

# BSquared

## Primary Steps core subject pack 2018

an observation-based, teacher assessment framework  
for primary curriculum outcomes



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# Primary Steps (core)

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## An Introduction to Primary Steps

In 2013, the Department for Education (DfE) produced new National Curriculum programmes of study for use from 2014 onwards. The DfE, and its relevant agencies and public bodies, subsequently removed the old National Curriculum level descriptors and (following their consultation on '*Primary School Pupil Assessment: Rochford Review Recommendations*') the P scale attainment targets for pupils with special educational needs. Following their responses to the aforementioned consultation and the '*Primary assessment in England*' consultation, the Standards and Testing Agency (STA) then released the '*permanent and extended*' pre-key stage standards and the teacher assessment frameworks.

In response to this range of documents, B Squared have designed Primary Steps to be used as an observation-based, teacher assessment framework for use with pupils who are working towards end of year outcomes. This framework has been designed to help teachers to identify and record the ongoing achievements of pupils who are working at or around age-related expectations, in most areas of their development. It can be used with pupils who are studying the primary National Curriculum.

The Primary Steps assessment framework helps schools and teachers to monitor their provision for Cognition and Learning by enabling staff to record the academic knowledge and abilities demonstrated by their pupils.

Some of the assessment points in Primary Steps are similar to assessment points in our other frameworks; however, we have spent a long time analysing and refining the content of Primary Steps and we believe that we have reduced the workload for teachers whilst ensuring that pupil progress milestones are still recognised.

## Primary Steps (core)

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## The Structure of Primary Steps

The structure of this framework covers the ability range of pupils who would have previously been assessed as operating between the upper-end of P4 and the end of Key Stage 2 expectations.

Skills that are deemed similarly challenging have been grouped together in steps. The organisation of the higher steps reflects the structure of the end of year outcomes from the primary National Curriculum programmes of Study. The organisation of the lower steps reflects the structure of the first three teacher assessment standards described by the STA in the '*Pre-Key Stage 1/2: pupils working below the National Curriculum assessment standard—teacher assessment framework*' documents.

The table below illustrates the structure of the Primary Steps framework.

Government Guidance					B Squared framework
Old NC/P levels	Pre-KS1 standards & TA frameworks	Pre-KS2 standards & TA frameworks	NC programmes of study	Primary Steps	
EP					
NC 8					
NC 7					
NC 6					
NC 5		GDS		Gtr. D & B	
NC 4		EXS		Yr. 6	
NC 3		WTS		Yr. 5	
NC 2	GDS	Standard 6	KS3	Yr. 4	
NC 1	EXS	Standard 5	KS2	Yr. 3	
P 8	WTS	Standard 4	KS1	Yr. 2	
P 7	Standard 4	Standard 3		Yr. 1	
P 6	Standard 3	Standard 2			
P 5	Standard 2	Standard 1			
P 4	Standard 1			PKS 3	
P 3				PKS 2	
P 2				PKS 1	
P 1					

# Primary Steps (core)

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## The Content of Primary Steps

Primary Steps breaks down the 2014 National Curriculum programmes of study for Key Stages 1–2. These assessment points can be used to evaluate the performance of pupils who are working at or around age-related expectations and can be used to support the development of those who make progress at atypical rates too. As there is no curriculum guidance available for teachers of pupils working beneath the level of the National Curriculum, we have identified prerequisite skills for entry to the Key Stage 1 programmes.

Primary Steps provides you with frameworks for the teacher assessment of all National Curriculum subjects. However, because every school has its own priorities, B Squared are providing these frameworks in three packs. This allows you to choose the areas which best help you and your school to meet the needs of the students with whom you work.

This is the [Core Pack](#). As our most popular pack, this will provide you with teacher assessment frameworks which cover the programmes of study for the core subjects: English, Maths, and all 16 Science topics. Additionally, it will identify the prerequisite skills for entry to these programmes.

