

## St Joseph's Catholic Primary School

			Progression i	n Working Scientifically			
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Science at Foundation	To use the	To use the	To use the following	To use the	To use the	To use the following
	Stage is introduced	following	following	scientific methods,	following scientific	following scientific	scientific methods,
	indirectly through	scientific	scientific	processes and skills	methods,	methods, processes	processes and skills
	activities that	methods,	methods,	(adult support may	processes and	and skills (adult	(adult support may be
	encourage children to	processes and	processes and	be needed).	skills (adult	support may be	needed).
	explore, problem solve,	skills (adult	skills with		support may be	needed).	
	observe, predict, think,	support may be	increasing		needed).		
	make decisions and talk	needed).	confidence.				
	about the world around						
	them.						
Asking	Explore and talk about	Ask simple	Ask simple	Ask some <b>relevant</b>	Ask some <b>relevant</b>	Use their <b>scientific</b>	Use their <b>scientific</b>
questions	different forces they	questions about	questions about	questions and use	questions and use	experiences to	<b>experiences</b> to explore
	can feel	the world	the world	different types of	different types of	explore ideas and	ideas and raise
	Explore and respond to	around us.	around us.	scientific enquiries	scientific	raise different kind	different kind of
	different natural			to answer them.	enquiries to	of questions.	questions.
	phenomena in their	Begin to	Begin to		answer them.		
	setting and on trips.	recognise	recognise	Begin to raise their		Begin to explore	Explore and talk
	Understand simple	different ways in	different ways in	own questions	Raise their own	and talk about	about ideas, ask their
	questions about 'who',	which the might	which the might	about the world	questions about	ideas, ask their own	own questions about
	'what' and 'where' (but	answer scientific	answer scientific	around them.	the world around	questions about	scientific
	generally not 'why').	questions	questions	Begin to make some	them.	scientific	phenomena, analyse
				decisions about		phenomena,	functions,
	Understand a question			which types of	Make some	analyse	relationships and
	or instruction that has			enquiry will be the	decisions about	functions,	interactions more
	two parts,			best way of	which types of	relationships and	systematically.
	Comments and asks			answering questions	enquiry will be the	interactions more	
	questions about			including observing	best way of	systematically.	Select the most
	aspects of their familiar			changes over time,	answering		appropriate ways to
	world such as			noticing patterns,	questions	Begin to select the	answer science
	the place where they			grouping and	including	most appropriate	questions using
	live or the natural			classifying, carrying		ways to answer	different types of

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world (30-50mths, UtW The World)  Talk about why things happen and how things work (30-50mths, UtW The World) Respond to what they have heard, expressing their thoughts and feelings. (30-50mths, UtW The World)  Use a wider range of vocabulary. Understand a question or instruction that has two parts, Understand 'why' questions, like: "Why do you think the caterpillar got so fat?" (30-50mths, UtW The World)	out simple comparative and fair tests, finding things out using secondary sources.	observing changes over time, noticing patterns, grouping and classifying, carrying out simple comparative and fair tests, finding things out using secondary sources.	science questions using different types of scientific enquiry (including observing changes over different periods of time, noticing patterns, grouping and classifying, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information.)	scientific enquiry (including observing changes over different periods of time, noticing patterns, grouping and classifying, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information.)
Ask questions to find out more and to check they				



