The Polesworth School

ENSURING EXCELLENCE

Year 8 Threshold Knowledge and support guidance

Spring term

For the topics of learning within each subject we have identified the key knowledge and skills which students need to secure to give them a firm foundation on which to build further learning. We refer to these as threshold knowledge and it our intention that every student secures the threshold knowledge in order to make outstanding progress through the curriculum.

We believe that the form in which feedback and assessment takes place must be specifically related to the individual subject therefore subject teachers use a range of strategies to assess students' progress using the threshold knowledge.

We have included below the subject threshold knowledge for the topics of learning covered during the autumn term. You can support your son/daughter's progress by regularly discussing the threshold knowledge with them to help them to remember what they have learnt. To assist you in supporting your son/daughter with any areas for development we have signposted resources and links for each subject below.

Subject	**Year 8 Threshold Concepts - Spring term**	**How to support students' learning**
Art	**African masks –** 1. Create alternative mask designs. 2. Show understanding of a culture's styles, colours and designs. 3. Construct form in a mask. 4. Apply colour and pattern to a mask. 5. Make a positive/negative mask using cut card.	• Look at different mask designs from around the world. https://masksoftheworld.com/ • Practice drawing and recognising the major characteristics of the masks from the different cultures.

Drama	**Space –** 1. Know and practically demonstrate a definition of physical theatre (movement, gesture, facial expression, mime, exaggeration, synchronisation, canon, people as objects, tableaux, dance, slow motion) in rehearsal. 2. Demonstrate a working understanding of ensemble. 3. Know and demonstrate an understanding of genre. 4. Know and practically demonstrate a definition of physical theatre in performance. 5. Understand and demonstrate how to develop an extended performance. 6. Know, understand and demonstrate how to use slow motion in contrast to real time as a physical theatre technique. Demonstrate the techniques of tension/ heaviness, control and exaggeration. 7. Understand the role of evaluation in improving performance work and acting skills. 8. Understand what a technical rehearsal is.	• Physical Theatre - https://www.youtube.com/watch?v=VjnKwTAmSNs • Ensemble Acting - https://www.youtube.com/watch?v=dAzXWnM47aw • Use of posture / stance / space - https://classroom.thenational.academy/lessons/use-of-posture-stance-and-space-in-performance-6xh32e
English (Literature and language)	**Language - Reading –** 1. Understanding - Shows simple awareness of ideas. 2. Use of References - Selects simple references/textual details/quotes.	• Listen to your child read a range of texts (e.g., fiction, non-fiction, articles, magazines) to allow them to fulfil their daily reading targets and to help them improve their confidence in reading.

	3. Analysis of Language - Offers simple comment on the effects of language. 4. Analysis of structure - Offers simple comment on the effects of structure. 5. Subject Terminology - Makes simple use of subject terminology, not always accurately/appropriately. 6. Inference - Paraphrase rather than inference. 7. Comparison - Makes simple cross reference of ideas. **Literature - WW1 Poetry –** 1. Some explained response to task and whole text. 2. References used to support a range of relevant comments about the text. 3. Explained/relevant comments on the writer's methods with some relevant use of subject terminology. 4. Identification of the effects of the writer's methods on the reader. 5. Some understanding of implicit ideas/ perspectives/contextual factors shown by links between context/text/task.	• Help them to revise content learned in school from their class notes, knowledge organisers and 'Big Question' sheets by testing them on the key concepts for each topic. • Research key concepts and key words from the texts in lesson. Look at examples of WW1 texts to help become more familiar with the issues and experience of the time period. Some books that are set during WW1 include 'War Horse' by Michael Morpurgo, 'Private Peaceful' by Michael Morpurgo • Research WW1, particularly what life was like for soldiers in the trenches in order to strengthen their context knowledge. • Practise some analysis of key quotations noted down in class. Revise word classes and literary techniques including the effect and impact these have. • Support them in improving the effect and impact these have. • Support them in improving literacy skills by visiting the KS3 grammar pages

