## Welcome back! This is your LbQ September maths Transitions Pack

Find out what your pupils already know with low-anxiety assessment resources, and give them the confidence and skills needed for a smoother transition.







FINALIST





WINNER Mathematics Learning by Questions

## READY TO PROGRESS FROM PRIMARY





LbQ's diagnostic **'Ready to Progress from Primary'** Question Sets can help you instantly find and – more importantly – fill any significant gaps in learning.

Based on the Ready to Progress criteria for KS2, our Question Sets are structured around key mathematical concepts, guiding pupils through the knowledge that they are expected to have at the end of year 6 and highlighting any gaps along the way.

The data generated from these Question Sets is presented in our Results Matrix, making spotting gaps in pupil knowledge easy to see. There is also a scheme of Question Sets that has been collated to help fill those gaps where needed.

## Let's get started!

Click on one of the subject areas below to view the list of Question Sets.

Clicking on the title will take you to the set itself\*.

From there, you can:

• add the set to your lesson planner.

• use it as a front-of-class teaching tool.

- adapt it to your needs.
- send to children to answer on their devices.











### Y7 Catch up and Transition Question Sets: Number and Place Value

Find the Gaps	
Fill the Gaps	Catch up Mastery and Practice Sets
Year 5 Gaps	<ul> <li><u>Count Up and Down in Tenths (Decimals)</u></li> <li><u>Count Up and Down in Hundredths (Decimals)</u></li> <li><u>Recognise and Write Decimal Equivalents to Any Number of Tenths</u></li> <li><u>Recognise and Write Decimal Equivalents to Any Number of Hundredths</u></li> <li><u>Read, Write, Compare and Order Numbers with up to Three Decimal Places</u></li> <li><u>Round Numbers up to 1,000,000</u></li> <li><u>Round Decimals With Two Decimal Places to the Nearest Whole Number and to One Decimal Place</u></li> <li><u>Compare and Convert Metric Units of Length, Mass and Volume up to 2</u></li> <li><u>Decimal Places</u></li> </ul>
Year 6 Gaps	Read, Write, Compare and Order Numbers up to 10,000,000Count in Steps of Powers of 10Round Numbers up to 10,000,000Understand Thousandths in Decimal NumbersMultiply and Divide Numbers Including Decimals by 10, 100 and 1,000Read, Write, Compare and Order Numbers with up to Three Decimal Places

#### Y7 Catch up and Transition Question Sets: Number Facts

Find the Gaps	
Fill the Gaps	Catch up Mastery and Practice Sets
Year 5 Gaps	Add and Subtract Numbers Mentally Multiply and Divide Numbers Mentally Practise Adding Decimals Mentally (Up to 3 d.p.) Practise Subtracting Decimals Mentally (Up to 3 d.p.) Practise Multiplying Mentally Using Known Table Facts Practise Dividing Mentally Using Known Table Facts Practise Decimal Multiplication Facts with Numbers to 1 d.p.

#### Y7 Catch up and Transition Question Sets: Addition and Subtraction

Find the Gaps	
Fill the Gaps	Catch up Mastery and Practice Sets
Year 5/6 Gaps	Add and Subtract Numbers Mentally Add and Subtract Numbers with More Than 4 Digits (Column Method) Add and Subtract Numbers up to 2 Decimal Places (Column Method)

### Y7 Catch up and Transition Question Sets: Multiplication and Division

Find the Gaps	
Fill the Gaps	Catch up Mastery and Practice Sets
Year 5 Gaps	Divide Numbers With up to 2 Digits by 10 Divide Numbers With up to 2 Digits by 100 Identify Factors Identify Multiples Identify Common Factors and Common Multiples Multiply Numbers up to 4 Digits by a 1-Digit Number (Short Multiplication) Divide Numbers up to 4 Digits by a 1-Digit Number (Short Division)
Year 6 Gaps	Number SequencesPerform Mental Calculations Including with Mixed OperationsMultiply Numbers MentallyDivide Numbers MentallyCompare Two QuantitiesFind and Use ProportionsFind and Use RatiosSolve Problems Involving Addition, Subtraction, Multiplication and Division

