# Emerging Progress

The Learning Journey to Grade 1 and Beyond in Science

Throughout an **Increasingly** Challenging Knowledge Led Curriculum from Year 7, to Year 9, Emerging Students Can:

- Recall some basic key words with support
- State the meaning of some basic key words with support
- Link some keywords to pictures or meanings with support
- Add some basic labels to diagrams with support
- Use basic maths within science with support

- Recognise some, equipment, safety, risks and steps needed during practical work, with support
- Understand basic information from graphs with support
- Demonstrate basic knowledge and understanding of their current topic,
- Recall basic information from past learning with support, prompting and questioning.

#### In Year 9, the students Knowledge journey increases in Challenge further to include.....

In Year 8, students Knowledge journey increases in Challenge to include				Mock Exam: Particle model,	Assessment 2: Reassesses some	Assessment 3: Chromatography,
	its Knowledge journey ludes	Assessment 1: Introduction to year 8 science skills,	Assessment 2: All of Assessment 1 content and Resultant forces and pressure,	Atomic structure , Cell biology	of the mock exam content Cell biology	Photosynthesis, Plant organisation, Energy
Assessment 1:	Assessment 2:	Periodic table,	Climate,		Atoms and	0,

Introduction to year 7 science skills, Universe, Particle model, Variation, Reproduction

Cells, Sound, Light, Acids and alkali, Energy, Current, voltage, resistance, Interdependence, Separating mixtures, Metals and non metals, Speed

Photosynthesis, Types of reaction, Digestive system, Earth structure and resources

**Includes links to prior** learning from year 7 content.

Evolution, Chemical change, Breathing respiration and movement, Magnets, Waves and their properties, Inheritance,

Work done. Heating and cooling

Includes links to prior learning from year 7 content.

Includes links to prior learning from the Year 7 and 8 content.

## Isotopes, Chemical change, Organic chemistry,

Also includes links to prior learning from the Year 7 and 8 content.

Atmosphere,

Also includes links to prior learning from the Year 7 and 8 content.

# Developing Progress

The Learning Journey to Grade 2/3 and Beyond in Science

Throughout an **Increasingly** Challenging Knowledge Led Curriculum from Year 7, to Year 9, Developing Students Can:

- Recall basic key words with guidance
- State the meaning of most basic key words with guidance
- Link keywords to pictures or meanings with guidance
- Add most labels to diagrams with guidance
- Use basic maths within science with guidance

- Recognise the equipment, safety, risks and steps needed during practical work with guidance.
- Describe basic graphs and find key information from them with guidance
- Demonstrate basic knowledge and understanding of their current and recent topics
- Can recall basic information from past learning with prompting and questioning.

the Year 7 and 8

content.

Organic chemistry,

Also includes links

to prior learning

from the Year 7

and 8 content.

Atmosphere

from the Year 7 and

8 content.

### In Year 9, the students Knowledge journey increases in Challenge further to include.....

In Year 8.	Mock Exam:	Assessment 2:	Assessment 3:			
In Year 8, students Knowledge journey increases in Challenge to include				Particle model,	Reassesses some	Chromatography,
In Year 7, students Knowledge journey includes		Assessment 1:	Assessment 2:	Atomic structure,	of the mock exam	Photosynthesis,
		Introduction to year 8	All of Assessment 1 content and	Cell biology	content	Plant organisation,
		science skills,	Resultant forces and pressure,		Cell biology	Energy
Assessment 1:	Assessment 2:	Periodic table,	Climate,		Atoms and	
Introduction to year 7	Cells,	Photosynthesis,	Evolution,	Includes links to	Isotopes,	Also includes links
science skills,	Sound,	Types of reaction,	Chemical change,	prior learning from	Chemical change,	to prior learning

Magnets,

Inheritance,

Work done,

year 7 content.

Heating and cooling

Breathing respiration and movement,

Includes links to prior learning from

Waves and their properties,

### Universe, Particle model, Variation,

#### Light, Acids and alkali, Energy, Current, voltage, resistance, Reproduction Interdependence, Separating mixtures, Metals and non metals, Speed

### Digestive system, Earth structure and resources **Includes links to prior** learning from year 7 content.

# Achieving Progress

The Learning Journey to Grade 4/5 and Beyond in Science

Throughout an **Increasingly** Challenging knowledge Led Curriculum from Year 7, to Year 9, Achieving Students Can:

- Recall most key words at the end of a topic independently
- State the meanings of basic key words independently and use them in context
- Link most keywords to pictures or meanings independently
- Add most labels to diagrams independently
- Use basic maths within science independently

- Recognise common, equipment, safety, risks and steps needed during practical work independently
- Find key information from graphs and be able to describe them independently
- Use scientific understanding with guidance to explain patterns and trends
- Demonstrate clear knowledge and understanding of their current and recent topics
- Can recall key information from past learning through questioning.

