a^{-\frac{1}{2}} = \frac{1}{a^{\frac{1}{2}}} = \frac{1}{\sqrt{a}}$
- $\left(\frac{25}{16}\right)^{-\frac{1}{2}} = \left(\frac{16}{25}\right)^{\frac{1}{2}}$
- $= \sqrt{\frac{16}{25}}$
- $= \frac{4}{5}$

**Key Concepts**

- $a^m \times a^n = a^{m+n}$
- $a^m \div a^n = a^{m-n}$
- $(a^m)^n = a^{mn}$
- $a^{-m} = \frac{1}{a^m}$
- $\frac{a^m}{a^n} = \sqrt[n]{a^m}$
- $a^{-\frac{m}{n}} = \frac{1}{\sqrt[n]{a^m}}$

**Key Words**

- Solve
- Rearrange
- Term
- Inverse

**Key Concepts**

**Solving equations:**  
Working with inverse operations to find the value of a variable.

**Rearranging an equation:**  
Working with inverse operations to isolate a highlighted variable.

**Examples**

Simplify:

$$4a + 3b - a + 2b = 3a + 5b$$

Expand and simplify:

$$9a - 2(3a - 4) = 9a - 6a + 8 = 3a + 8$$

Factorise:

$$9x^2 + 6x$$

Factorising is the opposite of expanding brackets

$$3x \text{ is common to both terms}$$

$$3x(3x + 2)$$

Expand and simplify:

$$2(4a + 2b) - 2(a + 3b) = 8a + 4b - 2a - 6b = 6a - 2b$$

Write as a single power: 1)  $a^3 \times a^2$  2)  $b^4 \times b$  3)  $d^{-5} \times d^{-1}$  4)  $m^6 \div m^2$

5)  $n^4 \div n^4$  6)  $\frac{8^4 \times 8^5}{8^6}$  7)  $\frac{4^9 \times 4}{4^3}$

Evaluate: 1)  $(3^2)^5$  2)  $2^{-2}$  3)  $81^{\frac{1}{2}}$  4)  $\left(\frac{1}{9}\right)^{\frac{1}{2}}$  5)  $16^{\frac{3}{2}}$  6)  $27^{-\frac{2}{3}}$

ANSWERS: 1)  $a^5$  2)  $b^5$  3)  $d^{-6}$  4)  $m^4$  5)  $1$  6)  $8^3$  7)  $4^7$   
1)  $3^{10}$  2)  $\frac{1}{4}$  3)  $9$  4)  $\frac{1}{3}$  5)  $6^3$  6)  $\frac{1}{9}$  7)  $4^7$

**Questions**

- $5x + 3y - 2x + 4y$
- $2p - 6q + 2q + 4p$
- $12b - 3(2b + 5)$
- Factorise a)  $4x + 10$  b)  $8a^2 - 10a$

ANSWERS: 1)  $3x + 7y$  2)  $6p - 4q$  3)  $6b - 15$  4)  $2(2x + 5)$  5)  $2a(4a - 5)$



This term we will learn about Blues Music, perform chords, the 12 bar Blues and the song Rock Around The Clock

### Keywords:

**Blues-** a music style that originated in United States from African-Americans

**Chord-** a group of notes played at the same time

**Chord C-** it contains the notes C E G

**Chord F-** it contains the notes F A C

**Chord G-** it contains the notes G B D

**Chord C7-** it contains the notes C E G Bb(flat)

**12 Bar Blues-** a sequence of chords, worth of 12 bars of music.

**The Walking Bass-** a bass pattern of notes based on the blues chords

**Bb(flat)-** black key on the keyboard, to the left of B

**Eb(flat)-** black key on the keyboard, to the left of E

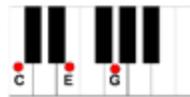
### What is Blues Music?

**Blues Music** has been described as the native music of the Mississippi African-American people. The word *blues* means sadness, despair and depression. Singers of blues sang about personal problems, betrayal, lost love, joblessness, hunger, homelessness and loneliness. Usually sung by one person who also played either a banjo or guitar between the lines of the song.

### The 12 Bar Blues:

The twelve-bar blues is one of the most prominent chord progressions in popular music. It's a sequence of chords worth of 12 bars of music for each verse.

### Chords



**C chord**  
has the notes:  
**C-E-G**



**F chord**  
has the notes:  
**F-A-C**



**G chord**  
has the notes:  
**G-B-D**



**C7 chord**  
has the notes:  
**C-E-G-Bb(flat)**

### The 12 bar blues

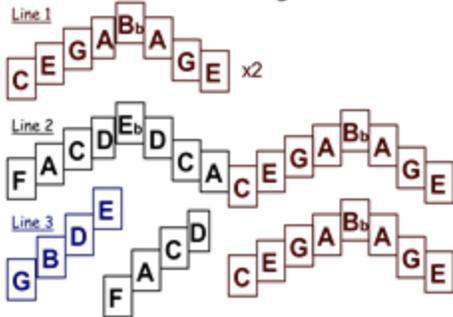
The 12 bar blues is the most popular chord sequence in blues music. Try and play the sequence by holding every chord for 4 counts.