		on the BBC bitesize website www.bbc.co.uk/bitesize/topics/z4hrt39 . Students will benefit from working through the tasks and using the activities to check their own work before submitting it in their 200-word writing challenge fortnightly homework tasks.
French	**Holidays –** 1. Produce 5+ past tense sentences/verbs. 2. Translate 8+ phrases from the model text. 3. Produce 5+ linked phrases to describe a past journey. 4. Produce 8+ places in town. 5. Produce 5+ linked phrases to describe a town inc. an opinion & 2 tenses.	• Refer to the KS3 parent and student handbook for specific revision techniques and links to extra resources and a range of websites that you can use with your child to support them at home. • Refer to the Knowledge Organiser in the student's books for vocabulary support. • Use https://www.bbc.co.uk/bitesize/subjects/zgdqxnb for KS3 French revision and cultural information. • Use duolingo / memrise / quizlet for French vocabulary revision (as outlined

		in the KS3 Handbook on the school website). • Use the student's vocabulary and sentence builders in their class books, for reference to vocabulary and grammatical structures.
Geography	**Spring 1 - Climate Change & Resources –** 1. Describe the differences between climate change and global warming. 2. Identify what climate was like in the past. 3. Describe how the Greenhouse Effect works. 4. Explain the natural and human causes of climate change. 5. Identify the various effects of climate change across the world. 6. Identify the responses to climate change including adaptation and mitigation. 7. Explain the advantages of geo-engineering. 8. Know what food miles are and how we can change our living habits to reduce our carbon footprints. 9. Explain how cities can be made more sustainable. **Spring 2 - Development –**	• Watch Geographical documentaries together such as David Attenborough. • Encourage your child to take an interest in current affairs/watch/read the news. • Use the BBC Geography bitesize website to support your son/daughter's learning. • BBC Bitesize – Climate Change https://www.bbc.co.uk/bitesize/topics/zx38q6f/articles/z773ydm?course=zjsgbqt • BBC Bitesize – Development https://www.bbc.co.uk/bitesize/topics/zvwtsbk • BBC News (or other global news platforms) https://www.bbc.co.uk/news/world

	1. Know what the term development means and how HICs differ from LICs. 2. Give 2 examples of indicators that measure a country's level of development. 3. Understand what the Human Development Index is. 4. Know what life is like in Ghana. 5. Understand why we have a development gap between HICs and LICs like Ghana and Britain. 6. Know what aid is. 7. Explain the advantages and disadvantages of goat aid. 8. Know what Fairtrade is and how it benefits farmers.	• Seneca https://senecalearning.com/en-GB/ • Education quizzes website – Geography https://www.educationquizzes.com/ks3/geography/ • CGP KS3 Geography revision guide • Collins KS3 Geography revision guide and practice question booklet • AQA KS3 Geography textbook
German	**Holidays –** 1. Produce 5+ past tense sentences/verbs. 2. Translate 8+ phrases from the model text. 3. Produce 5+ linked phrases to describe a past journey. 4. Produce 8+ places in town. 5. Produce 5+ linked phrases to describe a town inc. an opinion & 2 tenses.	• Refer to the KS3 parent and student handbook for specific revision techniques and links to extra resources and a range of websites that you can use with your child to support them at home. • Refer to the Knowledge Organiser in the student's books for vocabulary support.

		• Use https://www.bbc.co.uk/bitesize/subjects/zcj2tfr for KS3 German revision and cultural information. • Use duolingo / memrise / quizlet for French vocabulary revision • Use the student's vocabulary and sentence builders in their class books, for reference to vocabulary and grammatical structures.
History	**Power and People – (Life before the First World War)** 1. Identify social problems around 1900. 2. Describe social problems around 1900. 3. Explain social problems around 1900. 4. Be able to describe the key features of the different suffrage organisations. 5. Give examples of actions of the Suffragists and the Suffragettes. 6. Assess the reasons for Emily Davison's death. **Impact of the First World War –** 7. Form judgments on the reasons for the First World War being considered 'Great' using criteria.	• Talk about History at home around topics being studied and more generally. We are currently studying the First World War and this is a good opportunity for students to find out about local, regional or family history connected to the war alongside looking at the experience of the range of people and countries involved in the war. • Encourage them to read. It could be non-fiction, historical works, newspapers, or online material, but