	understand what has						
	been said to them.						
	(40-60 months)						
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	I am beginning to ask a simple question about the world around me. I can talk about the differences between materials and changes they notice.	I can ask a few simple questions about the world around us.	I can ask a few simple questions about the world around us.	I can ask some relevant questions about the world around us.  I can use some different types of scientific enquiry to answer questions.	I can ask relevant questions about the world around us.  I can use different types of scientific enquiry to answer questions.	I am beginning to explore ideas and ask my own questions about scientific phenomena.	I can explore ideas and ask my own questions about scientific phenomena.
	I am exploring and thinking about the world around me. I understand the need to respect and care for the natural environment and all living things	I can begin to use some different types of enquiry to answer questions.	I can begin to use some different types of enquiry to answer questions.	I am beginning to decide which type of enquiry is best to answer my question.	I am beginning to decide which type of enquiry is best to answer my question.	I am beginning to plan different types of scientific enquiry to answer questions.	I can plan different types of scientific enquiry to answer questions.
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Talk about what they	Experience	Experience	Be given a range of	Be given a range	Talk about how	Talk about how ideas
Developing	see, using a wide	different types	different types	scientific enquiries	of scientific	ideas have	have developed over
Enquiry	vocabulary.	of science	of science	including different	enquiries including	developed over	time.
	Use all their senses in	enquiries,	enquiries,	types of scientific	different types of	time.	
Planning and	hands-on exploration	including	including	enquiries to answer	scientific enquiries		Begin to recognise
setting up	of natural materials.	practical	practical	questions	to answer	Begin to recognise	more abstract ideas
different types		activities	activities		questions	some more abstract	and begin to
of enquires	Develop manipulation and control.	(different types of	(different types of	Begin to explore everyday		ideas and begin to recognise how	recognise how these ideas help them to
	and control.	Of	of	everyday		recognise how	ideas help them to

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Explore different	enquiry	enquiry	phenomena and the	Explore everyday	these ideas help	understand how the
materials and tools.	including -	including -	relationships	phenomena and	them to understand	world operates.
(22-36months)	observing	observing	between living	the relationships	how the world	Donin to vocamica
	changes over	changes over	things and familiar	between living	operates.	Begin to recognise scientific ideas
	time, noticing	time, noticing	environments.	things and familiar	Begin to recognise	change and develop
Explore natural	patterns,	patterns,	Begin to develop	environments.	scientific ideas	over time.
materials, indoor and	grouping and	grouping and	their ideas about	Begin to develop	change and develop	over time.
outdoor.	classifying, carrying out	classifying, carrying out	functions,	their ideas about	over time.	Select and plan the
Explore different	simple	simple	relationships and	functions,		most appropriate ways
materials freely, in	comparative	comparative	interactions.	relationships and	Begin to select and	to answer science
order to develop their	tests, finding	tests, finding		interactions.	plan the most	questions using
ideas about how to	things out from	things out from	Set up simple		appropriate ways	different types of
use them and what to	secondary	secondary	practical enquiries	Set up simple	to answer science	scientific enquiry
make. <b>(30- 50</b>	sources).	sources).		practical enquiries	questions using	(including observing changes over different
months)			Recognise when a		different types of scientific enquiry	periods of time,
•			simple fair test is		(including	noticing patterns,
Develop their			necessary and help		observing changes	grouping and
own ideas and			to decide how to set it up		over different	classifying, carrying
then decide			πυρ		periods of time,	out comparative and
which materials					noticing patterns,	fair tests and finding
to use to express					grouping and	things out using a wide
them.					classifying, carrying	range of secondary
Join different materials					out comparative	sources of
and explore different					and fair tests and	information.)
textures. (30- 50					finding things out	
months)					using a wide range	Recognise when and
Explore different					of secondary	how to set up
materials freely, in					sources of	comparative and fair
order to develop their					information.)	tests and explain which variables need
ideas about how to					Begin to recognise	to be controlled and
use them and what to					when and how to	why
make. (30-50 months)					set up comparative	'
					and fair tests and	



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Select and use			explain which	
activities and			variables need to	
resources, with help			be controlled and why	
when needed. This			Willy	
helps them to achieve				
a goal they have				
chosen, or one which				
is suggested to them.				
Articulate their ideas				
and thoughts in well-				
formed sentences. Connect one idea				
or action to				
another using a				
range of				
connectives.				
Use talk to help				
work out				
problems and				
organise thinking				
and activities				
explain how				
things work and				
why they might				
happen.				
Return to and build on				
their previous				
learning, refining				
ideas and developing				
their ability to				



