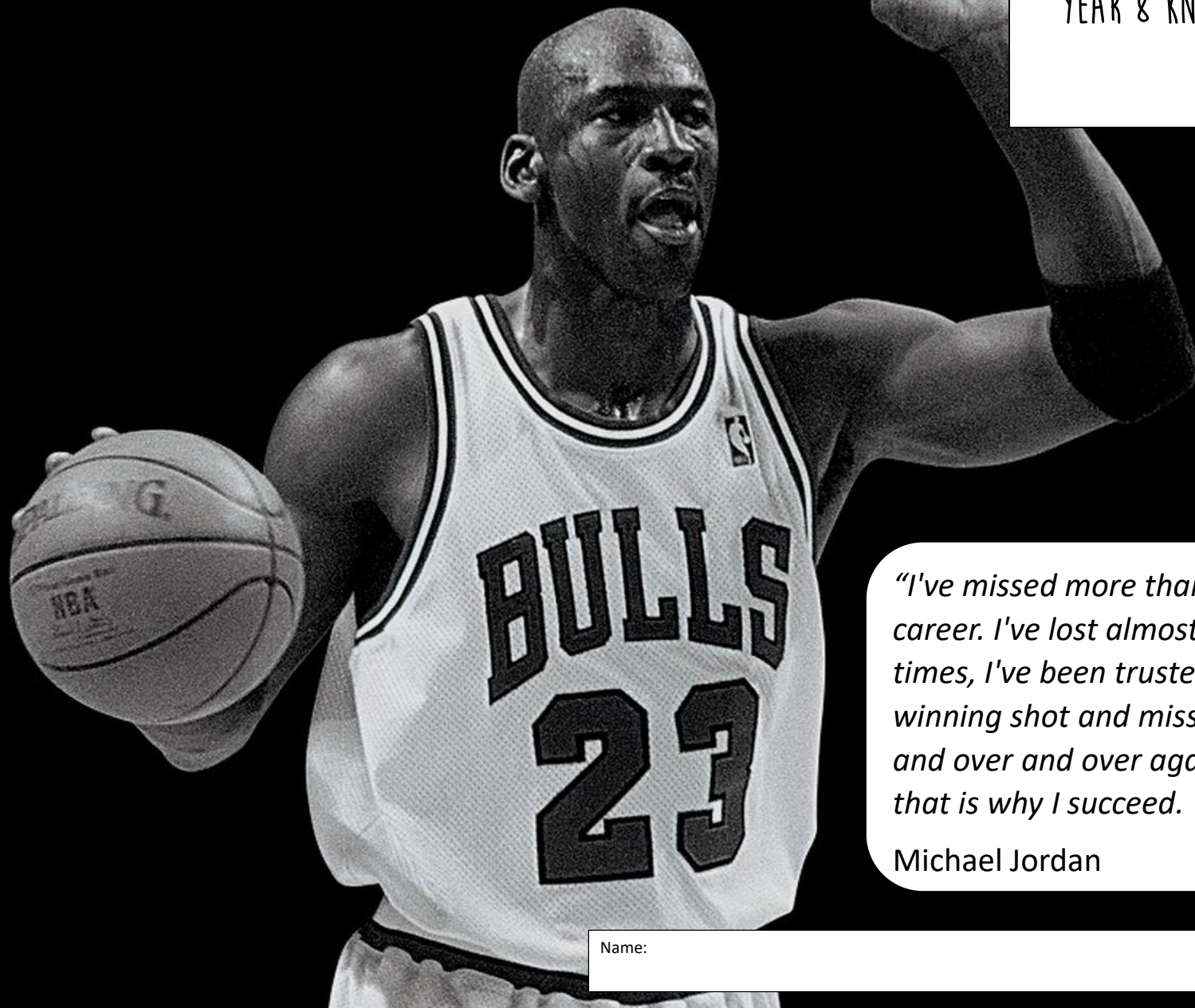




LEARNING - LOVING - LIVING

YEAR 8 KNOWLEDGE ORGANISER

TRINITY 2



*“I've missed more than 9000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed. “*

Michael Jordan

Name:

Family Group:

## HOW TO USE MY KNOWLEDGE ORGANISER

The timetable shows the **subjects** you should be studying and the days that you should be studying them. You should **complete your work in your exercise book**.

Each evening you should draw a straight line (using a ruler), under the previous day's work, and write the date, clearly at the top. You need to **bring your KO and exercise book with you to school EVERYDAY**.

The **KO** work that you have completed for the week will be checked in Family Group time **EVERY** Friday. If homework is not of an appropriate standard or amount will result in an after school detention. Knowledge tests will also be used frequently in lessons.

## SUBJECT HOMEWORK

Students will also be **given** additional subject homework to be completed throughout the week and/or can use FREE online revision tools such as [www.senecalearning.com](http://www.senecalearning.com)

It is also recommended that students regularly **READ** a variety of fiction and non fiction books that they choose for pleasure. This extra reading will help to develop and broaden their general knowledge.

In **ENGLISH** all students will be expected to complete 1-2 reading assignments each week by accessing [www.CommonLit.org](http://www.CommonLit.org) . Each assignment will take 20-30 minutes and students will be required to answer multiple choice questions to check their understanding of what they have read. Each class has a code based on the set they are in:

| English Set | Class Code for Commonlit |
|-------------|--------------------------|
| <b>8.2</b>  | 4YQ9BY                   |
| <b>8.1</b>  | ZDZ6JG                   |
| <b>8G1</b>  | 87G375                   |
| <b>8G2</b>  | G9R3BV                   |

In **MATHS** students are expected to watch short explanation videos and complete activities on the online platform of <https://mathswatch.co.uk>. Students can log in using the details and password they use to log in to the school computers.

## HOMEWORK TIMETABLE

You should spend *at least* **1 hour** per night on homework = 3 subjects x 20 mins per subject

| Year 8           | Subject 1 | Subject 2           | Subject 3       |
|------------------|-----------|---------------------|-----------------|
| <b>Monday</b>    | Maths     | History             | PE              |
| <b>Tuesday</b>   | English   | Geography           | ICT             |
| <b>Wednesday</b> | Maths     | Religious Education | English         |
| <b>Thursday</b>  | English   | Science             | Creative        |
| <b>Friday</b>    | Maths     | MFL                 | Performing Arts |

## RETRIEVAL ACTIVITY IDEAS

Knowledge organisers are for **learning and mastering** the knowledge in each subject. There are many different ways you can do this, however some **PROVEN** methods to try in your work book are:

### 4 Methods of Retrieval Practice

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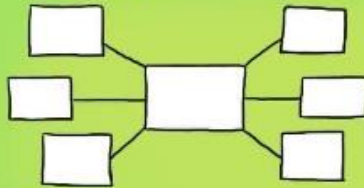
Before you start put away all your books & classroom materials.

#### Retrieval Practice Examples

- \* Exit Tickets
- \* Starter quizzes
- \* Multiple choice quizzes
- \* Short answer tests
- \* Free write
- \* Think, pair, share
- \* Ranking & sorting
- \* Challenge grids

#### BRAIN DUMP

Write, draw a picture, create a mind-map on everything you know about a topic.



Give yourself a time limit, say 3 minutes, then have a look at your books & add a few things you forgot.

#### QUIZZING

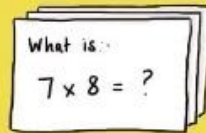
Create practice questions on a topic. Swap your questions with a partner & answer.

Question - What is a metaphor?

- A comparison using 'like, as, than'.
- A comparison where one thing is another.
- A comparison with a human attribute.

#### FLASHCARDS

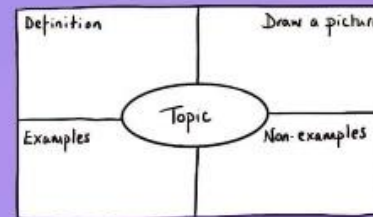
Create your own flashcards, question on one side answer on the other. Can you make links between the cards?



You need to repeat the Q&A process for flashcards you fail on more frequently & less frequently for those you answer correctly

#### KNOWLEDGE ORGANISERS

Complete a knowledge organiser template for key information about a topic.



You can use knowledge organisers to learn new vocab & make links in between subjects or ideas.