	8. Describe how the Franco-Prussian war could suggest reasons for the start of the First World War using a cartoon to assess. 9. Identify the different alliances and how the short term causes contributed to the start of war. 10. Explain how the assassination of the Archduke Franz Ferdinand triggered a crisis in the Balkans into war. 11. Compare the main reasons for the start of the First World War and form a judgement. 12. Assess how propaganda was used to recruit people to the army. 13. Prioritise reasons for one individual having joined the Durham Light Infantry and the army. 14. Understand the difficulty in being a conscientious objector. 15. Make inferences about the nature of trench warfare from photographs.	then ask them to assess it as a source using their skills. This could include reading war poetry from the First World War or reading War Horse. • Visit sites/museums/online displays. Many museums and historic sites have online resources. The Imperial War Museum (IWM) website has stories from the First World War and sections on objects and artefacts https://www.iwm.org.uk/history/first-world-war along with short videos on Trench Tales and more aspects of WW1 https://www.iwm.org.uk/learning/adventures-in-history/Trench-Tales-Part-One • Watch historical documentaries and programmes together (e.g. Dan Snow- short clips on WW1, Horrible Histories).
IT	**Programming in Python –** 1. Use range of basic programming constructs in Python. 2. Know how to print to the screen, perform calculations, take inputs and store them in suitably named variables.	• Encourage your child to practice programming skills using https://www.online-python.com/ • Use this website to find tutorials to help stretch and challenge their Python

	3. Develop working programs in Python to solve specific problems. 4. Identify the processes needed to solve a problem. 5. Design programs in Python to solve specific problems. 6. Analyse the requirements of a program. 7. Use Python confidently to write simple programs.	programming skills: https://www.w3schools.com/python/ • Use the BBC Bitesize information to reinforce learning in this topic: https://www.bbc.co.uk/bitesize/guides/zwmbgk7/revision/1
Maths	**Working in the Cartesian plane –** 1. Identify and draw lines that are parallel to the axes. 2. Recognise and use the line y = x. 3. Recognise and use lines of the form y = kx. 4. Recognise and use lines of the form y = x + a. 5. Explore graphs with negative gradient (y = -kx, y = a-x, x+y = a) **Representing data -** 1. Represent continuous data grouped into equal classes. 2. Draw and interpret scatter graphs. 3. Understand and describe linear correlation. 4. Draw and use line of best fit. 5. Represent data in two-way tables.	• Follow the teacher's guidance and use Sparx Maths to support home learning. • If your child is struggling with a particular skill encourage them to use the support materials or contact their teacher to resolve the issue. • Sparx Maths will send a homework update. Please encourage your child to complete the homework to the best of their ability. The homework is a recap of the skills they have been taught.

	Tables and probability – 1. Find probabilities from a sample space. 2. Find probabilities from two-way tables. 3. Find probabilities from Venn Diagrams. **Brackets and Equations –** 1. Multiply out a single bracket. 2. Expand multiple single brackets and simplify. 3. Factorise into a single bracket. 4. Solve two-step equations. 5. Solve equations, including with brackets. **Sequences –** 1. Generate sequences given an algebraic rule. 2. Generate sequences given a complex algebraic rule. 3. Find the rule for the nth term of a linear sequence. **Fractions and Percentages –** 1. Calculate percentage increase and decrease using a multiplier. 2. Express one number as a fraction or a percentage of another using calculator methods. 3. Express one number as a fraction or percentage of another without a calculator.	

