


## Blocks Guide

 control	
	All blocks under this hat block will run once
	All blocks under this hat block will loop forever
	Repeat the inner stack of blocks <b>10</b> times
	If the boolean is true, then execute the inner stack of blocks. A boolean block is any block shaped like 
	Wait for <b>1</b> second
	Stop all execution
 transforms (See <a href="#">handouts</a> to learn more about transforms)	
	Move the nib <b>50</b> pixels in the current direction
	Move to the coordinates x = <b>0</b> and y = <b>50</b>
	Return the x position of the nib
	Return the y position of the nib
	Rotate the nib by <b>30</b> degrees to the right
	Set the rotation to <b>90</b> degrees
	Return the rotation of the nib
	Set the scale of the nib to <b>200%</b> (100% is normal size)
	Return the scale of the nib
	If the nib is off the canvas, return <b>true</b> . Otherwise, return <b>false</b> .
 shapes	
	Draw a <b>50</b> pixel line in the current direction
	Draw a line from the current position to x = <b>0</b> and y = <b>50</b>
	Draw a filled rectangle that is <b>30</b> pixels by <b>50</b> pixels
	Draw an outlined rectangle that is <b>30</b> pixels by <b>50</b> pixels
	Draw a filled ellipse that is <b>30</b> pixels by <b>50</b> pixels
	Draw an outlined ellipse that is <b>30</b> pixels by <b>50</b> pixels
	Draw the text <b>design</b>
	Set the outline brush size to <b>1</b> pixel thickness
	Return the current brush size
 fill	
	Clean the entire canvas and restore all values to defaults
	Fill the background with the current color
 colors (See <a href="#">handouts</a> to learn more about colors)	
	Set the current color to <b>red</b> Note: <i>this also changes the hue, saturation and lightness accordingly</i>
	Set the current color's hue to <b>0</b>

<b>set saturation 100</b>	Set the current color's saturation to <b>100</b>
<b>set lightness 50</b>	Set the current color's lightness to <b>50</b>
<b>set transparency 0</b>	Set the current color's transparency to <b>0</b> (opaque)
<b>hue</b>	Return the current color's hue
<b>saturation</b>	Return the current color's saturation
<b>lightness</b>	Return the current color's lightness
<b>transparency</b>	Return the current color's transparency



 **math and logic**

<b>10 + 10</b>	Add <b>10</b> and <b>10</b>
<b>10 - 10</b>	Subtract <b>10</b> from <b>10</b>
<b>10 * 10</b>	Multiply <b>10</b> by <b>10</b>
<b>10 / 10</b>	Divide <b>10</b> by <b>10</b>
<b>10 % 10</b>	Return <b>10</b> modulo <b>10</b>
<b>10 &lt; 10</b>	Return <b>10</b> less than <b>10</b>
<b>10 = 10</b>	Return <b>10</b> equals <b>10</b>
<b>10 &gt; 10</b>	Return <b>10</b> greater than <b>10</b>
<b>and</b>	If both booleans are true, return <b>true</b> . Otherwise, return <b>false</b>
<b>or</b>	If either boolean is true, return <b>true</b> . Otherwise, return <b>false</b>
<b>not</b>	If the boolean is true, return <b>false</b> . If the boolean is false, return <b>true</b>
<b>1 to 100</b>	Return a random number from <b>1</b> to <b>100</b>
<b>round 1.5</b>	Round <b>1.5</b> to the nearest integer

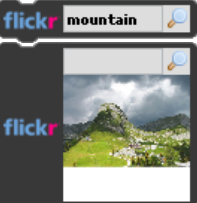
 **mouse** (See [handouts](#) to learn more about interactivity)

<b>mouse x</b>	Return the x position of the mouse
<b>mouse y</b>	Return the y position of the mouse
<b>mouse pressed</b>	If the mouse is pressed, return <b>true</b> . Otherwise, return <b>false</b>

 **variables**

<b>v</b>	Return the current value of variable <b>v</b>
<b>set v to 10</b>	Set variable <b>v</b> to <b>10</b>
<b>change v by 1</b>	Change variable <b>v</b> by <b>1</b>
<b>test</b>	Call the procedure under the corresponding hat: 
<b>test</b>	Blocks under this hat will run when this block is called: 

 **extras**

	Enter a search keyword, press enter, and see result image from <a href="http://www.flickr.com">http://www.flickr.com</a> search Draws the resulting <b>flickr</b> image
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<b>COLOURlovers love</b>	Set the current color to the result of a <b>love</b> keyword search on <a href="http://www.colourlovers.com">http://www.colourlovers.com</a>
<b>camera image</b>	Draw the current camera image
<b>camera motion</b>	Return a value of detected camera motion
<b>loudness</b>	Return a value of detected microphone volume
<b>push</b>	Push the current transformation onto the stack
<b>pop</b>	Pop a transformation from the stack

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**GET STARTED**



**create** 