	represent them. (40-60 months)  I can explore the world around me.	I can begin to use some different types of enquiry to answer questions.	I can begin to use some different types of enquiry to answer questions.	I am beginning to decide which type of enquiry is best to answer my question.	I am beginning to decide which type of enquiry is best to answer my question.	I am beginning to plan different types of scientific enquiry to answer questions.  I am beginning to decide which	I can plan different types of scientific enquiry to answer questions. I can decide which variables to control.
Performing test	EYFS  Explore how things work.  Explore collections of materials with similar and/or different properties.  Plant seeds and care for growing plants.  Repeat actions that have an effect.  Explore materials with different properties.  Explore natural	Year 1  Carry out simple tests with support.  To begin to discuss my ideas about how to find things out. To begin to say what happened in my investigation.	Year 2 Carry out simple tests. To discuss my ideas about how to find things out. To say what happened in my investigation.	Year 3  Begin to set up simple practical enquiries, comparative and fair tests  Begin to recognise when a simple fair test is necessary and help to decide how to set it up.  Begin to think of more than one variable factor.	Year 4  Set up simple practical enquiries, comparative and fair tests.  Recognise when a simple fair test is necessary and help to decide how to set it up  Can think of more than one variable factor.	Year 5  Begin to select and plan the most appropriate ways to answer science questions using different types of scientific enquiry (including observing changes over different periods of time, noticing patterns, grouping and classifying, carrying out comparative	Year 6  Select and plan the most appropriate ways to answer science questions using different types of scientific enquiry (including observing changes over different periods of time, noticing patterns, grouping and classifying, carrying out comparative and fair tests and finding things out using a wide
	materials, indoors and outside.					and fair tests and finding things out using a wide range of secondary	range of secondary sources of information.)



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Explore natural			sources of	Use test results to
materials, indoors and			information.)	make predictions to
outside (22-36months)				set up further
Explore and respond to			Begin to recognise	comparative and fair
different natural			when and how to	tests.
phenomena in their			set up comparative	
setting and on trips.			and fair tests and	Recognise when and
Make connections			explain which	how to set up
between the features			variables need to	comparative and fair
of their family and			be controlled and	tests and explain
other families.			why.	which variables need
Notice differences			Begin to suggest	to be controlled and
between people.			improvements to	why
(22-36 months UTW)			my method and	Suggest
			give reasons.	improvements to my
			Begin to decide	method and give
Explore material with			when it is	reasons.
different properties			appropriate to do a	Decide when it is
(22-36 months UTW)			fair test.	appropriate to do a
Use all their senses in				fair test.
hands on exploration of				
natural materials (30-				
35 months UTW)				
Repeat actions that				
have an effect.				
Explore materials with				
different properties.				
Explore natural				
materials, indoors and				
outside.				
Explore how things				
work. (30-50 months				
UTW)				



Plant seeds and care for growing plants. (30-50 months)						
Understand the key features of the life cycle of a plant and an animal.  (30- 50 months)  Describe what they see, hear and feel whilst outside.  Explore the natural world around them (40- 60 months)  Continue, copy and create repeating patterns. (40-60 months)						
I am exploring the world around me.	I can begin to perform simple tests.  I can begin to discuss my ideas.  I can begin to say what happened in an investigation.	I can perform simple tests.  I can discuss my ideas.  I can say what happened in an investigation.	I can set up some simple practical enquiries. Including comparative and fair tests.  I am beginning to help decide which variables to keep the same and which to change.	I can set up simple practical enquiries. Including comparative and fair tests.  I can help decide which variables to keep the same and which to change.	I can sometimes set up a range of comparative and fair tests.  I am beginning to explain which variables need to be controlled and why.  I am beginning to suggest improvements to	I can set up a range of comparative and fair tests.  I can explain which variables need to be controlled and why.  I can suggest improvements to my test, giving reasons.