There are two other Primary Steps packs available for purchase. These are:

### Core+ Pack

This pack covers the second most frequently purchased group of subjects and will provide you with teacher assessment frameworks which cover the programmes of study for Computing, and PE as well as providing frameworks which cover the government guidance for PSHE. Additionally, this pack will identify prerequisite skills for entry to these programmes.

### Foundation Pack

This pack is for schools who need a comprehensive assessment system. It will provide you with teacher assessment frameworks which cover the programmes of study for all the rest of the foundation subjects: Art & Design, DT, Geography, History, Languages (German, Spanish, French, and Italian), and Music as well as providing frameworks which cover the government guidance for Religious Education. This pack gives you a much higher level of detail than the National Curriculum programmes and also identifies prerequisite skills for entry to these programmes.

The following page identifies the subjects areas within this pack.

Core pack	Greater Depth & Breadth											
	Year 6	Year 5	Year 4	Year 3	Year 2	Year 1	Pre-Key Stage Step 3	Pre-Key Stage Step 2	Pre-Key Stage Step 1			
English; Reading	✓	✓	✓	✓	✓	✓	✓	✓	✓			
English; Writing	✓	✓	✓	✓	✓	✓	✓	✓	✓			
English; Spoken Language	✓	✓	✓	✓	✓	✓	✓	✓	✓			
English Appendix; Spelling	✓	✓	✓	✓	✓	✓	✓	✓	✓			
English Appendix; Vocabulary, Grammar & Punctuation	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Mathematics; Number	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Mathematics; Measurement	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Mathematics; Geometry	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Mathematics; Statistics	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Plants	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Animals, including Humans	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Everyday Materials	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Seasonal Changes	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Living Things & their Habitats	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Uses of Everyday Materials	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Rocks	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Light	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Forces & Magnets	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; States of Matter	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Sound	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Electricity	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Properties & Changes of Materials	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Earth & Space	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Forces	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Science; Evolution & Inheritance	✓	✓	✓	✓	✓	✓	✓	✓	✓			

Core+ pack	Greater Depth & Breadth											
	Year 6	Year 5	Year 4	Year 3	Year 2	Year 1	Pre-Key Stage Step 3	Pre-Key Stage Step 2	Pre-Key Stage Step 1			
Personal, Social, Health & Economic Education	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Computing/E-Safety; Computing	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Computing/E-Safety; E-Safety	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Physical Education/Swimming & Water Safety; PE	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Physical Education/Swimming & Water Safety; S&WS	✓	✓	✓	✓	✓	✓	✓	✓	✓			

Foundation pack	Greater Depth & Breadth											
	Year 6	Year 5	Year 4	Year 3	Year 2	Year 1	Pre-Key Stage Step 3	Pre-Key Stage Step 2	Pre-Key Stage Step 1			
Art & Design	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Design & Technology/Cooking & Nutrition; D&T	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Design & Technology/Cooking & Nutrition; Cooking	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Geography	✓	✓	✓	✓	✓	✓	✓	✓	✓			
History	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Languages; French	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Languages; German	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Languages; Italian	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Languages; Spanish	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Music	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Religious Education	✓	✓	✓	✓	✓	✓	✓	✓	✓			

# Primary Steps (core)

## the assessment of English

### English

This area of Primary Steps is based on the 2014 National Curriculum programme of study for English, which is a compulsory subject for pupils studying in all primary key stages (KS1–KS2). We have broken down the programme of study and supplemented it with the teacher-assessment standards to identify crucial pupil assessment milestones.

English has a pre-eminent place in education and in society. A high-quality education in English will teach pupils to speak and write fluently so that they can communicate their ideas and emotions to others, and through their reading and listening, others can communicate with them. Through reading in particular, pupils have a chance to develop culturally, emotionally, intellectually, socially and spiritually. Literature, especially, plays a key role in such development. Reading also enables pupils both to acquire knowledge and to build on what they already know. All the skills of language are essential to participating fully as a member of society; pupils who do not learn to speak, read, and write fluently and confidently are effectively disenfranchised.