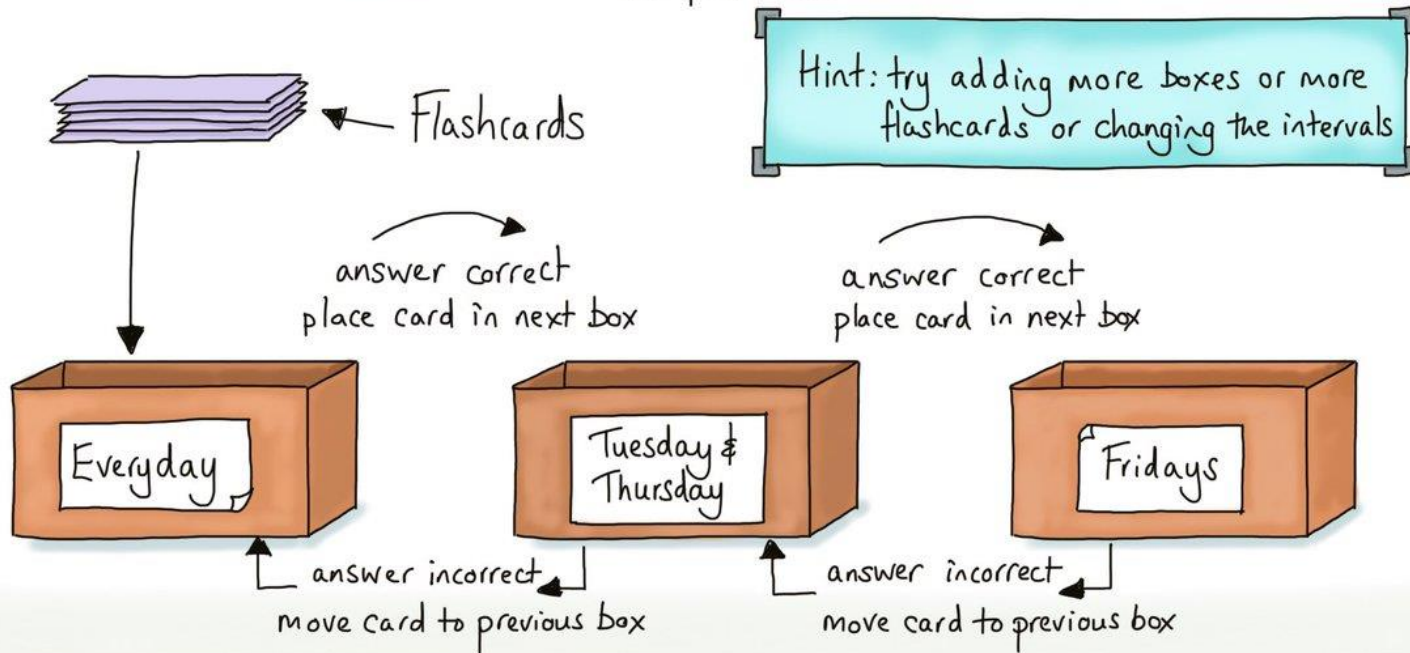
After you have retrieved as much as you can go back to your books & check what you've missed. Next time focus on that missing information

Once flash cards are created, you will need to use them correctly to have an impact. Follow the method below for the best knowledge retention

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# LEITNER Flash card method

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An effective use of flashcards to prompt & recall learning using spaced practice proposed by Leitner in the 1970s. It focuses on the proficiency of recall of the learner. Information which is easily recalled has a longer time lapse before the next recall opportunity.

| Key Vocabulary  | Definition  |   |   |
|---|---|---|---|
| 1) <b>Dystopia (n)</b><br><b>Dystopian (adj)</b>                        | Relating to an imagined place of state in which everything is unpleasant or bad | 22) <b>Despondency (n)</b><br><b>Despondent (adj)</b>                           | Feeling low, sad and dejected   |
| 2) <b>Conform (v)</b><br><b>Conformity (n)</b>                          | Behaviour in accordance with socially accepted conventions                      | 23) <b>Anonymous (adj)</b><br><b>Anonymity (n)</b>                              | Having no name  |
| 3) <b>Totalitarian (adj)</b><br><b>Totalitarianism (n)</b>              | A system of government that is centralized and dictatorial                      | 24) <b>Intangible (adj)</b><br><b>Intangibility (n)</b>                         | Unable to be touched, not having a physical presence  |
| 4) <b>Subservience (n)</b><br><b>Subservient (adj)</b>                  | Willingness to obey others without question                                     | 25) <b>Nebulous (adj)</b><br><b>Nebulousness (n)</b>                            | Like a cloud, not defined or vague  |
| 5) <b>Dehumanisation (n)</b><br><b>Dehumanise (v)</b>                   | To treat someone with a lack of compassion or humanity                          | 26) <b>Overburden (v)</b><br><b>Overburdened (adj)</b>                          | Give someone more pressure and work than they can deal with   |
| 6) <b>Propaganda (n)</b>  | Misinformation and lies spread by governments to fool their people (fake news)  | 27) <b>Archetype (n)</b><br><b>Archetypal (adj)</b>                             | A very typical example of something   |
| 7) <b>Utopia (n)</b><br><b>Utopian (adj)</b>                            | An imagined place where everything is perfect and pleasant                      | 28) <b>Acquiesce (v)</b><br><b>Acquiescent (adj)</b><br><b>Acquiescence (n)</b> | To accept something without protest; to do what someone wants   |
| 8) <b>Autonomy (n)</b><br><b>Autonomous (adj)</b>                       | Freedom from control or influence; independence                                 | 29) <b>Subjugate (v)</b><br><b>Subjugation (n)</b>                              | To bring under domination or control  |
| 9) <b>Onerous (adj)</b>   | Something that involves a lot of effort   | 30) <b>Suppress (v)</b><br><b>Suppression (n)</b><br><b>Suppressed (adj)</b>    | To prevent the development of something or to hide or ignore a feeling or desire  |
| 10) <b>Collectivism (n)</b><br><b>Collectivist (adj)</b>                | Giving the group priority over the individual                                   | 31) <b>Insignificant (adj)</b><br><b>Insignificance (n)</b>                     | Too small to be worthy of consideration; unimportant  |
| 11) <b>Individualism (n)</b><br><b>Individualist (adj)</b>              | Giving individual people priority over a group                                  | 32) <b>innate (adj)</b>   | Inborn, natural, within   |
| 12) <b>Coerce (v)</b><br><b>Coercion (n)</b>                            | To force someone to do something, perhaps by using threats                      | 33) <b>Trait (n)</b>  | Characteristic or qualities   |
| 13) <b>Isolate (v)</b><br><b>Isolation (n)</b><br><b>Isolated (adj)</b> | To be separated from others   | 34) <b>Nature vs Nurture</b>  | Whether people are shaped by their genetics (Nurture) or their environment (nurture) or both.   |
| 14) <b>Bereft (adj)</b>   | To be sad and lonely  | 32) <b>Thomas Hobbes</b>  | a) Philosopher who wrote Leviathan in 1651<br>b) Believed that human life was 'solitary, nasty, brutish and short'<br>c) Thought that a benign power was necessary to control people  |
| 15) <b>Desolate (adj)</b><br><b>Desolation (n)</b>                      | Feeling or showing great unhappiness  | 33) <b>John Locke</b>   | a) Philosopher who lived from 1632-1704<br>b) Believed that people are born as a blank slate with no innate characteristics<br>c) Believed that everyone began life equal and free<br>d) Thought that societies should not be ruled by God or Kings |
| 16) <b>Forsake (v)</b><br><b>Forsaken (adj)</b>                         | Abandon or leave  | 34) <b>'The Noble Savage'</b>   | a) The idea that humans are innately good<br>b) Society corrupts humans and makes them evil and violent   |
| 17) <b>Ostracise (v)</b><br>18) <b>Ostracisation (n)</b>                | To be excluded or left out  |   |   |
| 19) <b>Melancholy (n)</b><br><b>Melancholic (adj)</b>                   | A feeling of pensive sadness  |   |   |
| 20) <b>Poignant (adj)</b><br><b>Poignancy (n)</b>                       | Evoking a keen sense of sadness   |   |   |
| 21) <b>Profound (adj)</b>   | Having or showing a great knowledge or insight                                  |   |   |

