

PATCHES

Some Useful PATCH-based Commands for NetLogo

Obs	<code>clear-all</code>	<code>ca</code>	<code>ca</code>	Observer <i>clears the world</i>
Patch	<code>set</code>	<code>set</code>	<code>set pcolor blue</code>	Patch <i>turns blue</i>
Obs	<code>ask</code>	<code>ask</code>	<code>ask patches [set pcolor blue]</code>	Observer asks all of the patches, “ <i>make your color blue</i> ”
Any	<code>random</code>		<code>random 10</code>	Returns a number between 0 and 9
Example: using <code>set</code> and <code>random</code> together...			<code>set pcolor random 10</code>	Patch sets its color to a number between 0 and 9 (these are shades of gray).

Built-In Patch Variables and Aliases

Patch	<code>pxcor</code>	X coordinate of the patch	(can't be changed)	<code>ask patches with [pxcor = 10] [set pcolor red]</code>
Patch	<code>pycor</code>	Y coordinate of the patch	(can't be changed)	<code>ask patches with [pycor = 25] [set pcolor yellow]</code>
Patch	<code>pcolor</code>	Number between 0 and 140, also constants for all basic colors	<code>set pcolor red</code>	Patch <i>turns red</i> (see Tools>Color Swatches for all of the colors in NetLogo)
Any	<code>blue</code> , <code>red</code> , etc	These color-words are just names for NetLogo color numbers	<code>set pcolor pink</code>	(see Tools>Color Swatches for all of the colors in NetLogo)

Some other fundamental NetLogo Phrases

<code>ask _____ []</code>	<code>ask patches [set pcolor blue]</code>	Observer asks all patches, “ <i>turn blue</i> ”
<code>if _____ []</code>	<code>if (pxcor < 50) [set pcolor white]</code>	Patches think, “If I am to the left of 50, <i>I turn white</i> ”
<code>if _____ []</code>	<code>ask patches [if pcolor > 10 and pcolor < 20 [set pcolor white]]</code>	Observer asks all patches, “If you are reddish (red colors are in the range between 10 & 20), <i>turn white.</i> ”
<code>one-of _____</code>	<code>ask one-of patches [set pcolor green]</code>	Observer asks one of the patches (a random one), “ <i>turn green</i> ”
<code>neighbors</code>	<code>ask one-of neighbors [set pcolor green]</code>	Patch asks one of its (eight) neighboring patches, “ <i>turn green</i> ”
<code>with []</code>	<code>ask one-of patches with [pxcor < 20] [set pcolor green]</code>	Observer asks one of the patches to the left of 20, “ <i>turn green</i> ”

To “teach the computer a new word,” add to the Code tab, using the paired keywords “**to** <new command>” and “**end**”