## Barndale Activate Curriculum Science Overview

22/23				S	cience				F	hysics	Biology	Chemistry
Topic	Seasonal Changes Light & S		Sound	Animals inc Humans		Living things & Habitats		Everyday Materials		Properties of Materials		
Who/When	Hedgehogs	Autumn 1	Hedgehogs	Autumn 2	Hedgehogs	Spring 1	Hedgehogs Spring 2		Hedgehogs	Summer 1	Hedgehogs	Summer 2
Knowledge	Identify and notice changes outside- weather & trees  Name, label and measure weather  Identify clothing for the weather		Know what mal shadows  Identify differed  Make sounds a sounds without  Control sounds quieter, start ar	nt colours  nd identify t seeing them - louder,	Recognise part of animals and Know difference adults and bab and babies	humans e between	different environi Know what anima grow	Senses for what is in different environments  Know what animals need to grow  Can match animals & plants		Manipulate materials and sort by qualities  Know different types of materials (wood. Etc.)  Experiment suitability of materials for different tasks		rties and textures bend, rough etc) oods can change ix) ences between
Working Scientifically	Notice, Exp	lore, Sort, S	Show, Recogr	nise, Name,	Match, Anti	cipate						
Assessment	Steps 1	L & 2	Steps	1 & 2	Steps	1 & 2	Steps 1	& 2	Step	s 1 & 2	Step	s 1 & 2

23/24				S	cience				F	hysics	Biology	Chemistry
Topic	Forces, Magnets & Electricity		Earth & Space Evolution & Inheritance		Plants		States of Matter		Rocks			
Who/When	Hedgehogs	Autumn 1	Hedgehogs	Autumn 2	Hedgehogs	Spring 1	Hedgehogs	Spring 2	Hedgehogs	Summer 1	Hedgehogs	Summer 2
Knowledge	<ul> <li>Investigate objects they can push/pull, float/sink</li> <li>Investigate magnets</li> <li>Know what different things electrical objects can do</li> </ul>		Know what they can see in the sky during day/night     Know the shape of the moon (changes), earth and sun		them other • Reco <sub>l</sub> of an	gnise features imals and these benefit	Identify parts and details of plants     Compare different plants		<ul> <li>Identify water around us</li> <li>Know what happens to water when heated, cooled etc.</li> <li>Understand what items will feel like if they have been in a freezer/oven</li> </ul>		qualities  • Describe di wet and dr	fference between y sand t and explore

	Know electric can be mains or battery and know how to switch on and off	Know how people have travelled to space								
Working Scientifically	Notice, Explore, Sort, S	lotice, Explore, Sort, Show, Recognise, Name, Match, Anticipate								
Assessment	Steps 1 & 2	Steps 1 & 2	Steps 1 & 2	Steps 1 & 2	Steps 1 & 2	Steps 1 & 2				

22/23				S	cience					Physics	Biology	Chemistry
Topic	Seasonal (	Changes	Light &	Sound	Animals inc Humans		Living Things & Habitas		Everyday Materials		Propertie	s of Materials
Who/When	Squirrels	Autumn 1	Squirrels	Autumn 2	Squirrels	Spring 1	Squirrels Spring 2		Squirre	ls Summer	1 Squirrels	Summer 2
Knowledge	Suggest the we temperatures e from different s Describe similal between season Describe differe and their exper these (inc. cloth	xpected seasons rities ns ent weather ience of	Investigate ligh on/through dif materials Investigate sha reflections Group noises b categories Understand ho sound changes distance	ferent dows and y different w volume of	Draw the huma label main feat they feel sense Sequence hum Knows a range and wild anima Know humans a grow and the fo	ures and how s an life cycle of pets, farm ils and animals	Classify living this simple groups (no percent habitate that the content habitate that the conte	ants and ed to ss	can be ma Identify w be used fo	hy a material ma or a particular tas lescribe material:	materials whi  Explore which used on differ  Explore mate properties	ous changes to ch are irreversible in processes can be rent materials rials to find their erent materials
Working Scientifically	Discuss, Exp	olain, Identi	ify, Sort, Labe	el, Compare	e, Describe, R	ecord, Repi	esent, Collec	t evidence	<u> </u>			
Assessment	Steps 3 & 4 Steps 3 & 4 Steps 3 & 4 Steps 3 & 4						& 4	St	eps 3 & 4	Ste	os 3 & 4	