### In Year 9, the students Knowledge journey increases in Challenge further to include.....

In Year 8,	Mock Exam: Particle model,	Assessment 2: Reassesses some	Assessment 3: Chromatography,			
In Year 7, students Knowledge journey includes		Assessment 1: Introduction to year 8 science skills,	Assessment 2: All of Assessment 1 content and Resultant forces and pressure,	Atomic structure , Cell biology	of the mock exam content Cell biology	Photosynthesis, Plant organisation, Energy
Assessment 1: Assessment 2:		Periodic table,	Climate,		Atoms and	
Introduction to year 7	Cells,	Photosynthesis,	Evolution,	Includes links to	Isotopes,	Also includes links
science skills,	Sound,	Types of reaction,	Chemical change,	prior learning from	Chemical change,	to prior learning
Universe,	Light,	Digestive system,	Breathing respiration and movement,	the Year 7 and 8	Organic chemistry,	from the Year 7 and
Particle model,	Acids and alkali,	Earth structure and	Magnets,	content.	Atmosphere,	8 content.
Variation,	Energy,	resources	Waves and their properties,			
Reproduction	Current, voltage, resistance,		Inheritance,		Also includes links	
	Interdependence,	Includes links to prior	Work done,		to prior learning	
	Separating mixtures,	learning from year 7	Heating and cooling		from the Year 7	
	Metals and non metals,	content.			and 8 content.	
	Speed		Includes links to prior learning from			
			year 7 content.			

# **Exceeding Progress**

The Learning Journey to Grade 6/7 and Beyond in Science

Throughout an **Increasingly** Challenging Knowledge Led Curriculum from Year 7, to Year 9, Exceeding Students Can:

- Recall key words words at the end of a topic independently
- State the meanings of most key words independently and use them in context
- · Link keywords to pictures or meanings independently
- Add labels to diagrams independently
- Use higher maths skills within science independently

- Recognise equipment, safety, risks and steps needed during practical work independently
- Extrapolate and use information from graphs and be able to describe them independently with confidence
- Independently use key scientific understanding to explain and predict patterns and trends
- Demonstrate with confidence, a solid knowledge and understanding of their current and recent topics,
- Can confidently recall information from past learning, during questioning or independent work

### In Year 9, the students Knowledge journey increases in Challenge further to include.....

In Year 8,	Mock Exam: Particle model,	Assessment 2: Reassesses some	Assessment 3: Chromatography,			
In Year 7, students Knowledge journey		Assessment 1: Introduction to year 8	Assessment 2: All of Assessment 1 content and	Atomic structure , Cell biology	of the mock exam content	Photosynthesis, Plant organisation,
includes		science skills,	Resultant forces and pressure,		Cell biology	Energy
Assessment 1:	Assessment 2:	Periodic table,	Climate,		Atoms and	
Introduction to year 7	Cells,	Photosynthesis,	Evolution,	Includes links to	Isotopes,	Also includes links
science skills,	Sound,	Types of reaction,	Chemical change,	prior learning from	Chemical change,	to prior learning
Universe,	Light,	Digestive system,	Breathing respiration and movement,	the Year 7 and 8	Organic chemistry,	from the Year 7 and
Particle model,	Acids and alkali,	Earth structure and	Magnets,	content.	Atmosphere	8 content.
Variation,	Energy,	resources	Waves and their properties,			
Reproduction	Current, voltage, resistance,		Inheritance,		Also includes links	
·	Interdependence,	Includes links to prior	Work done,		to prior learning	
	Separating mixtures,	learning from year 7	Heating and cooling		from the Year 7	
	Metals and non metals,	content.			and 8 content.	
	Speed		Includes links to prior learning from			
	·		year 7 content.			

# **Excelling Progress**

The Learning Journey to Grade 8/9 and Beyond in Science

Throughout an **Increasingly** Challenging Knowledge Led Curriculum from Year 7, to Year 9, Excelling Students Can:

- · Recall all key words at the end of a topic independently
- State the meanings of key words independently and use them in context with confidence
- Link keywords to pictures or meanings independently
- Add labels to diagrams independently
- Use higher maths skills independently and with confidence to ensure all challenging questions are solved

- Recognise equipment, safety, risks and steps needed during practical work independently
- Extrapolate and use information from multiple graphs and be able to describe them independently with confidence
- Independently use thorough scientific understanding to explain and predict patterns and trends
- Demonstrate with confidence, a thorough working knowledge and understanding of their current and recent topics,
- Can confidently recall information from past learning, during questioning or independent work making links between topics

### In Year 9, the students Knowledge journey increases in Challenge further to include.....

In Year 8,	Mock Exam: Particle model,	Assessment 2: Reassesses some	Assessment 3: Chromatography,			
In Year 7, students Knowledge journey includes		Assessment 1: Introduction to year 8 science skills,	Assessment 2: All of Assessment 1 content and Resultant forces and pressure,	Atomic structure , Cell biology	of the mock exam content Cell biology	Photosynthesis, Plant organisation, Energy
Assessment 1: Assessment 2:		Periodic table,	Climate,		Atoms and	
Introduction to year 7	Cells,	Photosynthesis,	Evolution,	Includes links to	Isotopes,	Also includes links
science skills,	Sound,	Types of reaction,	Chemical change,	prior learning from	Chemical change,	to prior learning
Universe,	Light,	Digestive system,	Breathing respiration and movement,	the Year 7 and 8	Organic chemistry,	from the Year 7 and
Particle model,	Acids and alkali,	Earth structure and	Magnets,	content.	Atmosphere	8 content.
Variation,	Energy,	resources	Waves and their properties,			
Reproduction	Current, voltage, resistance,		Inheritance,		Also includes links	
	Interdependence,	Includes links to prior	Work done,		to prior learning	
	Separating mixtures,	learning from year 7	Heating and cooling		from the Year 7	
	Metals and non metals,	content.			and 8 content.	
	Speed		Includes links to prior learning from			
	·		year 7 content.			