YEAR 8 - T2- ENGLISH —LORD OF THE FLIES- WILLIAM GOLDING

| CHAPTER                             | PLOT  | MAIN                    | CHARACTERS  | VOCAB                            | CONTEXT  |
|-------------------------------------|---|-------------------------|---|----------------------------------|--|
| <b>1 WHERE ARE WE?</b>              | <i>Schoolboys have crash landed on a deserted Island. The reader meets Ralph and Piggy. Piggy has asthma. They find a conch and use it to summon any other survivors. Twins SamnEric, Jack and Simon.</i>   | <b>13 RALPH</b>         | <i>Largest and most physically powerful. Wants to plan and follow rules. <b>Symbolises: law, government and civil society</b></i>                                       | <b>OMNISCIENT (F)</b>            | <b>AUTHOR:</b> William Golding. Born 1921 in Cornwall England. Brought up to be a scientist by his parents.  |
| <b>2 FIRE AND BEASTS</b>            | <i>The boys focus on short term pleasure and fun. Ralph suggests building a fire to be rescued. Jack just wants to hunt. A boy with a birth mark tells of the beast.</i>  | <b>14 PIGGY</b>         | <i>Smartest boy but has asthma and is fat so bullied. Has a tendency to lecture and is ridiculed. <b>Symbolises: science and rationality</b></i>                        | <b>3<sup>RD</sup> PERSON (F)</b> |  |
| <b>3 HUTS &amp; PIGS</b>            | <i>Ralph wants to build shelters but only Simon helps whilst the others play and Jack hunts. The fire has been allowed to go out. Simon slips away to meditate</i>  | <b>15 JACK</b>          | <i>Leader of the hunters. Loves to hunt and kill gets angry when he doesn't get his way. Believes a leader should be obeyed. <b>Symbolises: dominance and power</b></i> | SCAR                             | <b>FACTS:</b> Allegorical novel. Protagonist = Ralph. Antagonist = Jack. Point of view = Third Person Omniscient                                       |
| <b>4 HUNTING &amp; LOST CHANCES</b> | <i>A boat goes past but there is no fire to attract it. Piggy is laughed at for sundials. Jack pants his face and hunts and kills a pig chanting "Kill the Pig. Cut her throat. Spill her blood" Ralph walks away.</i>  |                         |   | CONCH                            |  |
| <b>5 GROUP SPLITS</b>               | <i>Ralph calls a meeting, but he and Jack are more apart than ever. There is talk of the beast. Jack just wants to hunt and wont listen to the rules of the conch. Ralph wishes for adults.</i>   | <b>16 SIMON</b>         | <i>Dreamy, dark haired boy prone to fits. He recognises that the beast is within them. He is unafraid and meditates. <b>Symbolises: Religion and spirituality.</b></i>  | FLINKED                          | <b>LITERARY CONTEXT:</b> Post war fiction. Published 1954. Subverts traditional Robinson Crusoe stories. Could be seen as Goldings version of WW11     |
| <b>6 SOLDIERS &amp; BOULDERS</b>    | <i>A dead parachutist floats in to the Island. They think it is a beast. Jack finds a rock and some boulders.</i>   |                         |   | CHORISTER                        |  |
| <b>7 BEASTS &amp; BOARS</b>         | <i>Jack and Ralph continue to clash as they search for the beast. Ralph kills a boar and is flushed with excitement. Roger is almost killed in the reenactment.</i>   | <b>17 ROGER</b>         | <i>Quiet and intense at first then becomes more evil. He tortures SamnEric and likes to inflict pain. <b>Symbolises: Sadism</b></i>                                     | ENORMITY                         | <b>EVIDENCE</b>  |
| <b>8 SAVAGES RULE</b>               | <i>Jack declares himself chief of his own group. Simon meditates alone and leans what the beast is. The savages dance around as they kill a sow.</i>  |                         |   | ALLEGORY (F)                     |  |
| <b>9 DEATH OF SIMON</b>             | <i>A storm comes and they have no shelter. Simon emerges from the forest and is killed by the other boys who think he is the beast.</i>   | <b>THEMES</b>           |   | IRONY (S)                        | "Aren't there any grown ups at all?"<br>The fair boy said this solemnly; but then the delight of a realised ambition overcame him.                     |
| <b>10 ROCKS &amp; GLASSES</b>       | <i>Jacks gang have moved to castle rock. Ralph, Piggy and SamnEric remain but cant keep the fire going alone. Jack steals Piggy's glasses whilst the others protect the conch.</i>  | HUMAN NATURE            |   | FORESHADOW (S)                   |  |
| <b>11 PIGGY IS KILLED</b>           | <i>The boys go to castle rock to confront Jack. Piggy is killed by a boulder pushed by Roger. Jack attempts to kill Ralph with a spear. He flees</i>  | CIVILIZATION            |   | GROTESQUE                        | "But there isn't a beastie" Ralph pushed both hands through his hair and looked at the little boy in mixed amusement and exasperation                  |
| <b>12 TEARS &amp; RESCUE</b>        | <i>SamnEric are tortured into revealing Ralphs hiding place. Jack vows to burn down the forest to find him. The smoke attracts a boat. The officer finds the boys and asks if they are playing at war. All of the boys cry whilst the officer looks back at his ship.</i> | SAVAGERY & THE "BEAST"  |   | SAVAGE                           |  |
|                                     |   | SPIRITUALITY & RELIGION |   | BEAST                            | Here, invisible yet strong was the taboo of the old life. Round the squatting child was the protection of parents and school and policemen and the law |
|                                     |   | THE WEAK & THE STRONG   |   | CIVILIZATION                     |  |
|                                     |   | <b>SYMBOLS/MOTIFS</b>   |   | ABYSS                            | "Kill the pig! Cut her throat! Spill the blood."   |
|                                     |   | THE ISLAND & THE SCAR   |   | GARDEN OF EDEN                   |  |
|                                     |   | THE LORD OF THE FLIES   |   | <b>METAPHORS (L)</b>             | What I mean is...Maybe it's only us...   |
|                                     |   | THE CONCH               |   | SADISTIC                         |  |
|                                     |   | PIGGYS GLASSES          |   | TORTURE                          | Taken away its life like a long satisfying drink.  |
|                                     |   | THE OCEAN & ADULTS      |   | CAMOUFLAGE                       |  |
|                                     |   | FIRE                    |   | HEROISM                          |  |
|                                     |   |                         |   | LUST                             |  |
|                                     |   |                         |   | BEAST                            |  |
|                                     |   |                         |   | PROPHECY                         |  |
|                                     |   |                         |   | PARACHUTE                        |  |
|                                     |   |                         |   | AUTHORITY                        |  |

**Key Facts – Sample Space Diagram**

 Represent the results from adding two 6-sided dice in a sample space diagram.

- a) The probability of getting a total of 7?  $\frac{6}{36}$
- b) The probability of getting a total of a 1?  $\frac{0}{36}$
- c) The probability of getting a total of a 10?  $\frac{30}{36}$

|            |   | First die |   |   |    |    |    |
|------------|---|-----------|---|---|----|----|----|
|            |   | 1         | 2 | 3 | 4  | 5  | 6  |
| Second die | 1 | 2         | 3 | 4 | 5  | 6  | 7  |
|            | 2 | 3         | 4 | 5 | 6  | 7  | 8  |
|            | 3 | 4         | 5 | 6 | 7  | 8  | 9  |
|            | 4 | 5         | 6 | 7 | 8  | 9  | 10 |
|            | 5 | 6         | 7 | 8 | 9  | 10 | 11 |
|            | 6 | 7         | 8 | 9 | 10 | 11 | 12 |

**Questions and Answers**

Calculate the probability of rolling 5 or more on a dice.

$$P(5 \text{ or more}) = \frac{2}{6} = \frac{1}{3}$$

The probability of Cheryl winning a race is 0.2

$$P(\text{Doesn't win}) = 1 - P(\text{win})$$

$$= 1 - 0.2$$

$$= 0.8$$

What is the probability that she doesn't win?

**Mathswatch References and Worksheet Links**

|     |                            |
|-----|----------------------------|
| 14  | The probability scale      |
| 58  | Listing outcomes           |
| 59  | Calculating probabilities  |
| 60  | Mutually exclusive events  |
| 125 | Experimental probabilities |
| 126 | Possibility spaces         |

**Key Facts - All about Probability**

$$\text{Probability} = \frac{\text{number of successful outcomes}}{\text{total number of possible outcomes}}$$

$$\text{Estimated/Experimental Probability} = \frac{\text{frequency of event}}{\text{total frequency}}$$

$$\text{Relative Frequency} = \frac{\text{number of 'successful' trials}}{\text{total number of trials}}$$

**Predicted** number of outcomes = probability x number of trials

**Important Facts About Probability**

Probability adds up to 1

 Events are **mutually exclusive** when they cannot happen at the same time

 Events are **exhaustive** if they include all possible outcomes

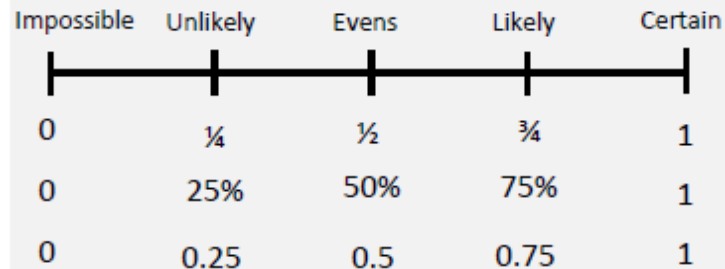
**Sample Space Diagram** shows all the possible outcomes. It is used to find theoretical probability

**Venn Diagrams** can be used to calculate probabilities

**Tree Diagrams** can be used to work out probability

**Vocabulary**

|             |  |
|-------------|--|
| Outcomes    | A possible result of a probability experiment is called an outcome                     |
| Events      | An event is a set of outcomes to which a probability can be assigned                   |
| Bias        | A systematic (built-in) error which makes all values wrong by a certain amount         |
| Correlation | When two sets of data are strongly linked together we say they have a High Correlation |
| Continuous  | Data that can take any value, within a range, as it is measured.                       |
| Discrete    | Data that is counted so it can only take certain values.                               |

**Probability Scale**


## The reactivity series

Most reactive

Potassium

Sodium

Calcium

Magnesium

Aluminium

Zinc

Iron

Tin

Lead

Copper

Silver

Gold

Platinum

Least reactive

The reactivity series shows a list of metals in the order of how reactive they are. The metals towards the top of the list react readily with air and water and violently with acid.