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presenting and communicating data and findings  Begin to understand the need to respect and care for the natural environment and all living things.  Express ideas and feelings through making marks, and sometimes give a meaning to the marks they make.	Gather and record data with some adult support, to help in answering questions.  Begin to record simple data.  Begin to record and communicate their findings in a range of ways.  Can show my results in a simple table that my teacher has provided.	Gather and record data to help in answering questions.  Record simple data.  Record and communicate their findings in a range of ways.  Can show my results in a table that my teacher has provided.	Gather, record, and begin to classify and present data in a variety of ways to help in answering questions.  Begin to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.  Begin to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.  Begin to use notes, simple tables and standard units and help to decide how to record and	Gather, record, classify and present data in a variety of ways to help in answering questions.  Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.  Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.  Use notes, simple tables and standard units and help to decide how to	my test, giving reasons.  Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.  Begin to report and present findings from enquiries.  Begin to decide how to record data from a choice of familiar approaches.  Begin to choose how best to present data.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.  Report and present findings from enquiries.  Decide how to record data from a choice of familiar approaches.  Can choose how best to present data.
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tenses and plurals, (30-50 months)  Describe what they shear and feel whilst outside. (40-60 months)  Continue, copy and create repeating patterns. (40-60 months)	see,		Begin to record results in tables and bar charts.	analyse their data.  Can record results in tables and bar charts.		
I can talk about wha see.	I can begin to collect simple data.  I can begin to record data in a table my teacher has provided.  I can begin to communicate my findings in a variety of ways.	I can collect simple data.  I can record data in a table provided.  I can communicate my findings in a variety of ways.	I am beginning to collect data in a variety of ways, including labelled diagrams, bar charts and tables.  I am beginning to help decide how to record data.  I am beginning to communicate findings using simple scientific language.	I can collect data in a variety of ways, including diagrams, bar charts and tables.  I can help decide how to record data.  I can communicate using simple scientific language	I am beginning to record data and results of increasing complexity using – scientific diagrams and labels, classification keys, tables, bar graphs, line graphs I am beginning to choose how best to present data. I am beginning to communicate findings using detailed scientific language.	I can record data and results of increasing complexity using — scientific diagrams and labels classification keys tables bar graphs line graphs I can choose how best to present data. I can communicate findings using detailed scientific language.

Observing and	Understand the key	With support,	With guidance,	Begin to look for	Look for naturally	Begin to look for	Look for different
measuring	features of the life	begin to notice	begin to notice	naturally occurring	occurring patterns	different causal	causal relationships in
	cycle of a plant and an	patterns and	patterns and	patterns and	and relationships	relationships in	their data and identify
	animal.	relationships	relationships	relationships	and decide what	their data and	evidence that refutes
				and decide what	data to collect to	identify	or supports their ideas.
	Begin to understand	Begin to use	Use simple	data to collect to	identify them.	evidence that	
	the need to respect	simple	measurements	identify them.		refutes or supports	Choose the most
	and care for the natural	measurements	and equipment		Take accurate	their ideas.	appropriate
	environment and all	and equipment	(e.g. hand	Begin to take	measurements		equipment to make
	living things	(e.g. hand	lenses, egg	accurate	using standard	Begin to choose the	measurements with
	Talk about the	lenses, egg	timers) to	measurements	units	most appropriate	increasing precision
	differences between	timers) to	gather data	using standard units	Learn how to use	equipment to make	and explain how to use
	materials and changes	gather data		Learn how to use a	a range of (new)	measurements with	it accurately. Take
	they notice.			range of (new)	equipment, such	increasing precision	repeat measurements
				equipment, such as	as data loggers /	and explain how to	where appropriate.
				data loggers /	thermometers	use it accurately. Take repeat	
	Notices detailed			thermometers	appropriately.	measurements	
	features of objects in			appropriately		where appropriate.	
	their environment (22-					where appropriate.	
	<b>36 mths, UtW)</b> Notice patterns and						
	arrange things in						
	patterns.(22-36						
	months M)						
	Inionthis ivi)						
	Observes the effect of						
	exercise on						
	their bodies (30-						
	50mths, PD (Health						
	and						
	Self-care)						
	Make comparisons						
	between objects						
	relating to size, length,						
	weight and capacity.						

