

Dynamic Dynasties Autumn 1 Year A Wolf Rock Class (Y5/6) Sequence of Lessons: Science

Evolution and inheritance

Intent: This project teaches children how living things on Earth have changed over time and how fossils provide evidence for this. They learn how characteristics are passed from parents to their offspring and how variation in offspring can affect their survival, with changes (adaptations) possibly leading to the evolution of a species.

Hooks from old learning:

Skills and Knowledge Components Focus, Year 5/6

Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.

Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.

Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.

Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Lesson	Sequence of Learning
1	WALT: understand how fossils are formed. Use the fossilization process images (In lesson one resources) and matching descriptors to order the sequence of events for fossilization to occur.
2	 WALT: distinguish between evolution and adaptation Adaptation: any change in the structure or behaviour of a species which helps it to become better fitted to survive and reproduce in its environment. Explain how over the years, many animals have ADAPTED to their environments to successfully continue living. Discuss evolution too and clarify meaning. Evolution is defined as the process of growth and development or the theory that organisms have grown and developed from past organisms. An example of evolution is how mobile phones have changed over time. PEPPERED MOTH INVESTIGATION – to showcase exactly how adaptation promotes evolution.
3	 WALT: identify significant scientists from the past and their contributions to scientific thinking Introduce the names Mary Anning and Charles Darwin - have they heard of them? Short 15-minute research session using iPads/laptops – take feedback – why were they important? Guide children to respond with explaining the significance of these two people's contributions. Discussion – why did some people not agree with their theories? Children to complete Scientist Fact Study sheet explaining the significance of one of these scientists.
4	 WALT: identify inherited characteristics Q: What does 'evolution' mean? Q: What does 'inheritance' mean? Q: Do these words have different meanings in different contexts? Allow children to discuss their thoughts. Ensure children understand that evolution is essentially change over time – it is more complicated than that, but that is a good starting point. Inheritance is when something is passed on to the next generation. E.g., eye colour, skin-colour, height etc. Explain to the children that when living things produce offspring – reproduce – they pass on characteristics to their offspring.
5	 WALT: identify examples of animal adaptations Darwin's Finches: https://www.youtube.com/watch?v=s64Y8sVYfFY Show pictures of different birds – can you match the bird to the food just by looking at how the beak has evolved? Give 5 minutes for this activity and take feedback. Now explain experiment – various 'foods' and 'types of beak'. Children to make predictions and then carry out experiment. Record in their science books using the investigation sheet. Ask questions – what happens if a food source disappears? E.g. A certain type of berry/seed? Birds will need to adapt or become extinct. Share conclusions and relate to Charles Darwin's voyage and discoveries in Galapagos.



Dynamic Dynasties Autumn 1 Year A Wolf Rock Class (Y5/6) Sequence of Lessons: RE

RE - What does it mean if God is Holy and loving?

Intent: The principal aim of religious education is to explore what people believe and what difference this makes to how they live, so that pupils can gain the knowledge, understanding and skills needed to handle questions raised by religion and belief, reflecting on their own ideas and ways of living. Hooks from old learning: EYFS: Christmas celebrates Jesus's birth.

Y1/2: Why does Faster matter to Christians?

 $Y_3/4$. What is it like for someone to follow God?

What kind of world did Jesus want?

Skills and Knowledge Components Focus

Year 5/6:

Make sense of belief:

- Identify some different types of biblical texts, using technical terms accurately
- Explain connections between biblical texts and Christian ideas of God, using theological terms Understand the impact:

• Make clear connections between Bible texts studied and what Christians believe about God; for example, through how cathedrals are designed

- Show how Christians put their beliefs into practice in worship
- Make connections:

• Weigh up how biblical ideas and teachings about God as holy and loving might make a difference in the world today, developing insights of their own.

Sticky Knowledge:

Determine the difference between God being holy and God being loving.

