

SqueakCards: Tools and Techniques

These materials are designed for classroom teachers who want to introduce Squeak to their students. All of the materials are freely available at www.squeakcmi.org. They are developed at the Office for Mathematics, Science, and Technology Education at the University of Illinois.

Squeak Card Student Handouts

- Each page is a student handout version of a SqueakCard lesson that is also an inter-active Squeak Project.
- Are print ready and can be printed in color or black and white.
- All four panels of the card print on one side of a piece of paper.
- Can be used in any order the teacher chooses.

kh
July 2007




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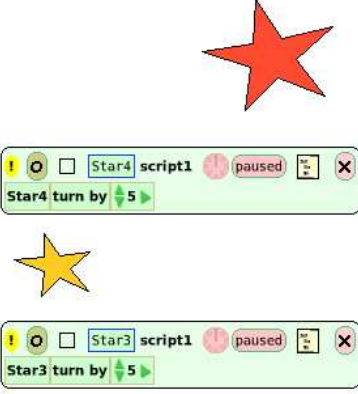
All Scripts Stop-Step-Go

Start and stop All Scripts.



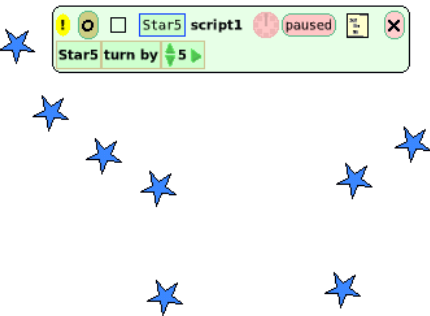
1

Draw two shapes and script them to move.



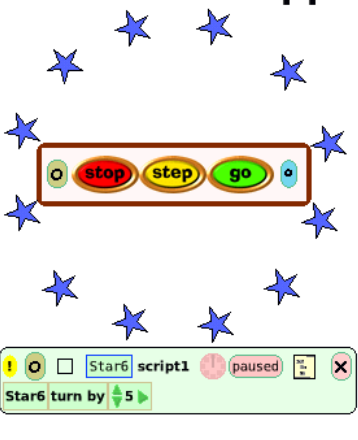
2

Use the bright green halo handle to make many copies of each.



3

Drag an All Scripts button out of Supplies.



4

3

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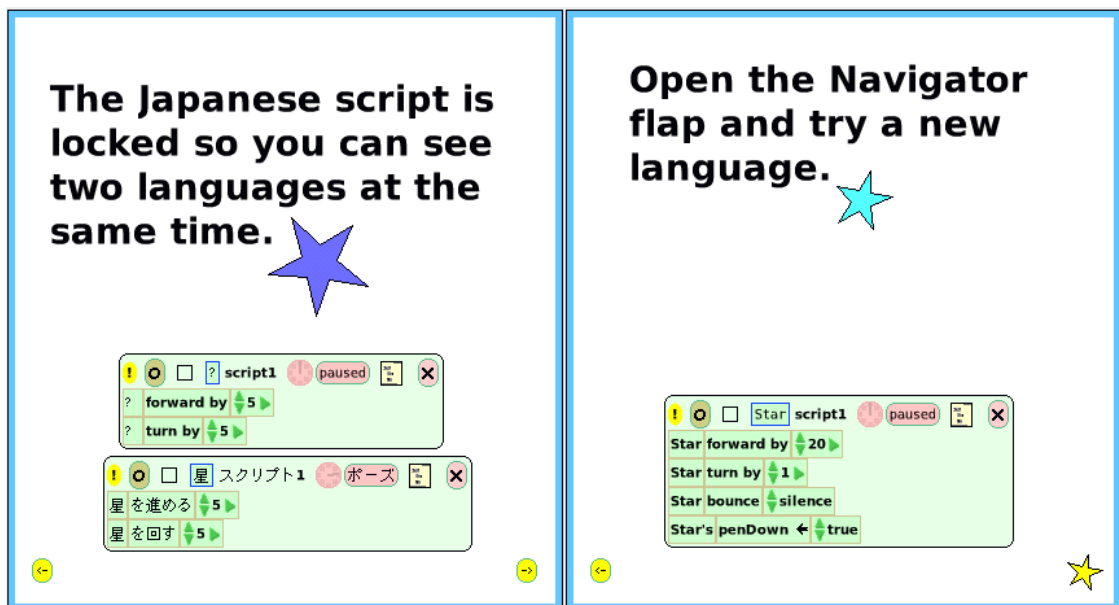


Choose Language Menu



1

2



3

4

4

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Forward and Turn


Forward and Turn Script tiles.

Draw a shape and keep it.