### Student Learning Journey: Progress in Science



	Scientific Knowledge	Literacy in Science Skills	Numeracy in Science Skills	Working Scientifically Skills
Emerging	Demonstrate basic knowledge and understanding of their current topic,     Recall basic information from past learning with support, prompting and questioning.     Recall some basic key words with support	State the meaning of some basic key words with support     Link some keywords to pictures or meanings with support	Understand basic information from graphs with support     Use basic maths within science with support	Recognise some, equipment, safety, risks and steps needed during practical work, with support     Add some basic labels to diagrams with support     Can identify hazards in practical methods
Developing	Demonstrate basic knowledge and understanding of their current and recent topics,     Can recall basic information from past learning with prompting and questioning     Recall basic key words with guidance	State the meaning of most basic key words with guidance     Link keywords to pictures or meanings with guidance	Describe basic graphs and find key information from them with guidance     Use basic maths within science with guidance	Recognise the equipment, safety, risks and steps needed during practical work with guidance. Add most labels to diagrams with guidance Can identify hazards, risk and some control measures in practical work
Achieving	Demonstrate clear knowledge and understanding of their current and recent topics,     Can recall key information from past learning through questioning.     Recall most key words at the end of a topic independently	State the meanings of basic key words independently and use them in context     Link most keywords to pictures or meanings independently	Find key information from graphs and be able to describe them independently     Use scientific understanding with guidance to explain patterns and trends     Use basic maths within science independently	Recognise common, equipment, safety, risks and steps needed during practical work independently     Add most labels to diagrams independently     Can complete a basic risk assessment independently
Exceeding	Demonstrate with confidence, a solid knowledge and understanding of their current and recent topics,     Can confidently recall information from past learning, during questioning or independent work     Recall keywords at the end of a topic independently	State the meanings of most key words independently and use them in context     Link keywords to pictures or meanings independently	Extrapolate and use information from graphs and be able to describe them independently with confidence     Independently use key scientific understanding to explain and predict patterns and trends     Use higher maths skills within science independently	Recognise equipment, safety, risks and steps needed during practical work independently     Add labels to diagrams independently     Can complete a detailed risk assessment     Can identify where experimental methods can be improved
Excelling	Demonstrate with confidence, a thorough working knowledge and understanding of their current and recent topics,     Can confidently recall information from past learning, during questioning or independent work making links between topics     Recall all key words at the end of a topic independently	State the meanings of key words independently and use them in context with confidence     Link keywords to pictures or meanings independently	Extrapolate and use information from multiple graphs and be able to describe them independently with confidence     Independently use thorough scientific understanding to explain and predict patterns and trends     Independently and with confidence ensure almost all challenging mathematical questions are solved	Recognise equipment, safety, risks and steps needed during practical work independently     Add labels to diagrams independently     Can complete a detailed risk assessment     Can write a basic evaluation

In Year 9, the students knowledge journey increases in challenge further to include.....

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	In Year 8, students knowledge journey increases in challenge to include					Assessment 2:	Assessment 3:	
					Particle model,	Reassesses some	Chromatography,	
	In Year 7, students knowledge journey		Assessment 1:	Assessment 2:	Atomic structure,	of the mock exam	Photosynthesis,	
	includes		Introduction to year 8	All of Assessment 1 content and	Cell biology	content	Plant organisation,	
			science skills,	Resultant forces and pressure,		Cell biology	Energy	
	Assessment 1:	Assessment 2:	Periodic table,	Climate,		Atoms and		
	Introduction to year 7	Cells,	Photosynthesis,	Evolution,	Includes links to	Isotopes,	Also includes links	
	science skills,	Sound,	Types of reaction,	Chemical change,	prior learning from	Chemical change,	to prior learning	
	Universe,	Light,	Digestive system,	Breathing respiration and movement,	the Year 7 and 8	Organic chemistry,	from the Year 7	
	Particle model,	Acids and alkali,	Earth structure and	Magnets,	content.	Atmosphere	and 8 content.	
	Variation,	Energy,	resources	Waves and their properties,				
	Reproduction	Current, voltage, resistance,		Inheritance,		Also includes links		
	·	Interdependence,	Includes links to prior	Work done,		to prior learning		
		Separating mixtures,	learning from year 7	Heating and cooling		from the Year 7		
		Metals and non metals,	content.			and 8 content.		
		Speed		Includes links to prior learning from				
		'		year 7 content.				