<b>C</b> chord	<b>C</b> chord	<b>C</b> chord	<b>C7</b> chord
<b>F</b> chord	<b>F</b> chord	<b>C</b> chord	<b>C</b> chord
<b>G</b> chord	<b>F</b> chord	<b>C</b> chord	<b>C</b> chord

Performing the melody of **Rock Around the Clock** with the left hand chords



### The Walking Bass



**Bb(flat)-** the black key on the keyboard, to the left of B

**Eb(flat)-** the black key on the keyboard, to the left of E

### Questions:

1. Describe Blues Music.
2. What is the 12 Bar Blues?
3. What is a chord?
4. What notes are in chord C?
5. What notes are in chord F?
6. What notes are in chord G?
7. What notes are in chord C7?
8. What is the Walking Bass?



# St Joseph's College PE Department

## Year 8 Half Term 2: Football

Key concepts and skills required for football



### Keywords:

- Pass** - Kicking ball to teammate
- Shoot** - Attempting to score a goal
- Attack** - Playing towards opponents goal
- Defence** - Protecting your goal
- Movement** - Creating space off the ball
- Heading** - Using head to shoot or pass
- Control** - Keeping ball close to body
- Penalty** - Awarded if foul committed in penalty area
- Free kick** - Awarded if foul committed outside of area
- Goal kick** - Awarded when ball goes over opposition goal line
- Throw in** - Awarded when ball goes out of play
- Corner kick** - Awarded to attackers if opposition kick ball over goal line

### Key skills/abilities required:

- Short Passing** - Use inside of foot and place standing foot next to ball
- Long passing** - Use laces for more power if required, standing foot next to ball
- Shooting** - Head and knee over ball, use laces for power, inside of foot for control
- Heading** - Use forehead to make contact with ball
- Movement** - Move into space to receive the ball
- Teamwork** - Pass the ball to teammates to be successful against opposition
- Aerobic fitness** - Maintain personal fitness to be able to run around for a full game
- Motivation** - Stay passionate and committed when playing in order to be successful
- Leadership** - Team sports require leadership so that all players know what is expected of them in game situations

### Famous players:



Lionel Messi



Cristiano Ronaldo



Sadio Mane

### How can you improve?

#### Practice drills

- Pass with a partner** - Stand a short distance apart working on short passing, increase the distance to work on long passing
- Work on weak foot** - Stand in front of a wall kicking the ball repeatedly against the wall with your weaker foot
- Shooting practice** - Make a goal or use a goal, aim for the corners when practising. If you have a goalkeeper friend, put them in goal to add challenge
- Small sided games** - Play small sided games with your friends, 3v3, 4v4, 5v5. Focus on movement in small spaces
- Finishing drills** - 2 players in wide positions crossing ball into box for first time finish from striker
- Defending** - 1 v 1 or 2 v 2 defensive drills in small area

### Questions:

- How many players are on each team in a game of football?
- How long does a professional football match last for?
- Which 3 skills are the most important for a footballer to become one of the best players in the world?
- How many times have England won the football world cup? Name the year(s) for a bonus point..





To explore the topics of prayer and worship in different religious communities, both monotheistic and polytheistic.

### Keywords:

- Intercession:** Asking God for something on behalf of someone else.
- Contrition:** Saying sorry for what you have done wrong.
- Adoration:** Praising God.
- Thanksgiving:** Saying thank you for something you have received from God.
- Salah:** The Islamic term for prayer and one of the five pillars of Islam.
- Hajj:** The Islamic pilgrimage to Mecca.
- Wudu:** Ritual washing preceding prayer.
- Puja:** The Hindu term describing worship.

### What is Prayer?:

- Intercession:** Asking God for something on behalf of someone else. ("Hail Mary")
- Contrition:** Saying sorry for what you have done wrong. ("Our Father")
- Adoration:** Praising God. ("Doxology prayers")
- Thanksgiving:** Saying thank you for something you have received from God. ("Prayers before or after meals")

With these four key words you will create their own prayer which includes all types of prayers.

### Jesus Praying:

Throughout the lesson it will be made clear that the "Our Father" or "Lord's Prayer" is the only prayer that Christ taught us and therefore it is a perfect prayer.

Mark 1:35, Luke 22:42, Luke 6:12-13, Luke 11:9-10, Luke 18:13-14, Luke 23:34, Matthew 6:7

### Islamic Worship:

Preparations of prayer: Wudu.

- Understanding the different steps in Wudu including intent, the physical washing and the saying of the Shahada.

Islamic Prayer movements.

- It is important to understanding why bowing and kneeling is prevalent in Islam. The answer being to glorify God, to show submission to God (which is what the word Islam means), and to be humble before God when praying.

Allahu Akbar = God is Great    Facing towards Mecca    Praying 5x a day

### Questions:

- 1) Compare and contrast two different forms of prayer.
- 2) Explain the Islamic pilgrimage to Mecca.
- 3) "The Our Father is the only prayer that Christians need". Evaluate this statement.



Describe how Scientists use the Periodic Table to order the elements they have discovered, comparing metals to non-metals and the properties of Groups 1, 7 and 0.