The overarching aim for English in the National Curriculum is to promote high standards of language and literacy by equipping pupils with a strong command of the spoken and written language, and to develop their love of literature through widespread reading for enjoyment. The National Curriculum programme of study for English aims to ensure that all pupils:

- read easily, fluently and with good understanding;
- develop the habit of reading widely and often, for both pleasure and information;
- acquire a wide vocabulary, an understanding of grammar and knowledge of linguistic conventions for reading, writing and spoken language;
- appreciate our rich and varied literary heritage;
- write clearly, accurately and coherently, adapting their language and style in and for a range of contexts, purposes and audiences;
- use discussion in order to learn; they should be able to elaborate and explain clearly their understanding and ideas; and
- are competent in the arts of speaking and listening, making formal presentations, demonstrating to others and participating in debate.



# Primary Steps (core)

## the assessment of English

The programme of study identified the following areas:

- Reading
- Writing
- Spoken Language

Using the programme of study as a starting point we designed three profiles to help identify important skills and knowledge.

The following pages describe how the Primary Steps 2018 framework compares to B Squared's previous assessment framework for English (Core P Steps 2014 and Core NC Years).

### English; Reading

This profile comprises two strands: 'Word Reading', and 'Comprehension'.

The earlier 'Word Reading' steps reflect the pre-key stage standards and identify the skills required to produce individual and blended sounds. These help children to access the written word by building fluency and developing the skills required to decode words. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programmes of study.

The earlier 'Comprehension' steps reflect the pre-key stage standards and identify the skills required to engage with the activity of reading. These help children to show a basic understanding of the meaning of simple texts. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programmes of study. 'Greater Depth and Breadth' aims to identify enhanced comprehension strategies employed by children.

# Primary Steps (core)

## the assessment of English

### English; Writing

This profile comprises four strands: 'Composition', 'Vocabulary, Grammar & Punctuation', 'Transcription: Spelling', and 'Transcription: Handwriting & Presentation'.

The earlier 'Composition' steps reflect the pre-key stage standards and identify the skills required to sequence events, verbally complete clauses, and make marks with meaning. These help children to devise their own creative ideas and to identify some purposes of writing. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. 'Greater Depth and Breadth' aims to identify a more developed ability to compose high-quality writing for a range of purposes.

The earlier 'Vocabulary, Grammar & Punctuation' steps reflect the pre-key stage standards and identify the pupil's use of different parts of speech alongside their initial attempts to imitate the conventions of writing (e.g. leaving spaces between marks, etc.). These help children to develop an understanding of how the English language works and how we use it. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. 'Greater Depth and Breadth' aims to identify an enhanced use of vocabulary, grammar, and punctuation.

The earlier 'Transcription: Spelling' steps reflect the pre-key stage standards and cover phoneme-grapheme correspondences, early mark-making and letter formation. These help children to develop an initial understanding of word structure. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. 'Greater Depth and Breadth' tracks an ongoing commitment to accurate spelling.

The earlier 'Transcription: Handwriting & Presentation' steps reflect the pre-key stage standards and identify the fine motor and line-making skills. These help children to develop an understanding of mark-making. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. 'Greater Depth and Breadth' aims to recognise fluency, speed, and presentation.

# Primary Steps (core)

## the assessment of English

### English; Spoken Language

This profile comprises one strand: 'Spoken Language'.

The earlier steps identify the skills required to imitate words (or sign and symbol usage), join in with songs or rhymes, and engage with small groups. These help children to develop the communication skills necessary for them to transmit and receive information about their own or others' needs, thoughts, ideas and feelings. Years 1, 2, 3, 4, 5, and 6 seek to expand upon the content contained within the National Curriculum programme of study. 'Greater Depth and Breadth' aims to track confidence and efficacy in a range of formal and informal contexts.

### English Appendix; Spelling

The National Curriculum in England provides a spelling appendix to the English programmes of study. We felt it important to create a framework in order to support the assessment of spelling. We have linked points between this framework and the other areas of English. This profile comprises one strand: 'Spelling'.

