



The John of Gaunt School
A Community Academy

Name

TG

Year 8

Knowledge Organisers

Term 4 -2024

Year 8 Term 5 Quizzing Homework - Question Bank

Computer Science	Design Technology
<ol style="list-style-type: none"> 1. What is binary code? 2. Why is Binary important in computer science? 3. How many options are there in Binary? 4. What is a bit? 5. How many bits are in a byte? 6. Define the term "kilobyte". 7. Explain the concept of a pixel in the context of digital images. 8. What is the difference between lossless and lossy compression techniques? 9. How is colour typically represented in digital images? 10. What is a bitmap graphic? 11. Convert the binary number 11001 to decimal. 12. Convery the binary number 01010 to decimal. 13. Convert the decimal number 19 to binary. 14. Convery the decimal number 23 to binary. 15. Define the term "resolution". 16. What do we mean by colour depth? 17. How does more colour in an image effect the file size? 18. How many kilo bytes make up a megabyte? 19. 4 bits can represent how many colours? 20. Put these in the correct file size Megabyte, petabyte, bit, byte, terabyte, byte, gigabyte 	<ol style="list-style-type: none"> 1. What does the word Rendering mean in Graphics? 2. What does the word Annotation mean? 3. Why do we Annotate design drawing work? 4. Name two methods of enhancing a drawing? 5. What does CAD stand for? 6. When using 2D Design what colour etches the materials. 7. Name a 3D drawing technique that uses 30-degree lines? 8. When looking at scale drawings what does this mean 2:1? 9. What does Aesthetics mean? 10. Why do we Analyse a product? 11. What is acrylic made from? 12. What does sustainability mean? 13. What does Placement involve in graphics? 14. Name a manufactured material that you could use in your mood light? 15. Why do we use joints to fasten wood together? 16. Give an example of a temporary wood joint. 17. Explain the term Specification. 18. How would you describe an Output of an electrical circuit? 19. What is the function of a Resistor in an electrical circuit? 20. What does Resistor do in an electric circuit?

Drama	English
<ol style="list-style-type: none"> 1. What three genres did Shakespeare write? 2. What is iambic pentameter? 3. What the name of Shakespeare's theatre? 4. What is characterisation? 5. What is body language and how do we use it? 6. What are facial expressions and how do we use them? 7. What is 'Realism' theatre trying to achieve? 8. Who was Konstantin Stanislavski? 9. What are given circumstances? 10. What questions is the technique of Magic If asking an actor? 11. What can help create atmosphere in a performance? 12. What are proxemics? 13. What is a set-designer? 14. What is a lighting-designer? 15. What is a sound-designer? 16. What is Slapstick comedy? 17. What affects a persons' accent? 18. What is tone? 19. How do you change your posture? 20. What is gesture and how do we use it? 	<ol style="list-style-type: none"> 1. Which character is the daughter of Leonato? 2. Which character falls in love with Hero? 3. List two words to describe Beatrice's character. 4. Benedick is a soldier. True or False? 5. Leonato is an uncle to Beatrice's character. True or False? 6. Which character is the Prince of Aragon? 7. Which character is resentful and angry? 8. How many lines does a sonnet have? 9. What is a soliloquy? 10. What does antithesis mean? 11. What does dramatic irony mean? 12. Your status is your social or professional position in society. True or False? 13. If you deliberately cause someone to believe that something isn't true, it is called d..... 14. What does innocent mean? 15. Who was on the throne when Shakespeare wrote Much Ado About Nothing? 16. Where does the play take place? 17. What genre is the play? 18. <i>Complete the quotation:</i> Hero: 'Some Cupid kills with, some with 19. <i>Complete the quotation:</i> Benedick: 'Well, you are a rare teacher' 20. <i>Complete the quotation:</i> Beatrice: 'A of my tongue is better than a of yours'

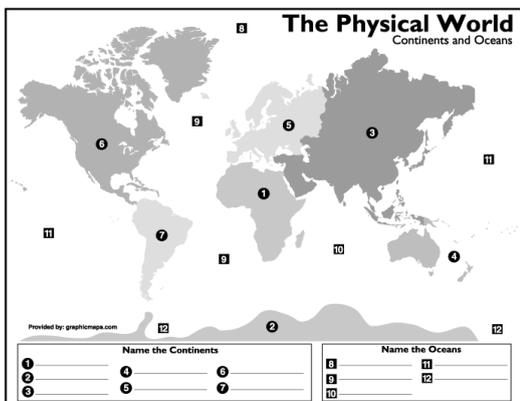
Food	French
<ol style="list-style-type: none"> 1. Name the 4 fat soluble vitamins. 2. Name the 2 water soluble vitamins. 3. Name 2 vegetable cuts. 4. When opening the oven door, where do you stand? 5. Where should the pan handles be pointed to when using the hob? 6. Which mineral is needed to absorb calcium from food? 7. True or false – you must provide your own apron and containers? 8. Bacteria reproduces via which method? 9. Name 3 food poisoning bacteria. 10. Explain the term ‘Danger Zone’. 11. What is the difference between saturated and unsaturated fats? 12. What are the 3 macronutrients? 13. What are Micronutrients? 14. What is cross contamination? 15. Explain what the Eatwell Guide is. 16. Name 5 sections of the Eatwell Guide. 17. List 4 diet related diseases. 18. What does BMR stand for and explain what it means? 19. Explain the term ‘Energy Balance’. 20. What does - ‘Protein Complementation’ mean? 	<p>A] Revise the opinions verbs on the KO and write what these are in French:</p> <ol style="list-style-type: none"> 1. I like 2. I really like 3. I like a lot 4. I love 5. I don’t like 6. I don’t like at all 7. I hate 8. I prefer <p><u>B] Write the English translations for these sentences about subjects and teachers. Check your answers with your KO. Revise the vocabulary, make up your own sentences.</u></p> <ol style="list-style-type: none"> 1. Normalement j’adore l’informatique parce que c’est intéressant. 2. Mon prof de maths explique bien. C’est facile. 3. Je m’intéresse à la géographie car c’est passionnant. 4. Ma prof de français m’aide beaucoup et elle est vraiment gentille. 5. Il y a beaucoup de variété dans les cours de sport, mais c’est vraiment fatigant.

Geography

History

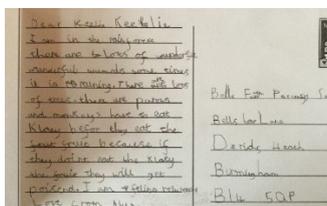
Activity one

1. Name Russia's capital city
2. What is Russia's population?
3. Give 3 reasons why this is an important country?
4. Give three facts about Siberia's climate
5. What was the coldest ever temperature?
6. Identify three challenges of living in Siberia
7. Name the tribe we studied
8. Identify the animal that this tribe relies upon for transport, fur and food.
9. Define Nomadic
10. What happened at Chernobyl?
11. Name an earthquake you have studied, its date, magnitude and deaths
12. Name the 7 continents and the 5 oceans:



Activity two:

Read the section on Russia's tundra climate. Imagine that you have visited Oymyakon in Russia's arctic tundra. Design a postcard that describes your experience. Write home about the climate, the landscape, the animals and the people. Create the picture side of the postcard too. Look at the example below for help.