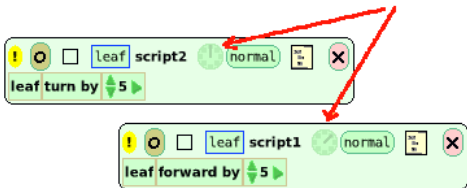
1

Use the cyan halo handle and open a script viewer.




2

Stop and start each script by clicking here.


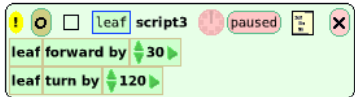


Or, combine tiles into one script.



3

Change the numbers.



4

5

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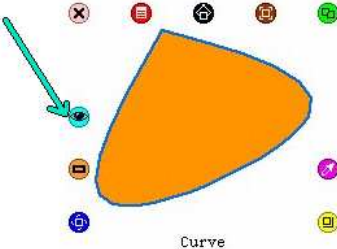
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Forward By Tile

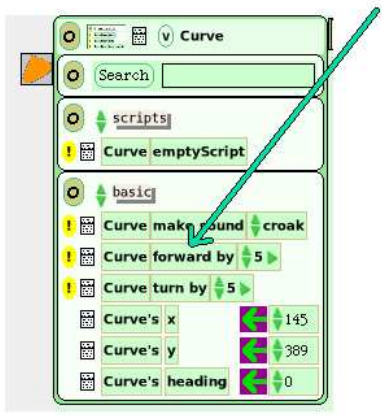
**Forward by 5
Open Supplies.**

**Drag out a curve.
Click on the cyan eye.**



Curve

Click on this tile.



Curve

Search

scripts

Curve emptyScript

basic

Curve make round croak

Curve forward by 5

Curve turn by 5

Curve's x 145

Curve's y 389

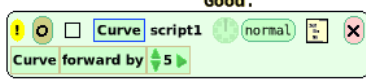
Curve's heading 0

1

2

**Does your tile look
like this now?**

Good.

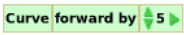


Curve script1 normal

Curve forward by 5


**Or,
does it look like this?**

Not.



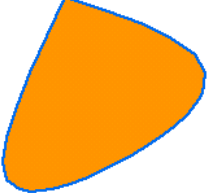
Curve forward by 5

**Click here to start
or stop the script.**



Curve script1 normal

Curve forward by 5



3

4

6

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Get Halo Handles

Get the ruby slipper's halo of handles



This drawing is a tracing of the image of web children.

#1 Hold down Alt on the keyboard.

#2 left click mouse = book's halo

#3 left click again = page's halo

#4 left click again = ruby slipper's halo

Read labels.



1

Click your mouse's left button while you press down your keyboard's Alt key.



2

The tip of the cursor arrow does the work.



3

Practice.
Get the halo for each drawing.



Thin lines are the most difficult.



4

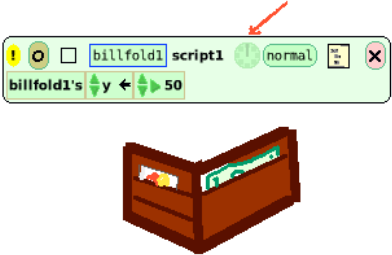




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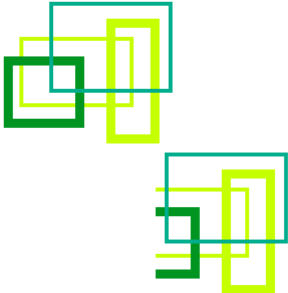
Grab Me Reveal Me Menu

<p>Lost and Found</p> <p>Draw.</p> <p>Write a script.</p> <p>Click to lose the billfold.</p>  <p>1</p>	<p>Click on this  in the top line of the script viewer.</p> <p>A menu opens.</p>  <p>2</p>
<p>Click on 'grab me'.</p> <p>The lost billfold comes to you.</p>  <p>3</p>	<p>Click on 'reveal me'.</p> <p>It blinks to show where it is.</p>  <p>4</p>

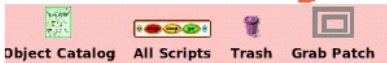


Grab Patch Tool


**Supplies tool:
Grab Patch**



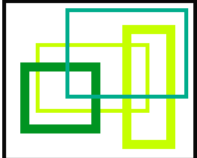
**Open Supplies.
Drag out a Grab
Patch tool.**