The earlier 'Spelling' steps cover phonic knowledge, rhyme, and CVC words. These help children to develop an initial understanding of word structure. Years 1, 2, 3, 4, 5, and 6 seek to expand upon the content contained within the National Curriculum appendix.

### English Appendix; Vocabulary, Grammar & Punctuation

This profile comprises four strands: 'Sentence', 'Text', 'Punctuation', and 'Terminology'.

The earlier 'Sentence' steps identify the pupil's ability to combine verbs and nouns, dictate sentences for recorded purposes, and write phrases that convey meaning. These help children to link words which are understood by members of staff. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study. 'Greater Depth and Breadth' expects children to extend and apply the grammatical knowledge previously learnt.

# Primary Steps (core)

## the assessment of English

The earlier 'Text' steps reflect the pre-key stage standards and identify the pupil's use of writing in play, sequencing of events, and storytelling techniques. These help children to develop an understanding of recorded expression and its purposes. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study. 'Greater Depth and Breadth' aims to demonstrate an understanding of the differences between spoken and written language and use it consciously in their writing to achieve particular effects.

The earlier 'Punctuation' steps reflect the pre-key stage standards and identify the pupil's use of spaces between self-made marks, verbal questioning, and lower- and upper-case letters. These help children to develop an understanding of the conventions of writing. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study. 'Greater Depth and Breadth' aims to assesses their ability to accurately use a wide range of punctuation to separate clauses, vary pace, indicate, subdivide and create atmosphere.

The earlier 'Terminology' steps reflect the pre-key stage standards and record the pupil's identification of simple grammatical features, and verbal use of pronouns and prepositions. These help children to develop an understanding of the functions of different parts of speech. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study. In 'Greater Depth and Breadth', pupils are expected to discuss writing with precise and confident use of linguistic and literary terminology.

# Primary Steps (core)

## the assessment of English

### Differences between Primary Steps and our Previous Framework for English

The Core P Steps 2014 and Core NC Years 2014 assessment package for Reading and Spoken Language comprised more strands. By reducing the number of strands, we hope to make the assessment of these areas more manageable for teachers. The previous assessment package for Writing comprised the same strand headings; however, we have worked hard to make explicit the value of each assessment point by refining our use of language and identifying crucial skills.

We included a Spelling Appendix in our Primary Core 2014 assessment package (based on end of years outcomes) but we did not include it in the Core P Steps 2014 and Core NC Years assessment packages. Therefore, this aspect of Primary Steps will be new to some schools. The Vocabulary, Grammar & Punctuation appendix will be new to all schools.

Within all areas, we have also integrated the content from the pre-key stage standards and the new teacher assessment frameworks in order to bring our Primary Steps in line with current expectations.

# Primary Steps (core)

## the assessment of mathematics

### Mathematics

This area of Primary Steps is based on the 2014 National Curriculum programme of study for Mathematics, which is a compulsory subject for pupils studying in all primary key stages (KS1–KS2). We have broken down the programme of study and supplemented it with the teacher-assessment standards to identify crucial pupil assessment milestones.

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of History's most intriguing problems. It is essential to everyday life, critical to Science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality Mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of Mathematics, and a sense of enjoyment and curiosity about the subject.

The National Curriculum for Mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately;
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language; and
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning, and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to Science and other subjects.

# Primary Steps (core)

## the assessment of mathematics

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

The programme of study identified several areas. We grouped the distinct areas of study on four profiles (Number, Measurement, Geometry, and Statistics) and designed a developmental framework to help identify the skills listed within the National Curriculum programme of study.

The following pages describe how the Primary Steps 2018 framework compares to B Squared's previous assessment framework for Mathematics (Core P Steps 2014 and Core NC Years).

### Mathematics; Number

This profile comprises five strands: 'Number & Place Value', 'Addition, Subtraction, Multiplication and Division', 'Fractions (including Decimals & Percentages)', 'Ratio, Proportion & Rates of Change', and 'Algebra'—some of which (respective of their position within the curriculum) do not appear until later in the framework.

