

Label

The label command enables a single word to be written at the turtle. The label is usually written in the direction the turtle is pointing. To have the label horizontal turn the turtle `rt 90`.



The command for this would be `label "label`. A single word is written after the command `label` with an inverted comma immediately preceding.

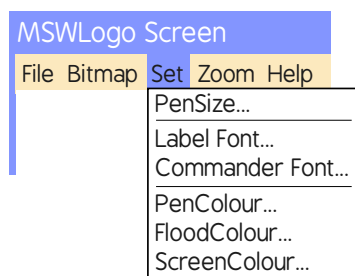
Only single words can be used so multiple words need `_the_underscore`.

The colour of the label is set by the `setcolor` or `setpc` command.

0: black	1: blue	2: green	3: cyan
4: red	5: magenta	6: yellow	7: white
8: brown	9: tan	10: green	11: aqua
12: salmon	13: purple	14: orange	15: gray

In online versions, you can usually change the label height using `setlabelheight`.

In MSWLogo you can change the height using the Label Font dialogue box in the Set menu.


















If you wish to move the turtle to write a label, the `penup (pu)` and `pendown (pd)` commands are used either side of moving the turtle where you wish to write the label.

Programming Turtle Logo: Label

<p>Aim: Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p>	<p>Success Criteria: I can write commands in the correct order. I can correct any mistakes. I can write text using the label command.</p>	<p>Resources: Lesson Pack Desktop Computer /laptop Turtle Logo application: installed /online Whiteboards and pens or books and pens for recording.</p>
<p>In the context of using Turtle Logo to create and debug an algorithm to write text.</p> <p>I can create and debug an algorithm to produce text.</p>	<p>Key/New Words: Algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable, calculation, procedure, setpc, random, fill, label.</p>	<p>Preparation: Label Activity Sheet - as required</p>

Prior Learning: Children will have created and debugged an algorithm to make a procedure, used coordinates to draw shapes and fill an area with colour in lessons 1 to 4.

Learning Sequence

	<p>Can You Type the Word Text? Using the label command, can the children find out how to write text?</p>	
	<p>Writing Labels: Demonstrate how to write text and how to change the size and colour using the label command. <i>(It is only possible to label with 1 word, so to label several words use <u>the_underscore</u>.)</i> Show the children how to save pictures of patterns if the application will allow. <i>(MSW Logo will save pictures as bitmaps).</i></p>	
	<p>Label the Shapes: Children experiment writing text in different colours and sizes using the label command. Children then draw regular polygons, filling and labelling them using the differentiated Label Activity Sheets.</p> <p>  Children use support when completing the activities.  Children use the guide to complete the activities.  Children complete the activities and create a 2D shapes poster for a Maths lesson. </p>	
	<p>Test and Debug: Children share their algorithms with a partner. They then test and debug them. Each pair should come up with one idea to share with another pair. The four children then share their ideas.</p>	
	<p>Apply: Children apply any new ideas they have learnt from each other. They then try to draw the picture on the Lesson Presentation.</p>	
	<p>Which Algorithm? Select children to share their what they have learnt from each other and show how they applied this to their work. As a class, choose which algorithm will make the pattern and listen to reasons. Click for the answer.</p>	

Taskit
labelit: Children explore making patterns and labelling.
Challengeit: Use the **Challenge Cards** for extension activities.



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Writing Labels

red blue yellow green

Write labels of different colour using the commands opposite.

Screenshot or snip and paste into a document.

Repeat with other colours.

turn the turtle using	> rt 90
label red in red using	> setpc 4 label red
move the turtle using	pu fd 30 pd
label blue in blue using	setpc 1 label blue
move the turtle	>
label yellow in yellow	>
move the turtle	>
label green in green	>

Label a Red Square

To label a red square:

> setpc 0

> repeat 4[fd 100 rt 90]

> pu fd 50 rt 90 fd 20 pd

> setcolor 4 fill

> setpc 7

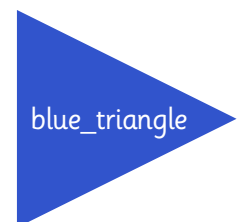
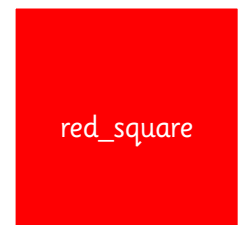
> label "red_square

> ht

Use ht (hideturtle) to hide the turtle and st (showturtle) to show the turtle again.