### Y7 Catch up and Transition Question Sets: Fractions

Find the Gaps	
Fill the Gaps	Catch up Mastery and Practice Sets
Year 5 Gaps	<u>Find Fractions of Quantities</u> <u>Identify and Find Equivalent Fractions</u> <u>Convert Decimal Numbers to Fractions</u> <u>Convert Tenths and Hundredths to Decimals</u> <u>Understand Thousandths in Decimal Numbers</u>
Year 6 Gaps	Simplify Proper FractionsPractise Finding Equivalent FractionsCompare and Order Fractions with Related Denominators (Proper, Improper and Mixed Number Fractions)Compare and Order Fractions with Different Denominators (Proper, Improper and Mixed Number Fractions)

### Y7 Catch up and Transition Question Sets: Geometry

Find the Gaps	
Fill the Gaps	Catch up Mastery and Practice Sets
Year 5 Gaps	Estimate and Compare Acute, Obtuse and Reflex Angles Measure Angles Calculate the Areas of Rectilinear Shapes by Counting Squares Calculate and Compare the Areas of Rectilinear Shapes Calculate and Estimate the Area of Irregular Shapes
Year 6 Gaps	Compare the Areas and Perimeters of Rectilinear Shapes Calculate the Area of Triangles

#### **Other useful transition resources**

	Question Set
Year 5	End of Year 5 Curriculum Review: Arithmetic End of Year 5 Curriculum Review: Non-Arithmetic
Year 6	<ul> <li>End of Year 6 Curriculum Review: Arithmetic</li> <li>End of Year 6 Curriculum Review: Non-Arithmetic</li> <li>Year 6 National Curriculum Test Practice (SATs): Maths Set 1 Paper 1</li> <li>Year 6 National Curriculum Test Practice (SATs): Maths Set 1 Paper 2</li> <li>Year 6 National Curriculum Test Practice (SATs): Maths Set 1 Paper 3</li> <li>Year 6 National Curriculum Test Practice (SATs): Maths Set 2 Paper 1</li> <li>Year 6 National Curriculum Test Practice (SATs): Maths Set 2 Paper 2</li> <li>Year 6 National Curriculum Test Practice (SATs): Maths Set 2 Paper 2</li> <li>Year 6 National Curriculum Test Practice (SATs): Maths Set 2 Paper 3</li> <li>Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 1</li> <li>Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 1</li> <li>Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 1</li> </ul>
	Year 6 National Curriculum Test Practice (SATs): Maths Set 2 Paper 3         Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 1         Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 2         Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 2         Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 2         Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 3

## READY-TO-PROGRESS RESOURCES



## Celebrate maths successes and inform future planning.

You can use LbQ's **'Ready-to-Progress'** Question Sets to find out where gaps might be hiding in children's learning from primary school, and use the results to plan which topics pupils might need to go over again or spend a little longer on over the coming year. LbQ's platform provides a very engaging and informal way of assessing children, and the pupils also benefit from receiving instant prompts and guidance if they need it.



"With the potential to improve the work-life balance of teachers, and the potential to put pupils a whole term ahead in terms of academic progress, all schools should consider Learning by Questions."

#### **Teacher Toolkit**











Each level of these Question Sets focuses on one ready-to-progress criterion, with simple contextual problems towards the end of each level. They can also be easily adapted if you require.

	Year 5	Year 6
Number and Place Value	Ready to Progress from Year 5 Number and Place Value	Ready to Progress from Year 6 Number and Place Value
Number Facts	Ready to Progress from Year 5 Number Facts	
Addition and Subtraction		Ready to Progress from Year 6 Addition,
Multiplication and Division	Ready to Progress from Year 5 Multiplication and Division	Subtraction, Multiplication and Division
Fractions	Ready to Progress from Year 5 Fractions	Ready to Progress from Year 6 Fractions
Geometry	Ready to Progress from Year 5 Geometry	Ready to-progress from Year 6 Geometry

## USING LbQ TO HELP DIAGNOSE GAPS IN LEARNING



Use LbQ's range of diagnostic Question Sets to instantly find and – more importantly – help you fill any critical gaps in maths learning.