Lesson Sequence of Learning

1	 WALT: identify how Christians view God WALT: explore our own views and ideas about a leader Success Criteria: Can identify Christians' characteristics of a God. Can compare their own characteristics of a God to the identified characteristics by Christians.
2	 WALT: explore Christian views of God. WALT: respect a range of viewpoints Success criteria: Can identify the purpose of the Bible. Can find key words and ideas in the Bible that identify Christian's views of God. Can compare their own views of a God to the identified views of Christians.
3	 WALT: analyse Christian hymns WALT: consider the impact of music in our lives Success Criteria: Can identify the difference between the terms holiness and love. Can identify themes within hymns that link to God's holiness and love. Can identify key words and ideas within Christian hymns.
4	 WALT: identify the significance of cathedrals in Christianity WALT: appreciate the importance of buildings around us. Success Criteria: Can look at how Cathedrals and churches differ and understand why Cathedrals were built. Can consider how Cathedrals are used to symbolise the qualities of God Can identify key aspects of a Cathedral
5	 WALT: explore Christian 'rules' WALT: identify rules that guide us in life. Success Criteria Can explain how Christians follow rules from God. Can consider what rules we have in society and their purpose. Can compare 'humanist' rules to Christian rules and create our own.
Subject Composite:	



Dynamic Dynasties Autumn 1 Year A Wolf Rock Class (Y5/6) Sequence of Lessons: Geography

Geography - Investigating our world

Intent: In Geography, children will locate the major cities of the UK and topographical features such as hills, mountains and coasts. Children will explore and locate worldwide countries and their environmental regions. Children will compare key physical and human geography characteristics and compare to a region in the UK.

Hooks from old learning: EYFS: Year 1/2: Year 3/4:

Skills and Knowledge Components Focus

Year 5/6

Describe and understand key aspects of human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water.

Describe and understand key aspects of physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.

Identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night). Sticky Knowledge:

Key Vocabulary: Ordnance Survey maps; Contour lines; Six-figure grid references; Time zones; Climate zones; Vegetation belts; Biomes; Human geography; World cities; Sustainable manufacturing processes; Relatives locations and distances; Transport networks; Settlement hierarchy; Local enquiry; Fieldwork Subject Composite:

Junpact:

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Hooks for new learning (Y5/6):

Lesson Sequence of Learning

WALT: identify features of OS maps

Ask the children to recall what they know about maps, encouraging them to describe how to use compass directions, keys and grid references to locate features. Organise the children into small groups and give each group an Ordnance Survey (OS) Explorer map of the local area with a 1:25,000 scale. Follow the guidance below to help the children explore the map and key. After a period of collective exploration, provide the children with the Ordnance Survey map recording sheet, which will prompt them to answer questions and write a description of the local area using the information they have found out from the map. Encourage the children to share their work at the end of the lesson, highlighting where children have used the scale, compass directions and key to help them write their descriptions

WALT: understand time zones

Show the children the Time zones video on BBC Bitesize to introduce the children to time zones. Talk about the video, including why Earth has time zones, and address any misconceptions, if necessary. Show the Time zones presentation to explain how time zones are calculated. Use the information to prompt discussion and questioning and encourage the children to calculate time zones worldwide. To consolidate their understanding, ask children to work in pairs to complete the Time zones question sheet using the Time zones map to help. At the end of the session, mark the children's work collectively.

WALT: understand climate zones

Share the Climate zones, vegetation belts and biomes presentation with the children. Discuss the definitions carefully and ensure that children understand the link between the three terms. Explain that they will learn more about climate zones in this lesson. Ask the children what they already know about climate zones from previous learning, encouraging them to use the names polar, temperate, Mediterranean, desert and tropical.

WALT: understand vegetation belts

Revisit the Climate zones, vegetation belts and biomes presentation and explain that they will now learn about vegetation belts. Give pairs of children a copy of the Vegetation belts information sheet. Encourage them to look at the map first, identifying similarities with the Climate zone map, and then ask them to read the information to find out about plants that grow in the vegetation belts. To consolidate their knowledge, give the children access to computers and the Vegetation belts drag and drop template.