23/24				S	cience				Р	hysics	Biology	Chemistry
Topic	Forces, Magnets & Earth & Space		Space	Evolution & Inheritance		Plants	5	States o	f Matter	Ro	ocks	
Who/When	Squirrels	Squirrels Autumn 1 Squirrels Autumn 2		Squirrels	Spring 1	Squirrels	Spring 2	Squirrels	Summer 1	Squirrels	Summer 2	
Knowledge	Name poles of a how these can r Examine how ol move differently Create a simple Know about ele	move objects bjects can y circuit	Name some of in the solar syst Understand the rock and how the changes over a Experience a viriform space	e moon is a ne reflection month	Identify similar difference betwand offspring Organise event sequence Identify and co	veen parents in their life in	Identify and recorplants/trees chan seasons  Name and label ptrees and flowers  Know what a seed grow and investig	ge over parts of	Explain and shi change water f solid and vice v List ways to he up or cool it do Investigate how clothes	rom liquid to versa at something own	Sort rocks in gr properties Compare fossil Identify how fo	s
Working Scientifically	Discuss, Exp	olain, Identi	fy, Sort, Labe	l, Compare	, Describe, R	ecord, Repr	esent, Collect	evidence				
Assessment	Steps 3	3 & 4	Steps	3 & 4	Steps	3 & 4	Steps 3	& 4	Steps	3 & 4	Step	s 3 & 4

22/23		Science												
Торіс	Seasonal Changes Light & Sounds		Sounds	Animals inc Humans		Living things & Habitats		Everyday Materials		Propertie	Properties of Materials			
Who/When	Foxes	Autumn 1	Foxes Autumn 2		Foxes	Spring 1	Foxes	Spring 2	Foxes	Summer	1 Foxes	Summer 2		
	Know what months fall in Demonstrates how light			Name and labe	l the skeleton	Recognise, order	and	List different materials			riety of materials			
	seasons travels				Describe how b	paby animals	imals explain food chains		objects can be made from		using differer	using different properties		
	Know how plants and Group natural and artificial		change as they	grow	Connect healthy	habitats to								
	animals respond	d to different	light sources		Explain the imp	oortance of	the number of liv	ing things	List mater	ials more	Describe way	s to separate		
	seasons		Use mirrors to	see things	food groups and exercise in there		specifically		different mat	erials, inc				
Knowledge	Know the impo	rtance for	out of sight		being healthy Know how habitats c		ats can be			solutions				
	not enough or t	oo much of	Explain how so	und travels	Identify and cla	assify animals	damaged		Test ways to improve					
	the same weath	the same weather Explain the term vibration				List what all living	g things	materials and adapt for the		Investigate w	hat materials are			
	Recognises the sun rises and Predict high and low pitch				need to survive		future		soluble and v	hich are				
	sets at different times								reversible					

Working Scientifically	Enquire, Communicate	, Conclude, Predict, Test	t, Reason, Speculate			
Assessment	Steps 5 & 6	Steps 5 & 6	Steps 5 & 6	Steps 5 & 6	Steps 5 & 6	Steps 5 & 6

23/24				S	cience					Physics	Biology	Chemistry	
Topic	Forces, M Electi	· ·	Earth &	Space	Evolution & Inheritance		Plants		States of Matter		F	Rocks	
Who/When	Foxes	Autumn 1	Foxes	Autumn 2	Foxes	Spring 1	Foxes	Spring 2	Foxes	Summer 1	Foxes	Summer 2	
Knowledge	Explain how mork  Demonstrate how and speed of a  Understand how orks –water, s  Create simple of the complex of the complex complex of the c	ow forces can ection, shape n object w friction surface, air	Know the sun is centre of our Si Centre of our Si Know the 4 close to the sun Identify the hosplaces on the given Describe a mode Describe the role Earth Describe how sichange during in the control of the sun in the sun	sest planets and cold lobe ons 'orbit' tation of	Suggest why/h animal has ada survive in diffe conditions  Make judgeme we know how lived from foss  Know that all li produce their of Follow a simple	ents on how dinosaurs il evidence ving things	Describe and inverse function of differ flowering plants of Describe the life plant  Explore how plant reproduce  Give examples of plants in differen	ent parts of and trees cycle of a	temperatur change shap Explain the of the wate Explore obj	different stages r cycle ects to test if id, liquid or gas precord	Explain how of were made  Demonstrate understandin are made	entify rocks in s different rocks	
Working Scientifically	Enquire, Communicate, Conclude, Predict, Test, Reason, Speculate												
Assessment	Steps	5 & 6	Steps	5 & 6	Steps	5 & 6	Steps 5	& 6	Ste	ps 5 & 6	Ste	os 5 & 6	