Our Question Sets are ideal for low-stakes testing and diagnostic purposes, and they are extremely useful to inform planning before you start teaching a new topic.

For each set, pupils privately answer questions on their devices and work at their own pace on our engaging platform. All questions are automatically marked and pupils receive instant feedback and guidance where needed.

Teachers are provided with continuous assessment on the LbQ Results Matrix, meaning that any gaps can be addressed with individual pupils or with the whole class.

## Let's get started!

Click on one of the year groups below to view the list of Question Sets.

Clicking on the title will take you to the set itself\*.

From there, you can:

- add the set to your lesson planner.
- use it as a front-of-class teaching tool.
- adapt it to your needs.
- send to children to answer on their devices.

"LbQ engages all learners as children are motivated to work at their own level. As a teacher, I know there is an excellent pace of learning. I can address misconceptions as they happen, rather than the next day when I have marked their books."

**Debbie Mercer, Year 3 Teacher** St Thomas Primary School, Blackburn









### Finding the Gaps: Year 5 Suggested Diagnostic Sets

Topic Reviews	Ready to Progress and Curriculum Reviews
Place Value Topic Review (Y5)	Ready to Progress from Year 5 Number and Place Value
Add and Subtract Topic Review (Y5)	Ready to Progress from Year 5 Number Facts
Multiplication and Division Topic Review (Y5)	Ready to Progress from Year 5 Multiplication and Division
Fractions Topic Review (Y5)	Ready to Progress from Year 5 Fractions
Decimals and Percentages Topic Review (Y5)	Ready to Progress From Year 5 Geometry
Properties of Number Topic Review (Y5)	End of Year 4 Curriculum Review: Arithmetic
Measurement Topic Review (Y5)	End of Year 4 Curriculum Review: Non-Arithmetic
Geometry Topic Review (Y5)	End of Year 5 Curriculum Review: Arithmetic
Statistics Topic Review (Y5)	End of Year 5 Curriculum Review: Non-Arithmetic

### Finding the Gaps: Year 6 Suggested Diagnostic Sets

Topic Reviews	Ready to Progress and Curriculum Reviews
Place Value Topic Review (Y6)	Ready to Progress from Year 6 Number and Place Value
Multiplication and Division Topic Review (Y6)	Ready to Progress from Year 6 Addition, Subtraction, Multiplication and Division
Fractions Topic Review (Y6)	Ready to Progress from Year 6 Fractions
Decimals and Percentages Topic Review (Y6)	Ready to Progress From Vear 6 Geometry
Ratio and Proportion Topic Review (Y6)	End of Yoar 5 Curriculum Poviow: Arithmotic
Algebra Topic Review (Y6)	End of Year 5 Curriculum Review: Anthintetic
Measurement Topic Review (Y6)	End of Year S Curriculum Review. Non-Anthrnetic
Geometry Topic Review (Y6)	End of Year 6 Curriculum Review: Arithmetic
Statistics Topic Review (Y6)	End of Year 6 Curriculum Review: Non-Arithmetic

## TOP TEN MATHS SKILLS For transition



It's important to ensure children have the key mathematical skills that will provide the foundations for success in secondary school.