WALT: understand biomes

Ask the children to recap their knowledge of climate zones and vegetation belts and ensure the children understand the definition of the word 'biome'. Display the Biomes map to identify the locations of the five major biomes. Ask the children if they can see any similarities and differences between the names of the vegetation belts and the biomes highlighting that four are the same and one is different.



Dynamic Dynasties Autumn 1 Year A Wolf Rock Class (Y5/6) Sequence of Lessons: History

History - Dynamic dynasties

Intent: Learn about the achievements of the earliest civilizations – an overview of where and when the first civilizations appeared and a depth study of one of the following: Ancient Sumer, The Indus Valley, Ancient Egypt, The Shang Dynasty of Ancient China. Hooks from old learning:

Skills and Knowledge Components Focus

and why contrasting arguments and interpretations of the past have been constructed. Knowledge

Skill: Explore the validity of a range of historical reports and use books, technology and other sources to check accuracy.

Sticky Knowledge:

China is the longest lasting civilisation. Different world history civilisations existed before, after and alongside others. For example, the ancient Sumer existed from c4500 BC

Key Vocabulary:

Ancient China; Timelines and chronology; Shang Dynasty; Sources and artefacts; Oracle bones and religious beliefs; Bronze Age in individual – Di Xin; End of the Shang Dynasty; Bronze Ages around the world; Life after the Shang Dynasty; Legacy. Subject Composite:

Impact:

This project teaches children about the history of ancient China, focusing primarily on the Shang Dynasty, and explores the lasting legacy of the first five Chinese dynasties, some of which can still be seen in the world today. Hooks for new learning (Y5/6):

Lesso n	Sequence of Learning
1	WALT: understand what Ancient China was like Play the children the Ancient China video. After watching, ask the children to sort the History of ancient China sorting cards into a timeline of ancient China, using their knowledge of BC and AD dates. Ask the children to use the information on the timeline to answer the questions on the History of ancient China question sheet. At the end of the session, mark the children's timelines and answers and explain that, in this project, they will be exploring the history of ancient China.
2	WALT: power and hierarchy Explain to the children that they are going to take a deep dive into power in the Shang Dynasty. Play the Power video and ask the children to discuss the information and identify aspects of their lives that are affected by power. Show the children the Shang Dynasty hierarchy diagram and discuss which people were powerful and which were powerless. Talk about the effects that this distribution of power would have had on society and the everyday lives of the people in the Shang Dynasty.
3	WALT: understand what everyday life was like for different members of society in Ancient China Recap power and social hierarchy from the previous lesson, and explain that everyday life in the Shang Dynasty was different for each person due to their position in society.
4	WALT: understand warfare through enquiry Share the enquiry question 'Why were the people in the Shang Dynasty such successful warriors?' Listen to the Shang Dynasty warfare podcast audio and ask the children to begin to consider the enquiry question. Provide the children with the Shang Dynasty warfare podcast transcript and Warfare artefacts picture cards. Encourage them to use the evidence from the podcast and picture cards to write an answer to the enquiry question, using headings, such as social structure, weapons, bronze, chariots, wealth and leadership, to structure their arguments. At the end of the session, ask the children to share their answer to the question with a small group. Did everyone come to the same conclusion?
5	WALT: understand the significance of individuals in Ancient China Show the children the Fu Hao picture card, which shows the modern statue that stands outside her tomb. Ask the children to think of historically valid questions, inspired by the image, about the life and power of Fu Hao.
6	WALT: understand the factors which led to the end of the Shang Dynasty Share the enquiry question, 'How did the actions of the last king lead to the downfall of the Shang Dynasty?' then ask the children to read the Evidence from the records information sheet to find out about the reign of the last king, Di Xin, who was also known as the zhou (tyrant).



Dynamic Dynasties Autumn 1 Year A Wolf Rock Class (Y5/6) Sequence of Lessons: D&T

Design and Technology: Moving Mechanisms

Intent: This project teaches children about pneumatic systems. They experiment with pneumatics before designing, making and evaluating a pneumatic machine that performs a useful function.**Hooks from old learning:** (YR, Y1, Y2) Using familiar tools and equipment to sew. Y3/Y4 Planning a product, assessing it and considering adaptation.