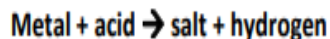
The metals towards the bottom of the list do not even react with acid.

The order of the reactivity series can be remembered using a mnemonic.

**"Pond slime can make a zoo interesting - the long crinkly sort goes purple."**

## Reactions of metals with acid

The general equation for the reaction of a metal with acid is:



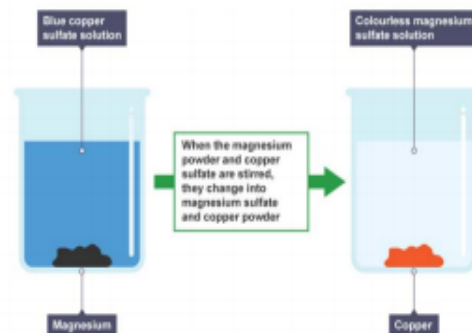
The test for hydrogen is sometimes called the squeaky pop test. Hydrogen makes a small 'pop' when it is placed near a lit wooden splint.

| Metal  | Reaction with acid   |
|--|--|
| Potassium<br>Sodium                          | Explosive, very exothermic reaction – should not be carried out in the school laboratory |
| Calcium                                      | Violent reaction, produces large amounts of hydrogen quickly                             |
| Magnesium                                    | Rapid reaction, produces hydrogen gas readily  |
| Aluminium<br>Zinc                            | Fast reaction, noticeable amounts of gas evolved.  |
| Iron<br>Tin                                  | Slow reaction, gas evolved very slowly. Reaction more noticeable in concentrated acid.   |
| Lead<br>Copper<br>Silver<br>Gold<br>Platinum | No observable reaction   |

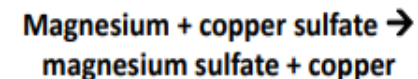
## Displacement reactions

Displacement reactions involve a reaction between a metal and a compound of a different metal.

**A more reactive metal will displace a less reactive metal from its compounds.**

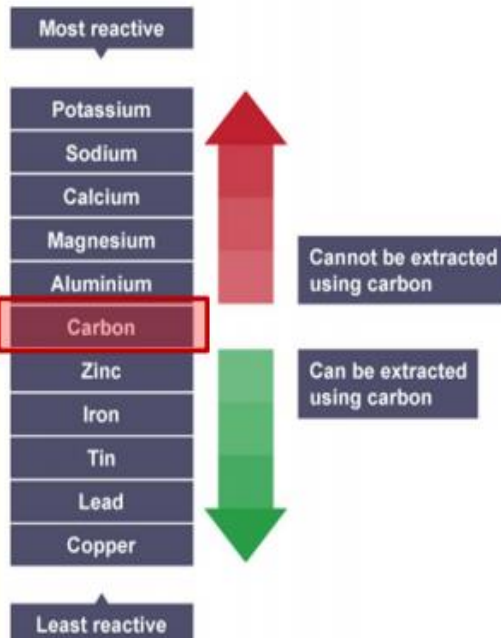


For example the more reactive magnesium will displace the less reactive copper from the copper sulfate solution.





### Reacting metals with carbon



Carbon can be placed into the reactivity series.

Metals which are less reactive than carbon can be extracted by reduction with carbon.

Metals that can be extracted by this method are zinc, iron, tin, lead and copper.

The general equation for this reaction is:



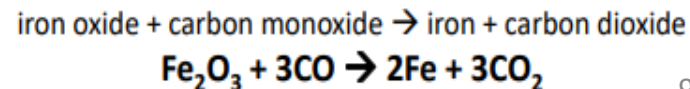
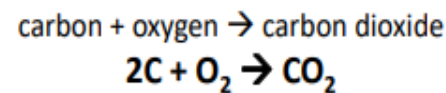
### Properties of metals and non-metals

| Property                      | Metals                                | Non-metals   |
|-------------------------------|---------------------------------------|--|
| Appearance                    | Shiny                                 | Dull   |
| State at room temp            | Solid (except mercury)                | Half are solids, half are gases, one is liquid (bromine) |
| Density                       | High                                  | Low  |
| Strength                      | Strong                                | Weak   |
| Malleable or brittle          | Malleable (can bend without breaking) | Brittle (will shatter when hammered)                     |
| Conduction (heat/electricity) | Conduct both well                     | Poor (graphite only non-metal conductor)                 |
| Magnetic                      | Only iron, cobalt and nickel          | None   |

### Obtaining iron from iron oxide

Iron can be extracted by the reaction with carbon in a container called a blast furnace. The blast furnace heats iron oxide with carbon in the form of coke (coal).

As the coke burns it forms carbon monoxide which is able to displace the oxygen from the iron oxide.



### Extraction of metals high in the reactivity series

Metals that are higher than carbon in the reactivity series have to be extracted by a process known as **ELECTROLYSIS**.

**ELECTROLYSIS** literally means pulling apart with electricity and can only be done on compounds that have been melted or dissolved in a substance called an electrolyte. Aluminium is the most common example of a metal extracted by this method.

| No. | Key Term                        | Definition  |
|-----|---------------------------------|---|
| 1   | <b>Ecosystem</b>                | A localized biome made up of living things and their no living environment  |
| 2   | <b>Biome</b>                    | A large scale ecosystem like a tropical rainforest  |
| 3   | <b>Tundra</b>                   | A cold region where the ground us deeply frozen; only the surface thaws in summer.  |
| 4   | <b>Desert</b>                   | An area that receives less than 250mm of rain a year. There are hot and cold deserts.   |
| 5   | <b>Net Primary productivity</b> | NPP a measure of how much new plant and animal growth us added to a biome each year.  |
| 6   | <b>Decomposition</b>            | <b>Decomposition</b> is the breakdown of animals and plant structures by bacteria and the release of carbon compounds into the atmosphere, soil and to the ocean floor. |
| 7   | <b>Biodiversity</b>             | The number of different plant and animal species within an area.  |
| 8   | <b>Biotic</b>                   | Living matter i.e. plants and animals   |
| 9   | <b>Abiotic</b>                  | Non-living matter i.e. precipitation, gasses etc.   |
| 10  | <b>Biomass</b>                  | The total amount of living things in one area.  |
| 11  | <b>Flora</b>                    | Trees, plants and flowers   |
| 12  | <b>Fauna</b>                    | Animals   |
| 13  | <b>Deforestation</b>            | The removal of trees  |

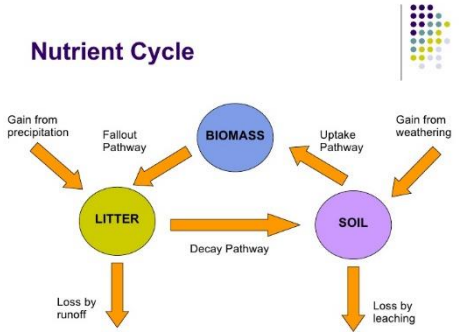
### Tree adaptation

- Trees that produce their seeds in cones, such as pine or fir trees, dominate the Coniferous forest.
- These trees often have shallow roots that spread out widely to take advantage of the moisture in the upper levels of the ground, which only thaws occasionally.
- They are also shallow because of the poor soil and rocky conditions.
- Trees have pine needles instead of broad leaves. They are an important adaptation due to the climate. Pine needles contain very little sap, so freezing is not much of a problem.
- Being dark in colour they absorb what little light falls on their surfaces.



| Adaptations of a Cactus to desert environments |                                    |   |
|--|------------------------------------|---|
| 14   | <b>No leaves</b>                   | Reduce water loss                       |
| 15   | <b>Small surface area</b>          | Reduce water loss                       |
| 16   | <b>Very thick stem</b>             | To store water in.                      |
| 18   | <b>Spines</b>                      | To stop animals eating them.            |
| 19   | <b>Shallow but extensive roots</b> | To absorb as much moisture as possible. |

| Flora and Fauna adaptations to Hot Desert environments |                          |   |
|--|--------------------------|---|
| 14   | <b>Drought Tolerant</b>  | Plants have mechanisms that help them survive droughts such as shedding leaves to prevent water loss due to transpiration. Some may even become dormant during very dry months. |
| 15   | <b>Drought avoiders</b>  | Most drought avoiders are annuals- they survive just one season, have a rapid life cycle and die after seeding.   |
| 16   | <b>Succulent species</b> | Species of plants that store water in fleshy leaves , stems or rootes   |
| 18   | <b>Nocturnal</b>         | Animals that sleep in the day and are active at night to avoid the heat of the day.   |