### Keywords:

**Periodic Table:** A tabular representation of all known elements in order based on atomic number.

**Atomic Number:** The number of protons in the nucleus of an atom. Also called the proton number.

**Periods:** A horizontal row in the Periodic Table.

**Groups:** A vertical column in the Periodic Table containing elements with similar chemical properties.

**Elements:** A substance made of only one type of atoms.

**Compound:** A substance where two or more elements have chemically joined together.

**Mixture:** Two or more substances that are joined together. The substances can be elements, compounds or both.

### Metals vs Non-metals:

#### Metals are:

- Shiny
- Sonorous
- Strong
- Good conductors of heat and electricity
- Malleable (can be bent and shaped)
- Have high densities

Metal										Metalloid		Nonmetal																																			
H															He																																
Li	Be										B	C	N	O	F	Ne																															
Na	Mg										Al	Si	P	S	Cl	Ar																															
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr																														
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe																														
Cs	Ba	La-Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn																														
Fr	Ra	Ac-Lr																																													
<table border="1"> <tr> <td>La</td><td>Ce</td><td>Pr</td><td>Nd</td><td>Pm</td><td>Sm</td><td>Eu</td><td>Gd</td><td>Tb</td><td>Dy</td><td>Ho</td><td>Er</td><td>Tm</td><td>Yb</td><td>Lu</td> </tr> <tr> <td>Ac</td><td>Th</td><td>Pa</td><td>U</td><td>Np</td><td>Pu</td><td>Am</td><td>Cm</td><td>Bk</td><td>Cf</td><td>Es</td><td>Fm</td><td>Md</td><td>No</td><td>Lr</td> </tr> </table>																		La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu																																	
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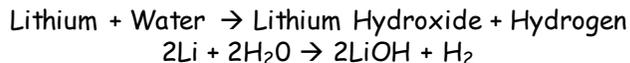
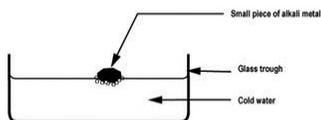
#### Non-metals are:

- Dull
- Brittle
- Poor conductors of heat and electricity

### Group 1 - Alkali Metals:

- Group 1 metals are very soft metals which can be cut with a knife.
- They have relatively low melting and boiling points for metals.
- They are very reactive compared to other metals (they are stored in oil and react violently with water).
- The elements become more reactive as you go down Group 1.

When the group 1 metals react in water they produce a metal hydroxide and hydrogen gas.

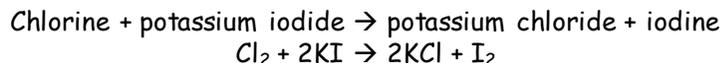


### Group 7 - The Halogens:

- Group 7 elements are non metals
- They form molecules of two atoms.
- Their boiling and melting points increase as you go down the group.



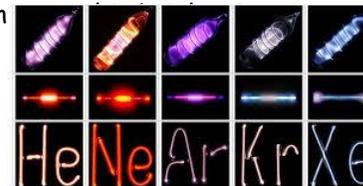
- Group 7 halogens become less reactive when you move down the group.
- A more reactive halogen will kick a less reactive halogen out of a compound (known as displacement).



### Group 0 - The Noble Gases:

- Group 0 elements are non-metals.
- They are unreactive because they have a stable electron structure.
- They exist as individual atoms.
- They are all gases at room temperature because they have low boiling points.

#### Neon



Radon is a radioactive element.





In this unit you will learn how to interpret distance-time graphs and velocity-time graphs, as well as how pressure affects substances.

### Keywords:

**Speed:** Speed ((m/s) = distance (m) / Time (s)

**Average speed:** The Total distance / by total time it took to complete a journey

**Velocity:** Speed in a given direction

**Acceleration:** change in velocity/time

**Gas pressure:** Collision of gas particles on the container

**Atmospheric pressure:** The air particles that surround you in our atmosphere exert a pressure on all objects as they collide.

**Liquid pressure:** Liquid molecules colliding and exerting a force on the container.

**Pressure:** (Solid) Pressure = Weight or force / area

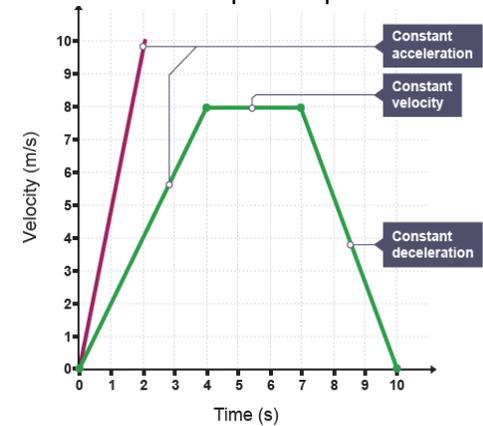
### Velocity-time graphs:

The velocity of an object is its speed in a particular direction. A velocity-time graph shows the speed and direction an object travels over a specific period of time.

When an object is moving with a constant velocity - the line on the graph is horizontal.

Constant acceleration: the line on the graph is straight but sloped.

Curved lines on velocity-time graphs also show changes in velocity, but not with a constant acceleration or deceleration. A sloped line downwards shows deceleration.