Lesson	Sequence of Learning
1	WALT: understand pneumatic systems Share the States of matter presentation to recap on the characteristics of gases. Show the children the Pneumatics video. Ask the children questions about the information and ensure they can describe the forces in action and why pneumatics are used in heavy lifting equipment and machinery. Provide each child with a Pneumatic systems recording sheet and the listed practical resources. Invite the groups to carry out the experiments listed on the recording sheet and encourage them to share their findings at the end of the session.
2	WALT: investigate pneumatic systems Ask the children to recall what they learned about pneumatics in the previous lesson and how they are used in machines to create movement. Provide them with the Pneumatics challenge planning sheet. Introduce the challenge and provide the children with the practical resources. Give groups of children 45 minutes to complete the task. At the end of the session, ask the children to show their work to others and evaluate their task using the Pneumatics challenge evaluation sheet.
3	WALT: design a pneumatic prototype Ask the children to design a prototype for an object, furniture or gadget that uses pneumatics to make life easier or more comfortable around the home. Before they start, display the Design criteria information sheet and show the children the practical resources. Encourage the children to gather their ideas using discussion, annotated and exploded diagrams and simple modelling, then ask them to choose one idea to make into a prototype.
4	WALT: make a pneumatic prototype Ask the children to gather the resources they need to build their prototype. Before they start, share and discuss the Iterative design process poster. Encourage the children to follow the process as they work, implement their initial plan, regularly test their prototype, evaluate its success, and then adjust their design until they have a working prototype that they can deploy.
5	WALT: evaluate a working pneumatic prototype Ask the children to present their prototype to two small focus groups, one made up of children from school and one made up of adults. Encourage them to use the Pneumatic product prototype evaluation sheet questions to lead a discussion about their prototype with each group. Encourage the focus groups to use the prototype, ask questions, comment on the design, explain what they like and suggest any improvements.

Subject Composite: Impact:



Dynamic Dynasties Autumn 1 Year A Wolf Rock Class (Y5/6) Sequence of Lessons:

Computing

Computing 5.1 Coding

Intent: Children will often be able to solve their own problems when they get stuck, either by reading through their code again or by asking their peers; this models the way that coding work is really done. More able children can be encouraged to support their peers, if necessary, helping them to understand but without doing the work for them.

Hooks from old learning:

Skills and Knowledge Components Focus

Year 5/6:

Sequence of learning

To begin to simplify code. To create a playable game. To understand what a simulation is. To program a simulation using 2Code. To know what decomposition and abstraction are in computer science. To a take a real-life situation, decompose it and think about the level of abstraction. To understand how to use friction in code. To begin to understand what a function is and how functions work in code. To understand what the different variables types are and how they are used differently. To understand how to create a string. To understand what concatenation is and how it works.

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and program. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Key Vocabulary: algorithms, input, output, correction, software, manipulate, debug, analyse, evaluate Impact: Children will be able to read code and identify errors so that they can edit code and debug algorithms Hooks for new learning (Y5/6): Unit 6.1 Coding

