Year 7 Spring (Christmas to Easter):

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| --- | --- |
| **What will your child know, understand or know how to do?** | **Home learning/how parents can help?** |
| Maths: |  |
| Know that a set of coordinates, constructed according to a mathematical rule, can be represented algebraically and graphicallyUnderstand that a graphical representation shows all of the points (within a range) that satisfy a relationshipUse the properties of a range of polygons to deduce their perimetersRecognise that there is constant multiplicative relationship (π) between the diameter and circumference of a circleUse the relationship C = πd to calculate unknown lengths in contexts involving the circumference of circlesDerive and use the formula for the area of a trapeziumUnderstand that the areas of composite shapes can be found in different waysUnderstand the derivation of, and use the formula for, the area of a circleSolve area problems of composite shapes involving whole and/or part circles, including finding the radius or diameter given the areaUnderstand the concept of surface area and find the surface area of 3D shapes in an efficient wayUnderstand that 1 can be written in the form n/n (where n is any integer) and vice versaUnderstand that fractions of the form a/b where a > b are greater than 1 and use this awareness to convert between improper fractions and mixed numbersUnderstand that a fraction represents a division and that performing that division results in an equivalent decimalAppreciate that any terminating decimal can be written as a fraction with a denominator of the form 10n (e.g. 0.56 = 56/100, 560/1000, etc.)Understand the process of simplifying fractions through dividing both numerator and denominator by common factorsKnow how to convert from fractions to decimals and back again using the converter key on a calculatorKnow how to enter fractions as divisions on a calculator and understand the limitations of the decimal representation that results Compare negative integers using < and > Compare decimals using < and > Compare and order fractions by converting to decimalsCompare and order fractions by converting to fractions with a common denominatorOrder a variety of positive and negative fractions and decimals using appropriate methods of conversion and recognising when conversion to a common format is not requiredAppreciate that, for any two numbers there is always another number in between them | We set regular home learning, either written or on the “MyMaths” website. Usually this is set once every 3 lessons.You can help by:Reminding them to use their maths book or the lessons on the mymaths website to help them if they get stuck on their homework.Keeping a note of their mymaths username and password somewhere safe.Asking them to tell you what they are learning about or talk you through a worked example from their book. [www.mymaths.co.uk](http://www.mymaths.co.uk)We teach using the mastery approach – Pearson have put together a useful guide for parents, which can be found here. [Parents’ guide to the mastery approach](https://www.pearson.com/content/dam/one-dot-com/one-dot-com/uk/documents/Learner/Primary/Primary%20parents/pearson-maths-mastery-parent-factsheet-final-web.pdf)Below are some oak academy lessons, covering this term’s topics:1. Coordinates: <https://classroom.thenational.academy/units/coordinates-7ec1>
2. Area of 2D shapes: <https://classroom.thenational.academy/units/area-of-2-d-shapes-13b9>
3. Conceptualising fractions: <https://classroom.thenational.academy/units/conceptualising-and-comparing-fractions-97e4>
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| Science: |
| In addition to Completing the work listed in the Autumn Term document, students will complete two of the three units listed below:1. **Relationships in an ecosystem**

Know that plants make carbohydrates in their leaves by photosynthesis and gaining mineral nutrients and water from the soil via their roots Know the interdependence of organisms in an ecosystem, including food webs and insect pollinated crops Know the importance of plant reproduction through insect pollination in human food securityKnow the reactants in, and products of, photosynthesis, and a word summary for photosynthesis Know the dependence of almost all life on Earth on the ability of photosynthetic organisms, such as plants and algae, to use sunlight in photosynthesis to build organic molecules that are an essential energy store and to maintain levels of oxygen and carbon dioxide in the atmosphere Know the adaptations of leaves for photosynthesis the role of leaf stomata in gas exchange in plants1. **Atoms elements & compounds**

Know: The differences in arrangements, in motion and in closeness of particles explaining changes of state, shape and density; the anomaly of ice-water transition A simple (Dalton) atomic model Changes with temperature in motion and spacing of particles Internal energy stored in materials Conservation of material and of mass, and reversibility, in melting, freezing, evaporation, sublimation, condensation, dissolving Similarities and differences, including density differences, between solids, liquids and gases What is meant by “diffusions and “Brownian motion”1. **Forces**