### Distance-time graphs:

Distance-time graph represent the motion of an object. It shows how the distance moved from a starting point changes over time.

Distance travelled = the Y axis

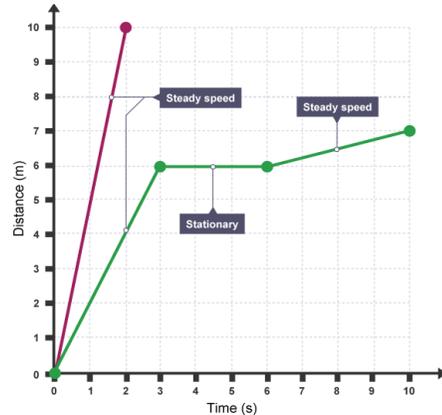
Time taken = x axis

The gradient = speed.

This means that:

- Horizontal for a stationary object (because the distance stays the same)

- The steeper the horizontal line is, the quicker the object is moving.



You can work out the speed using this graph using this equation:

$$\text{Speed (m/s)} = \text{distance (m)} / \text{Time (s)}$$

Eg: From the distance-time graph, calculate the speed between 6 s and 10 s.

$$\text{Speed (m/s)} = \text{distance (m)} / \text{Time (s)}$$

$$\text{distance travelled} = 7 - 6 = 1 \text{ m} \quad \text{time taken} = 10 - 6 = 4 \text{ s}$$

$$\text{speed} = 1 \text{ m} / 4 \text{ s} = 0.25 \text{ m/s}$$

### Pressure in gas:

The particles in a gas move quickly in all directions. However, when the gas particles are inside a container, they collide with the walls of their container. This is what cause pressure. You can increase the pressure in three ways.

- 1) Increase temperature. This cause the particles in a gas move faster, so they collide with the walls of the container more often.
- 2) Decrease the volume of the container (same amount of particles). This will also allow the particles to collide with the wall of the container more frequently.
- 3) Increasing the number of particles in the container. This will also increase the number of collisions of the container.

### Pressure in solids:

Pressure is how much force is exerted over an area. The force is weight which is measured in N.

You can calculate pressure in solids with the below equation.

Eg: A force of 20 N acts over an area of 4 m<sup>2</sup>. Calculate the pressure.

$$\text{pressure} = \text{force} \div \text{area}$$

$$= 20 \text{ N} \div 4 \text{ m}^2 = 5 \text{ N/m}^2$$

$$\text{Pressure (N/m}^2\text{)} = \text{force (N)} \div \text{area (m}^2\text{)}$$



# St Joseph's College Spanish Department

## Y8 Half Term 2: Mi instituto y los trabajos.



¿Cómo se llama tu colegio?

¿Qué instalaciones hay? Hay (there is)... No hay (there is no)...

**Objective:** Learn to talk about your school, the subjects you study, etc

porque because

¿Qué hay en tu mochila? (what's in your bag?).

Hay (there is)... No hay (there is no)...



un cuaderno una goma



un bolígrafo una regla



un lápiz un libro



un estuche un papel

**EL COLEGIO**  
Mi colegio se llama \_\_\_\_  
Es un colegio público, privado, mixto, de chicos de chicas

una pista de fútbol  
aulas  
un teatro  
un comedor  
una piscina  
un gimnasio  
unos laboratorios  
una biblioteca  
un patio

¿Qué asignaturas estudias? (Which subjects do you study?)

Estudio (I study)... No estudio

a el español b las matemáticas c el inglés  
f el francés g la informática h la historia

### The past imperfect tense

Singular	Estudiar = to study	Plural	Estudiar = to study
Yo	estudiaba	Nosotros	estudiábamos
Tú	estudiabas	Vosotros	estudiabais
Él Ella	estudiaba	Ellos Ellas	estudiaban

### The present simple tense

Singular	Estudiar = to study	Plural	Estudiar = to study
Yo	estudio	Nosotros	estudiamos
Tú	estudias	Vosotros	estudiáis
Él Ella	estudia	Ellos Ellas	estudian

### The immediate future tense

Singular	Estudiar = to study	Plural	Estudiar = to study
Yo	voy a estudiar	Nosotros	vamos a estudiar
Tú	vas a estudiar	Vosotros	vais a estudiar
Él Ella	va a estudiar	Ellos Ellas	van a estudiar

- es divertido
- es fácil
- es interesante
- es práctico
- es útil
- me apasiona
- es obligatorio
- me entretiene

**Question:** ¿Cómo es tu colegio?  
**Answers:** Mi colegio se llama San José. Estudio ciencias, matemáticas, español, etc. Mi asignatura favorita es la informática. Hay una pista de fútbol, un teatro, un comedor y una piscina.