22/23				S	cience				Pl	nysics	Biology	Chemistry
Topic	Seasonal (	Changes	Light &	Sound	Animals inc	c. Humans	Living thir Habita		Everyday	Materials	Properties of Materials	
Who/When	Badgers	Autumn 1	Badgers	Autumn 2	Badgers	Spring 1	Badgers	Spring 2	Badgers	Summer 1	Badgers	Summer 2
	Compare climat the world durin month		Understand hor react to differe of light		Describe and compare different reproductive processes and life cycles in animals  Describes the life cy different types of an			•	Identify a wide different mater	•	Identify whether changes in materials are reversible or not	
	Describe why the position of a country affects when they get certain seasons		Explain how lig through a peris	Identifies the changes during puberty and how this differs for male/female  Recognise how humans change in old age  Describe the main functions of the circulatory system		Creates a classification key using subgroups  Describe the types of animals found in a biome and their physical adaptations to their environment		Groups a wide variety of different materials  Understand how the properties of materials can make them better for certain uses  Suggest ways to identify		Recognise that materials can of Give examples	-	
Knowledge			List materials that reflect light into the eyes  Sort objects by transparency using correct terms							can't be reversed  Know terms insoluble, soluble and solution		
			using correct terms		Describe the process of digestion including features of the mouth		Explain how environmental changes have an impact on living things		materials more specifically		Know about the electrical cond	
Working Scientifically	Describe an	d evaluate,	, Questions, I	Fair testing,	Controlling \	Variables, S	cientific Diagra	ams, Pred	lict, Draw Co	nclusions		
Assessment	Steps 7	7 & 8	Steps	7 & 8	Steps	7 & 8	Steps 7	& 8	Steps	7 & 8	Step	s 7 & 8
23/24				S	cience				Pl	nysics	Biology	Chemistry
Topic	Forces, Ma Electr	_	Earth &	Space	Evoluti Inherit		Plants	5	States of	Matter	R	ocks
Who/When	Badgers	Autumn 1	Badgers	Autumn 2	Badgers	Spring 1	Badgers	Spring 2	Badgers	Summer 1	Badgers	Summer 2
	Identify levers, gears and pulleys as mechanisms		Recite the order of the planets  Explain why day and night		"	Recognises the term evolution and species		synthesis ants an explain	Compare the properties of solids, liquids and gases  Begin to use the correct			that soil contains us, water and air for rocks
Knowledge	Explain floating as balanced forces		occur	. •	adapt, hibernate and migrate		types of seed dispersal		terms when describing the water cycle			

	Describe attraction and	Know how the Sun and	Describe features or	Describe and label a		Suggest why not all living					
	repulsion with magnets	moon create our calendar	characteristics that can be	flowering plant, explain the		things that die become					
			inherited	function of each part		fossilised					
	Recognise and explain	Explain that the moon									
	gravity	reflects the suns light	Know how palaeontologists			Describe the difference					
			find out about how things			between sedimentary and					
	Explain how a series circuit		lived from fossils			igneous rock					
	works and make changes										
	Explain why a circuit might not work										
Working Scientifically	Describe and evaluate	Describe and evaluate, Questions, Fair testing, Controlling Variables, Scientific Diagrams, Predict, Draw Conclusions									
Assessment	Steps 7 & 8	Steps 7 & 8	Steps 7 & 8	Steps 7 & 8	Steps 7 & 8	Steps 7 & 8					