



KS3 Activity Pack				
Subject	Activity	National Curriculum Links	Resource Location	Further ideas/activities
Science	An introduction to pine martens: (Including access to Power Point, suggested texts, suggested websites to visit, YouTube videos to watch)	<p>Year 7 Biology Reproduction Pupils should be taught about:</p> <ul style="list-style-type: none"> • Reproduction in mammals, including the structure and function of the male and female reproductive systems, fertilisation, gestation, and birth. • Reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal. <p>Year 9 Biology Inheritance and Evolution Pupils should be taught about:</p> <ul style="list-style-type: none"> • Differences between species • The variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection. • Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction. <p>Year 9 Biology Ecosystems and interdependence Pupils should be taught about:</p> <ul style="list-style-type: none"> • The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops. • How organisms affect, and are affected by, their environment. • The importance of maintaining biodiversity. 	PMBB Woodland Trust The Wildlife Trusts Vincent Wildlife Trust	<p>https://www.wildlifetrusts.org/wildlife-explorer/mammals/pine-marten</p> <p>https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/animals/mammals/pine-marten/</p> <p>https://www.forestryengland.uk/article/pine-martens</p> <p>https://www.vwt.org.uk/species/pine-marten/</p> <p>https://www.vwt.org.uk/projects-all/pine-marten-recovery-project/</p> <p>https://www.vwt.org.uk/projects-all/back-from-the-brink/</p>
	Food Chains & Food webs	<p>Year 8 Biology Photosynthesis and Respiration Pupils should be taught about:</p> <ul style="list-style-type: none"> • 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. <p>Year 9 Biology Inheritance and Evolution Pupils should be taught about:</p> <ul style="list-style-type: none"> • Differences between species • The variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection. • Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction. <p>Year 9 Biology Ecosystems and interdependence Pupils should be taught about:</p> <ul style="list-style-type: none"> • The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops. • How organisms affect, and are affected by, their environment. • The importance of maintaining biodiversity. 	PMBB	<p>Specialised plant cells - Living organisms - KS3 Biology - BBC Bitesize - BBC Bitesize</p> <p>What is respiration and photosynthesis in plants? - BBC Bitesize</p> <p>https://storage.viewit360.co.uk/national-trust/holnicote-estate/</p> <p>Nature reserves Somerset Wildlife Trust</p> <p>Nature Reserves Devon Wildlife Trust</p> <p>Advanced study Dartmoor</p> <p>Calculating tree growth activity sheet Forestry England</p> <p>Climate change education resources for teachers Forestry England</p>



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	<p>Pyramids of number & Biomass</p>	<p>Year 8 Biology Photosynthesis and Respiration Pupils should be taught about:</p> <ul style="list-style-type: none"> • 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. <p>Year 9 Biology Inheritance and Evolution Pupils should be taught about:</p> <ul style="list-style-type: none"> • Differences between species • The variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection. • Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction. <p>Year 9 Biology Ecosystems and interdependence Pupils should be taught about:</p> <ul style="list-style-type: none"> • The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops. • How organisms affect, and are affected by, their environment. • The importance of maintaining biodiversity. 		<p>Invertebrate Investigations Learning through Landscapes (ltl.org.uk)</p> <p>Extinct British wildlife The Wildlife Trusts</p>
	<p>Adaptations of a predator</p>	<p>Year 9 Biology Inheritance and Evolution Pupils should be taught about:</p> <ul style="list-style-type: none"> • Differences between species • The variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection. • Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction. <p>Year 9 Biology Ecosystems and interdependence Pupils should be taught about:</p> <ul style="list-style-type: none"> • The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops. • How organisms affect, and are affected by, their environment. • The importance of maintaining biodiversity 		<p>Extinct British animals - BBC Bitesize</p> <p>The UK's extinct animals - Woodland Trust</p>
	<p>How would you classify a pine marten?</p>	<p>Year 9 Biology Inheritance and Evolution Pupils should be taught about:</p> <ul style="list-style-type: none"> • Differences between species • The variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection. • Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction. 		<p>Mammals – British Animals - Woodland Trust</p>