## What if you could just prioritise giving children 10 key skills that would allow them a solid start at secondary?

We asked a range of teachers – from primaries and secondaries – to choose their **'Top Ten Key Maths Skills for Y6 to Y7 Transition'**. Whilst there was some interesting debate about what to include in this list, we have settled on the following 10 skills:

Top Ten Key Maths Skills for Transition		
Scaling integers and decimals by 10, 100 and 1,000	Calculating with fractions	
Using formal written methods	Fraction-decimal-percentage equivalence	
Choosing and using efficient methods for calculations	Simple angle rules	
Using mental methods and known facts	BIDMAS/The order of operations	
Finding factors and multiples	Basic algebra skills	











To help you and your students, we have resources that cover our top ten math skills for transition. They are short, mixed Question Sets that are designed to remind students of these key maths skills in the first few weeks of their time at secondary. They'll be perfectly prepped for the next stage of their maths education!

Key Transition Skills Question Sets for Year 6 and Year 7 Pupils		
Transition Key Skills Practice: Set 1	Transition Key Skills Practice: Set 6	
Transition Key Skills Practice: Set 2	Transition Key Skills Practice: Set 7	
Transition Key Skills Practice: Set 3	Transition Key Skills Practice: Set 8	
Transition Key Skills Practice: Set 4	Transition Key Skills Practice: Set 9	
Transition Key Skills Practice: Set 5	Transition Key Skills Practice: Set 10	

Everybody we surveyed was in complete agreement that rapid recall of times table facts was another vital skill. Use our **Practise 1 to 12 Times Tables** and **Practise 1 to 12 Times Tables Division Facts** sets regularly in addition to the mixed skills practice sets.

# ASSESSMENT WITHOUT ANXIETY 2 Learning by Questions

## Informal, low-stakes assessment for all pupils

When assessing student's overall understanding at the beginning of the year, many schools use paper-based assessments to assess how secure their primary school learning has been. Just preparing and marking such tests can take up hours of your valuable time, before you even begin to analyse the results. Not to mention, many children have huge anxiety around such tests and can often underperform in these one-off tests as a result.

What if there was a way of getting valuable data without causing pupil anxiety whilst also saving hours of marking time too?

Well, as an LbQ user, you can do just that!

For Year 2–6 maths, we have end-of-year Curriculum Reviews. These sets are ideal for a number of reasons:

- 1. Start a set instantly no photocopying.
- 2. Assess curriculum objectives for each year group.
- 3. Assessment is automatic, making your analysis much easier.
- 4. More engaging for the pupils.
- 5. Pupils who need it will still receive guidance to help them get to a correct answer or correct their own mistakes.

For each set, pupils privately answer questions on their devices and work at their own pace on our engaging platform. Teachers are provided with continuous assessment on the LbQ Results Matrix, meaning that any gaps can be addressed with individual pupils or with the whole class. Move to the next page to find links to all of our end-of-year assessments.



	Question Set
Year 2	End of Year 2 Curriculum Review: Arithmetic End of Year 2 Curriculum Review: Non-Arithmetic Part 1 End of Year 2 Curriculum Review: Non-Arithmetic Part 2
Year 3	End of Year 3 Curriculum Review: Arithmetic End of Year 3 Curriculum Review: Non-Arithmetic
Year 4	End of Year 4 Curriculum Review: Arithmetic End of Year 4 Curriculum Review: Non-Arithmetic
Year 5	End of Year 5 Curriculum Review: Arithmetic End of Year 5 Curriculum Review: Non-Arithmetic
Year 6	End of Year 6 Curriculum Review: Arithmetic End of Year 6 Curriculum Review: Non-Arithmetic Year 6 National Curriculum Test Practice (SATs): Maths Set 1 Paper 1 Year 6 National Curriculum Test Practice (SATs): Maths Set 1 Paper 2 Year 6 National Curriculum Test Practice (SATs): Maths Set 1 Paper 3 Year 6 National Curriculum Test Practice (SATs): Maths Set 2 Paper 1 Year 6 National Curriculum Test Practice (SATs): Maths Set 2 Paper 1 Year 6 National Curriculum Test Practice (SATs): Maths Set 2 Paper 2 Year 6 National Curriculum Test Practice (SATs): Maths Set 2 Paper 3 Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 1 Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 1 Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 1 Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 2 Year 6 National Curriculum Test Practice (SATs): Maths Set 3 Paper 3