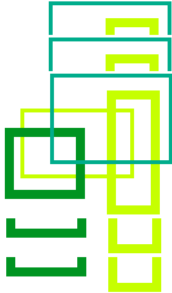
**It changes to
look like this.**



**Click and drag.
The lines stretch
and make the copy.**

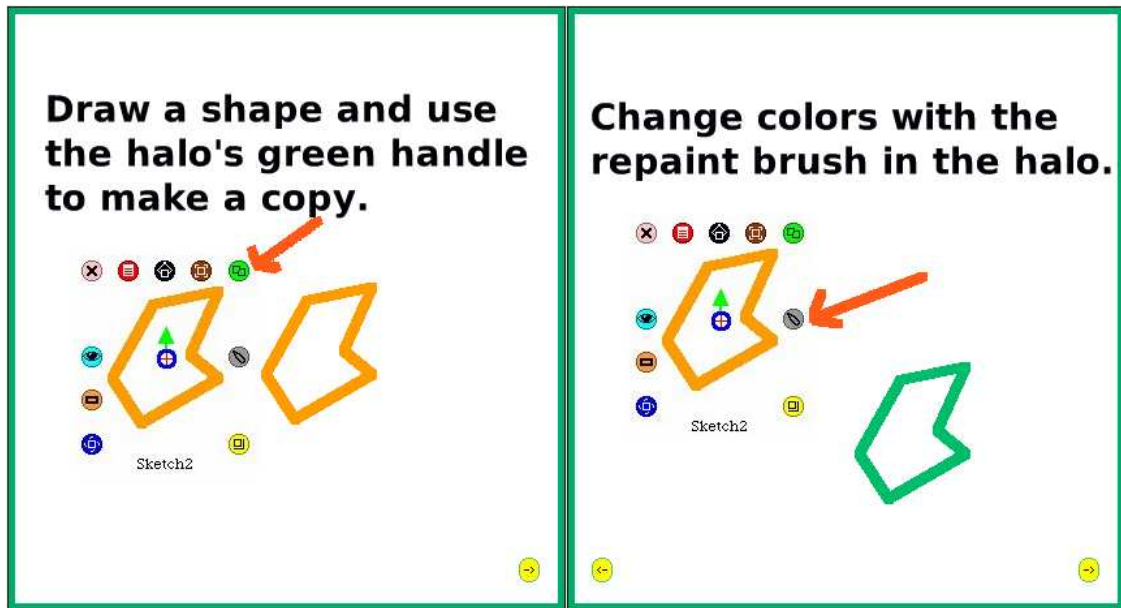


Make more.



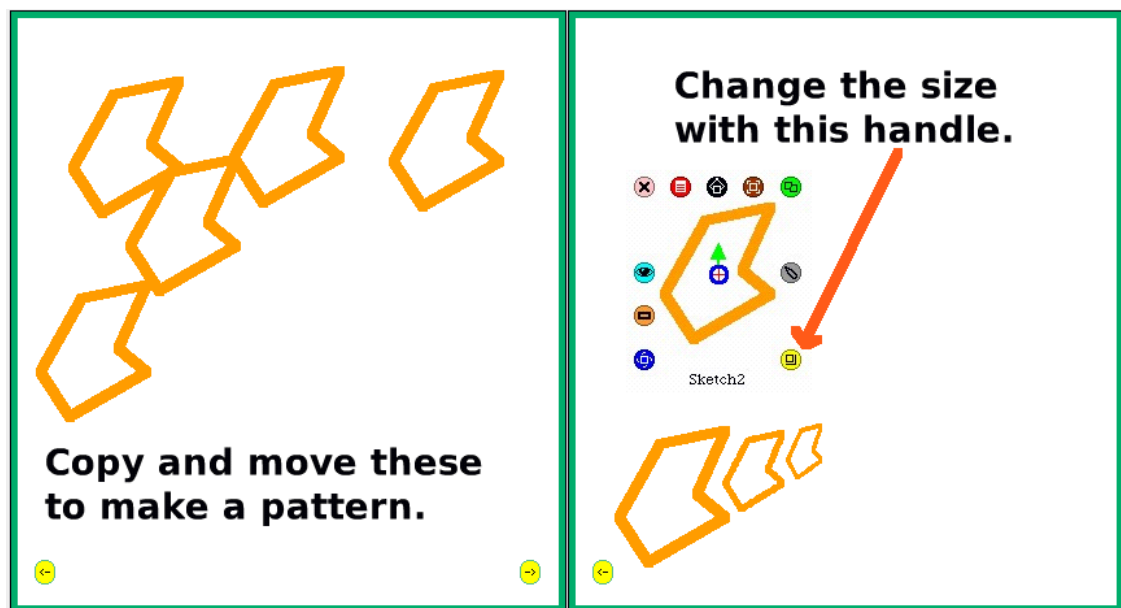


Halo of Handles Tools



1

2



3

4

10

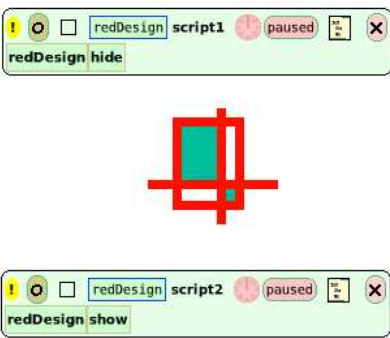
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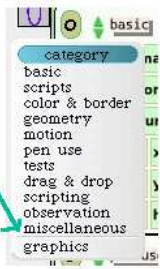