Activity three:

Use the knowledge organiser and what you have learnt in class about animals in the tundra to design your own imaginary tundra animal. Your animal must be perfectly adapted to the tundra environment. Draw your animal carefully then annotate it to explain the adaptations to the cold, dangerous environment.

8.4 History Task 1

1. What was nickname given to a Parliamentarian soldier in the English Civil War?
2. Why did King James VI of Scotland also become King James I of England in 1603?
3. Which phrase describes the idea that kings (and royal blood) are chosen by God?
4. What word is used for the devil when he approaches witches (in animal form)?
5. What is a Puritan?
6. In what year did Catholic plotters attempt to assassinate James I and all his MPs and advisors?
7. Which Catholic led and organised the Gunpowder Plot?
8. Name 4 ways that witches could be found guilty of witchcraft in a court?
9. Who wrote a very popular and influential book in 1597 all about identifying and hunting down witches?
10. How much could people earn (using today's money) in the 1600s if they "correctly" found a witch who was then found guilty in court?

8.4 History Task 2

Write a letter home to your wife/parents explaining why you have joined the Civil War and describing your role in the army and a battle that you have fought in.

You should include the following information

1. Which army you have joined - Roundhead or Cavalier
2. Why you decided to join up- what do you like about the side you chose? What have the opposition done wrong? Think back to the causes of the Civil War
3. What role do you play in the army? Infantry? If so - Pike man? Musketeer? Cavalry?
4. Describe a battle that you have fought in- local ones include Roundway and Lansdown - What happened? Who won?

History cont.	Music
<p>8.4 History Task 3</p> <p>11. Name 3 reasons why so many people were accused of witchcraft in the 1640s?</p> <p>12. What name was given to the king's <i>personal</i> court of justice?</p> <p>13. Between 1563 and 1716, how many women are estimated to have been hanged for witchcraft in the UK?</p> <p>14. Which Civil War definition below is FALSE?</p> <p>15. What was the outcomes of the capture of Guy Fawkes and the Gunpowder Plotters?</p> <p>123 Catholic plotters were rounded up and hanged</p> <p>16. What title did lawyer Matthew Hopkins give himself between 1645 and 1647?</p> <p>17. Give 4 reasons why England's Protestant Parliament challenged Charles I after 1625?</p> <p>18. Name 2 local areas which saw Civil War battles between 1642 and 1644?</p> <p>19. What did Parliament call their <i>changed</i> army after 1644 (uniforms / equipment / training / proper pay / discipline etc)</p> <p>20. Charles I was executed (beheaded) for treason? When?</p>	<ol style="list-style-type: none"> 1. Where did the Blues originate? 2. Name typical instruments you would find in Blues music 3. What is improvisation? 4. What is the 12 bar Blues? 5. How many different chords are in the 12 Bar Blues chord pattern? 6. What is a work song? 7. What are the names of the four families in the orchestra? 8. What is the difference between pizzicato and arco? 9. What is the word for a high female voice? 10. What is the word for a low female voice? 11. What is the word for a high male voice? 12. What is the word for a low male voice? 13. Where does Calypso Music come from? 14. Name a traditional Caribbean instrument 15. What instruments do you usually find in Calypso music? 16. What is a riff? 17. What is call and response? 18. What is the musical word for how loud or quiet the music is? 19. What is the musical word for how fast or slow the music is? 20. What is the musical word for how many layers there are in a piece? <p>Also recognise the instrument from images:</p> <ul style="list-style-type: none"> Saxophone Trombone Clarinet Piano Double Bass Trumpet Drum Kit Bass Guitar Electric Guitar

Science	Spanish
<p>What pH is a strong acid? What pH is a weak acid? What pH is neutral? What colour is neutral with universal indicator? What colour is acidic with universal indicator? What colour is acidic with litmus paper? What ions do acids have? What ions do alkalis have? In universal indicator I go purple, what am I? What is the neutralisation reaction? What salts do hydrochloric acids make?</p>	<p>Task A: Choose 8-10 of the following sentences and translate them into Spanish using your knowledge organiser:</p> <ol style="list-style-type: none"> 1. Two years ago I went to Greece with my family and we stayed in a hotel 2. Last week I visited Wales. I didn't like it because it was not exciting. 3. Last year I went to Belgium and I had a blast because we travelled on a cruise ship. 4. We travelled by car and I loved it because it was comfortable. 5. I had a blast because I went with my class and there was a water park. 6. Last month I travelled to Turkey by coach and I stayed with my relatives 7. We stayed in an apartment however I didn't like it because there wasn't a pool. 8. We travelled by bus and also we stayed in a bed and breakfast. 9. Last summer we went to Italy by train and I liked it but it was not very cheap 10. I went to Germany but there wasn't lots to do. I didn't like it because it was not very fun. 11. We went to France with my school and there were lots of people. I had a blast! 12. I went by coach because it was not very expensive, however it was a bit uncomfortable. 13. Last year we went to Mexico with my grandparents. We stayed in a villa and it was very relaxing. 14. I visited Belgium and there was a theme park and a football pitch. It was quite interesting. 15. I didn't like Scotland because I stayed in a campsite and it was dirty. 16. Last month I went to France by boat. I like it because there was a games room. 17. I travelled to Spain with my school and I had a blast because there were lots of trips. 18. I went to Italy and I loved it because there was a water park. I had a blast! 19. I stayed in a hotel and there was a spa area. I liked it because it was very relaxing. 20. Last week I went to the United States with my aunt and uncle and we travelled by plane. <p>Task B: Write and translate 8-10 sentences of your own about past holidays using your knowledge organiser. They do not need to be true (but they can be!) e.g. El verano pasado fui a Irlanda con mis amigos y fuimos en avión - Last summer I went to Ireland with my friends and we went by plane.</p>

Year 8 Art and Design Knowledge Organiser

Drawing

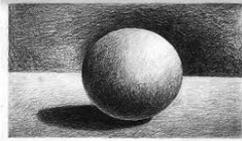
When drawing you need to consider these three main areas – tone, texture (using mark making) and proportions.

Tone

Tone means how light or dark something is. The tones artists and designers use and the contrast between them can create very different moods and visual effects.

Further reading:

<https://www.bbc.co.uk/bitesize/guides/z2thmsg/revision/1>



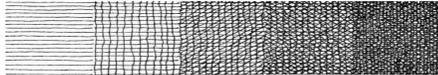
Creating Tonal Ladders

A tonal ladder shows tone that gradually becomes darker as you increase the pressure with your pencil.

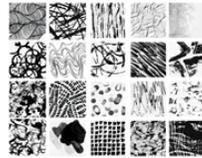


Cross Hatching

Cross hatching is created using layers of lines. The denser the line spacing the darker your object will appear. You can practice this technique by creating a tonal ladder using cross hatching.



Texture refers to the surface quality in a work of art. We associate textures with the way that things look or feel. Everything has some type of texture. We describe things as being rough, smooth, silky, shiny, fuzzy and so on.