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	Make comparisons						
$\uparrow$	between objects						
	relating to size, length,						
	weight and capacity.						
	Talk about and						
	identifies the patterns						
	around them.						
	For example: stripes						
	on clothes, designs						
	on rugs and						
	wallpaper. Use						
	informal language						
	like 'pointy', 'spotty',						
	'blobs' etc. <b>(30-50</b>						
	months)						
	-						
	Compare length,						
	weight and capacity.						
	(40-60 months)						
	,						
	Compare length,						
	weight and capacity.						
	Continue, copy and						
	create repeating						
	patterns. <b>(40-60</b>						
	months)						
Identifying and	Talk about the	Begin to use	Use simple	Begin to talk about	talk about criteria	Begin to use and	Use and develop
Classifying	differences between	simple features	features to	criteria for grouping,	for grouping,	develop keys and	keys and other
	materials and changes	to compare	compare	sorting and	sorting and	other information	information records
	they notice.	objects,	objects,	classifying; and use	classifying; and	records to	to identify,
	Notice patterns and	materials and	materials and	simple keys	use	identify, classify	classify and describe
	arrange things in	living	living		simple keys	and describe living	living things and
	patterns.(22-36	things and, with	things and, with	Begin to identify		things and	materials.
	months M)	help, decide	help, decide	differences,	-	materials.	
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Make comparisons	how to sort and	how to sort and	similarities or	Identify		Identify
between objects	group them	group them	changes related to	differences,	Begin to identify	patterns that might
relating to size, length,	(identifying and	(identifying and	simple scientific	similarities or	patterns that might	be found in the
weight and capacity.	classifying)	classifying)	ideas and processes.	changes related	be found in the	natural environment.
Make comparisons				to	natural	
between objects	Identify and	Identify and	Begin to talk about	simple scientific	environment.	
relating to size, length,	classify with	classify.	criteria for	ideas and		
weight and capacity.	some support.		grouping, sorting	processes.		
Talk about and		Observe and	and classifying and			
identifies the patterns	To begin to	identify,	use simple keys.	Talk about		
around them.	observe and	compare and		criteria for		
For example: stripes	identify,	describe.	Begin to compare	grouping, sorting		
on clothes, designs	compare and		and group according	and classifying and		
on rugs and	describe.		to behaviour or	use simple keys.		
wallpaper. Use		Use simple	properties, based on			
informal language	To begin to	features to	testing.	Compare and		
like 'pointy', 'spotty',	use simple	compare		group according		
'blobs' etc. <b>(30-50</b>	features to	objects,		to behaviour or		
months)	compare	materials and		properties, based		
	objects,	living things		on		
	material	and, with help,		testing		
Compare length,	s and living	decide how				
weight and capacity.	things and, with	to sort and				
Continue, copy and	help, decide how to sort and	group them.				
create repeating	group them.					
patterns. <b>(40-60</b>	group them.					
months)						
Recognise some						
environments that are						
different to the one in						
which they live.						
Describe what they see,						
hear and feel whilst						
outside.						



	Look closely at similarities, differences, patterns and change (40-60mths UtW The World)						
	I can compare objects.	I can begin to identify a variety of objects, materials and living things.  I can begin to compare, sort and group a range of objects, materials and living things.	I can identify a variety of objects, materials and living things.  I can compare, sort and group a range of objects, materials and living things	I am beginning to talk about and identify differences and similarities in the properties or behaviour of living things, materials and other scientific phenomena. I am beginning to identify simple changes related to simple scientific phenomena. I am beginning to discuss criteria for grouping and sorting and can classify using simple keys.		I am beginning to use keys and other information records to classify and describe living things, materials and other scientific phenomena.  I am beginning to develop my own keys and other information records to classify and describe.  I am beginning to identify changes related to scientific phenomena.	I can use keys and other information records to classify and describe living things, materials and other scientific phenomena.  I can develop my own keys and other information records to classify and describe.  I can identify changes related to scientific phenomena.
Gathering and	Repeat actions that	Begin to record	Record simple	Begin to collect and	Collect and record	Begin to decide	Decide how to record
recording data	have an effect.	simple data. Begin to observe	data. Observe closely	record data from their own	data from their own observations	how to record data and results of	data and results of increasing complexity
	Explore materials with different properties.	closely using	using simple	observations and	and	increasing	from a choice of