	Standard form – 1. Investigate negative powers of 10. 2. Work with numbers between 0 and 1 in standard form. 3. Add and subtract numbers in standard form. 4. Multiply and divide numbers in standard form. **Number Sense –** 1. Estimate the answer to a calculation. 2. Round numbers to given number of decimal places.	
Music	**Reggae Music –** 1. Understand where reggae music comes from and it's social impact. 2. Understand how to play reggae devices and to demonstrate these through performance. 3. Perform both reggae and ska music by key performers. 4. Demonstrate primary chords and syncopated rhythms. 5. Develop instrumental skills through whole class performances.	• **Performing:** If your son/daughter is without an instrument, then a virtual instrument can be a good way of experimenting and following up with classwork: https://www.onlinepianist.com/virtual-piano https://virtualpiano.net/ https://www.musicca.com/guitar https://www.apronus.com/music/onlineguitar.htm https://ukebuddy.com/ukulele-chords

		• **Listening:** I would recommend creating a free account with www.spotify.com or using YouTube for listening around the styles we will be studying throughout Year 8. The more students listen to the music we are studying, the more they will understand the techniques and elements used. INSTRUMENTAL LESSONS ARE AVAILABLE AT SCHOOL. PLEASE EMAIL: s.glover@thepolesworthschool.com
PE	**Athletics –** 1. Demonstrate progress towards their personal bests when performing. 2. Use the correct starting grip and technique for at least one throwing event. 3. Use pacing during a longer distance event. 4. Understand and attempt to use the correct technique when performing a sprint start (either standing or crouch). 5. Understand the correct running technique to achieve maximum speed for a sprint event.	**Athletics:** • Join a local athletics club (Tamworth/Nuneaton) to develop your technique. • Encourage your child to attend the school club for extra practice. • Discuss the requirements for different events with your child and encourage them to record and improve their personal bests.

	6. Understand how to generate maximum height or distance in a jump event to enable them to achieve their best performance. 7. Demonstrate how to prepare the body effectively for a variety of activities through an independent warm-up. **Badminton –** 1. Recalls and demonstrates how to grip and racket correctly. 2. Demonstrates correct footwork. 3. Play clears to at least the back half of the court. 4. Play drop shots to clear the net and land before service line. 5. Play at least one type of net shot. 6. Show planned shot variation within their game play. **Cross country –** 1. Understands and attempts to show a change in running techniques for different gradients. 2. Understands and attempts to demonstrate pacing in their cross country running. 3. Can explain how running will help to maintain a health and active lifestyle.	• Watch athletics events live on TV or on YouTube. Watch world records and coaching videos for individual events. • Ask your child about "ME in PE" and discuss the characteristics they have developed in PE. **Badminton:** • Book a court at Polesworth sports centre to play. • Encourage your child to attend the school club for practice. • Watch badminton matches/skills on YouTube/TV (e.g. https://www.badmintonskills.net/badminton-skills-and-techniques/). • Ask your child about "ME in PE" and discuss the characteristics they have developed in PE. **Cross Country:** • Go for a run as a family. • Download free Apps to track their runs (Strava).

	4. Understands some rules and terminology. 5. Perform activities safely. 6. Complete a time trial event (in pairs or in isolation) relevant to their ability. 7. Explain how the body is working aerobically during performance. **Dance –** 1. Copy and demonstrate without teacher lead movements/exercises. 2. Understanding of Capoeira as a dance style. 3. Understand and use specific terminology in dance in specific – capoeira and choreography. 4. Use of correct timing is evident in performance and choreography. 5. Contribute to sequences and communicate choreography ideas positively to group. 6. Recall and perform a set dance warm up without teacher lead. 7. Understand and use a variety of simple choreographic devices in their choreography project most appropiate to dance style. 8. Use performance skills in front of other students, demonstrating sound movement memory of choreography project.	• Join local running club/park runs/athletics club (Tamworth/Nuneaton) https://www.parkrun.org.uk/. • Ask your child about "ME in PE" and discuss the characteristics they have developed in PE. **Dance:** • Watch professional street/hip-hop companies on YouTube (e.g., boy blue entertainment, Zoonation and annual 'breakin convention'). • Encourage your child to attend the school club and annual dance shows for extra practise and confidence. • To aid with movement memory and confidence, challenge students to either perform or teach others key moves, warm up and dance phrase. • Ask your child about "ME in PE" and discuss the characteristics they have developed in PE.