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Adaptations: Delayed implantation		<p>Year 7 Biology Reproduction Pupils should be taught about:</p> <ul style="list-style-type: none"> • Reproduction in mammals, including the structure and function of the male and female reproductive systems, fertilisation, gestation, and birth. • Reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal. <p>Year 9 Biology Inheritance and Evolution Pupils should be taught about:</p> <ul style="list-style-type: none"> • Differences between species • The variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection. <p>Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction.</p>	PMBB	<p>Inheritance - Inheritance and genetics - KS3 Biology - BBC Bitesize - BBC Bitesize</p> <p>Species and selective breeding - Inheritance and genetics - KS3 Biology - BBC Bitesize - BBC Bitesize</p>
Compare other mustelid species – Polecat, weasel, stoat, badgers, otters, etc. – and look at their different niches.		<p>Year 9 Biology Inheritance and Evolution Pupils should be taught about:</p> <ul style="list-style-type: none"> • Differences between species • The variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection. • Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction. <p>Year 9 Biology Ecosystems and interdependence Pupils should be taught about:</p> <ul style="list-style-type: none"> • The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops. • How organisms affect, and are affected by, their environment. • The importance of maintaining biodiversity. 	PMBB	<p>Adaptations and evolution - Inheritance and genetics - KS3 Biology - BBC Bitesize - BBC Bitesize</p>
Biodiversity: How human impacts have affected woodland habitats and the issues we face as biodiversity decreases.		<p>Year 9 Biology Ecosystems and interdependence Pupils should be taught about:</p> <ul style="list-style-type: none"> • The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops. • How organisms affect, and are affected by, their environment. • The importance of maintaining biodiversity. 	PMBB	<p>About a Wilder Somerset 2030 Somerset Wildlife Trust</p> <p>Biodiversity and extinction STEM</p> <p>Biodiversity Study Dartmoor</p> <p>Beavers Devon Wildlife Trust</p> <p>Carbon dioxide and climate change STEM</p>



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	Are pine martens a pest?	<p>Year 9 Biology Ecosystems and interdependence Pupils should be taught about:</p> <ul style="list-style-type: none"> • The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops. • How organisms affect, and are affected by, their environment. • The importance of maintaining biodiversity. 	PMBB	Beavers Somerset Wildlife Trust Using natural solutions to combat climate change Devon Wildlife Trust
	<p>The reintroduction of pine martens: Class debate – scenario of reintroducing of pine martens on a site earmarked for business development (or something similar) Split the class into various roles (conservation charity, landowner, local business, council, locals, etc). Students provided with info and quotes from the point of view of their role and they have to debate about the pros and cons of reintroduction to that site.</p>	<p>Year 9 Biology Ecosystems and interdependence Pupils should be taught about:</p> <ul style="list-style-type: none"> • The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops. • How organisms affect, and are affected by, their environment. • The importance of maintaining biodiversity. 	PMBB	Create a Nature Recovery Network Somerset Wildlife Trust Food webs and interdependence STEM How organisms affect the environment STEM
	Quiz	This is a review of all of the NC links taught throughout the activities.	PMBB	The Ultimate Wildlife Quiz Lincolnshire Wildlife Trust (lincstrust.org.uk)
English	Suggested reading materials	<p>Reading Pupils should be taught to:</p> <ul style="list-style-type: none"> • develop an appreciation and love of reading, and read increasingly challenging material independently through: <ul style="list-style-type: none"> - reading a wide range of fiction and non-fiction, including in particular whole books, short stories, poems and plays with a wide coverage of genres, historical periods, forms and authors. - choosing and reading books independently for challenge, interest and enjoyment. - re-reading books encountered earlier to increase familiarity with them and provide a basis for making comparisons. • understand increasingly challenging texts through: <ul style="list-style-type: none"> - learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries - making inferences and referring to evidence in the text - knowing the purpose, audience for and context of the writing and drawing on this knowledge to support comprehension - checking their understanding to make sure that what they have read makes sense. • read critically through: <ul style="list-style-type: none"> - knowing how language, including figurative language, vocabulary choice, grammar, text structure and organisational features, presents meaning - making critical comparisons across texts 	List created by PMBB	Advanced study Dartmoor Blog Devon Wildlife Trust