Key Artists to Compare and Analyse:

Claes Oldenburg-

Makes large scale sculptures often seen in public spaces. Linked to consumerist culture. Draws attention to 'everyday' things. Part of Pop Art movement.



Extra Vocab.

Scale
Sculpture
Realistic
Bold
Surprising

Andy Warhol-

Andy Warhol is known for his bright, colourful paintings and prints of subjects ranging from celebrities, to everyday products such as cans of soup. Part of Pop Art movement.



Repetition
Pop Art
Colour
Simplified
Contrasting

Sarah Graham-

Sarah Graham is a photo realistic painter. Mostly uses oil paints. Themes of childhood nostalgia. Linked to Pop Art movement. <https://sarahgraham.info/>



Vivid/bright
Bold
Contrasting
Close-up
Perspective

Key Words - definitions

Pop Art- A style of art based on simple, bold images of everyday items e.g. cakes and sweets.

Photo Realistic - An extremely realistic style of painting or drawing, in which the artwork is based on a photo. This style is known for its 'WOW' factor.

Proportion (Proportions, Proportional, Proportionate) - Proportion explores the size relationship between two or more elements in an artwork.

Lighting - In photography lighting is used to create mood and depth. It can be bright, crisp and clear or more muted. It is also used to create shadows.

Focus- (in focus) Focus in photography is the process of making adjustments to the lens to find the maximum resolution, sharpness, and contrast for your chosen subject.

Imagination- (imaginative) the act or power of forming a mental image of something not present to the senses.

Sculpture- A sculpture is the creation of a piece of art in 3D — it will have a length, width, and height. A sculpture may look exactly like a person or object or may be more abstract.

Contrast(contrasting)- Two colours from different segments of the colour wheel are contrasting colours (also known as complementary or clashing colours).

Artist's Comparison and Analysis

Describing and analysing artists work is an important skill. We try to analyse work by looking at the formal elements of **colour, line, tone, texture, scale, perspective and shape.**

When writing your opinion make sure you describe **what you do or don't like about a piece of work and why (use the formal elements to help you)** e.g. 'I like Claes Oldenburg's sculptures because the **scale** is so huge and they look so bold in the landscape.'

'I like Sarah Graham's work because the **colour** is so vivid and she draws attention to detail with close up shots.'

Computer Science

Key content

Why do computers use binary numbers?

ON corresponds to 1 and OFF corresponds to 0. All computer programs, must therefore be translated into binary code for the computer to understand and execute the instruction.

Note : Humans cannot use this system easily.

Converting from binary to denary

To convert a **binary** number to denary, start by writing out the binary place values. In denary, the place values are 1, 10, 100, 1000, etc – each place value is 10 times bigger than the last. In binary, each place value is 2 times bigger than the last (i.e. increased by the power of 2). The first few binary place values look like this:

16	8	4	2	1
1	0	0	1	1

$$16 + 2 + 1 = 19$$

To convert a binary number into a denary number, add the *numbers in the column headings* for the columns that contain a 1.

There is a 1 in 16, 2 and 4 columns, so add these together to find the denary number of 19.

What is Binary?

Binary is a number system that only uses two digits: 1 and 0. All information that is processed by a computer is in the form of a sequence of 1s and 0s. Therefore, all data that we want a computer to process needs to be converted into binary.

More info can be found here:

BBC BiteSize Data Representation:

<https://www.bbc.co.uk/bitesize/topics/zxnfr82>

Key Vocab

Data Representation

Word	Definition
Binary	A number system that uses only two digits : 1 and 0
Bitmap	Graphics made with tiny dots called pixels
Bit	The smallest amount of data (stands for <i>binary digit</i>) (0 or 1)
Byte (B)	8 bits
Kilobyte (KB)	1024 bytes
Megabyte (MB)	1024 kilobytes
Gigabyte (GB)	1024 megabytes
Terabyte (TB)	1024 gigabytes
Petabyte (PB)	1024 terabytes

Diagrams: [Bitmap graphics](#)

Bitmap graphics made with painting packages consist of many tiny dots called pixels. It is possible to edit each individual pixel.

Since the computer has to store information about every single **pixel** (the colour for example) in the image, the file size of a **bitmap** graphic is often quite large. **Bitmap** graphics lose quality when they are resized.

Images

Pixel: A single point in an image.

Resolution: The number of pixels that make up an image e.g. 800 x 600

Colour Depth: The number of bits used for each colour. E.g. 8 bit colour and 24 bit 'True Colour'.



Creating a Bitmap

Each **pixel** is given a binary value. Each value represents a different colour. Using one bit per **pixel** allows only 2 values, 0 and 1.

1	1	1	1	1	1	1	1
1	1	1	0	0	1	1	1
1	1	0	0	0	0	1	1
1	1	0	1	1	0	1	1
1	1	0	1	1	0	1	1
1	1	0	0	0	0	1	1
1	1	0	0	0	0	1	1
1	1	0	1	1	0	1	1
1	1	0	1	1	0	1	1
1	1	1	1	1	1	1	1

1	=	White
0	=	Black

More bits per **pixel** = more colour combinations.

- 1 bit = 2 Colours

- 2 bits = 4 Colours

- 3 bits = 8 Colours

- 4 bits = 16 Colours

How many bits per **pixel** required for 256 colours?

11	11	11	11	11	11	11	11
11	11	11	11	11	11	11	11
11	11	00	00	11	11	11	11
11	11	11	11	00	11	11	11
11	11	00	01	01	10	10	11
11	00	01	01	10	10	11	11
11	00	01	01	10	10	11	11
11	00	01	01	10	10	11	11
11	00	01	01	10	10	11	11
11	00	01	01	10	10	11	11

01 = ■ 10 = ■
00 = ■ 11 = ■

The 6Rs of

REDUCE

Cut down the amount of material and energy you use as much as you can.

REUSE

Use a product to make something else with all or parts of it.

REPAIR

When a product breaks down or doesn't work properly, fix it.

RECYCLE

Reprocess a material or product in order to make something else.

REFUSE

Don't use a material or buy a product if you don't need it or if it's bad for people or the environment.

RETHINK

Do we make too many products? Design in a way that considers people and the environment.

Joining Materials

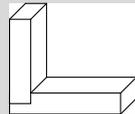
Materials can be either joined Permanently or Temporarily. This allows products to be strong, adaptable or maintained easily.

When Joining woods, the most common joints you will use are: -

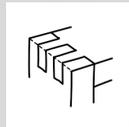
Permanent Joint



Mitre Joint



Half Lap Joint



Comb (Finger) Joint

Temporary Joint



Screw



Bolt

washer

Nut

Key Words	Definitions
Dimensions	The use of measurements on a design to show sizes.
Isometric	A 3D drawing technique which shows an image at 30° to horizontal projection.
Orthographic	A 2D drawing technique which allows you to draw flat views of an object (Front, Side, and Plan views)
Annotate	To add notes to your designs that explain what you are aiming to achieve. (Size, Materials, joining techniques)
Prototype	A working model of a product made to see if the design would work before making the final piece
Ergonomics	The study of how humans interact with their surroundings and how the products are then designed to work well with different people.
Anthropometrics	The study of human sizes and how they can be used to make different products.
CAM	This stands for Computer Aided Manufacture where a machine turns a design drawing into a made product

Extension task Look at products that you recycle everyday. What symbols tell you that you can recycle them?