| Key terms |  |   |
|-----------|--|---|
| 1         | <b>Shoah</b>                                     | Modern Hebrew word which means catastrophe, the preferred term for the mass murder of Jews under the Nazi regime.   |
| 2         | <b>Extermination Camps</b>                       | Camps that were set up for the sole purpose of exterminating the inmates. The camps were designed to do this systematically with gas chambers to carry out the mass murders and crematoria to destroy the bodies. Examples include Auschwitz, Treblinka, Sobibor, Chelmno and Belzec. |
| 3         | <b>Concentration Camps</b>                       | A place where civilians, especially political prisoners or member of persecuted minorities, are deliberately imprisoned for crimes against the state.   |
| 4         | <b>Anti-Semitism</b>                             | Political, social and economic actions against Jews. In simple terms it means 'Hatred of Jews'.   |
| 5         | <b>Nuremberg Laws</b>                            | Jews were stripped of their citizenship rights and marriage between Jews and non-Jews was forbidden.  |
| 6         | <b>Kristallnacht (Night of the Broken Glass)</b> | A Nazi sponsored event against the Jewish community.  |
| 7         | <b>Ghettos</b>                                   | Enclosed areas in towns and cities where the Nazis forced the Jews to live in isolation after 1939. The largest was in Warsaw.  |
| 8         | <b>Final Solution</b>                            | The plan to do something about the 'Jewish problem' once and for all. This is where the extermination camps were used.  |
| 9         | <b>Holocaust</b>                                 | Term generally given to mass slaughter carried out by the Nazis during WW2. Comes from a Jewish term for a sacrificial offering which was burnt completely on an altar.   |
| 10        | <b>Persecute</b>                                 | <b>Treat someone cruelly because of race, religion etc.</b>   |
| 11        | <b>Inferior</b>                                  | <b>Of lower quality, position or status</b>   |
| 12        | <b>Untermensch</b>                               | <b>A person considered racially or socially inferior. Nazis included Jews, black people, gypsies, vagrants, homosexuals and those with mental illness as 'untermenschen'</b>  |
| 13        | <b>Aryan</b>                                     | <b>A person of German or Scandinavian origin, preferably with fair hair and blue eyes. The Nazis believed that Aryans were superior to all other races.</b>   |
| 14        | <b>Genocide</b>                                  | Deliberate killing of a specific group of people from a specific nation or ethnic group.  |
| 15        | <b>Einsatzgruppen</b>                            | Mobile killing squads that carried out mass murders in the east after 1939.   |
| 16        | <b>Wannsee Conference</b>                        | Meeting held on January 20th 1942 between senior Nazi officials, led by Heydrich. Here they discussed the co-ordination of what they called the "Final Solution of the Jewish Question".  |

| Key People/ Groups |                            |  |
|--------------------|----------------------------|--|
| 1                  | <b>Adolf Hitler</b>        | Leader of the Nazi party   |
| 2                  | <b>SS or Schutzstaffel</b> | Elite group of Aryan soldiers loyal to Hitler. Hitler's personal bodyguards. Nicknamed the 'Blackshirts'   |
| 3                  | <b>Heinrich Himmler:</b>   | Head of the SS -put in charge of leading the organisation the Final Solution   |
| 4                  | <b>Reinhard Heydrich</b>   | Led the Wannsee Conference, key figure in the implementation of the Final Solution.  |
| 5                  | <b>NSDAP</b>               | The Nazi party   |
| 6                  | <b>Adolf Eichmann</b>      | labelled as the mastermind behind the specific detail of establishing the extermination camps. His work earned him the title of 'Chief Executioner of the Third Reich'   |
| 7                  | <b>Gestapo</b>             | State secret police. Did not wear uniforms. Had a huge network of informers. Telephones were tapped and mail was opened. The Gestapo would arrest people without trial, torture them and send them to concentration camps. |

| Case Study: POLAND |  |  |
|--------------------|--|--|
| 1                  | <b>Background-</b> Poland was created at the end of WW1. Before this it had been part of Germany. The Nazis saw it as their right to take their land back. After invading in October 1939 the Nazis divided the country and began to remove all Polish control and culture, <b>as they considered the Poles to be racially inferior.</b> |  |
| 2                  | <b>Eastern General Plan</b>  | Drawn up by Himmler in 1940, this would be the template for all occupation in the East. 30,000 of the most talented people in Poland were arrested, many were tortured and murdered. <b>1.9 million non-Jewish Poles were killed.</b> 1.5 million were deported to work in labour camps. Poles were forced to wear a P on their arm and sexual relationships with Germans were banned. |
| 3                  | <b>Warsaw Ghetto</b>   | Ghettos were enclosed areas that isolated Jews. Hundreds were set up in Poland, the largest being the Warsaw Ghetto (completed Nov. 1940). By March 1941, the ghettos had 445,000 Jewish inhabitants. Over <b>140,000 died</b> in the Ghetto's three year existence.   |
|                    | <b>Liquidation of the Ghetto</b>   | July 21 <sup>st</sup> 1942 the Nazis began the mass-deportation of inhabitants to the Treblinka death camp. By Sept 21 <sup>st</sup> 300,000 had perished in the gas chambers. By October only 10% of the official ghetto population registered in July were still present   |

**Key Terms:**

**Faith:** strong belief in the doctrines of a religion, based on spiritual conviction rather than proof.  
**Belief:** Something somebody thinks is true.  
**Knowledge:** facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject.  
**Political party:** an organized group of people, often with common views, who come together to contest elections and hold power in the government.  
**Salvation:** saving the soul from sin and going to heaven thanks to Jesus’ sacrifice.  
**Adherents:** someone who believes and helps to spread the doctrine of another.  
**Sin:** Any action against God.  
**Holy Spirit:** Gods presence in the world  
**Resurrection:** coming back from the dead.

**Jihads:** Muslims use the word Jihad to describe three different kinds of struggle:

- A believer's internal struggle to live out the Muslim faith as well as possible
- The struggle to build a good Muslim society
- Holy war: the struggle to defend Islam, with force if necessary

**Sabbath:** a day of religious observance and abstinence from work, kept by Jews from Friday evening to Saturday evening, and by most Christians on Sunday.  
**Philosophy:** the study of the fundamental nature of knowledge, reality, and existence, especially when considered as an academic discipline.

**Where do beliefs come from?**

The core beliefs of Christianity are summarised in 1 Corinthians 15:1-4. Jesus died for our sins, was buried, was resurrected, and thereby offers salvation to all who will receive Him in faith. Unique among all other faiths, Christianity is more about a relationship than religious practices. Instead of adhering to a list of “do’s and don’ts,” the goal of a Christian is to cultivate a close walk with God. That relationship is made possible because of the work of Jesus Christ and the ministry of the Holy Spirit.

Christianity is a worldwide religion with over 2,000 million adherents. This is about 32% of the world’s population.

**How do religious beliefs impact relationships?**

Being raised in a religious home can have some powerful effects on your life and relationships. Religious institutions can provide moral and ethical education, emotional support and social interactions. Often, they also teach specific ideas about gender and the types of relationships that are “acceptable” and “not acceptable.” Unfortunately, sometimes these ideas lead to attitudes of control and dominance in relationships, and those aren’t healthy parts of any relationship, regardless of your religious affiliation.

**Where do ethics come from?** - Philosophers have several answers to this question:

- God and religion
- Human conscience and intuition
- a rational moral cost-benefit analysis of actions and their effects
- the example of good human beings
- a desire for the best for people in each unique situation
- political power

**How do religious beliefs impact history, politics and society?**

History informs us that every religion known to, and practiced by man has a set of principles and rules to follow. Whether God created man or man invented gods, religious beliefs have for centuries impacted on society, and so, on human behavior. No doubt the rules were designed to encourage ethical and moral behavior, but as always, these have been bent, altered and misinterpreted so that goodness has not always been the outcome of religious beliefs. Some behaviors run contrary to the ethics of the religion, with disastrous effects.

That has always been so, those interpretations that lead to extreme behaviors in the name of religion. The Spanish Inquisition, Bloody Mary Tudor executing Protestants, the Salem Witch Hunts, the Holocaust, right up to the Islamic Jihads of today – all manifestations of the impact of religion on human behavior. But the true purpose of any religious system is not to murder and destroy “un-believers,” but to provide a set of tenets to live by that will make the individual a better person, thus helping society to improve, as each person contributes to the common good. When this happens, the positive impact of religion is felt.

**Source of Wisdom and Authority:**

- You shall not murder. **(Exodus 20:13)**
- Moreover, brethren, I declare unto you the gospel which I preached unto you, which also ye have received, and wherein ye stand; By which also ye are saved, if ye keep in memory what I preached unto you, unless ye have believed in vain. For I delivered unto you first of all that which I also received, how that Christ died for our sins according to the scriptures; And that he was buried, and that he rose again the third day according to the scriptures: **(1 Corinthians 15: 1-4)**

### What is meant by a 'leap of faith'?

Leap of faith is an act of believing in or attempting something whose existence or outcome cannot be proved or known.

#### How do expressions of faith and belief impact on others?

Many Christians believe it is their duty to express their faith to those who are not yet believers. According to the Gospel of Matthew, Jesus' last command to His followers before He ascended into heaven was, "Go and make disciples of all nations."

### Should a political party have a religious affiliation?

Politics and religion play important roles in the way people live and societies operate. One is meant to regulate social behavior so that man can coexist peacefully and gainfully, while the other regulates individual behavior and the belief of a higher power.

One question that many tend to ask is: Should the two be mixed? And if they are mixed, would the mixture be like manna from heaven or a powerful poison that burns everything it touches?