**Reglas del colegio:**

- Escucha
- Siéntate al llegar
- Presta atención
- Ayuda a tus amigos
- No interrumpas a otros
- Organiza tus materiales
- Llega a tiempo

**Debes** / **No debes**

- Dar patadas
- empujar
- comer chicle
- pegar
- arañar

Respect for FAITH

Respect for LEARNING

Respect for OTHERS

Respect for COMMUNITY

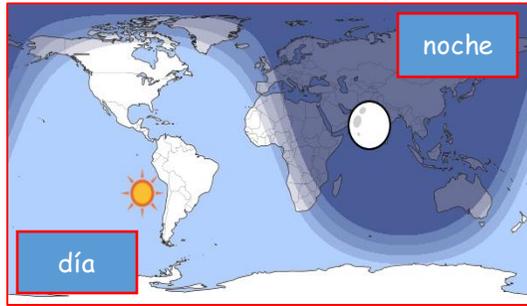
Respect for SELF



# St Joseph's College Spanish Department

## Y8 Half Term 2: Mi instituto y los trabajos.

Lo que necesito para tener un día perfecto:



### LA HORA

¿Qué hora es? ... en punto

... menos cinco ... y cinco  
 ... menos diez ... y diez  
 ... menos cuarto ... y cuarto  
 ... menos veinte ... y veinte  
 ... menos veinticinco ... y veinticinco  
 ... y media

2:00 - Son las dos **en punto**.      2:30 - Son las dos **y media**.  
 2:05 - Son las dos **y cinco**.      2:35 - Son las tres **menos veinticinco**.  
 2:10 - Son las dos **y diez**.      2:40 - Son las tres **menos veinte**.  
 2:15 - Son las dos **y cuarto**.      2:45 - Son las tres **menos cuarto**.  
 2:20 - Son las dos **y veinte**.      2:50 - Son las tres **menos diez**.  
 2:25 - Son las dos **y veinticinco**.      2:55 - Son las tres **menos cinco**.

Para las 12:00 se puede decir:      Otras expresiones:  
 - Las doce en punto.      ... de la mañana (hasta el mediodía)  
 - El mediodía (= 12 del día)      ... de la tarde (desde el mediodía hasta la noche)  
 - La medianoche (= 12 de la noche)      ... de la noche (cuando está oscuro)

### Las fiestas de Navidad y Año Nuevo

- Periodo de tiempo del 22.12 al 06.01
- Momentos señalados
  - 22.12 Lotería de Navidad
  - 24.12 Nochebuena
  - 25.12 Día de Navidad
  - 28.12 Santos Inocentes
  - 31.12 Nochevieja
  - 1.1 Día de Año Nuevo
  - 5.1 Noche de Reyes
  - 6.1 Día de Reyes, Lotería del niño



### Horario escolar en España

7:00		
8:00		
9:00		
10:00	Clases	Clases
11:00		
12:00		
13:00	Almuerzo	
14:00		
15:00	Clases	
16:00		
17:00		
18:00		

### Gramática

#### Using future expressions

The following future expressions are all followed by the infinitive:

- Tengo la intención de... I intend to...
- Espero... I hope...
- Quisiera... I would like...
- Me gustaría... I would like...
- Me encantaría... I would love...

Use them with these time phrases:

- En el futuro... In the future...
- El curso/año que viene... Next year...
- Pronto... Soon...
- Dentro de poco... Shortly...

### Trabajos. Profesiones



Me gustaría ser...	I would like to be
Quiero ser...	I want to be
Soy...	I am
Mi padre trabaja de...	My father works as
Mi madre trabaja como	My mother works as



### Mi día IDEAL

MÁS TARDE      LUEGO      POR LA NOCHE

... juego... el fútbol con Claudio Pizarro: ¡marco! el primer gol!

... voy a dormir... ¡oooooooooo!... es el fin de mi día ideal!

¿Cuál es tu deporte favorito?

¿A qué hora vas a dormir?

¿Dónde vas con tus amigos?

¿Con quién te gusta salir?

... voy al parque con mis amigos para practicar con el monopatin'.

¡Me voy rápido, galgo! con Helena Christensen. Helena come pizza... ¡y yo también!