	Football – 1. Use at least two different parts of the foot, on both feet, to manipulate the ball. 2. Use at least two parts of the foot to pass the ball accurately over at least a 10m distance. 3. Control the ball using their back foot to open up the body. 4. Change direction when moving with the ball with some control and speed. 5. Attempt to select the correct option to pass or move with the ball in a modified and conditioned game. 6. Use movement to lose a defender and receive ball in space. 7. Understand and demonstrate how to defend using the correct body position in a 1 v 1 situation. 8. Recall and demonstrate good etiquette, sportsmanship and respect. 9. Recall, demonstrate and lead how to warm up and cool down safely. **Handball –** 1. Recall and use more than one type of pass accurately - Over arm pass, bounce pass, flick pass and under arm pass.	**Football:** • Practice ball familiarisation skills used in lessons to develop confidence with both feet. https://www.youtube.com/watch?v=q1B4is3faOM • Encourage your child to attend the school football club to development skills and confidence. • Explore getting your child involved in local youth football. Visit the FA website club finder to find accredited organisations. https://www.thefa.com/get-involved. • Ask your child about "ME in PE" and discuss the characteristics they have developed in PE. **Handball:** • Get involved in any sport that you need to dodge, run, catch, and throw.

	2. Attempt to receive the ball over increasing distances under limited pressure. 3. Use passing & movement to keep possession of the ball and create opportunities in attack under pressure. 4. Create space to shoot with accuracy. 5. Understand how to work together as a team to defend. 6. Use multiple skills to create space to shoot in game situations. **HRF Practical –** 1. Execute a basic training session in at least two types of training. 2. Plan a more detailed training session to develop specific fitness component. 3. Maintain training zone intensity required for a training session. 4. Give a basic explanation of the difference between aerobic and anaerobic training zones.	• Watch Handball matches on TV or YouTube matches/skills – e.g., Olympic and World Championships. • Join the Handball club in school. • Contact your local handball club (Loughborough/Coventry/ Birmingham). • Ask your child about "ME in PE" and discuss the characteristics they have developed in PE. **HRF – Practical:** • Ask your child to lead a warm-up with the family. • Discuss different sports and what is needed to participate in that sport. • Encourage them to develop their fitness and have a go at a type of training at home. • Identify 1 exercise and add 1 more repetition each day for a month. For example, 1st January do 5 sit-ups and by the end of January do 36.

		• Ask your child about “ME in PE” and discuss the characteristics they have developed in PE.
	HRF Theory – 1. Explain what intensity means. 2. Explain how to calculate maximum heart rate. 3. Give a simple explanation of the difference between aerobic and anaerobic training zones. 4. Explain briefly 3 types of training. 5. Link 3 training methods to a sport/position/benefit.	**HRF – Theory:** • Discuss different sports and what is needed to participate in that sport. • Discuss the difference between aerobic and anaerobic zones as a family. • Ask your child to plan a session as a family to do. • Ask your child about “ME in PE” and discuss the characteristics they have developed in PE.
	Netball – 1. Select and perform footwork and passing variations within their game play under increasing pressure. 2. Use dodging and change of direction to move into space to support team-mates. 3. Apply pressure to the opposition through marking/defending and use of body to channel/limit options. 4. Observes the rules of footwork, obstruction, contact and offside and the rules of centre pass.	**Netball:** • Practice throwing and catching/target-based skills (e.g., catch or chalk target on a wall) and foot coordination skills (e.g., skipping or hopscotch) at home. • Encourage your child to attend the school club for practice. • Research local netball clubs/teams to join https://www.englandnetball.co.uk/play-netball/find-a-session-or-club/.

	Develop awareness of some further rules including 3 second rule/replay/repossession/short pass. 5. Contributes to attacking or defensive play, working effectively in a team to select and apply tactics. **Problem Solving –** 1. Successfully complete more challenging tasks set as part of their group. 2. Contribute towards more challenging tasks physically. 3. Provide feedback on the completion of tasks. 4. Lead a small group in more challenging task.	• Watch netball drills on-line https://www.youtube.com/watch?v=8WxpyyUwQIQ https://www.youtube.com/watch?v=sGPHv-hkBVs or watch parts of matches on YouTube/TV https://www.youtube.com/watch?v=H25dND9cJuQ. • Ask your child about "ME in PE" and discuss the characteristics they have developed in PE. **OAA - Problem Solving:** • Ask them do explain what they have been doing in lessons. • Discuss what skills they have used during lessons. • Ask them to explain, demonstrate and lead some activities they have done in lessons with family/friends. • Look at local Scout/Brownie/Cadet groups. • Ask your child about "ME in PE" and discuss the characteristics they have developed in PE.

