

Appendix 7 (Case study) - Using phonics-based approaches in maths

This teacher taught English at Redcar College when she participated in the initial pilot training for the Post-16 Phonics approaches. When the OTLA English project came around, she was teaching maths and decided to use the approach with her Entry Level Foundation course learners who struggled to remember common shapes, their names and how to spell them.

The learners were given pre- and post- tests.

Using grapheme cards to spell and understand mathematical terms.

Context: A group of four learners attending a college-based Foundations in Learning course, learning the meaning and spelling of mathematical terms in preparation for a Functional Skills examination.

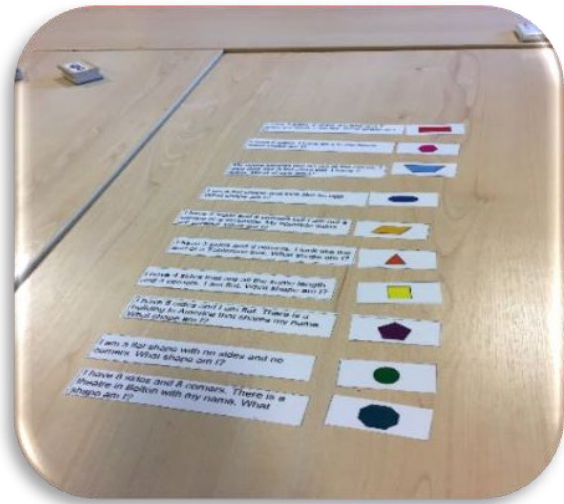
a) Sounding out the syllables



b) Learners begin to read out and match definitions to mathematical terms with support from teacher and LSA.



c) The completed activity



d) Learners use grapheme tiles and white boards to spell out key words as a group, discussing with teacher



- e) The completed activity, learners add words to white boards and maths glossary.



The result of changing her approach to teaching shapes was significant. After the spelling lessons, learners not only remembered how to spell the terms but were able to recall names quickly and accurately.

See below for common errors before the intervention and two months later.

21/1/20 FANTASTIC Leah 6/6
Correct



This 2D shape is a square.

It has 4 corners.

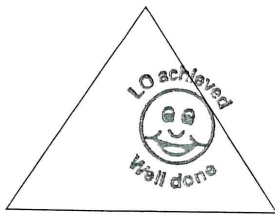
It has 4 sides.



This 2D shape is a circle.

It has 0 corners.

It has 0 sides.



This 2D shape is a Triangle.

It has 3 corners.

It has 3 sides.



This 2D shape is a rectangle.

It has 4 corners.

It has 4 sides.



This 2D shape is a pentagon.

It has 5 corners.

It has 5 sides.









This 2D shape is a Hexagon.

It has 6 corners.


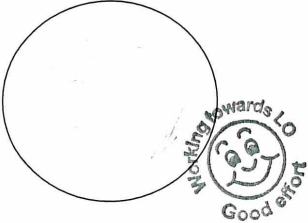




It has 6 sides.

Fantastic Kirsty 5/6 Spellings Correct

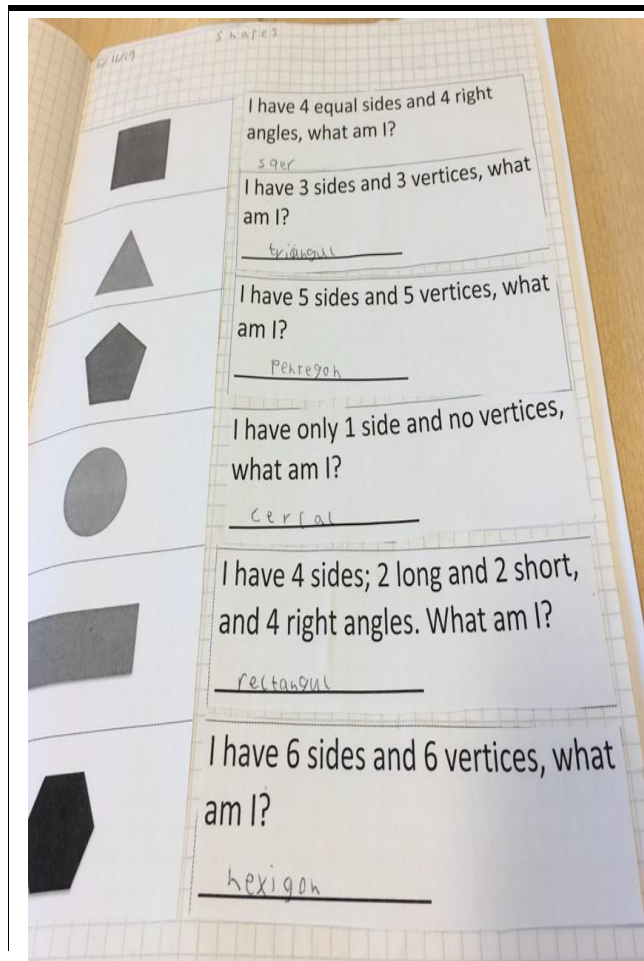
	<p>This 2D shape is a <u>square</u>.</p> <p>It has <u>4</u> corners.</p> <p>It has <u>4</u> sides.</p>
	<p>This 2D shape is a <u>circle</u>.</p> <p>It has <u>0</u> corners.</p> <p>It has <u>0</u> sides.</p>
	<p>This 2D shape is a <u>triangle</u>.</p> <p>It has <u>3</u> corners.</p> <p>It has <u>3</u> sides.</p>
	<p>This 2D shape is a <u>rectangle</u>.</p> <p>It has <u>4</u> corners.</p> <p>It has <u>4</u> sides.</p>
	<p>This 2D shape is a <u>pentagon</u>.</p> <p>It has <u>5</u> corners.</p> <p>It has <u>5</u> sides.</p>
	<p>This 2D shape is a <u>hexagon</u>.</p> <p>It has <u>6</u> corners.</p> <p>It has <u>6</u> sides.</p>

21/1/20

4/6 Correct Amazing Phonics
Work Aaron.