desayuno      comida      cena

de 7 a 9 de la mañana      de 2 a 3 de la tarde      de 9 a 10 de la noche







# The Periodic Table of Elements

1	2											3	4	5	6	7	0	
		<b>Key</b> relative atomic mass <b>atomic symbol</b> name atomic (proton) number										1 <b>H</b> hydrogen 1						4 <b>He</b> helium 2
7 <b>Li</b> lithium 3	9 <b>Be</b> beryllium 4											11 <b>B</b> boron 5	12 <b>C</b> carbon 6	14 <b>N</b> nitrogen 7	16 <b>O</b> oxygen 8	19 <b>F</b> fluorine 9	20 <b>Ne</b> neon 10	
23 <b>Na</b> sodium 11	24 <b>Mg</b> magnesium 12											27 <b>Al</b> aluminium 13	28 <b>Si</b> silicon 14	31 <b>P</b> phosphorus 15	32 <b>S</b> sulfur 16	35.5 <b>Cl</b> chlorine 17	40 <b>Ar</b> argon 18	
39 <b>K</b> potassium 19	40 <b>Ca</b> calcium 20	45 <b>Sc</b> scandium 21	48 <b>Ti</b> titanium 22	51 <b>V</b> vanadium 23	52 <b>Cr</b> chromium 24	55 <b>Mn</b> manganese 25	56 <b>Fe</b> iron 26	59 <b>Co</b> cobalt 27	59 <b>Ni</b> nickel 28	63.5 <b>Cu</b> copper 29	65 <b>Zn</b> zinc 30	70 <b>Ga</b> gallium 31	73 <b>Ge</b> germanium 32	75 <b>As</b> arsenic 33	79 <b>Se</b> selenium 34	80 <b>Br</b> bromine 35	84 <b>Kr</b> krypton 36	
85 <b>Rb</b> rubidium 37	88 <b>Sr</b> strontium 38	89 <b>Y</b> yttrium 39	91 <b>Zr</b> zirconium 40	93 <b>Nb</b> niobium 41	96 <b>Mo</b> molybdenum 42	[98] <b>Tc</b> technetium 43	101 <b>Ru</b> ruthenium 44	103 <b>Rh</b> rhodium 45	106 <b>Pd</b> palladium 46	108 <b>Ag</b> silver 47	112 <b>Cd</b> cadmium 48	115 <b>In</b> indium 49	119 <b>Sn</b> tin 50	122 <b>Sb</b> antimony 51	128 <b>Te</b> tellurium 52	127 <b>I</b> iodine 53	131 <b>Xe</b> xenon 54	
133 <b>Cs</b> caesium 55	137 <b>Ba</b> barium 56	139 <b>La*</b> lanthanum 57	178 <b>Hf</b> hafnium 72	181 <b>Ta</b> tantalum 73	184 <b>W</b> tungsten 74	186 <b>Re</b> rhenium 75	190 <b>Os</b> osmium 76	192 <b>Ir</b> iridium 77	195 <b>Pt</b> platinum 78	197 <b>Au</b> gold 79	201 <b>Hg</b> mercury 80	204 <b>Tl</b> thallium 81	207 <b>Pb</b> lead 82	209 <b>Bi</b> bismuth 83	[209] <b>Po</b> polonium 84	[210] <b>At</b> astatine 85	[222] <b>Rn</b> radon 86	
[223] <b>Fr</b> francium 87	[226] <b>Ra</b> radium 88	[227] <b>Ac*</b> actinium 89	[261] <b>Rf</b> rutherfordium 104	[262] <b>Db</b> dubnium 105	[266] <b>Sg</b> seaborgium 106	[264] <b>Bh</b> bohrium 107	[277] <b>Hs</b> hassium 108	[268] <b>Mt</b> meitnerium 109	[271] <b>Ds</b> darmstadtium 110	[272] <b>Rg</b> roentgenium 111	[285] <b>Cn</b> copernicium 112	[286] <b>Nh</b> nihonium 113	[289] <b>Fl</b> flerovium 114	[289] <b>Mc</b> moscovium 115	[293] <b>Lv</b> livermorium 116	[294] <b>Ts</b> tennessine 117	[294] <b>Og</b> oganeson 118	

\* The Lanthanides (atomic numbers 58 – 71) and the Actinides (atomic numbers 90 – 103) have been omitted.

Relative atomic masses for **Cu** and **Cl** have not been rounded to the nearest whole number.



# Multiplication Grid & Formulae



## My Multiplication Chart 1-12

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

### Areas

Rectangle =  $l \times w$

Parallelogram =  $b \times h$

Triangle =  $\frac{1}{2} b \times h$

Trapezium =  $\frac{1}{2}(a+b)h$

### Circles

Circumference =  $\pi \times \text{diameter}$ ,  $C = \pi d$

Circumference =  $2 \times \pi \times \text{radius}$ ,  $C = 2\pi r$

Area of a circle =  $\pi \times \text{radius squared}$ ,  $A = \pi r^2$

### Pythagoras

Pythagoras' Theorem  
For a right-angled triangle,  
 $a^2 + b^2 = c^2$

Trigonometric ratios (new to F)  
 $\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$ ,  $\cos x^\circ = \frac{\text{adj}}{\text{hyp}}$ ,  $\tan x^\circ = \frac{\text{opp}}{\text{adj}}$

### Quadratic equations

The Quadratic Equation  
The solutions of  $ax^2 + bx + c = 0$ , \_\_\_\_\_  
where  $a \neq 0$ , are given by  $x = \frac{-b \pm \sqrt{(b^2 - 4ac)}}{2a}$

### Volumes

Cuboid =  $l \times w \times h$

Prism = area of cross section  $\times$  length

Cylinder =  $\pi r^2 h$

Volume of pyramid =  $\frac{1}{3} \times \text{area of base} \times h$

### Compound measures

Speed  
 $\text{speed} = \frac{\text{distance}}{\text{time}}$

Density  
 $\text{density} = \frac{\text{mass}}{\text{volume}}$

Pressure  
The formula for pressure does not need to be learnt, and will be given within the relevant examination questions.

### Trigonometric formulae

Sine Rule  $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine Rule  $a^2 = b^2 + c^2 - 2bc \cos A$

Area of triangle =  $\frac{1}{2} ab \sin C$

Foundation tier formulae

Higher tier formulae



# Equipment

**SJC: The Basics**  
Every lesson!  
Every day!

**ESSENTIALS**

**IDEAL**

**Essentials**  
Pencil case  
Blue/Black pens  
Green pens  
Pencils  
Sharpener  
Rubber  
Ruler  
Calculator  
Compass  
Protractor  
Exercise Books  
Textbooks  
Coloured pencils  
Highlighters

**Ideal**  
Document wallet  
Glue stick  
Scissors



### Respect for Faith

We believe that we are a school community rooted in the Catholic Christian faith with respect for all faiths, religions and views. All students and staff have the right to express their faith in God and be treated with dignity.