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Explore natural	equipment with	equipment with	measurements in a	measurements in	from a choice of	scientific diagrams
materials, indoors and	help, observe	help, observe	variety of ways:	a variety of ways:	familiar	and
outside.	changes over	changes over	notes, bar charts	notes, bar charts	approaches:	labels, classification
Compare sizes, weights	time.	time.	and tables,	and tables,	scientific diagrams	keys, tables, scatter
etc. using gesture and			standard units,	standard units,	and	graphs, bar and line
language - 'bigger/			drawings, labelled	drawings, labelled	labels, classification	graphs.
little/smaller',			diagrams, keys and	diagrams, keys	keys, tables, scatter	
'high/low', 'tall',			help to	and help to	graphs, bar and line	Make their own
'heavy'. (22-36 months)			make decisions	make decisions	graphs.	decisions about what
Notice patterns and			about how to	about how to		observations to make,
arrange things in			analyse this data	analyse this data.	Begin to make their	what measurements
patterns.(22-36					own decisions	to use and how long
months M)			Begin to make	Make systematic	about what	to make them for.
Make comparisons			systematic and	and careful	observations to	
between objects			careful observations	observations	make,	
relating to size, length,			Help to make	Help to make	what	
weight and capacity.			decisions about	decisions about	measurements to	
Make comparisons			what observations	what observations	use and how long	
between objects			to make, how long	to make, how	to make them for	
relating to size, length,			to make them for	long to make them		
weight and capacity.			and the type of	for and the type of		
Talk about and			simple equipment	simple equipment		
identifies the patterns			that	that		
around them.			might be used	might be used		
For example: stripes						
on clothes, designs						
on rugs and						
wallpaper. Use						
informal language						
like 'pointy', 'spotty',						
'blobs' etc. <b>(30-50</b>						
months)						
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	Compare length, weight and capacity. Continue, copy and create repeating patterns. (40-60 months) Recognise some environments that are different to the one in which they live. Describe what they see, hear and feel whilst outside. Look closely at similarities, differences, patterns and change (40-60mths UtW The World)						
Research	Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world (30-50mths, UtW The World) Talk about why things happen and how things work (30-50mths, UtW The World) Respond to what they have heard, expressing their thoughts and	To begin to use simple secondary sources to find answers.  To begin to find information to help me from books and computers with help	Use simple secondary sources to find answers.  Can find information to help me from books and computers with help.	Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.	loggers / thermometers appropriately	Begin to recognise which secondary sources will be most useful to research their ideas.	Recognise which secondary sources will be most useful to research their ideas.

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	feelings. (30-50mths, UtW The World)  Understand 'why' questions, like: "Why do you think the caterpillar got so fat?" (30-50mths, UtW The World)  Explore the natural world around them. Ask questions to find out more and to check they understand what has been said to them. (40-60 months)	I can begin to find information to help me from books,	I can find information to help me from books,	I can begin to decide when research will help in my		I am beginning to recognise which secondary source will be most useful	I can recognise which secondary source will be most useful to my research.
		computers and other familiar sources.	computers and other familiar sources.	help in my enquiry.  I am beginning to carry out simple research on my own.		to my research.  I can begin to carry out research independently.	I can carry out research independently.
Conclusions	Express preferences and decisions. They also try	With support, record and communicate their findings in	With some support, record and	I am beginning to use results to draw simple conclusions, make predictions for	Using results to draw simple conclusions , make predictions for	Am beginning to report and present findings from enquiries, including	Reporting and presenting findings from enquiries, including conclusions,



new things
and start
establishing
their
autonomy.(22-
36 months
PSE)

Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions. Talk about the differences between materials and changes they notice. (30-50 months)

Describe what they see, hear and feel whilst outside.

• Understand the effect of changing seasons on the natural world around them. Recognise some environments that are different to the one in which they live. Think about the perspectives of others.

a range of ways and begin to use simple scientific language. Begin to talk about what they have found out and how they found it out.

To begin to say what happened in my investigation. To begin to say whether I was surprised at the results or not. To begin to say what I would change about my investigation.

communicate
their findings in
a range of ways
and begin to use
simple scientific
language.

Talk about what they have found out and how they found it out.

To say what happened in my investigation.
To say whether I was surprised at the results or not.

To say what would change about my investigation.

Am beginning to use straightforward scientific evidence to answer questions or to support their findings.

new values, suggest

improvements and

raise further

Begin to use

relevant simple

to discuss their

ideas

scientific language

and communicate

audiences, including

oral and written

presentations of

their findings in

ways that are

appropriate

for different

explanations,

displays or

results and

conclusions

questions.

With help, am beginning to look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and new values, suggest improvements and raise further questions.

Use relevant simple scientific language to discuss their ideas and communicate their findings in wavs that are appropriate for different audiences. including oral and written explanations. displays or presentations of results and conclusions

Use

support their findings.