Religion and politics have been bound in a passionate love-hate affair almost from the very beginning of history. Both wield power and an alliance of the two was meant to be the best way to exercise unbridled power on people. In fact, during the Middle Ages (known as the Dark Ages for this very reason), the Church was a formidable power, one that could even threaten the monarch. To keep itself strong, the Church encouraged feudalism and discouraged independent thought. Ultimately though, massive corruption and abuse of power by the Church led to popular dissent and revolution. Martin Luther King is one of the most prominent symbols of this dissent. Another factor that contributed to the weakening of the stranglehold of religion over the masses was the growth of science.

### What is the difference between religion and science? What is 'truth'?

The difference between science and religion exist in their principles and concepts. In other words, science and religion are two fields that are often distinguishable from each other when it comes to their principles and concepts. The principles applied in religion often are not applicable to science. The converse is also true. The relationship between science and religion is a very controversial one. Religion is based on faith while science is based on logic. That is why the two are often not compatible. This is also the reason for most of the disputes between the church and the scientists in the past.

#### What is Religion?

The existence of God is one of the chief concepts in religion. The formation or the creation of the [universe](#) is considered as the act of God according to religion. According to the [Bible](#), God created the world in six days. He used six days for creation and the seventh day, which is Sunday, was considered a holiday. Christians, who follow the Sabbath do not work on Sunday. However, by now, these traditions are not followed exactly. Nevertheless, there are followers, who are strict about these rules even now. Religion has paved the way for varied cultures and customs. Different countries across the world may have different religions for that matter.

#### What is Science?

Science has its own way of doing things and it has nothing to do with religious beliefs. It is always based on logic. For something to be accepted as true there should be proof. Since there is no proof to the existence of God, science does not accept God. Therefore, God did not create the world according to science. According to science, the universe was created as a result of the Big Bang. The theory that explains this belief is known as the Big Bang Theory. According to that, universe began in a rapid expansion about 13.7 billion year ago and has evolved since that time.

However, science and religion also have a positive relationship. That is when many phenomena that have been assumed by religion long time ago were proved by science later. For example, both Hinduism and Buddhism have been speaking about Big Bang theory as the source of the creation of the world.

### What is the difference between Science and Religion?

- The existence of God is one of the chief concepts in religion. On the other hand, there is no proof for the existence of God according to science.
- According to religion, God created world. However, according to science, the world came into being as a result of the Big Bang.
- However, some religious beliefs have been proven true by science later such as the Big Bang Theory.
- Religion has paved the way for varied cultures and customs whereas science has paved the way for discoveries and inventions.
- Different countries across the world may have different religions for that matter. On the other hand, the scientific principles are common wherever you go.

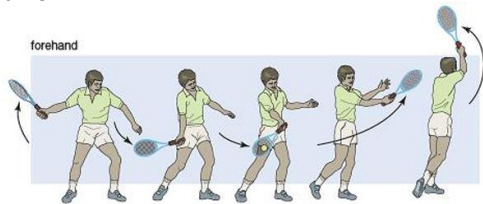
# YEAR 8 - T2- PHYSICAL EDUCATION— STRIKING AND FIELDING

- Striking and fielding includes; **tennis, cricket, rounders, softball** (games where you are hitting (striking) the ball).
- Fielding is the role of the team out in the field trying to stop the striker / runner scoring points by getting them out.
- This varies among different sports but essentially they are 'stumped out'.

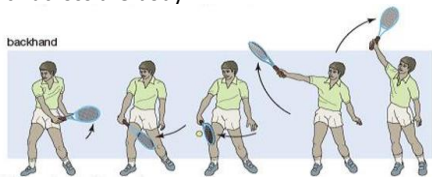
## Tennis 1:

- A game played on a rectangular court either singles or doubles.
- Players stand on opposite sides of a net and use a racket to hit a ball back and forth to each other.
- Maximum of one bounce after it has been hit by their opponent to return the ball over the net and within the boundaries of the court – if a player fails to do any of these three things, the opponent wins a point.
- Game – set – match.

**Tennis 2:** A **forehand** in tennis is a simple way to return the ball. It is played on your **strong side**, standing side on to the ball and the racket swings back to front **transferring your weight** at the same time.



**Tennis 3:** A **backhand** in tennis is more technical than a forehand and is played on your weaker side. You should swing the racket to your weak side, make connection with the ball and the racket comes back across the body.



## Cricket:

- The aim of cricket is simple - score more than the opposition.
- Two teams, both with 11 players, take it in turns to bat and bowl.
- When one team is batting, they try and score as many runs as they can by hitting the ball around an oval field.
- The other team must get them out by bowling the ball overarm at the stumps, which are at either end of a 22-yard area called a wicket.
- The bowling team can get the batsmen out by hitting the stumps or catching the ball.
- Once the batting team is all out, the teams swap over and they then become the bowling side.

## Rounders:

- Two teams with a maximum of 15 players and a minimum of 6 with no more than 9 on the field at one time.
- The ball must be bowled below the shoulder but above the knee.
- A rounder is scored if 4th post is reached and half a rounder is scored if 2<sup>nd</sup> base is reached.
- You can get the batter out by catching them out or stumping the post they're running to.
- Softball** consists of a **pitcher, catcher, four infielders, and three outfielders**.
- A strike is called when the batter swings at a pitch whether it is deemed to be in the strike zone or not.

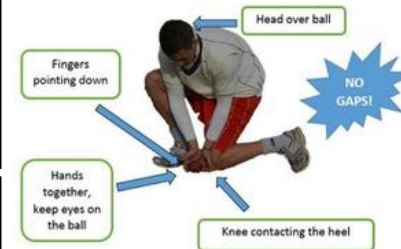
## Catching skills:

- Hands should be ready at chest height in a **bucket**.
- Eye on the ball.
- Step back as you receive and keep the body balanced.



**Fielding** is an important part of all striking and **fielding** games. Effective fielding is going to prevent the batting / striking team from scoring points by getting players **out**. Good fielders need to be able to throw and catch well and also stop the ball not always with their hands (long and short barrier).

## The Long Barrier



The **long barrier** is used in all fielding games if the ball is coming to you along the ground i.e rolling. You kneel down, making a barrier from your leg and foot, cup your hands together, keeping your eye on the ball.

## Throwing technique:

- Stand side on, weight on back foot, pull strong arm back, above shoulder height, other arm pointing to target.
- Transfer weight from back foot, push arm forward, pivot hips to face direction of throw, rotate shoulder / arm towards target.
- Flick wrist at point of release (at ear) and follow through.



## Questions:

- Name four sports that are striking and fielding?
- Explain the long barrier technique in your own words.
- Explain the throwing technique above in your own words.
- How do you *get people out* in striking and fielding games?
- How do you score points in rounders and cricket?
- Name 2 movements in tennis.

## Environmental Issues

- Negative Impacts
  - Energy Consumption
  - E-Waste and health →
- Recycling and Sustainability
- Positive Impacts
  - Climate monitoring
  - Teleworking
  - Reduced printing



## Types of Software

- Proprietary
  - e.g. Windows, iOS and MacOS
  - Microsoft Office, Adobe Photoshop
- Open Source
  - e.g. Linux and Android
  - LibreOffice, The GIMP
- Cost versus support model

## Privacy and Security

- Location monitoring
- Mobile Phone providers
- Surveillance Cameras
- Encrypted messaging
- Data Protection Act
- Cybersecurity
  - Threats and Defences

## Ethical Impact

- Inclusion / Accessibility
- The Digital Divide
- Professionalism
- Codes of Conduct

## Legislation

- Copyrights, Designs & Patents Act 1988
  - Intellectual Property
  - Hardware patents
- Computer Misuse Act
  - Hacking / viruses
- Data Protection Act 1998
  - Protects Personal data
  - 8 principles
  - Privacy, accuracy, security
- Software Licensing
  - Volume Licensing
  - Personal use licensing

## Emerging Technologies

- Robotics, AI
- Internet of Things. Quantum Computing.