### Respect for Self

We believe we are all children of God and encourage each other to see this within themselves. We believe that our social, emotional and spiritual development, being healthy and happy are central to our wellbeing. We believe that we must protect these rights for all.

### Respect for Others

We believe that everyone deserves respect and we will treat others as we would like to be treated.

### Respect for Learning

We believe that students and staff must be prepared in order to make the best of every learning opportunity. We believe that everyone can improve, make progress and achieve success. We believe that developing independence and determination is key to life's journey.

### Respect for the College and Wider Community

We seek to care for our College and serve our local community. We believe that the college environment should be respected and safe.

## STUDENTS WILL:

1. Be proud of their faith and treat all faiths with respect.
2. Show respect, and courtesy to all, treating all members of the school and visitors as they would like to be treated themselves. They will make sure the school is a safe place for all to express their views and opinions.
3. Value the whole school treating every area with respect making sure that every part of the school is clean, tidy and litter free.
4. Move around the school calmly, sensibly and safely.
5. Have a 'positive can do' attitude to learning, take pride in their appearance by wearing a smart uniform, arriving on time to lessons with the right equipment.
6. Work to the best of their ability. They will not give up even when work is difficult and challenging. They will take responsibility for their actions and for achieving their potential.
7. Participate in at least one extra-curricular activity to support their social and emotional development.
8. Respect all school expectations and follow the rewards/sanctions procedures.

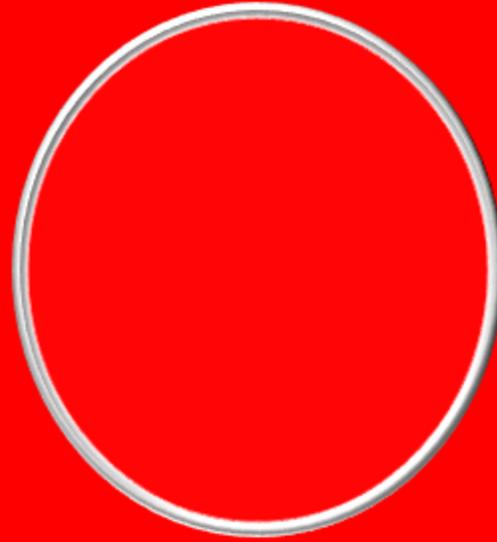


## STAFF WILL:

1. Respect the views and opinions of all students, parents and colleagues. They will act as role models to students by demonstrating patience, respect and fairness.
2. Demonstrate their belief in a growth mindset: that all learners can improve, progress and achieve success.
3. Dress smartly for lessons, arrive on time, greet students at the door and ensure that learning can begin immediately.
4. Prepare for learning by knowing their students, having excellent subject knowledge and ensuring every student is challenged and stretched.
5. Create a positive and engaging learning environment and ensure that class displays are supportive, relevant, encourage resilience and are presentable.
6. Assess learning regularly, create different opportunities for students to access learning content and help students achieve their personal goals.
7. Promote the health, happiness and well-being of all students.
8. Apply the school expectations fairly to all students.