	<p>This 2D shape is a <u>square</u>.</p> <p>It has <u>4</u> corners.</p> <p>It has <u>4</u> sides.</p>
	<p>This 2D shape is a <u>circle</u>.</p> <p>It has <u>0</u> corners.</p> <p>It has <u>1</u> sides.</p>
	<p>This 2D shape is a <u>Triangle</u>.</p> <p>It has <u>3</u> corners.</p> <p>It has <u>3</u> sides.</p>
	<p>This 2D shape is a <u>rectangle</u>.</p> <p>It has <u>4</u> corners.</p> <p>It has <u>4</u> sides.</p>
	<p>This 2D shape is a <u>pentagon</u>.</p> <p>It has <u>5</u> corners.</p> <p>It has <u>5</u> sides.</p>
	<p>This 2D shape is a <u>hexagon</u>.</p> <p>It has <u>6</u> corners.</p> <p>It has <u>6</u> sides.</p>

Common errors before the phonics intervention



sqer

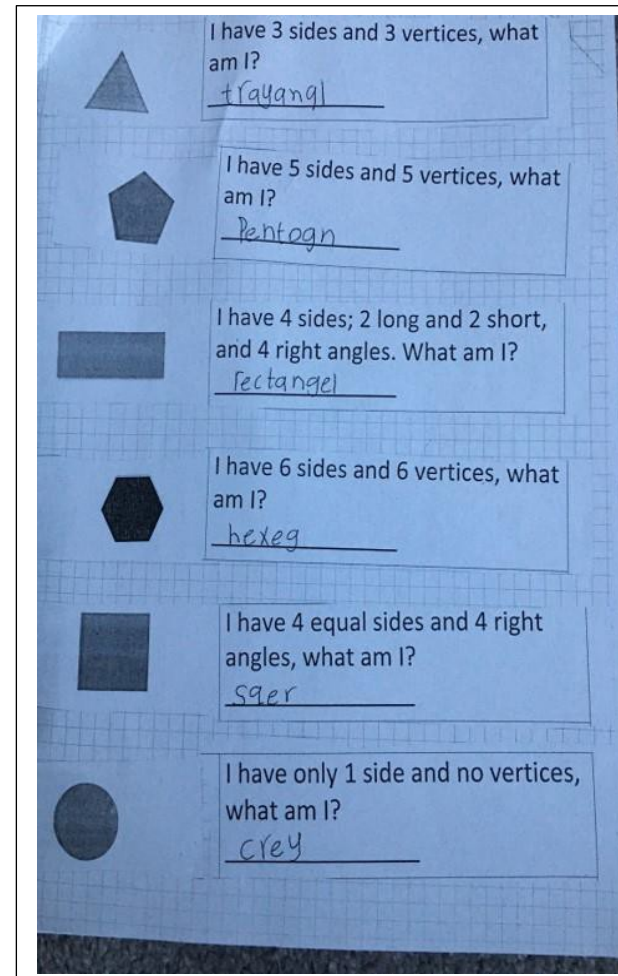
triangill

penregon

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trayangl

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sqer

crey

The BIG picture?

Learners are exploring the different properties of different 2D shapes and identifying the names of these shapes and how to spell them accurately.

The 5 minute Lesson Plan

...print and scribble your way to Outstanding!

Appendix 10

Objectives

*All should be able to identify common 2D shapes and recognise their different properties. *Most should be able to identify how many syllables are needed to spell the 2D shapes *Some will be able to spell the 2D shapes correctly using the phonics tiles.

Engagement?

Match card activity
shape match card activity, including phonics tiles and whiteboards for spellings.

Stickability!

Identifying the syllables of each word and understanding what specific sounds are used to spell the 2D shapes.

Differentiation

Stretch task for more confident spellers, they will explore new shapes such as parallelogram, trapezium, octagon and oval. They will also be able to identify the properties of these shapes.

Level 4

Level 3

Level 7

Level 6



Square, circle, rectangle, pentagon, hexagon, triangle, parallelogram, oval, octagon, trapezium, syllables, angle, blending, graphemes.
along the way...

A f L

Whiteboards to check prior knowledge on syllables. Completion of the match card starter and identifying the properties of the 2D shapes. Reading the clue cards out correctly and using the phonics tiles to spell the 2D shapes correctly.



Teacher Led or Student Led?

Recap prior knowledge of syllables. The tutor will say out loud the 2D shapes and students will write on their whiteboards how many syllables each word has.



Learning Episodes

Teacher Led or Student Led?

Match card activity student led in pairs or small groups. Each student will read out loud a clue card and will try and match the correct picture shape to the clue card. Students will work together to discuss the properties of each 2D shape.

Teacher Led or Student Led?

Students will then use the phonics tiles to try and spell these key shapes accurately. Once they think they have the correct tiles in place they will say out loud the sounds and practice blending them together to make the word. They can then discuss if any changes need to be made.

Teacher Led or Student Led?

More able learners can explore new key words/shapes and try to spell the 4 new shapes of the day correctly (parallelogram, trapezium, octagon and oval). Once completed the students will write the new 10 2D shapes in their spelling books.

The Education Training Collective