	Rounders – 1. Use a range of bowling techniques with some accuracy and consistency to challenge the opposition. 2. Move into position to use a long barrier technique. 3. Demonstrate the correct technique for batting and modify to change batting direction. 4. Use overarm throw with some accuracy from backstop to 1st post / 2nd post and from 2nd post to 4th post. 5. Understand the relevance of the pitch lines. 6. Explain a wide range of rules relating to bowling, batting and fielding.	**Rounders:** • Practice throwing and catching/target-based skills (e.g., catch or chalk target on a wall) and running skills at home (e.g., forwards/backwards relays/ball collect). • Encourage your child to attend the school club for practice. • Find local rounders clubs/teams to join https://www.roundersengland.co.uk/play/. • Watch rounders drills on-line https://www.youtube.com/watch?v=kWCNpoJ9vXA https://www.youtube.com/watch?v=smTBrE52Fag. • Watch parts of matches on YouTube https://www.youtube.com/watch?v=EGcimxQM0v0. • Encourage them to talk about health and fitness and what makes a person healthy. • Ask your child about “ME in PE” and discuss the characteristics they have developed in PE.

	Rugby – 1. Recall how to catch ball at pace. 2. Passing accurately over variety of distances. 3. Demonstrate at least one way to support a team mate in conditioned game 4. How to retain the ball in contact. 5. Understand how to evade an opponent. 6. Recall tackling technique and use in conditioned game. 7. Present a ball in a ruck consistently. 8. Demonstrate techniques of entering a ruck. 9. Make effective decisions in game situations. **Volleyball –** 1. Play a dig from a feed. 2. Alternate between a volley and a dig (body position). 3. Get into position to play a dig from an imperfect feed. 4. Contact the ball in the correct position for a spike. 5. Demonstrate the jump required to play shot #3. 6. Demonstrate correct timing of the block. 7. Play the dink shot.	**Rugby:** • Contact your nearest rugby club (Tamworth, Atherstone, Nuneaton, Market Bosworth). • Encourage your child to attend the school rugby club or practice. • Get involved in any games that involve dodging, running, throwing, and catching. • Watch a rugby game on TV or live/skills on YouTube. • Ask your child about "ME in PE" and discuss the characteristics they have developed in PE. **Volleyball:** • Encourage your child to attend the school club for practice. • Watch volleyball matches/skills online. The following are good to use: https://www.youtube.com/c/Volleyball1on1Videos https://www.youtube.com/watch?v=Foj6A4WWgCg. • Join a volleyball club – both Tamworth Spartans and Nuneaton Volleyball Club

		are recommended and have links with the school. • Ask your child about “ME in PE” and discuss the characteristics they have developed in PE.
Religious Studies	**Judaism –** 1. Identify simple links between key beliefs and religious stories about Jesus and the prophets of Judaism. 2. Use key evidence such as teachings or story from the Torah or Bible, to support ideas and explanations. 3. Explain religious beliefs about Abraham, Moses and Jesus and give evidence to support them. 4. Describe and explain some religious practices, such as that of Christians or orthodox Jews in Britain today. 5. Identify and explain some of the difficulties faced by Jews in Britain today.	• Parents and carers can discuss the main beliefs Jews have about God, who the main prophets were, and what it may be like to be a member of that faith in the world today. • They should focus on being able to give a clear idea and examples which help explain it • Websites which can help discussion are: https://classroom.thenational.academy/units/judaism-beliefs-and-teachings-6de4 https://classroom.thenational.academy/units/judaism-practices-63cb https://www.bbc.co.uk/bitesize/topics/znwhfg8/articles/zh77vk7