Drama Bugsy Malone

(1929, Gangster warfare in New York) Dandy Dan's hoodlums terrorise the district, exterminating undesirables with their new weapon splurge guns. His rival is Fat Sam Stacetto, who runs the Grand Slam Speakeasy, but Fat Sam's gang still use old fashioned pies. Fat Sam engages the help of Bugsy Malone, a smooth city slicker. The police arrive, led by Captain Smolsky and Lieutenant O'Dreary. Will the city ever find peace?

Key terminology when staging a script

Word	Definition
Atmosphere	The mood of a scene or a play, can be created by design choices
Proxemics	The distance between actors
Set-design	Designing the set including: backdrop, staging, furniture and colours.
Lighting-design	Designing the lighting including: gel colour, use of black out, spotlight of "flood"
Sound-design	Designing the sound including: volume, live music, sound effects
Slapstick comedy	Physical comedy style that includes absurd situations and over-exaggerated violence

Key physical and vocal skills

Word	Definition
Accent	How you sound depending on where you're from
Tone	The emotion in your voice
Posture	How you sit or stand
Gesture	Using your hands to communicate
Characterisation	The use of physicality and voice to create a character

How to give constructive feedback

- WHAT skill have they used
- HOW have they used that skill
- WHY have they used that skill in that way?
- What could they do to improve?

If you want to develop your practical skills, search 'Oak National Academy' on Google. Click Key Stage 3, Drama and 'Approaching Text: Bringing it to life'. This will help you stage a script and perform confidently.

Key Characters (QLA R1/ QLA R5):

1. **Hero** – Innocent, naïve. Daughter of Leonato. Falls in love with Claudio.
2. **Claudio** – Young noble-man. Best friends with Benedick. Falls in love with Hero.
3. **Beatrice** – Hero's cousin. Witty and intelligent. Argues with Benedick, but ends up falling in love with him.
4. **Benedick** – Best friends with Claudio and Don Pedro. Claims that he will never get married. Argues a lot with Beatrice, but ends up falling in love with her. A soldier.
5. **Leonato** – Father of Hero and Uncle to Beatrice.
6. **Don Pedro** – Prince of Aragon. Returned victorious from war.
7. **Don John** – The half-brother of Don Pedro. Resentful and angry because of his status. Plots to destroy the happiness of others.

Key Context (QLA R5):

- Shakespeare wrote 'Much Ado About Nothing' in 1598 whilst Queen Elizabeth I was on the throne.
- The play is a comedy so it has a lot of mistaken identity, disguises and of course a happy ending.
- The play takes place in Messina, a Sicilian city in the 16th Century. This is so that the play can comment on social issues without getting in to trouble for criticising England or English government.
- A strong focus of the play is the difference in expectations for men and women. A key theme in this play is marriage, but the main female character (Beatrice) is very unusual for the period as she claims she will never marry.
- There is a strong social hierarchy within the play, which the audience would have expected and understood.

Key Vocabulary, Spellings and Definitions (QLA W1 and W3)

1. **Playwright** = A person who writes plays.
2. **Sonnet** = A poem with fourteen lines and usually ten syllables.
3. **Antagonist** = Villain
4. **Chastity** = Refraining (stopping) all sexual relations
5. **Soliloquy** = A character speaking aloud by themselves
6. **Antithesis** = A person or a thing that is the direct opposite of someone or something else.
7. **Dramatic Irony** = A literary device when the audience know more than the characters on stage.
8. **Status** = Social or professional position in society.
9. **Deception** = To deliberately cause someone to believe something that isn't true.
10. **Innocent** = Not guilty of a crime or an offence.

Key Quotations (QLA R2):

1. **Hero:** 'Some Cupid kills with arrows, some with traps'
2. **Claudio:** 'There, Leonato, take her back again.'
3. **Beatrice:** 'A bird of my tongue is better than a beast of yours'
4. **Benedick:** 'Well, you are a rare parrot teacher'
5. **Leonato:** 'There is a merry war betwixt Signor Benedick and she'

More information/challenge activities can be found on your Unit Cover Sheets.

Food Preparation Yr. 8

Key content

Nutrition

The Eatwell Guide

The **Eatwell Guide** shows the proportions in which different groups of foods are needed in order to have a well-balanced and healthy diet.

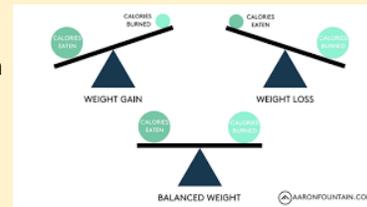
The proportions shown are representative of food eaten over a day or more, not necessarily at each meal time.

Choose a variety of different foods from each food group to help get the wide range of nutrients the body needs to stay healthy.



Energy Balance

The relationship between the calories you take in through food and drinks, and the calories you burn through physical activity and basic functions (like breathing and digestion).



Diagrams:



Food skills are acquired, developed and secured over time.

Bridge hold



Claw grip



NUTRITION & SKILLS

Key vocab

Word	Definition
Water Soluble	These are vitamins that dissolve in water, they are destroyed easily – B,C.
Fat Soluble	These are Vitamins that dissolve in fat – A,D,E,K.
Antioxidants	Vitamins A,C,E – these help to slow down cell damage, help protect against cancer and premature aging.
Micronutrients	These are nutrients which are needed in small amount – Vitamins and Minerals.
Macronutrients	These are nutrients which are needed in larger amounts – Fats, Proteins and Carbohydrates.
Coagulate	Proteins setting through the application of heat – eggs in your chocolate brownies!
Fermentation	A process in which micro-organisms are allowed to consume the sugar in a food in order to produce carbon dioxide gas, this changes the texture, flavour and aroma of bread dough.
Enzymic Browning	A browning reaction in fruits - Browning is the process of food turning brown due to the chemical reactions – apples in your apple cake.

More info can be found here:

<https://www.foodafactoflife.org.uk/11-14-years/healthy-eating-11-14-years/>

Tasks

1. Create an infographic on either macronutrients or micronutrients. Focus on the definition of each nutrient, recommendations and sources.
2. Draw the digestive system and label each of the body parts and the stages of digestion that occur at each part.
3. Calculate the energy and nutrients provided by a food diary for one or two days using <http://explorefood.foodafactoflife.org.uk> - reflect on the results.