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	Creating a vocabulary list (to be used when writing)	<p>Grammar and vocabulary Pupils should be taught to: Consolidate and build on their knowledge of grammar and vocabulary through:</p> <ul style="list-style-type: none"> drawing on new vocabulary and grammatical constructions from their reading and listening, and using these consciously in their writing and speech to achieve particular effects 	PMBB	Glossary of wildlife words Wildlife Watch
	Design an informative educational booklet about the pine marten and its reintroduction to inform/persuade local residents.	<p>Writing Pupils should be taught to: Write accurately, fluently, effectively and at length for pleasure and information through:</p> <ul style="list-style-type: none"> writing for a wide range of purposes and audiences, including: <ul style="list-style-type: none"> well-structured formal expository and narrative essays notes and polished scripts for talks and presentations a range of other narrative and non-narrative texts, including arguments, and personal and formal letters summarising and organising material, and supporting ideas and arguments with any necessary factual detail applying their growing knowledge of vocabulary, grammar and text structure to their writing and selecting the appropriate form drawing on knowledge of literary and rhetorical devices from their reading and listening to enhance the impact of their writing plan, draft, edit and proof-read through: <ul style="list-style-type: none"> considering how their writing reflects the audiences and purposes for which it was intended amending the vocabulary, grammar and structure of their writing to improve its coherence and overall effectiveness paying attention to accurate grammar, punctuation and spelling; applying the spelling patterns and rules set out in English Appendix 1 to the key stage 1 and 2 programmes of study for English. <p>Grammar and vocabulary Pupils should be taught to: Consolidate and build on their knowledge of grammar and vocabulary through:</p> <ul style="list-style-type: none"> extending and applying the grammatical knowledge set out in English Appendix 2 to the key stage 1 and 2 programmes of study to analyse more challenging texts studying the effectiveness and impact of the grammatical features of the texts they read drawing on new vocabulary and grammatical constructions from their reading and listening, and using these consciously in their writing and speech to achieve particular effects knowing and understanding the differences between spoken and written language, including differences associated with formal and informal registers, and between Standard English and other varieties of English using Standard English confidently in their own writing and speech English – key stage 3 6 discussing reading, writing and spoken language with precise and confident use of linguistic and literary terminology. 	PMBB	Somerset Environmental Records Centre Somerset Wildlife Trust Specialist groups Somerset Wildlife Trust Wilder Youth Somerset Wildlife Trust Saving Devon's Treescapes Devon Wildlife Trust We are for wildlife Forestry England
	Protecting our woodlands and the species that call woodlands their home: A persuasive letter	<p>Writing Pupils should be taught to: Write accurately, fluently, effectively and at length for pleasure and information through:</p> <ul style="list-style-type: none"> writing for a wide range of purposes and audiences, including: <ul style="list-style-type: none"> well-structured formal expository and narrative essays notes and polished scripts for talks and presentations a range of other narrative and non-narrative texts, including arguments, and personal and formal letters 	PMBB	Bringing back pine martens Devon Wildlife Trust Project Pine Marten Gloucestershire Wildlife Trust



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		<ul style="list-style-type: none"> - summarising and organising material, and supporting ideas and arguments with any necessary factual detail - applying their growing knowledge of vocabulary, grammar and text structure to their writing and selecting the appropriate form - drawing on knowledge of literary and rhetorical devices from their reading and listening to enhance the impact of their writing • plan, draft, edit and proof-read through: <ul style="list-style-type: none"> - considering how their writing reflects the audiences and purposes for which it was intended - amending the vocabulary, grammar and structure of their writing to improve its coherence and overall effectiveness - paying attention to accurate grammar, punctuation and spelling; applying the spelling patterns and rules set out in English Appendix 1 to the key stage 1 and 2 programmes of study for English. <p>Grammar and vocabulary Pupils should be taught to: Consolidate and build on their knowledge of grammar and vocabulary through:</p> <ul style="list-style-type: none"> • extending and applying the grammatical knowledge set out in English Appendix 2 to the key stage 1 and 2 programmes of study to analyse more challenging texts • studying the effectiveness and impact of the grammatical features of the texts they read • drawing on new vocabulary and grammatical constructions from their reading and listening, and using these consciously in their writing and speech to achieve particular effects • knowing and understanding the differences between spoken and written language, including differences associated with formal and informal registers, and between Standard English and other varieties of English • using Standard English confidently in their own writing and speech English – key stage 3 6 discussing reading, writing and spoken language with precise and confident use of linguistic and literary terminology. 		
<p><u>DT</u></p>	<p>Design pine marten proof bird boxes (considering different sized species of bird).</p>	<p>Key stage 3 Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of domestic and local contexts [for example, the home, health, leisure and culture], and industrial contexts [for example, engineering, manufacturing, construction, food, energy, agriculture (including horticulture) and fashion]. When designing and making, pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> • use research and exploration, such as the study of different cultures, to identify and understand user needs • identify and solve their own design problems and understand how to reformulate problems given to them • develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations • use a variety of approaches [for example, biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses • develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools <p>Make</p> <ul style="list-style-type: none"> • select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture • select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties 	<p>PMBB</p>	<p>Pine martens and bird boxes - PineMarten.ie</p> <p>Build a home for wildlife Somerset Wildlife Trust</p>



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Somerset Wildlife Trust



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		<p>Evaluate</p> <ul style="list-style-type: none"> • analyse the work of past and present professionals and others to develop and broaden their understanding • investigate new and emerging technologies • test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups • understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists <p>Technical knowledge</p> <ul style="list-style-type: none"> • understand and use the properties of materials and the performance of structural elements to achieve functioning solutions • understand how more advanced mechanical systems used in their products enable changes in movement and force • apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors], and control outputs [for example, actuators], using programmable components [for example, microcontrollers] 		
<p>Access to the pine marten blog for updates on project</p>				