Know that forces are pushes or pulls, arising from the interaction between 2 objects Know how to use force arrows in diagrams, adding forces in 1 dimension, balanced and unbalanced forces Know that forces are needed to cause objects to stop or start moving, or to change their speed or direction of motion (qualitative only)  | Key words and definitions are issued at the start of a new unit and reviewed through a match up activity in class midway through the unit. Pupils to spend 30 minutes on this home learning.Challenge mat – a series of multiple-choice questions on the topic. This home learning is issued midway through the unit and reviewed prior to the end of the unit. Pupils to spend 30 minutes on this home learning.You can help by:Practising the definitions and of key terms with your child, for example by reading them together and quizzing each other.Displaying Key words at home.Asking your child to use the words in a sentence. Some additional helpful resources are below:1. Online atom, elements and compounds quiz: https://www.footprints-science.co.uk/index.php?quiz=Elements%20Compounds%20Mixtures
2. Build an Atom (online interactive simulation):
3. http://phet.colorado.edu/sims/html/build-an-atom/latest/build-an-atom\_en.html
4. Online tour of the atom: https://pbslm-contrib.s3.amazonaws.com/WGBH/arct15/SimBucket/Simulations/chemthink-atomicstructure/content/index.html
5. Create your own compounds: https://molview.org/
6. BBC Bitesize - Living Organisms: <https://www.bbc.co.uk/bitesize/guides/zpwmxnb/revision/1>
7. BBC Bitesize - Food Chains and Food Webs: <https://www.bbc.co.uk/bitesize/guides/zq4wjxs/revision/1>
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| English: |
| **A Monster calls:** Know the following writers’ methods:  * Structure – how an extract is structured
* Morality Stories – definition, other examples, applied to this novel
* Symbolism – how symbols are used in literature and the effect in this novel
* Pathetic Fallacy – definition, examples in literature, examples in the novel
* Characterisation - how a character is created effectively
* Yew Tree – paganism – links to context
* Semantic field – definition, applied to the novel
* Personification – definition, examples in literature, examples in the novel
* Knowledge of the writer’s context using non-fiction texts.
* Using non-fiction texts to explore the idea of Patrick Ness as a ‘ghost writer’ for Siobhan Dowd.

**Poetry:**A study of poetry across time. A wide range of forms and poets studied. Form and structure explored independently to language analysis.* To recap poetic techniques
* To know the meaning and effects of metaphors
* To know about the life of William Shakespeare
* To know what a sonnet is
* To know the features of a Shakespearean sonnet
* To know the context of William Blake
* To know how rhyming couplets, symbolism and metaphors are used in poems
* To know how juxtaposition is used in poetry
* To know how extended metaphors are used in poetry
* To know how similes are used in poems
* To know the meanings and messages within the following poems:

Shakespeare – Sonnet 27, Sonnet 15Blake – The TigerBronte – She dried her tears and they did smileDickinson – Hope is the thing with feathersRossetti – A birthdayGrace Nichols – Hurricane Hits EnglandRita Dove - RosaJohn Agard – Half-casteImtiaz Dharker - BlessingKnow and understand the contexts surrounding the poets and their poems using non-fiction texts.  | All students in Y7-9 are given access to Bedrock Vocabulary: <https://app.bedrocklearning.org/> a fantastic app that works with your child to increase their vocabulary knowledge and application. Students have their passwords and usernames recorded in their planners and are expected to complete at least two sessions per week as part of their homework.Should you wish to create a parent account, allowing you to monitor your child’s progress and explore the vocabulary that they are currently learning, you will need your child’s log in information, along with a parent access code (again, found in your child’s planner). Further guidance can be found on the links below:**Parents’ guide to using Bedrock at home**<https://bedrocklearning.org/wp-content/uploads/2020/04/Parents%E2%80%99-guide-to-using-Bedrock-at-home-parents-of-school-users-5e9c7ef847935.pdf>? **Parents of Bedrock School Users**<https://bedrocklearning.org/parents-of-bedrock-school-users/?utm_source=Bedrock+Learning+Master+Audience&utm_campaign> **Recommended Reading:**A review of the film adaptation of the novel: <https://www.theguardian.com/film/2017/jan/08/a-monster-calls-review-film-patrick-ness-adaptation>The Chaos Walking Series – Patrick NessMore than This – Patrick NessThanks for the Trouble – Tommy WallachThe Still Point of the Turning World – Emily Rapp Black |
| Languages: |
| French:Know how to:Say how many there are,   Count in French   Describe people (family)   Say what people have   Say what people do (sports)  Say where people go,  Ask questions  Talk about yourself and about someone else  Intonation questions with question words  SpanishKnow how to: Describe family​  Describe some natural wonders of the Spanish-speaking world​  Ask and answer questionsTalk about what you do with others (rural life)​  Talk about what people can do​  Contrast what people must, can and want to do​  Places and locations​  Say what people are like today vs in general  | Home learning:* Regular vocab-learning homework
* Self-quizzing homework.