Lesso n	Sequence of Learning
1	 Code Efficiently WALT: To review existing coding knowledge. To begin to be able to simplify code. To create a playable game. Success Criteria: Children can use simplified code to make their programming more efficient. Children can use variables in their code. Children can create a simple playable game
2	 Simulate a Physical System WALT: To understand what a simulation is. To program a simulation using 2Code. Success Criteria Children can plan an algorithm modelling the sequence of traffic lights. Children can select the right images to reflect the simulation they are making. Children can use their plan to program the simulation to work in 2Code.
3	 Decomposition and Abstraction WALT: To know what decomposition and abstraction are in Computer Science. To take a real-life situation, decompose it and think about the level of abstraction. To use decomposition to make a plan of a real-life situation. Success Criteria Children can make good attempts to break down their task into smaller achievable steps. Children recognise the need to start coding at a basic level of abstraction to remove superfluous details from their program that do not contribute to the aim of the task.
4	 Friction and Function WALT: To understand how to use friction in code. To begin to understand what a function is and how functions work in code. Success Criteria Children can create a program which represents a physical system. Children can create and use functions in their code to make their programming more efficient.
5	Introducing Strings WALT: To understand what the different variable types are and how they are used differently. To understand how to create a string. Success Criteria • Children can create and use strings in programming. • Children can set/change variable values appropriately. • Children know some ways that text variables can be used in coding.
6	 Text Variables and Concatenation WALT: To begin to explore text variables when coding. To understand what concatenation is and how it works. Success Criteria Children can create a string and use it in their program. Children can use strings to produce a range of outputs in their program



Dynamic Dynasties Autumn 1 Year A Wolf Rock Class (Y5/6) Sequence of Lessons: Music

Music: Happy - Pharrell Williams

Intent: This is a six-week Unit of Work. All the learning in this unit is focused around one song: Happy by Pharrell Williams - a Pop song with a Soul influence about being happy. What makes you happy? Hooks from old learning: (YR, KS1, LKS2) Recognition of musical terms: rhythm, pulse, beat, body clapping, repetition of musical lyrics in songs. Singing in time with others. Skills and Knowledge Components Focus Y5/6:

The children can

- Describe the style indicators of the song/music.
- Describe the structure of the song.
- Identify the instruments/voices they can hear.
- Talk about the musical dimensions used in the song.
- Play instrumental parts accurately and in time as part of the performance.
- Children can contribute to the performance by singing, playing an instrumental part, improvising or by performing their composition

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Lesson	Sequence of Learning		
1	WALT: listen and appraise Listen and Appraise - Happy by Pharrell Williams: Play the song. Click on the 'Listening' tab and use the questions as a focus when you are finding the pulse. After listening, share your thoughts and feelings together. Next, contextualise the song using the Fast Facts and History tabs and then answer the 'Questions' together. Try to use correct musical language. For more of a challenge, look together at the 'Extended Listening' tab. (See Unit Overview).		
2	WALT: engage in musical activities Musical Activities (embed with increasing depth over time) Use the Activity Manual for support a. Warm-up Games - Happy: Continue to work through the warm-up challenges. (See Unit Overview). b. Flexible Games (an optional extension activity) - Happy: Continue to progress through the Extended Games challenges. c. Vocal warm ups and Learn to Sing the Song - Happy: Continue to learn to sing the song. (See Unit Overview). d. Play Your Instruments with the Song: New Musical Activity in this step. (See Unit Overview).		
3	WALT: begin to recognise the style indicators of a cappella Pop music Listen and Appraise - Don't Worry Be Happy: Play the song and find the pulse. Follow the on-screen guidance as in previous steps. Remember, for more of a challenge, look together at the 'Extended Listening' tab. Listen and Appraise - Happy (if you want to): How are the songs different, how are they similar?		
4	WALT: perform pieces of music Performance - Happy: Perform and share what has taken place in today's lesson. Sing the song and improvise using voices and/or instruments within the song.		
5	WALT: listen and appraise Listen and Appraise - Walking On Sunshine: Play the song and find the pulse. Follow the on-screen guidance as in previous steps. Remember, for more of a challenge look together at the 'Extended Listening' tab. Compare and contrast with Happy. Perform Happy with instruments.		
6	WALT: begin to recognise the style indicators of Big Band music from the 1940s and 1950s Listen and Appraise - When You're Smiling: Play the song and find the pulse. Listen and Appraise - Happy (if you want to): How are the songs different, how are they similar? Notes Musical Activities (embed with increasing depth over time) Use the Activity Manual for support a. Warm-up Games - Happy: Continue to work through the warm-up challenges. b. Flexible Games (an optional extension activity) - Happy: Continue to progress through the Extended Games challenges. c. Vocal warm-ups and Learn to Sing the Song - Happy: Sing the song. (See Unit Overview). d. Play Your Instruments with the Song: Revisit this activity. e. Improvise with the Song: Option to revisit this activity. f. Compose with the Song: Option to revisit this activity. Notes Perform • Performance - Happy: Perform and share what has taken place in today's lesson. Choose what you perform today.		
Subjec	Subject Composite: Children will		

Impact: Children will be able to identify preferences in musical styles based on their personal tastes linked to their emotions and feelings.