The earlier 'Number and Place Value' steps reflect the pre-key stage standards and identify the skills required to contrast quantities, count up to five objects, and begin to write numerals. These help children to form a basic understanding of quantities and form a relationship with number. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programmes of study. 'Greater Depth & Breadth' aims to identify higher level number skills including working with fractions, decimals, and negative numbers.

The earlier 'Addition, Subtraction, Multiplication and Division' steps reflect the pre-key stage standards and identify the skills required respond to questions involving the word 'more', make groups, remove objects, and count the remaining ones. These help children to form a basic understanding of mathematical operations. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programmes of study. 'Greater Depth & Breadth' aims to identify higher level number skills including working with fractions, decimals, and negative numbers.

# Primary Steps (core)

## the assessment of mathematics

The earlier 'Fractions (including Decimals & Percentages)' steps reflect the pre-key stage standards and identify the skills required to bend pliable materials, share concrete objects so that everyone has equal amounts, and use the term 'half'. These help children to form a basic understanding of parts of a whole. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programmes of study.

The 'Ratio and Proportion' and 'Algebra' strands do not come into the curriculum until Year 6. At this point we seek to expand upon the content contained within the programme of study.

### Mathematics; Measurement

This profile comprises one strand: 'Measurement'.

The earlier steps reflect the pre-key stage standards and identify the skills required to explore measures in practical situations. This maybe through use of language, motor skills or sensory exploration. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study. In 'Greater Depth and Breadth' the pupils are expected to use formula to accurately measure angle, length, perimeter, area, and volume for a wide range of shapes.

### Mathematics; Geometry

This profile comprises two strand: 'Properties of Shape', and 'Position and Direction'.

The earlier 'Properties of Shape' steps identify the skills required to build and dismantle a tower of blocks, find out which 3D shapes roll, and listing some properties of shapes. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programmes of study.

The earlier 'Position and Direction' steps identify the skills required to place objects in a line, recreate a linear pattern on a pegboard, and assemble puzzles. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programmes of study.



# Primary Steps (core)

## the assessment of mathematics

### Mathematics; Statistics

This profile comprises one strand: 'Statistics'.

The earlier steps identify the skills required to create and read basic pictograms, classify items by set criteria, and record data with tally charts. These help children to form a basic understanding of data and to use similarities and differences to identify groups. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programmes of study.

### Differences between Primary Steps and our Previous Framework for Mathematics

The Core P Steps 2014 and Core NC Years assessment package for mathematics comprised similar profile and strand headings; however, we have worked hard to make explicit the value of each assessment point by refining our use of language and identifying crucial skills.

Within all areas, we have also integrated the content from the pre-key stage standards and the new end of key stage teacher assessment frameworks in order to bring our Primary Steps in line with current expectations.

# Primary Steps (core)

## the assessment of science

### Science

This area of Primary Steps is based on the 2014 National Curriculum programme of study for Science, which is a compulsory subject for pupils studying in all primary key stages (KS1–KS2). We have broken down the programme of study and supplemented it with the teacher-assessment standards to identify crucial pupil assessment milestones.

A high-quality Science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry, and physics. Science has changed our lives, is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes, and uses of Science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how Science can be used to explain what is occurring, predict how things will behave, and analyse causes.

The National Curriculum for Science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics;
- develop understanding of the nature, processes and methods of Science through different types of Science enquiries that help them to answer scientific questions about the world around them; and
- are equipped with the scientific knowledge required to understand the uses and implications of Science, today and for the future.

The programme of study identified 17 distinct areas across Key Stage 1 and 2. One of which was identified as “Working Scientifically”. We decided to incorporate “Working Scientifically” within all of the other sixteen areas. We then designed a developmental framework to help identify the skills listed within the National Curriculum programme of study.

The following pages describe how the Primary Steps 2018 framework compares to B Squared's previous assessment framework for Science (Core P Steps 2014 and Core NC Years).