Challenge:

Use Quizlet study sets 06

The elements of **Stanislavski's** system and naturalism.

|  |   |
|--|---|
| <p><b>1</b> <b>Magic If:</b> The actor start off by asking what would I do if I were in these circumstances or if certain circumstances were true?</p>                   | <p><b>6</b> <b>Objective:</b> What the character you are playing wants or needs in a scene?</p>   |
| <p><b>2</b> <b>Given circumstances:</b> The facts, events, period, time and place of action and the conditions of life. (Who, what where, when)</p>                      | <p><b>7</b> <b>Super Objective:</b> What the character wants or need most in the play as a whole.</p>   |
| <p><b>3</b> <b>Imagination:</b> The ability to give expression to the inner life of the character by adding whet the writer, director and others have left out.</p>      | <p><b>8</b> <b>Truth and Belief:</b> The actual fact of real life used to bring alive something on stage. You train yourself to use your own inner judgement.</p>     |
| <p><b>4</b> <b>Attention:</b> The ability to control the imagination and concentrate the actor's mind on what is taking place on the stage and prevents distraction.</p> | <p><b>9</b> <b>Discipline;</b> Physical, creative and mental self managing and a sense of responsibility to the actors and technicians around you.</p>                |
| <p><b>5</b> <b>Muscle relaxation:</b> Removing tension from the muscles so as not to impede the freedom of movement. This should be developed daily.</p>                 | <p><b>10</b> <b>Method of physical actions:</b> You can start with a physical action and if it has an objective, it can make you feel what you should be feeling.</p> |

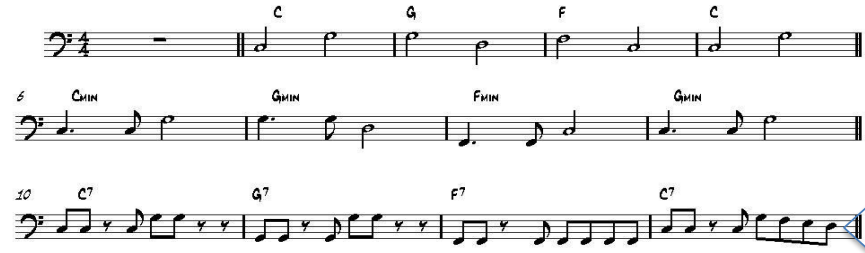


**KEYWORDS**

- 1- **Chord:** 2 or more notes played simultaneously.
- 2- **Chord Progression:** Movement from chord to chord.
- 3- **Cadence:** the two chords at the end of a musical phrase.
- 4- **Riff:** short repeated phrase in popular music.
- 5- **Melody:** the main tune of a song.
- 6- **Phrase:** a short musical passage; a musical sentence.
- 7- **Bass:** the lowest part of a piece, often providing harmonic support.
- 8- **Key:** group of pitches, or scale, that form the basis of a piece.
- 9- **Modulation:** Change from one key to another.
- 10- **Sequence:** the repetition of a musical phrase at a higher or lower pitch than the original.
- 11- **Harmony:** parts that play together simultaneously create harmony. Often accompanying or secondary parts to a melody.

**COMPOSING BASS LINES**

ROOTS AND 5THS CAN MAKE THE BASS LINE MORE INTERESTING



Oh Suzana in C major pentatonic



| MAJOR CHORD PROGRESSIONS |       |       |       |       |       |            |
|--------------------------|-------|-------|-------|-------|-------|------------|
| I                        | ii    | iii   | IV    | V     | vi    | vii°       |
| Major                    | Minor | Minor | Major | Major | Minor | Diminished |
| A                        | B     | C#    | D     | E     | F#    | G#         |
| B                        | C#    | D#    | E     | F#    | G#    | A#         |
| C                        | D     | E     | F     | G     | A     | B          |
| D                        | E     | F#    | G     | A     | B     | C#         |
| E                        | F#    | G#    | A     | B     | C#    | D#         |
| F                        | G     | A     | Bb    | C     | D     | E          |
| G                        | A     | B     | C     | D     | E     | F#         |

2

**4 Rules for Chord Progressions**

1. Start and end on chord I
2. The primary/major chords are strong (I, IV & V)
3. The minor chords add some interest and variety (but avoid using iii)
4. NEVER use chord vii (diminished)

**3 hints for Basslines**

1. Bass them around the root (bottom) note of the chord
2. Use other notes of the chords for interest
3. Add some rhythm for character

**5 characteristics of a good melody**

- A Good Melody...
1. Starts and ends on the same note (C)
  2. Moves mainly by step
  3. Has a smooth contour/shape
  4. Has 2 or 4 bar phrases
  5. Uses similar short motifs to give it a clear character

|    | Definition  | Keyword                 |
|----|---|-------------------------|
| 1  | Dry heat is applied to a starchy product and the molecules on the surface break down and change colour to brown   | Dextrinisation          |
| 2  | When sugars melt at high heat to change colour to a shade of brown and release sweetness  | Caramlisation           |
| 3  | A protein found in wheat flours, that makes the dough elastic   | Gluten                  |
| 4  | An intolerance to Gluten which causes the inflammation of the intestine walls and damage them making nutrient absorption more difficult for the body              | Coeliac disease         |
| 5  | Releases when starch is heated and enables sauces to thicken  | Amylase                 |
| 6  | The unravelling of the bonds that hold amino acids together in proteins, and the creation of a different structure of amino acids                                 | Denature                |
| 7  | The thickness of a liquid   | Viscosity               |
| 8  | When starch particles swell and burst, thickening a liquid  | Gelatinisation          |
| 9  | A yellowy, high-protein wheat that is grown especially for making pasta   | Durum wheat             |
| 10 | The process which separates the different parts of the grain  | Milling                 |
| 11 | A coarse-ground flour which comes from wheat  | Semolina                |
| 12 | The whole seed in its natural state, none of the layers have been removed   | Whole grain             |
| 13 | Products which does not have any wheat, rye, barley and sometimes oats  | Gluten - free           |
| 14 | 'Firm to the bite' describes the texture of pasta   | Al dente                |
| 15 | When extra vitamins and minerals are added to a food  | Fortification           |
| 16 | Changing raw foods to make them ready to eat or cook, or prepare them as ingredient for other food products   | Primary food processing |
| 17 | The fragments of grain husks that are separated from flour after milling which can reduce nutritional value   | Bran                    |
| 18 | The main part of the grain, a starch and protein supply   | Endosperm               |
| 19 | A carbohydrate made from two sugars molecules   | Disaccharide            |
| 20 | The keyword for how much of the original wheat grain is in the flour and used in products   | Extraction Rate         |
| 21 | A chemical breakdown of sugar to acid, gas or alcohol by bacteria, yeasts or other microorganisms   | Fermentation            |
| 22 | When bread is left to rest in a warm, damp environment to enable fermentation   | Proving                 |
| 23 | Part of the grain which provides fat and B vitamins, it is also used to grow new plants   | Germ                    |
| 24 | The two names of the proteins which form gluten. They are kneaded and stretched in the production of bread.   | Glutenin and Gliadin    |
| 25 | The impact of carbohydrate food on the blood sugar levels   | Glycaemic index         |
| 26 | The process of gathering or reaping crops   | Harvesting              |
| 27 | Fibre which the body can not absorb   | Insoluble fibre         |
| 28 | To re-knead the dough which knocks out some of the carbon dioxide allowing the yeast to produce more carbon dioxide   | Knocks back             |
| 29 | A method of making pastry where alternative layers of dough and butter are pressed together   | Lamination              |
| 30 | A simple sugar made of small molecules that are easily digested   | Monosaccharide          |
| 31 | The place in which something is derived. Where food comes from  | Origin                  |
| 32 | The ability of a fat to produce a characteristic crumbly texture to bakes products, partly pastry   | Shortening              |
| 33 | A polysaccharide and a complex carbohydrate   | Starch                  |
| 34 | A type of flour with the highest gluten content   | Strong flour            |
| 35 | When primary food is changed or converted into an ingredient which can then be used to make a food product  | Secondary processing    |
| 36 | Refers to bread, cake and biscuits made without raising agents  | Unleavened              |
| 37 | Contains just the endosperm, the bran and the germ have been removed  | White flour             |
| 38 | A microorganism belonging to the fungi family, made up of single oval cells that reproduce by budding, this means they multiply and the one cell divides into two | Yeast                   |

### A. Key Terms

| Keyword        | Description  |
|----------------|--|
| 1. Proportion  | the comparative measurements or size of different parts of a whole.  |
| 2. Scale       | a ratio of size in a map, model, drawing, or plan.   |
| 3. Tonal range | <b>Tone</b> in an <b>artistic</b> context refers to the light and dark values used to render a realistic object, or to create an abstract composition. When using pastel, an <b>artist</b> may often use a colored paper support, using areas of pigment to <b>define</b> lights and darks, while leaving the bare support to show through as the mid- <b>tone</b> . |
| 4. Costume     | a set of clothes in a style typical of a particular country or historical period.  |
| 5. Distort     | pull or twist out of shape.  |
| 6. Emphasize   | <b>Emphasis</b> is defined as an area or object within the <b>artwork</b> that draws attention and becomes a focal point.  |
| 7. Develop     | Improve your idea or design  |

### B. Command Words

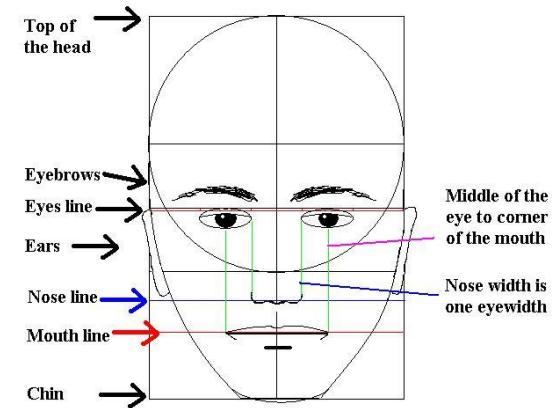
| Keyword     | Description   |
|-------------|---|
| 8. Study    | To examine, consider, investigate, research and show an in-depth understanding of what you have found or experienced.           |
| 9. Explore  | To investigate, examine and look into with an open mind about what might be found and developed.                                |
| 10. Create  | To conceive, make, craft or design something new or invent something.   |
| 11. Analyse | To examine in depth, study thoroughly, question, investigate and consider your own opinion or visual investigation of something |

### D. Technique based vocabulary

| Keyword          | Description  |
|------------------|--|
| 12. Papier-mâché | Papier-mâché is a composite material consisting of paper pieces or pulp, sometimes reinforced with textiles, bound with an adhesive, such as glue, starch, or wallpaper paste. |
| 13. Prime        | In painting, priming is coating a material in a protective layer of a neutral colour to prepare the surface for the final design.  |
| 14. Media        | The material and method used to produce a piece of art.  |
| 15. Layer        | a sheet, quantity, or thickness of material, typically one of several, covering a surface or body.   |

### C. Proportion

18. You must be able to label the proportions on a figure correctly. Revise using the diagram below.



### E. Jing Ju Chinese opera masks



- E1: Jing ju or Peking opera is a Chinese form of theatre
- E2. Masks and face paint are used to show different characters
- E3. Each colour shows a specific personality trait.
- E4. Bold patterns are used so that the audience can see the characters emotion.