With help,
look for changes, patterns, similarities and differences in their data in order to draw simple

straightforward

questions or to

to answer

scientific evidence

relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.
Use relevant scientific language and illustrations to discuss,

communicate and

scientific ideas,

Begin to use oral

such as displays

and other

and written forms

iustify their

conclusions, causal

presentations to report conclusions, causal relationships and explanations of degree of trust in results.
Begin to identify scientific evidence that has been used to support or refute ideas or arguments.

Begin to draw conclusions based on their data and

causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.

Identify scientific evidence that has been used to support or refute ideas or arguments. Use oral and written forms such as displays and other

presentations to report conclusions, causal relationships and explanations of degree of trust in results.
Begin to identify scientific evidence that has been used to support or refute ideas or arguments.

Draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge



Connect one idea or action to another using a range of connectives. Articulate their ideas and thoughts in wellformed sentences. Use talk to help work out problems and organise thinking and activities explain how things work and why they might happen. (40-60 months)	answer questions. With support, am beginning to identify new questions arising from the data, make new predictions and find ways of improving what they have already done.  Am beginning to see a pattern in my results. Am beginning to say what I found out, linking cause and effect.  Am beginning to say how I could make it better. Am beginning to answer questions	conclusions and answer questions. With support, identify new questions arising from the data, make new predictions and find ways of improving what they have already done.  Can see a pattern in my results.  Can say what I found out, linking cause and effect.  Can say how I could make it better.	observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings.  Begin to use test results to make predictions to set up further comparatives and fair tests.  Begin to look for different causal relationships in their data and identify evidence that refutes or supports their ideas.	and understanding to explain their findings.  Use test results to make predictions to set up further comparatives and fair tests.  Look for different causal relationships in their data and identify evidence that refutes or supports their ideas. Use their results to identify when further tests and observations are needed.  Separate opinion from fact.  Can draw conclusions and identify scientific evidence.
things work and why they might happen.	Am beginning to see a pattern in my results. Am beginning to say what I found out, linking cause and effect.  Am beginning to say how I could make it better. Am beginning to	they have already done.  Can see a pattern in my results.  Can say what I found out, linking cause and effect.  Can say how I could make it	results to make predictions to set up further comparatives and fair tests.  Begin to look for different causal relationships in their data and identify evidence that refutes or supports their	causal relationships in their data and identify evidence that refutes or supports their ideas. Use their results to identify when further tests and observations are needed. Separate opinion from fact. Can draw conclusions and identify scientific evidence. Can use simple models. Know which evidence proves a scientific point. Use test results to make predictions
			opinion from fact.  Begin to draw conclusions and identify scientific evidence.	to set up further comparative and fair tests.

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					Can use simple models. Know which evidence proves a scientific point. Begin to use test results to make predictions to set up further comparative and fair tests.	
I can talk about the world around me.	I can begin to talk about what I have found out.  I can begin to explain how I carried out my enquiry.  I can begin to suggest simple changes to my enquiry.	I can talk about what I have found out.  I can explain how I carried out my enquiry.  I can suggest simple changes to my enquiry.	I am beginning to draw simple conclusions based on the results of my enquiry.  I am beginning to answer my questions using the results of my enquiry.  I am beginning to use my findings to make	I can draw simple conclusions based on the results of my enquiry. I can answer my questions using the results of my enquiry.  I can use my findings to make new predictions suggest improvements and think of new questions.	I am beginning to come to scientific, conclusions using the results of an enquiry to justify my ideas.  I am beginning to explain my conclusion using scientific knowledge and understanding.  I am beginning to distinguish opinion and facts.	I can come to a scientific, conclusions using the results of an enquiry to justify my ideas. I can explain my conclusion using scientific knowledge and understanding. I can distinguish opinion and facts. I can use my findings to make predictions and set up further enquiries I can begin to use abstract models to