How you can help:* Test your child on the vocab set via the QR codes on the homework sheets
* With your child, look through the white vocab booklet which they were given at the start of the year
* Use BBC Bitesize to deepen knowledge and understanding:

French - <https://www.bbc.co.uk/bitesize/subjects/zgdqxnb>Spanish - <https://www.bbc.co.uk/bitesize/subjects/zfckjxs> |
| History: |
| Know what life was like in Medieval England, including: life in a Medieval village and town. Medieval leisure. Medieval law and order. Know what is meant by “The Black Death” – symptoms, cures, consequences. Know who held the power in Medieval England and the discourse between crown and church.Know about King John. Know the significance of the Magna Carta. Know about the Peasants Revolt  | “Research, review and do” homework tasks when set by teachers.Learn key terms by using key word glossary in exercise book.Use BBC Bitesize to help with understanding, including the following links: <https://www.bbc.co.uk/bitesize/topics/zbn7jsg> |
| Geography: |
| Know what is meant by the water cycle.Know how rivers, erode material and what landforms they make. Know how rivers change as you travel downstream. Know the causes and consequences of flooding.Know where we get our water from and why? Know the threats and challenges of water useKnow how to use OS Maps | “Research, review and do” tasks when set by teachers.How you can help?Look at a map with your child and see what they can identify. If you go for a walk, can they match up where they are with the map – using landmarks and the map key? |
| RE: |
| To learn about Buddhism:Know key terms associated with Buddha Dharma Know the story of the Buddha by linking it to his teachings such as anicca and anatta Know the influence of the Buddha on the lives of Buddhists by explaining the 5 precepts and 4 noble truths.  Know the role of the Sangha in the lives of Buddhists, looking at monastic and lay Buddhists  | Research key facts and information about Sikhism to make a title page.Create a postcard from a place of Sikh pilgrimage.Create a sheet of revision for assessment.How you can help:Talk to your child about the views and beliefs of Sikhs - did you know that Guru Nanak’s birthday is on 8th November this year and celebrations last for up to three days? You could ask your child to talk you through why this an important festival. |
| Art History: |
| To know how to use the formal elements (line, tone, shape, composition, texture, pattern, colour) to create abstract artwork.To know how tone, volume, beat and rhythm can be represented when drawing.To know about the process of relief printing and the history of printing techniques:* Woodcut
* Etching
* Engraving
* Lithography
* Screen printing