**Levers**

Levers are used to lift heavy weights with the least amount of effort. In the example opposite, the heavy weight on the left hand side is been lifted by the person because of the lever. The longer the 'rod' the easier it is to lift the weight. Under normal circumstances the person would not be able to lift the weight at all. The *fulcrum* is the place where the rod *pivots* (or rotates).

The *load* is the scientific name for the weight. The *effort* is quite simply the amount of effort used to push down on the rod in order to move the weight.

**Types of lever**

**CLASS ONE**

The workman uses a trolley to move the large packing case. The fulcrum is the wheel.

**CLASS TWO**

The gardener uses a wheel barrow to lift tools and garden waste. The load is in the centre of the barrow

**CLASS THREE**

The fisherman catches the 'fish' which becomes the load at the end of the lever.

**The science of elasticity, energy and rubber**

Energy is a great subject in science. It covers so many things and I have many other aspects that I hope to share with you soon but one thing that explains energy so well is a simple rubber band; it can demonstrate elasticity, kinetic energy and potential energy and it great to use in some really cool experiments. Here are just a few short facts on the topic.

**What is Elasticity?**

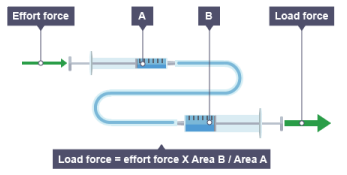
Elasticity is the ability of an object to return to its original size and shape after it has been stretched or squeezed.

When we pull an elastic object we are applying a force on it called a stress. If we apply too much stress to an object it will eventually reach a limit called its **elastic limit**.



When an object is pulled beyond its elastic limit it cannot return to its original shape.

All objects will eventually lose their elasticity due to wear and tear, friction and stress.



**Pascal's law**, in [fluid \(gas or liquid\) mechanics](#), statement that, in a fluid at rest in a closed container, a [pressure](#) change in one part is transmitted without loss to every portion of the fluid and to the walls of the container.

original force  $F_1 = P_1 A_1$

area  $A_1$

area  $A_2$  ( $A_1 \times 10$ )

fluid

$P_1 = \frac{F_1}{A_1}$

$P_2 = \frac{F_2}{A_2}$

Pascal's principle  $P_1 = P_2$

**Hydraulics** is a technology and [applied science](#) using [engineering](#), [chemistry](#), and other sciences involving the mechanical properties and use of [liquids](#). At a very basic level, hydraulics is the liquid counterpart of [pneumatics](#), which concerns [gases](#).

## REGULAR PRESENT TENSE

|            | -ER | -IR    | -RE |
|------------|-----|--------|-----|
| Je         | e   | is     | s   |
| Tu         | es  | is     | s   |
| Il/Elle/On | e   | it     |     |
| Nous       | ons | issons | ons |
| Vous       | ez  | issez  | ez  |
| Ils/Elles  | ent | issent | ent |

A few important verbs take *être*, not *avoir*.

The past participle has to agree with the subject:

*Elle est allée en ville.*

*je suis*

*tu es*

*il/elle/on est*

*nous sommes*

*vous êtes*

*ils/elles sont*

*allé(e)(s)*  
*resté(e)(s)*  
*sorti(e)(s)*

## Forming the perfect tense with avoir

How to make a past participle for regular verbs used with *avoir*:

Choose the verb you want to use.

For verbs ending in **-er**, take off **-er** and add **-é**:

**parler** (to speak) → **parl** + **é** → **parlé** = spoken

For verbs ending in **-ir**, take off **-ir** and add **-i**:

**choisir** (to choose) → **chois** + **i** → **choisi** = chosen

For verbs ending **-re**, take off **-re** and add **-u**:

**vendre** (to sell) → **vend** + **u** → **vendu** = sold

How to form the perfect tense with *avoir*

Once you have formed your past participle, you need to select the correct part of **avoir** you want to use.

1. You must choose a part of **avoir** in the **present** tense, eg:

| English              | Subject pronoun | Avoir - to have |
|----------------------|-----------------|-----------------|
| I                    | j'              | <b>ai</b>       |
| you (informal)       | tu              | <b>as</b>       |
| he/she/it (we)       | il/elle/on      | <b>a</b>        |
| we                   | nous            | <b>avons</b>    |
| you (formal, plural) | vous            | <b>avez</b>     |
| they                 | ils/elles       | <b>ont</b>      |

2. Now **add** your chosen **past participle**:

| -er verb: parler | -ir verb: choisir | -re verb: vendre |
|------------------|-------------------|------------------|
| parlé            | choisi            | vendu            |

■ **j'ai** + **parlé** = I spoke/I have spoken

■ **nous avons** + **choisi** = we chose/we have chosen

■ **il a** + **vendu** = he sold/he has sold

**Time words**

- ahora – now
- antes – before
- después – after
- hoy – today
- hoy en día – nowadays
- hace ...años - ...years ago
- ayer – yesterday
- mañana – tomorrow
- el año pasado – last year
- el año que viene – next year

| Presente        |                        | Pasado (Imperfecto) |                          |
|-----------------|------------------------|---------------------|--------------------------|
| soy/<br>es      | I am/<br>s/he/it is    | era                 | I was/<br>s/he/it was    |
| estoy/<br>está  | I am/<br>s/he/it is    | estaba              | I was/<br>s/he/it was    |
| hay             | there is/<br>there are | había               | there was/<br>there were |
| tengo/<br>tiene | I have/<br>s/he/it has | tenía               | I had/<br>s/he/it had    |

**Referring to places**

- aquí – here
- allí - there

**Comparing**

- más...que – more than
- menos..que – less than
- tan + adj + como – as.as
- tanto(a,os,as) + noun + como – as many..as

**Making links**

- también – also
- no..tampoco – neither
- sin - without

**Sentence building**

|                                 |        |  |
|---------------------------------|--------|--|
| (no) puedo / puede              |        | I can(not) / s/he can (not)...                                 |
| (no) quiero / quiere            |        | I (don't) want to / s/he (doesn't) want(s)to...                |
| (no) quería                     |        | I (didn't) want to / s/he (didn't) want to...                  |
| (no)tengo que/<br>(no)tiene que |        | I (don't)have to / s/he has to/<br>(s/he doesn't have to.....) |
| (no) tenía)                     |        | I (didn't) have to/ s/he (didn't) have to..                    |
| voy a/va a                      | + verb | I'm going to / s/he is going to...                             |
| iba a                           |        | I was going to / s/he was going to ..                          |
| (no) me (le) gusta              |        | I (don't) like to / s/he doesn't like to                       |
| me (le) encanta                 |        | I love to / s/he loves to...                                   |
| me (le) gustaría                |        | I/he/she would like to...                                      |

**Saying what you did**

|            |                                |
|------------|--------------------------------|
| hablé      | I spoke                        |
| hablaste   | you spoke                      |
| habló      | he/she is/you spoke (pol.sing) |
| hablamos   | we spoke                       |
| hablasteis | you spoke (fam.pl.)            |
| hablaraon  | they/you spoke (pol.pl.)       |

|              |                   |
|--------------|-------------------|
| visité       | I visited         |
| compré       | I bought          |
| me alojé     | I stayed          |
| nadé         | I swam            |
| pasé         | I spent           |
| lo pasé bien | I had a good time |
| viajé        | I travelled       |
| <b>jugué</b> | I played          |

**Asking questions**

- ¿Por qué? – why?
- ¿Qué? – what?
- ¿Cuándo? – when?
- ¿Dónde? – where?
- ¿Quién? – who?
- ¿Cuánto(s)? – how much/many?
- ¿Cómo? – how?

- fui** – I went
- hice** – I did
- ví – I saw
- comí – I ate
- bebí – I drank