		My Life, My Religion documentary https://www.youtube.com/watch?v=lb-oCtDEh_w
Science	**Biology - Evolution –** 1. Describe and evaluate how different animals are adapted. 2. Define evolution and describe how fossils are evidence for evolution. 3. Describe how natural selection leads to evolution of an organism. 4. Define biodiversity and describe how preserving biodiversity is useful for humans. 5. Describe what extinction is and explain why it might happen to a species. **Biology - Variation –** 1. Recall examples of variation within humans. 2. Identify and describe when variation is continuous or discontinuous. 3. Identify and measure variation within a species. 4. Explain the difference between vertebrates and invertebrates. 5. Describe why variation is important for the survival of a species.	**Biology:** • Use BBC bitesize Biology: https://www.bbc.co.uk/bitesize/subjects/z4882hv. • Get pupils to set themselves quizzes on Educake (The Science Department's homework platform) to help them revise topics they are trying to understand. • Talk about science at home and what students have learnt today. As well as discuss new scientific advances in the news. • Watch BBC Four's 'Chemistry: A volatile history' documentary. • You could google 'Oak Academy' and they have videos on different topics and lessons that we cover.

	6. Predict implications of a change in the environment on a population. **Chemistry - Acids and Bases –** 1. Recall what an acid and base are. 2. Recall what the pH scale is and what pH an acid, alkali and neutral substance would have. 3. Recall and explain that mixing an acid and alkali produces a chemical reaction, neutralisation, forming a chemical called a salt and water. 4. Explain how to make a salt from an insoluble solid and acid. 5. Describe what an indicator is and how they work. **Physics - Universe –** 1. Recall that the solar system can be modelled as planets rotating on tilted axes while orbiting the	**Chemistry:** • Use BBC bitesize Chemistry: https://www.bbc.co.uk/bitesize/subjects/znxtyrd. • Get pupils to set themselves quizzes on Educake (The Science Department's homework platform) to help them revise topics they are trying to understand. • Talk about science at home and what students have learnt today. As well as discuss new scientific advances in the news. • Watch BBC Four's 'Chemistry: A volatile history' documentary. • You could google 'Oak Academy' and they have videos on different topics and lessons that we cover. **Physics:** • Use BBC bitesize Physics: https://www.bbc.co.uk/bitesize/subjects/zh2xsbk

	Sun, moons orbiting planets and sunlight spreading out and being reflected. 2. Describe that light takes minutes to reach Earth from the Sun, four years from our nearest star and billions of years from other galaxies. 3. Describe how space exploration and observations of stars are affected by the scale of the universe. 4. Explain how we get day and night, year length, and seasons. 5. Understand and explain why places on the Earth experience different daylight hours and amounts of sunlight during the year. **Physics - Gravity –** 1. Recall that mass and weight are different but related. 2. Explain that mass is a property of the object; weight depends upon mass but also on gravitational field strength. 3. Demonstrate the use of the formula: weight (N) = mass (kg) x gravitational field strength (N/kg). 4. Draw a force diagram for a problem involving gravity.	• Get pupils to set themselves quizzes on Educake (The Science Department's homework platform) to help them revise topics they are trying to understand. • Talk about science at home and what students have learnt today. As well as discuss new scientific advances in the news. • Watch 'Into the universe with Stephen Hawking' documentary. • You could google 'Oak Academy' and they have video's on different topics and lessons that we cover.

	5. Compare their weight on Earth with their weight on different planets using the formula. **Physics - Magnetism –** 1. Describe the shape of a magnetic field around a bar magnet and the Earth. 2. Recall and explain where a magnetic field is the strongest. 3. Describe and explain how to make an induced magnet. 4. Recall what materials are magnetic and why. 5. Describe how a compass works. 6. Understand the difference between a permanent and induced magnet. **Physics - Pressure –** 1. Describe the factors that affects pressure. 2. Recall and use the calculation for pressure. 3. Describe the difference between pressure and stress. 4. Describe and explain what causes objects to float or sink.	
Technology		To improve your child's knowledge and skills access the following:

	Fashion & Textiles – 1. Produce several textile processes (finishes and textures) to create a final project. 2. Know how to use specialist equipment safely. 3. Know how to develop and use design specifications to create a final project suitable for a target market. 4. Recognise the links between industry and their textiles lessons. 5. Know how to test and evaluate their products against a specification.	• Further resources: Resources from the Marks and Spencer archive museum on fibres, fabrics, fashion. Although some resources are targeted at other key stages and subjects many are a good starting point for ideas for KS3 and 4 D&T. The archive catalogue is also a good research tool for students to use https://marksintime.marksandspencer.com/schools • The BBC Bitesize website has a range of resources for different age groups, KS3 resources are quite limited but many of the GCSE resources are also suitable for younger learners (they include mini tests and quizzes along with outlining knowledge). Choose the age range the resources are for and the area of the UK along with design and technology. https://www.bbc.co.uk/bitesize • Shows to watch – The Great British Sewing Bee: https://www.bbc.co.uk/programmes/b03myqj2

	Food preparation and nutrition – 1. Understand environmental issues linked to food production and how being sustainable can help. 2. Understand what Fairtrade means and how it can help improve the life of farmers in less economically developed countries. 3. Understand different cultures and some of their traditions and beliefs. 4. Know different farming methods. 5. Understand the food science behind raising agents and sauce making. 6. Know how food is processed from raw ingredients to a final dish. 7. Develop knowledge of and demonstrate how to cook a repertoire of predominantly savoury dishes using a range of cooking techniques and equipment. **Car project –** 1. Identify and understand different types of energy and motion. 2. Design and produce work in the style of a real designer – Alec Issigons.	• https://www.bbc.co.uk/bitesize/topics/zjr8mp3/articles/zjnxwnb https://www.bbc.co.uk/bitesize/topics/zjr8mp3/articles/zyjytrd • https://www.youtube.com/watch?v=PLKTGWH398Q • http://archive.foodafactoflife.org.uk/Sheet.aspx?siteId=19&sectionId=135&contentId=819 • https://www.bbc.co.uk/bitesize/guides/zy6gq6f/revision/2 • https://www.youtube.com/watch?v=0USi4DbRVVQ • https://www.youtube.com/watch?v=0dmZKRLLjZ4 https://www.youtube.com/watch?v=y8vLjPctrcU • https://www.foodafactoflife.org.uk/recipes/ • Video clip explaining mechanisms- https://www.bbc.co.uk/bitesize/guides/zhq8jty/revision/1 2.

	3. Build knowledge of the properties and working characteristics of paper and board. 4. Develop practical skills when measuring, marking, sawing, cutting and assembling their final project. 5. Successfully design using a range of different techniques including isometric, oblique and orthographic and incorporate them into the design process. **Jewellery project –** 1. Write a design brief and specification from a context and then evaluate against a specification. 2. Design and produce work in the style of a real designer and art movement. 3. Expand knowledge of the properties and working characteristics of polymers. Categorise some polymers into thermoforming and thermosetting polymers. 4. Develop practical skills when using various polymers including recycled plastics.	• Information page on Alec Issigonis - http://www.designtechnology.info/engineers/page18.htm • BBC Bitesize design and technology page- https://www.bbc.co.uk/bitesize/subjects/zfr9wmn • Website full of ideas and inspiration and mini projects to practice practical skills- https://www.instructables.com/ • Video clip introducing the key designer- https://www.youtube.com/watch?v=IvTCONnchnk • Information page on Jewellery silversmithing- https://www.bbc.co.uk/teach/class-clips-video/art-and-design-ks3--gcse-the-craft-of-silversmithing/z67jf4j • BBC Bitesize design and technology page- https://www.bbc.co.uk/bitesize/subjects/zfr9wmn

	5. Know how to question and develop opinions on how the environment can impact designers, their ethics and morals. 6. Understand and recall the process of pewter casting in order to complete the final project through CAM.	• Website full of ideas and inspiration and mini projects to practice practical skills- https://www.instructables.com/ • https://www.montsaye.northants.sch.uk/assets/Uploads/KO-Plastics-Smart-Materials-KS3-A4-version-Y7.pdf