To Know about the history of portraiture and the self-portrait from ancient times to the present day  Knowledge of the Renaissance period and its key features.  | Article tasks (reading the articles and answering questions)How you can help:Support your child with the Art & Design article homework tasks, reading with them and discussing linked questions.Look at work by the named artists, with your child, ask them to explain how the artist has used the key features listed (e.g., line, texture). |
| Drama: |
| To know the social historical context of “War Horse” understand the plot and themes of the play.Know the skills:Mark the moment Split scene Monologue Ensemble Slow motion puppetry  . | Home Learning:Make a paper puppet How you can help:Encourage your child to practice the spellings and definitions of the key terms.Watch drama performances online or visit a local theatre.  |
| Music: |
| * Know the cultural and social background of the musical traditions of Africa/Samba/Indonesian Gamelan as well as the impact of purpose and venue on the presentation of the music.
* Know the elements of music with a particular emphasis on Rhythm (syncopation and polyrhythms) and texture (call and response, monophonic, polyphonic) and Instrumentation (djembe, djun djun)
* Know how to read stave notation including the rhythmic values of semibreves, minims, crotchets, quavers, triplets, and dotted rhythms.
* Know how to work with others as musicians focusing on the SPIRIT values of Self-regulation, Participation, Resilience, Inspiration, and Tolerance
* Know how to perform a traditional African vocal/polyrhythm piece in an ensemble ([La Laiko](https://www.youtube.com/watch?v=rrsEi6qwBkM&ab_channel=MamadyKe%C3%AFta-Topic)).
* Know features of cyclic rhythms in traditional music [Kokoleoko](https://www.youtube.com/watch?v=AJ-0e2vU6OQ&ab_channel=ConsolFerre)
 | Pupils can practise in the music department at breaktimes / lunchtimes and after school How can you help?Listen to a range of music at home, below is a link to an article about Samba, with 8 Samba tracks to listen to:<https://www.musicindustryhowto.com/what-is-samba-music/> |
| PE: |
| Whilst also learning sport specific knowledge for the activity they are participating in, students will know immediate and short term effects of exercise while participating. To know that health is a state of complete physical, mental and social wellbeing, not merely the absence of disease. To know that fitness is the ability to meet the demands of your environment. To know the physical and mental benefits of exercise. Including: improved posture, body shape, strength and flexibility. Know the social benefits of exercise for example,what makes an effective team, the ability to win and lose well, make friends, meet new people.  | We would encourage all students to follow the government guidelines of exercising for 30minutes every day. Local sports club information can be found in the PE area of the website and on notice boards in the PE faculty.Students should also aim to watch a range of different sports, particularly those they are studying. This will aid their knowledge of the rules and tactics. |
| ICT/Computing: |
| Spreadsheets: Know why spreadsheets are useful and how they can be changed and updated with minimal effort. Know formula building up to more advanced functions and formula along with how to create and use graphs correctly.  Know the hardware and software components that make up computer systems, and how they communicate with one another and with other systems   | Home learning:Spellings  Key Term DefinitionsHow you can help:Do you have a shortcut/top tip for using Microsoft Excel? If you have, share this with your child. If not, ask your to share something they have learned with you. |
| Design and Technology: |
| Graphics, RM and Food or Textiles:**Tech RM/Graphics:**Know the difference between hardwoods and softwoods Know the properties of pine & mild steel and how these can be manipulated to make a product. Know the health & safety requirements of using a pillar drill Know the advantages of using templates in marking out. Know what is meant by user-centred design techniques e.g. questionnaires, interviews, etc Know what a design brief & specification are used for  **Food/Textiles:****Either, moving from food to textiles:**Food science to include enzymic browning. Understanding how to write a successful time-plan. The Danger zone and key food safety temperatures. Bacteria growth.Food provenance. Where our food is grown, reared and caught. Then Textiles: Health and safety in the Textiles room. Know and understand how to write a specification and design brief. Carrying out primary and secondary research.Sources and origins of Textiles materials and fabrics.Fabric construction knowledge. Final design ideas. **Or from Textiles to food:**Completion of drawstring bag using hand and machine sewing skills. Final evaluation to include areas for development. Then Food:Health and safety in the food room. Understanding the 4C’s of food safety and hygiene as well as correct food storage methods. Weighing and measuring.The Eatwell guide.Seasonality.How to write a successful evaluation.  | Home learning:“Jason Mayden” reading article.Recall knowledge questions on woods/metals (pg 6 &7 of home learning booklet)How you can help:Help your child to read and learn the definitions printed on the inside of the cover of their homework booklet and test them. Read the Jason Mayden article with your child.Home Learning:Food article homework tasks and linked questions.How you can help:Look at food packaging with your child and discuss any symbols on the packaging, for example, dolphin friendly, red tractor.Home learning: Relevant textiles articles and linked homework questions.How you can help: Look at seams with your child at home. Could they practice on old clothes, or watch you if you re-hem an item of clothing? |
| SPIRIT: |  |
| Know what is meant by “self-regulation” and know how to regulate your emotions. Know the power of your words, know the impact your spoken and written words can have.Know the importance of personal care.Know how to apply self-regulation to your own habits, such as eating a balanced diet and using technology.Know what is meant by “resilience”. Know how to approach learning and challenges with a growth mindset and how this can help us to improve. | How you can help:Talk about self-regulation at home – has your child established strong routines for personal care, eating balanced snack and meals and using technology? The following is a link to an article about “growth mindset” – specifically aimed at parents. <https://www.mindsetworks.com/parents/growth-mindset-parenting#:~:text=One%20of%20the%20best%20ways,part%20of%20the%20learning%20process>. Talk to your child about mistakes they have made, and what they can learn from this - focus on what they could control and change to get a better outcome.  |