Year 8 Term 4

School subjects



Qu'est-ce que tu penses de tes matières?	<i>What do you think of your subjects?</i>	Tu aimes ... ?	<i>Do you like ...?</i>
le français	<i>French</i>	j'adore ...	<i>I love ...</i>
le théâtre	<i>drama</i>	j'aime ...	<i>I like ...</i>
la géographie	<i>geography</i>	j'aime assez ...	<i>I quite like ...</i>
la musique	<i>music</i>	je n'aime pas ...	<i>I don't like ...</i>
la technologie	<i>technology</i>	je déteste ...	<i>I hate ...</i>
l'anglais	<i>English</i>	C'est ...	<i>It's ...</i>
l'EPS	<i>P.E.</i>	facile.	<i>easy.</i>
l'histoire	<i>history</i>	difficile.	<i>difficult/hard.</i>
l'informatique	<i>I.C.T.</i>	intéressant.	<i>interesting.</i>
les arts plastiques	<i>art</i>	ennuyeux.	<i>boring.</i>
les maths	<i>maths</i>	amusant.	<i>fun/funny.</i>
les sciences	<i>science</i>	créatif.	<i>creative.</i>
aimer	<i>to like</i>	nul.	<i>rubbish/awful.</i>
détester	<i>to hate</i>	le/la prof est sympa	<i>the teacher is kind</i>
adorer	<i>to love</i>	le/la prof est trop sévère	<i>the teacher is too strict</i>
		j'ai trop de devoirs	<i>I have too much homework</i>

School uniform



Qu'est-ce que tu portes?	<i>What do you wear?</i>	une cravate	<i>tie</i>
je porte ...	<i>I wear ...</i>	une jupe	<i>skirt</i>
on porte ...	<i>we wear ...</i>	une veste	<i>jacket/blazer</i>
l'uniforme scolaire	<i>school uniform</i>	des chaussettes (f)	<i>socks</i>
un pantalon	<i>trousers</i>	des chaussures (f)	<i>shoes</i>
un polo	<i>polo shirt</i>	des baskets (f)	<i>trainers</i>
un pull	<i>jumper</i>	chic	<i>smart/stylish</i>
un sweat	<i>sweatshirt</i>	confortable	<i>comfy/comfortable</i>
un tee-shirt	<i>tee-shirt</i>	démodé(e)	<i>old-fashioned</i>
une chemise	<i>shirt</i>	pratique	<i>practical</i>

Geography

China

Location: Northern Hemisphere and East Asia;
Nearby countries: Russia, Vietnam, India, Nepal, North and South Korea;
Nearby seas: East China Sea and South China Sea

Population density = the amount of people living in an area

- China is densely populated on its east coast where a lot of cities are.
- China is sparsely populated in the west, around the Tibetan Plateau

- Urban China is richer; Rural China is poorer
- Jobs in China range from farmers who grow food for themselves in the countryside, to factory workers, to bankers in the cities.

Yangtze River: Longest river in China (3rd longest in the world); Stretches for 6,300km from the Himalayas in West China to Shanghai on the east coast; Flows into East China Sea; Famous for 3 Gorges Dam

Tibetan Plateau: An elevated area of land in Central and East Asia; Located in between the Himalaya Mountains and the Taklimakan Desert; Known as the 'roof of the world'; Near the tallest mountain in the world, Mount Everest

Gobi Desert: Covers northern China and southern Mongolia; It is the fifth largest desert in the world; A cold desert where temperatures range between 25°C in summer and -30°C in winter.

Key vocab

Word	Definition
Rural to Urban migration	The movement of people from the countryside to the city
Manufacturing	Process of using raw materials to make items that can be sold/exported
Newly Emerging Economy (NEE)	A country experiencing high rates of economic development, usually with rapid industrialisation (e.g. growth of manufacturing)
Social issues	Positives or negatives that affect peoples lives and their quality of life
Environmental harm	The negative changes in the environment as a result of human activity, such as air/water/land pollution
Global warming	human-induced warming of the Earth system created by human activities releasing greenhouse gases (carbon dioxide)
Economic development	low-income economies transformed into modern industrial economies
Transnational Corporation	Companies that operate in more than one country. Known as TNC's
Renewable energy	Energy from renewable resources (water, wind, solar) that are naturally replenished on a human timescale
Non-renewable energy	Non-renewable energy comes from sources that will run out or will not be replenished in our lifetime



Capital city: Beijing; **Largest city:** Shanghai
Population: 1.4 billion people (largest population)

<p>Push factors = bad things that make you want to leave a place (push you away)</p> <ul style="list-style-type: none"> • Poor housing • No jobs • Natural disaster 	<p>Pull factors = good things that make you want to move (pull you in)</p> <ul style="list-style-type: none"> • Jobs • Education • Healthcare • Housing
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Pollution	
<p>Causes</p> <ul style="list-style-type: none"> -Burning coal for electricity -Factories emit greenhouse gases and traffic – people are getting richer so they have more cars -Sewage – 90% of human waste flows into China's rivers 	<p>Impacts</p> <ul style="list-style-type: none"> -Global warming and climate change -The particles in the air can cause asthma and other respiratory diseases -Water pollution kills fish and makes the water undrinkable for people -Air pollution can cause acid rain and destroy crops -Total cost of pollution in 2013 estimated to be 10% of China's GDP.

More info can be found here:
<https://kids.nationalgeographic.com/geography/countries/article/china> – Nat Geo China

<https://www.bbc.co.uk/bitesize/topics/zydk4xs/articles/zk9h6g8> - BBC Bitesize KS3 China



Population

1. 144 million people (2018)
2. The life expectancy is 72 years old
3. There are 27 official languages and 100 minority languages spoken
4. Christianity is the major religion, 71.8% of Russian's identify as Christian
5. The literacy (reading and writing) rate is 99.7% (UK = 99.0%)
6. The average income (GNI) is \$13000 (UK = \$44000)

Tundra

1. The coldest temperature ever recorded at Oymyakon in Russia's arctic tundra is -68°C.
2. The tundra is a harsh environment with nearly 20 hours of darkness in winter and 20 hours of light in the summer
3. Much of Siberia in northern Russia is tundra
4. Because of the curvature of the earth the sun has a large surface area to heat up so the region gets very cold in winter
5. The area is characterised by permafrost.
6. Some permafrost (discontinuous) thaws in the summer and re-freezes in the winter.
7. Living and working in the tundra is very tough. Diesel fuel freezes at minus 40°C so engines need to be thawed.
8. Cold injuries are common, such as frostbite, making human life very challenging.

<https://www.nationalgeographic.com/environment/habitats/tundra-biome/> - Tundra

<https://www.bbc.co.uk/news/science-environment-51024844> - Permafrost and climate change

Geography – Russia and Cold Environments

Key terms

- Adaptation** - Features that make something better suited to its environment
- Biome** – A large scale ecosystem, such as tundra, desert or the rainforest
- Chernobyl** – 1986 nuclear power plant radiation disaster
- Natural Resource** – Natural materials that can be exploited for economic gain
- Methane gas** – A potent greenhouse gas that is 28 times more powerful than CO₂ at warming the atmosphere
- Nomads** – Those that move from one place to another rather than living in one place all of the time, normally to follow resources or as weather/seasons change
- Permafrost** – A frozen layer of soil that remains frozen all year round
- Tundra** – A vast, flat, frozen and treeless Arctic region of Europe, Asia and North America

Importance

1. Russia's economy is the 7th largest in the world. Its GDP was \$4.2 trillion in 2018
2. Russia is the largest country in the world
3. Russia is the world's biggest exporter of wheat and is ranked fifth in the world for corn. Many Asian and European countries rely on these products
4. Russia is one of the world's largest producers of oil and in 2017 it was Germany's largest supplier of natural gas.
5. Russia is a major military power with more than 1 million troops. Compare this to the UK's 81,000.