Hooks for new learning (Y5/6): Listen to and appraise a range of music from different genres



Dynamic Dynasties Autumn 1 Year A Wolf Rock Class (Y5/6) Sequence of Lessons: Art

Art: Tints, Tones and Shades

Intent: In Art, children will explore the colour wheel, mixing tints, shades and tones. Children will investigate Taotie motifs, casting methods and watercolours. Hooks from old learning: (YR, KS1, LKS2) Skills and Knowledge Components Focus Y5/6: The children will: Improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials (for example, pencil, charcoal, paint, clay) Mix and use tints and shades of colours using a range of different materials, including paint. Produce creative work on a theme, developing ideas through a range of preliminary sketches or models Evaluate and analyse creative works using the language of art, craft and design. Compare and comment on the ideas, methods and approaches in their own and others' work. Lesson Sequence of Learning 1 WALT: understand terms 'tints', 'tones' and 'shades' Begin by recapping the children's knowledge of colour and colour theory. Ask, 'What do you already know about colour and colour theory?' Introduce the terms 'tints', 'tones' and 'shades', and model how to mix each. Then set out the practical resources and support the children to follow the Mixing tints, shades and tones instructions. At the end of the session, ask the children to lay their sketchbooks open and allow them to walk around and review others' work. Evaluate how successfully the children have been able to mix and record their colour mixing. 2 WALT: Mix and use tints and shades of colours using a range of different materials, including paint. Recap on the children's learning from the previous lesson. Show the Tints, shades and tones in landscape art presentation, and use the questions included as a starting point for discussion. Ask the children to choose one of the Landscape picture cards to study in more detail. Give them hand lenses so they can look at the colours, and then work carefully to mix and record them. Support the children to identify, mix and record colours they can see in their chosen artwork. Discuss and model different ways of recording the colours they find. At the end of the session, ask the children to display their sketchbooks alongside their chosen landscape. Allow time for the children to walk around the display to evaluate others' work. 3 WALT: Produce creative work on a theme, developing ideas through a range of preliminary sketches or models. Begin by showing the children the Drawing landscapes presentation. After watching the presentation, invite the children to talk about the techniques shown. Recap and model any techniques. Provide the children with pens, pencils, drawing paper and other reference materials, such as landscape images. Encourage them to draw thumbnail sketches to try out possibilities and ideas for a landscape composition. Encourage the children to share and compare their sketches and plans and invite them to give constructive advice to each other about how they could be improved. 4& WALT: Use a range of materials to create imaginative and fantasy landscapes Explain to the children that they are going to use their favourite landscape sketch as a basis for a landscape painting. 5 Explain that they should plan to use a palette that includes a range of tints, shades and tones. Show children the Painting landscapes video for inspiration. Reinforce the brief, that their landscape can be fantasy or real, done from direct observation or from their imagination. Allow children a period of sustained working to complete their landscape. As the children paint, talk with them, asking them questions and giving constructive feedback that they can use to improve their work. 6 WALT: Compare and comment on the ideas, methods and approaches in their own and others' work. Display the children's work. Give feedback, highlighting good examples of the children's technique and colour work. Ask the children to choose a partner. Ask them to discuss each other's work, saying what each of them did well and what ideas they have for improving what they have done. To complete and evaluate children's knowledge of colour theory, ask children to complete the Tints, Tones and Shades question sheet. Subject Composite: Children will produce a landscape painting using a range of colour mixing using tints, shades and tones.

Impact: Hooks for new learning (Y5/6):