Screenshot or snip and paste into your document.

Repeat for a different colours and/or shape.



Use algorithms opposite for regular polygons:

equilateral triangle	> repeat 3[fd 150 rt 120]
regular hexagon	> repeat 6[fd 100 rt 60]
regular decagon	> repeat 10[fd 50 rt 36]



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Writing Labels

red blue yellow green

Write labels of different colour using the commands opposite.

Continue using algorithms to write the other colours.

Screenshot or snip and paste into a document.

Repeat with other colours.

turn the turtle using	> rt 90
label red in red using	> setpc 4 label red
move the turtle using	> pu fd 30 pd

Label a Red Square

To label a red square:

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> repeat 4[fd 100 rt 90]

> pu fd 50 rt 90 fd 20 pd

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> setpc 7

> label "red_square

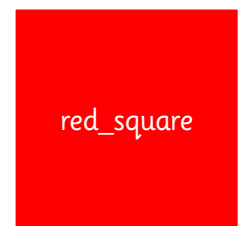
> ht

Use ht (hideturtle) to hide the turtle and st (showturtle) to show the turtle again.

Screenshot or snip and paste into your document.

Repeat for a different colours and/or shape.

Use the different algorithms for regular polygons.:

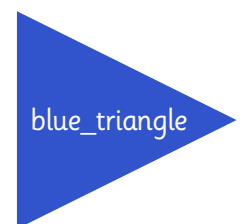


equilateral triangle	> repeat 3[fd 150 rt 120]
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Extension Tasks:

Can you create a 2D Shapes poster that could be used in a Maths lesson?

Think about the colours, labels and positions your shapes will need.





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Writing Labels

red blue yellow green

Write labels of different colour using the following commands:

setpc, label, pu, pd, fd, rt

Continue using algorithms to write other colours.

Screenshot or snip and paste into a document.

Repeat with other colours.

Label a Red Square

To label a red square:

black pen

square

move turtle into the square

fill

label

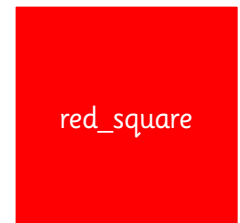
hideturtle

Use ht (hideturtle) to hide the turtle and st (showturtle) to show the turtle again.

Screenshot or snip and paste into your document.

Repeat for a different colours and/or shape.

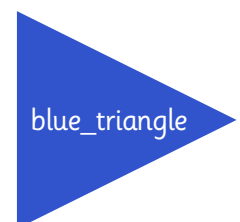
Use the different algorithms for regular polygons.



Extension Tasks:

Can you create a 2D Shapes poster that could be used in a Maths lesson?

Think about the colours, labels and positions your shapes will need.



Programming Turtle Logo

Challenge Cards



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Programming Turtle Logo

Challenge Cards



Using the label command, setpc, pu, pd and setpos or setxy write all the colours available in words over the screen.

yellow blue
red orange green

Make a pattern in a circle using pu, pd, fd, bk and label. Here's an idea:



Using the label command, setpos or setxy, pu, pd and changing the label height, write words associated with size around the screen.

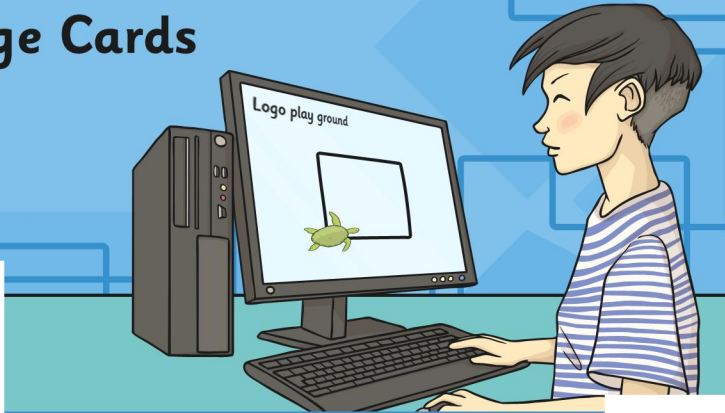
big enormous
tiny

Make a pattern in a circle using pu, pd, fd, bk, random and label. Here's an idea:



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I can write commands in the correct order.		
I can correct any mistakes.		
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