Environment

1. 40% of Russia is environmental stressed
2. Problems include oil spills and deforestation
3. Only 15% of urban population breathe safe air and 75% of surface water is polluted
4. 50% of all water is not potable
5. Climate change is melting the permafrost releasing methane gas

Animals

1. Dark skin & noses to absorb heat and sunlight to keep warm
2. Thick layers of fat for insulation
3. Thick fur coats have translucent fur to camouflage
4. Polar bears have large feet to spread their weight and not break ice

The Nenets

People of the Siberian Arctic are the guardians of a style of reindeer herding that is the last of its kind.



Nenets - <http://www.bbc.co.uk/tribes/tribes/nenets/index.shtml>

Nenets Facts

1. -5,000 reindeer died in 2013 due to increased temperatures
2. Nenets tribe people have been forced to settle in one place due to climate change
3. Suicide rates are increasing
4. An ancient way of life could disappear

The Stuart Era Timeline

1603 – Elizabeth I dies with no heir so Scottish **Protestant** King James VI become English King James I. The first Stuart king.

1605- Catholic plotters led by Robert Catesby are caught attempting to blow up James I and Parliament

1625- Protestant Charles I becomes king and marries French **Catholic** Henrietta Maria

1626 to 1637 – Charles I rules without Parliament

1634 – 1640 – Charles makes quite **Catholic** changes to the **Protestant** Church – new prayer books and power to bishops

1634-1636 – Charles I orders ALL counties to pay Ship Money

1641 – The Grand Remonstrance – Parliament demands to choose Charles ministers and make Church more **Protestant**. Charles furious.

Jan 1642 – Charles tries to arrest 5 MPs (members of Parliament)

March 1642 – Parliament seizes control of the English Army

June 1642 – 19 Propositions – Parliament demands they must agree on ALL king’s decisions and educating his children. King outraged.

August 1642 – Charles I declares war on Parliament

Aug 1642 – June 1644 = Royalists on top. Victories at Chewton Mendip, Lansdowne Hill (Bath), Bristol and Roundway Down (Devizes).

June 1644 to 1646 = Parliament on top. Victories at Marston Moor and Naseby by Parliament’s New Model Army.

January 1649 – Charles I executed for treason after arranging second Civil War (invasion from Scotland)

***1563-1716** Around 1,000 women were hanged for witchcraft

Challenge yourself to learn more about the Stuart Era:

<https://www.bbc.co.uk/bitesize/guides/zky82hv/revision/1>

Why were people accused of witchcraft?

1. King James I had personal interest (wrote Demonologie in 1597)
2. Chaos, disease and deaths of Civil War led to increased blame of women who acted differently
3. Catholic / Protestant struggles led to suspicion of people who behaved differently
4. Women had lost husbands, sons and brothers in the Civil War so were easy targets for witch-hunters
5. Financial reward (£500?) for convicted witch

How were witches convicted?

- A) Swim-test** – if holy water rejected them = guilty
- B) Prick-test** – if accused didn’t bleed = guilty
- C) Witch’s Marks** – Moles, warts and nipples were said to be used to feed familiars = guilty
- D) Confessions** – Sleep deprivation and threats were made to get confessions
- E) Witnesses** – Gave statements about spells, curses and seeing the witch’s familiars

The Gunpowder Plot 1605

- ❑ **1. Plotters:** Robert Catesby, Guido Fawkes, Thomas Percy, Robert Winter and 8 others – all **Catholic**
- ❑ **2. Plan:** Rent cellar under Parliament / Blow up **Protestant** James I / Put his daughter Elizabeth on throne with **Catholic** advisors.
- ❑ **3. CONSPIRACY?** – How did **Catholics** get 36 barrels of gunpowder? Cellar was rented from friend of Robert Cecil (King James’ chief advisor!). After anonymous letter to Lord Monteagle, cellars not searched for 10 days, why? Plotters caught 7th November – how did Robert Cecil know where they were?
- ❑ **4. Outcomes? Plotters hung, drawn and quartered for HIGH TREASON.** 5th November celebrations (Bonfire Night), Strict Laws against **Catholics** passed.

History – KPI 3: The Stuart Era

Key term	Definition
Roundhead	Nickname for Parliamentary soldier
Cavalier	Nickname for Royalist soldier
Ship Money	Tax for raising a navy against attack. Usually only for counties near the sea
Civil War	War between two groups in same country
Divine Right	Idea that kings were chosen by God
Star Chamber	King’s personal court of justice
Puritan	Someone with VERY Protestant beliefs
Familiar	Name given to the devil in animal form
Pike	Very long sharp weapon
Cavalry	Soldiers on horseback
Musketeer	Old name for soldier with a rifle
Grand Remonstrance	Parliament’s FIRST set of demands (choose king’s advisors) – Nov. 1641
19 Propositions	Parliament’s SECOND set of demands (total power to them) – June 1624
The Gentry	Important, powerful, rich landowners
Plunder	To steal from civilians during a war
Tyrant	A cruel leader who rules by force
Sleep-deprivation	Form of torture – allowing no sleep
Witchfinder General	Title used by lawyer Matthew Hopkins during his witch hunts 1645-1647

Key content

The Blues is a music genre which originated in the Deep South of the United States around the 1860s. The Blues is characterized by the use of call-and-response, the Blues scale, specific chord progressions in a 12 bar repeating structure. This term you will be composing your own Blues piece of music using the software BandLab.

Diagrams:



The 12 Bar Blues Chords

C (CEG)	C	C	C
F (FAC)	F	C	C
G (GBD)	F	C	C

The Blues Scale



The Walking Bass Line



Key vocab

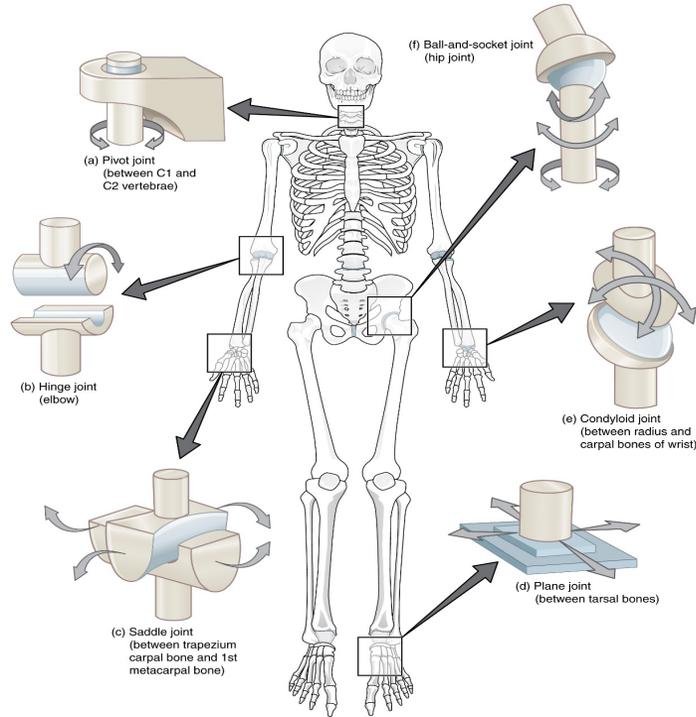
Word	Definition
12 Bar Blues	A 12 bar repeating structure
Walking Bass	An accompaniment part that has a constant rhythmic pulse
Call and Response	A musical question and answer between parts
Improvisation	Making it up on the spot
Blues Scale	A set of 6 notes – these notes are used to improvise with
Structure	The way a piece of music is organised
Lick	A short musical phrase
Melody	The main tune
Root note	The main note on which the chord is built e.g. the root note of C chord (CEG) is C
Chords	Two or more notes played together

More info can be found here: [Listening](#)



- Etta James – At Last
- I Got a Woman – Ray Charles
- I Got the Blues – Sam Myers
- The Thrill is Gone – B. B. King
- Crossroad Blues – Robert Johnson
- All Blues – Miles Davis

Synovial Joints



Functions of connective tissue:

1. Support
2. Protection
3. Insulating
4. Fuel storage
5. Transport

Benefits of exercise:



Key vocab

Key Word / Term	Definition
Concentric muscular contraction	Muscle shortens under tension
Eccentric muscular contraction	Muscle lengthens under tension
Isometric muscular contraction	Length of muscle remains the same
Isotonic muscular contraction	Length of muscle changes. These include eccentric and concentric contractions
Isokinetic muscular contraction	Specialised equipment is used to produce a constant speed no matter how much effort is put in.
Inspiration	(Inhalation) is the process of taking air into the lungs
Expiration	(Exhalation) is the process of air leaving your lungs

HEALTHY ME	
SKELETAL SYSTEM	
Know the 6 Synovial Joints	■ ■ ■
MUSCULAR SYSTEM	
Describe the function of connective tissue and muscular contraction	■ ■ ■
BENEFITS OF EXERCISE	
Know the benefits of exercise	■ ■ ■

Key word	Definition
<i>Truth</i>	The true or actual state of a matter
<i>Miracles</i>	An extraordinary event in the physical world
<i>Healing</i>	Curing; mending; getting well
<i>Lourdes</i>	City in France
<i>Pilgrimage</i>	A sacred religious journey
<i>Coincidence</i>	Two or more events at one time apparently by mere chance
<i>Resurrection</i>	The act of rising from the dead
<i>Literal</i>	True to fact; not exaggerated; actual
<i>Nature</i>	The natural world surrounding humankind
<i>Interpretation</i>	The action of explaining the meaning of something
<i>Scientific</i>	Regulated by or agreeing with scientific principles

Useful websites for extended reading:

- <https://www.bbc.co.uk/bitesize/clips/zg6cd2p>
- <https://www.bbc.co.uk/bitesize/guides/zkrf8xs/revision/10>
- <https://www.bbc.co.uk/bitesize/guides/zsts4wx/revision/4>

Miracles

Key Content:

A miracle is an extraordinary event that goes against nature, cannot be explained by science and that Christians believe is caused by God. We learn a lot about Jesus as a person through the miracles he worked.

You can remember the list below through the acronym **CERT – compassion, examples, relationship and teachings:**

- Miracles showed the **compassion** Jesus had for people. He did not want to see them suffering unnecessarily. For example, when he healed a leper.
- Miracles provided **examples** for people to follow. This can be seen when Jesus healed the paralysed man because of the faith of his friends. This teaches us to have faith.
- Miracles demonstrated the close **relationship** Jesus had with God, his Father. It is through the power of God that Jesus is able to perform miracles.
- Miracles proved that Jesus' **teachings** were true. Jesus was who he said he was.

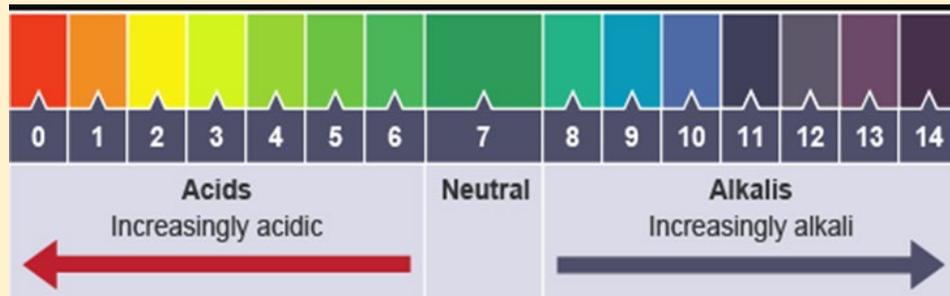
Lourdes

Lourdes is a famous pilgrimage site in France where the waters are believed to have healing powers. In 1858, Bernadette Soubirous, a young local girl, was said to have seen the Virgin Mary at Lourdes and her friend was said to have been healed in the waters. Bernadette was made a saint by Pope Pius XI in 1933. Often the water is taken home by pilgrims, and there have been many more stories of healings.



Science

Key content



Naming Salts

The first part comes from the metal in the metal carbonate, oxide or hydroxide. The second part of the name comes from the acid that was used to make it. For example, sodium chloride.

Acid Used	Salt Produced
hydrochloric	chloride
nitric	nitrate
sulfuric	sulfate

Litmus

Litmus indicator solution turns red in acidic solutions and blue in alkaline solutions. It turns purple in neutral solutions.

Litmus paper is usually more reliable, and comes as red litmus paper and blue litmus paper. The table shows the colour changes it can make.

	Red litmus	Blue litmus
Acidic solution	Stays red	Turns red
Neutral solution	Stays red	Stays blue
Alkaline solution	Turns blue	Stays blue

C5 Acids and Alkalis

Key vocab

Word	Definition
Acidic	H ⁺ ions in a solution.
Alkaline	OH ⁻ ions in a solution.
Neutral	Has a pH of 7, neither acid or alkali.
Indicator	Chemical used to identify an acid or an alkali using colour.
Neutralisation	Acid + alkali → salt + water
Chloride	Name of the salt if hydrochloric acid is used.
Sulphate	Name of the salt if sulphuric acid is used.
Nitrate	Name of the salt if nitric acid is used.
The pH scale	The pH scale shows how acidic a substance is. It can be measured using a pH meter which gives a numerical value

More info can be found here:

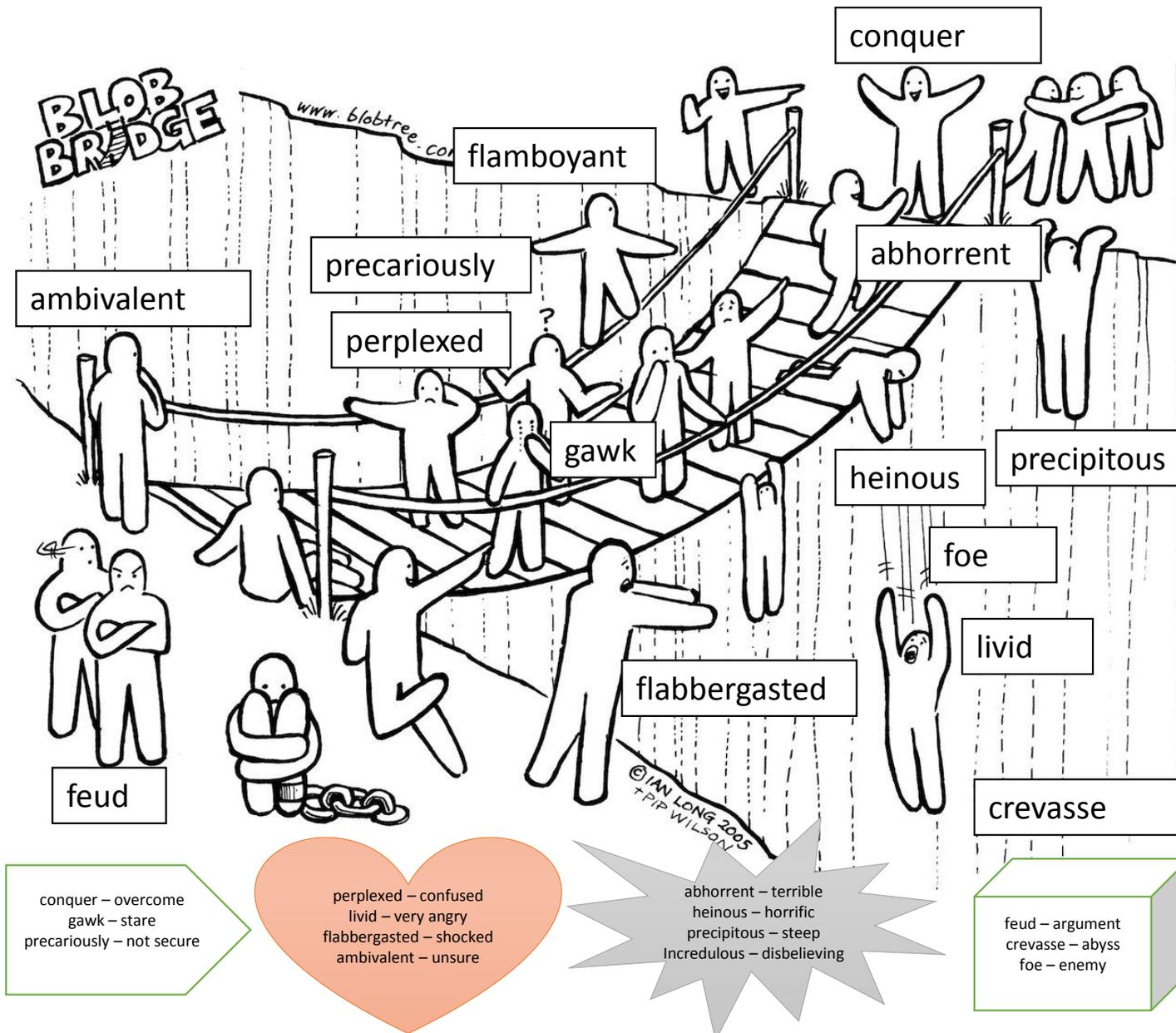
<https://www.bbc.co.uk/bitesize/topics/zn6hvcw>

<https://classroom.thenational.academy/units/reactivity-609c>

<https://classroom.thenational.academy/units/chemical-reactions-5ffa>

**SPANISH - LAS VACACIONES - HOLIDAYS
PRETERITE (PAST) TENSE**

Hace dos años Two years ago	fui a I went to	Irlanda Ireland	España Spain	con mi familia with my family	y fui and I went	en avión by plane	me quedé en I stayed in	en una caravana in a caravan		
El año pasado Last year		Grecia Greece	Alemania Germany	con mis padres with my parents		en autobús by bus		en un chalet in a villa		
El verano pasado Last summer		los Estados Unidos (EE.UU.) The United States (U.S.A.)	Francia France	con mis abuelos with my grandparents		en autocar by coach		en un apartamento in an apartment		
El mes pasado Last month		México Mexico	Italia Italy	con mis tíos with my uncle and aunt		en coche by car		en un hotel in a hotel		
La semana pasada Last week		Bélgica Belgium	Gales Wales	con mis amigos/as with my friends		en tren by train		en una pensión in a bed and breakfast		
Ayer Yesterday		Marruecos Morocco	Escocia Scotland	con mi clase with my class		en barco/ferry by boat/ferry		en un camping in a campsite		
		Grecia Greece	Turquía Turkey	con mi instituto with my school		en un crucero on a cruise ship		con mis parientes with my relatives		
Me gustó I liked it	porque because	(no) era it was (not)	limpio clean	bonito pretty	incómodo uncomfortable	barato cheap	relajante relaxing	ruidoso noisy	emocionante exciting	fácil easy
No me gustó I didn't like it			sucio dirty	lujoso luxurious	cómodo comfortable	caro expensive	tranquilo quiet/peaceful	interesante interesting	divertido fun	difícil difficult
Me encantó I loved it	ya que because	(no) había there was/were(not)	un gimnasio a gym	un campo de fútbol a football pitch	una playa a beach	una zona de spa a spa area	mucha gente lots of people			
Lo pasé bomba I had a blast			dado que because	un restaurante a restaurant	un parque acuático a water park	una piscina a pool	una sala de juegos a games room	mucho que hacer lots to do		
			una tienda a shop	un parque temático a theme park	un parque temático a theme park	una cancha de tenis a tennis court	muchos excusiones lots of trips			



As blob stood by the start of the bridge he felt completely **ambivalent**, could he possibly make it across in one piece? He could see that on the other side, arms wide with pride, blob had clearly managed to **conquer** his fears and crossed the bridge successfully. However, there were those who clung on with a **perplexed** expression and he wondered what they had to be so puzzled about.

Perhaps they (as to be honest, he was) were questioning the risky and **flamboyant** choice of blob balanced so **precariously** on the rope of the bridge. With such a steep **precipitous** edge and deep **crevasse** to fall into, it did seem a rather foolish idea. It was almost certainly this that had **exacerbated** his **trepidation** over setting foot on the bridge.

Blob was so focused on the left side of the bridge that he failed to notice the **abhorrent** act of another blob who had pushed his **foe** over the edge! With a **livid** cry, his enemy hurtled to the ground! This **heinous** act was witnessed by a **flabbergasted** blob who instinctively stretched out his arms in vain, but knew there was no hope of saving him.

It was quite **incredulous** to think that not more blob's had tried to help! Although for some, the **feud** they were having with their friend had taken their attention away from everything. For others, they ought to stop **gawking** at the lost blob and focus on saving the other clinging on to the bridge!

LAST PAGE