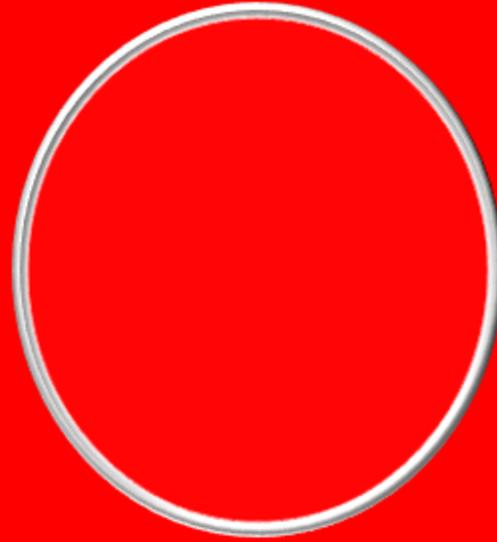
**Traffic light:**



**Red**



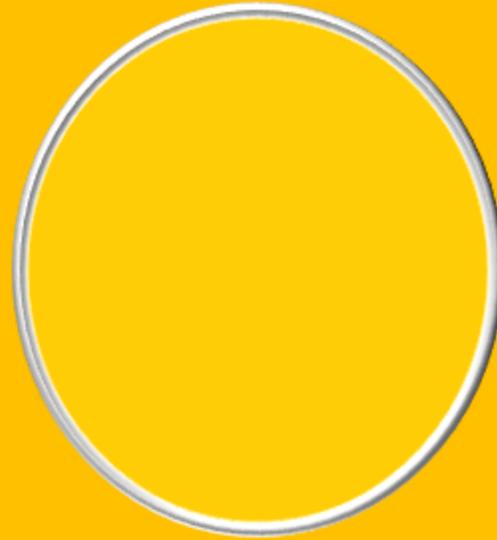
**Traffic light:**



**Red**



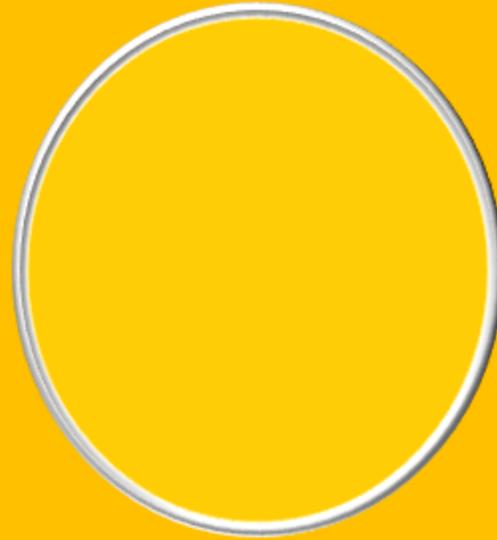
**Traffic light:**



**Amber**



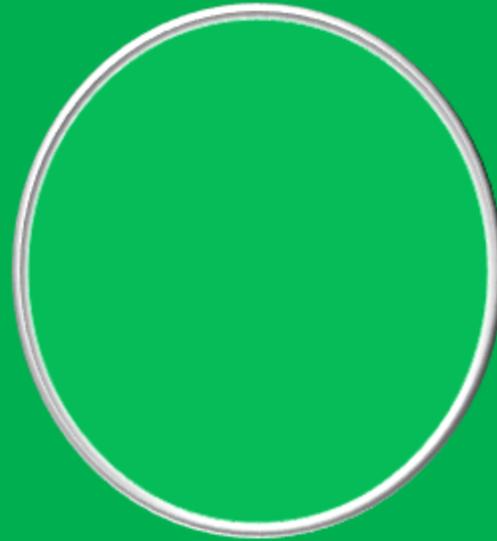
**Traffic light:**



**Amber**



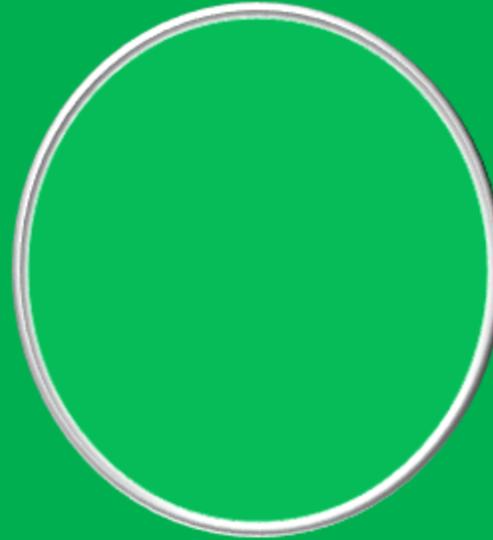
**Traffic light:**



**Green**



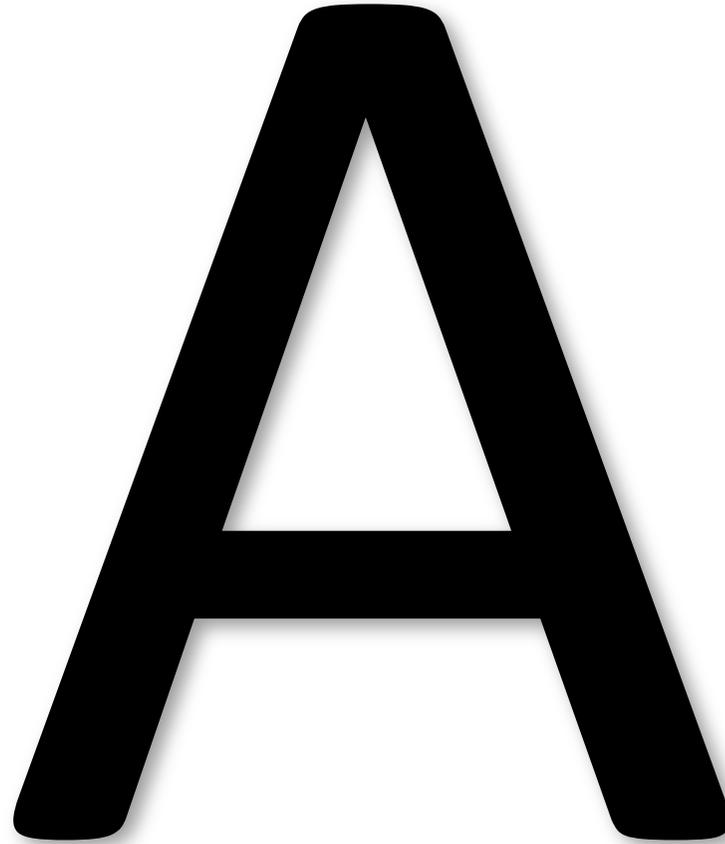
**Traffic light:**



**Green**



# A, B, C, D Cards





# A, B, C, D Cards

**B**



# A, B, C, D Cards

C



# A, B, C, D Cards