# Primary Steps (core)

## the assessment of science

### Science; Animals, including Humans

This profile comprises one strand: 'Animals, including Humans'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Animals, including Humans'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify similarities and differences between different groups and encourages them to think about animal food chains, their life cycles, and the operations of their body parts.

### Science; Plants

This profile comprises one strand: 'Plants'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Plants'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify similarities and differences between different groups and encourages them to think about the requirements of plants, their life cycles and the structure of them.

### Science; Living Things and their Habitats

This profile comprises one strand: 'Living Things and their Habitats'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Living Things and their Habitats'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify similarities and differences between different groups and encourages them to think about the needs and behaviours of living things.

# Primary Steps (core)

## the assessment of science

### Science; Evolution and Inheritance

This profile comprises one strand: 'Evolution and Inheritance'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Evolution and Inheritance'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify similarities and differences between different groups and encourages them to think about how living things are suited to their environments and how reproduction over time changes a species.

### Science; Everyday Materials

This profile comprises one strand: 'Everyday Materials'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Everyday Materials'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify similarities and differences between different materials and encourages them to think about what they are made from.

### Science; Uses of Everyday Materials

This profile comprises one strand: 'Uses of Everyday Materials'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Uses of Everyday Materials'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify similarities and differences between different materials and encourages them to think about how they can be used.

# Primary Steps (core)

## the assessment of science

### Science; Rocks

This profile comprises one strand: 'Rocks'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Rocks'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify similarities and differences between different rocks and soil types and encourages them to think about their properties.

### Science; States of Matter

This profile comprises one strand: 'States of Matter'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'States of Matter'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify similarities and differences between different materials and encourages them to think about how they may change with temperature and pressure.

### Science; Properties and Changes of Materials

This profile comprises one strand: 'Properties and Changes of Materials'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Properties and Changes of Materials'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify similarities and differences between different materials and encourages them to think about how their specific properties make them useful.

# Primary Steps (core)

## the assessment of science

### Science; Seasonal Changes

This profile comprises one strand: 'Seasonal Changes'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Seasonal Changes'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify and describe seasonal processes and how these affect the world around them.

### Science; Earth and Space

This profile comprises one strand: 'Earth and Space'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Earth and Space'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify and describe the processes of our solar system and how these affect the world around them.

### Science; Light

This profile comprises one strand: 'Light'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Light'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify and describe the processes of light and shadow and how their own eyes receive this information.

# Primary Steps (core)

## the assessment of science

### Science; Sound

This profile comprises one strand: 'Sound'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Sound'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify and describe changes in pitch and volume and how vibrations are received by their ears.

### Science; Electricity

This profile comprises one strand: 'Electricity'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Electricity'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify and describe electrical components, build circuits, and draw circuit diagrams.

### Science; Forces and Magnets

This profile comprises one strand: 'Forces and Magnets'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Forces and Magnets'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify and describe how things can be made to move and how these affect the world around them.

# Primary Steps (core)

## the assessment of science

### Science; Forces

This profile comprises one strand: 'Forces'.

The earlier steps identify the skills required to work scientifically to explore, discuss and experiment within the topic of 'Forces'. Years 1 and 2 seek to expand upon the content contained within the Key Stage 1 National Curriculum programmes of study and teacher assessment frameworks. Years 3, 4, 5, and 6 seek to expand upon the content contained within the Key Stage 2 National Curriculum programme of study and teacher assessment frameworks. This helps children to identify and describe how things can be made to move by more and how these affect the world around them.

### Differences between Primary Steps and our Previous Framework for Science

Many of the assessment points are linked across a range of the Science profiles. This means that some of the skills that have been marked as 'Mastered' in this area, will also be 'Mastered' in other profiles.

Our Core P Steps 2014 and Core NC Years assessment package used similar areas of development; however, we have worked to make explicit the value of each assessment point by refining our use of language and identifying crucial skills and we have integrated the content from the new end of key stage teacher-assessment frameworks to bring the Primary Steps in line with national expectations.





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