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				new predictions, suggest improvements and think of new questions.	I can begin to think of cause and effect in my explanations.	I am beginning to use my findings to make predictions and set up further enquiries.	explain my ideas.
				I am beginning sometimes to think of cause and effect in my explanations.		I can begin to use abstract models to explain my ideas.	
Vocabulary	Copy what adults do, taking 'turns' in conversations (through babbling) and activities. Try to copy adult speech and lip movements. (22-36 months)  Use a wider range of vocabulary. Engage in extended conversations about stories, learning new vocabulary. Talk about what they see, using a wide vocabulary.	Use some simple scientific language  Begin to use some science words.  Use comparative language with support.	Use simple scientific language and some science words.  Use comparative language — bigger, faster etc	Begin to use some scientific language to talk and, later, write about what they have found out.  Begin to use relevant scientific language.  Begin to use comparative and superlative language.	Use some scientific language to talk and, later, write about what they have found out.  Use relevant scientific language.  Use comparative and superlative language	Am beginning to read, spell and pronounce scientific vocabulary correctly.  Am beginning to use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas.  Am beginning to confidently use a range of scientific vocabulary.	Can use scientific ideas when describing simple processes. Can use the correct science vocabulary



Use a wider range of vocabulary. (30-50 months)  Learn new vocabulary. Use new vocabulary through the day. (40-60 months)  Use new vocabulary in different contexts. Listen to and talk about selected non-fiction to develop a deep familiarity with new knowledge and vocabulary. Use new vocabulary in different contexts (40-60 months)					Am beginning to use conventions such as trend, rogue result, support prediction and -er word generalisation.  Am beginning to use scientific ideas when describing simple processes. Am beginning to use the correct science vocabulary	
I am learning new words.	I can begin to use simple scientific language.  I can begin to describe what I see eg something is long.  I can begin to compare eg something is	I can use simple scientific language.  I can describe what I see.  I can compare eg something is longer or shorter.	I am beginning to use some scientific language in my work. I am beginning to describe my observations and my findings. I am beginning to use comparative and superlative descriptions eg	I can use comparative and superlative descriptions eg longer / shorter than, longest / shortest.  I can begin to describe cause and effect.	I am beginning to read, spell and pronounce scientific vocabulary correctly.  I am beginning to confidently use the correct scientific language when appropriate.  I am beginning to explain my ideas	I can read, spell and pronounce scientific vocabulary correctly.  I can confidently use the correct scientific language when appropriate.  I can explain my ideas with scientific reasons.  I can use scientific conventions eg trends,

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Un	nderstanding	Be able to express a	longer or shorter.  Can begin to talk	Can talk about	longer / shorter than, longest / shortest.  I can begin to describe cause and effect.  Begin to know	Knows which	with scientific reasons.  I am beginning to use scientific conventions eg trends, rogue result, support prediction.  Am beginning to	rogue result, support prediction.  Can talk about how
		point of view and to debate when they disagree with an adult or a friend, using words as well as actions. (30-50 months)  Talk about what they see, using a wide vocabulary. (30-50 months)  Respond to what they have heard, expressing their thoughts and feelings. (30-50 months)	about how science helps us in our daily lives eg. torches and lights help us see hen it is dark.  Am beginning to understand science can sometimes be dangerous.	how science helps us in our daily lives eg. torches and lights help us see hen it is dark.  Am beginning to understand science can sometimes be dangerous.	which things in science have made our lives better.  Can begin to understand risk in science	things in science have made our lives better.  Can understand there is some risk in science.	talk about how scientific ideas have changed over time. Am beginning to explain the positive and negative effects of scientific development. Am beginning to see how science is useful in everyday life. Am beginning to say which parts of our lives rely on science.	scientific ideas have changed over time.  Can explain the positive and negative effects of scientific development.  Can see how science is useful in everyday life. Can say which parts of our lives rely on science.
		I can respond to what I see or hear.	I can say how science helps us in our daily lives. I can say how science can be	I can say how science helps us in our daily lives.	I am beginning to know which things in science have made our lives better eg computers	I know some things in science which have made our lives better eg computers in	I am beginning to see how science is useful in lots of different ways.	I can see how science is useful in lots of different ways.

	dangerous eg	I can say how	in schools, hospitals	schools, hospitals	I am beginning to	I can say which parts of
	electricity can	science can be	etc	etc	say which parts of	our lives rely on
	give you a shock.	dangerous eg electricity can	I can begin to understand risk in	I understand there is some risk	our lives rely on science.	science. I can explain the
		give you a shock.	science	in science	I am beginning to explain the positive and negative	positive and negative effects of scientific developments.
					effects of scientific developments.	

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