Hide and Show

hide and show



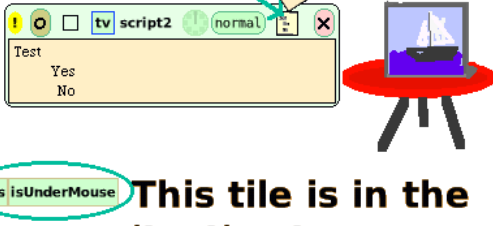
The script tiles for hide and show are in the category 'miscellaneous'.



1

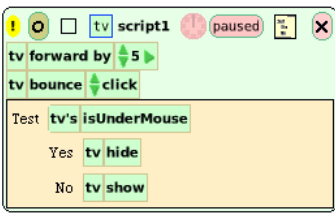
2

Click for a test and drop it in a script box.



This tile is in the 'test' category.

Put it together like this.



3

4

11

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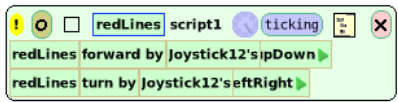
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Joystick Control

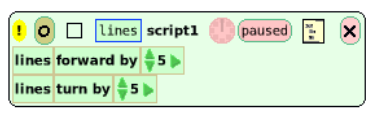
Supplies: joystick

Click and drag the dot.


1

Write a script.



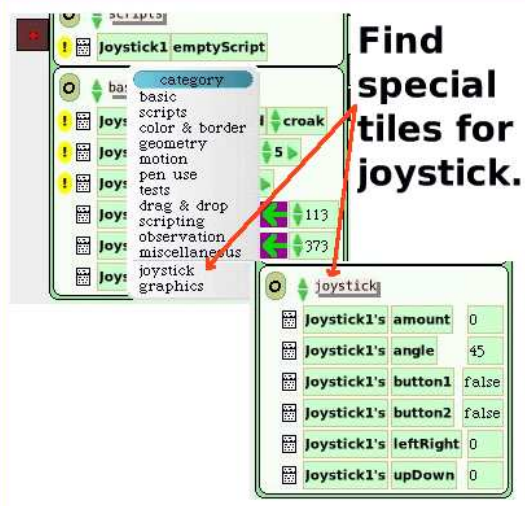
K

Get a joystick from Supplies. Click.






2

Find special tiles for joystick.



3

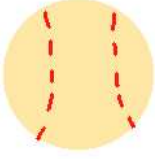
Combine tiles.


4

Motion Bounce

Add bounce to a script.

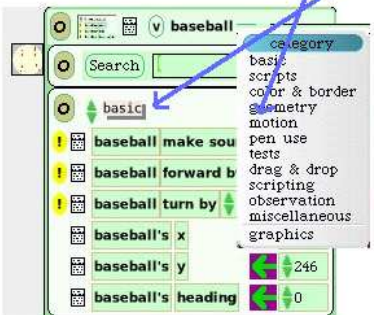


Start with a script that looks like this.




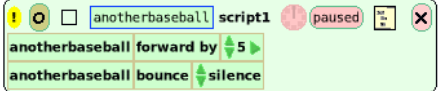
1

**Click on the word 'basic'.
See a list.
Choose motion.**

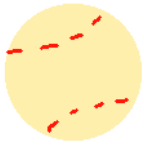
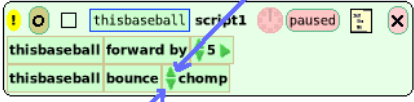


2


**Make a new script.
Add 'bounce'.**

3

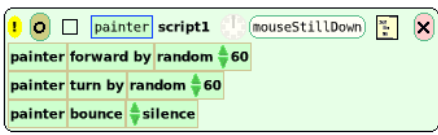

**There are other sounds.
Click on the tiny green arrows.**



4

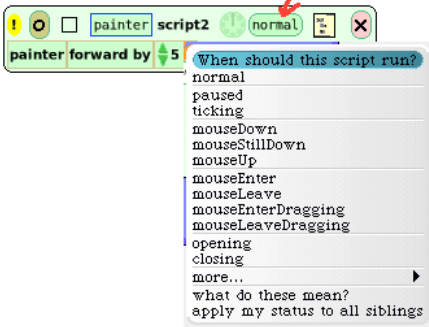
MouseDown in Script Run Menu

'mouseStillDown' is when this script will run.





1

Click and hold down on 'normal' to open a list.





2

Lots of choices in the list; here is another one.



3

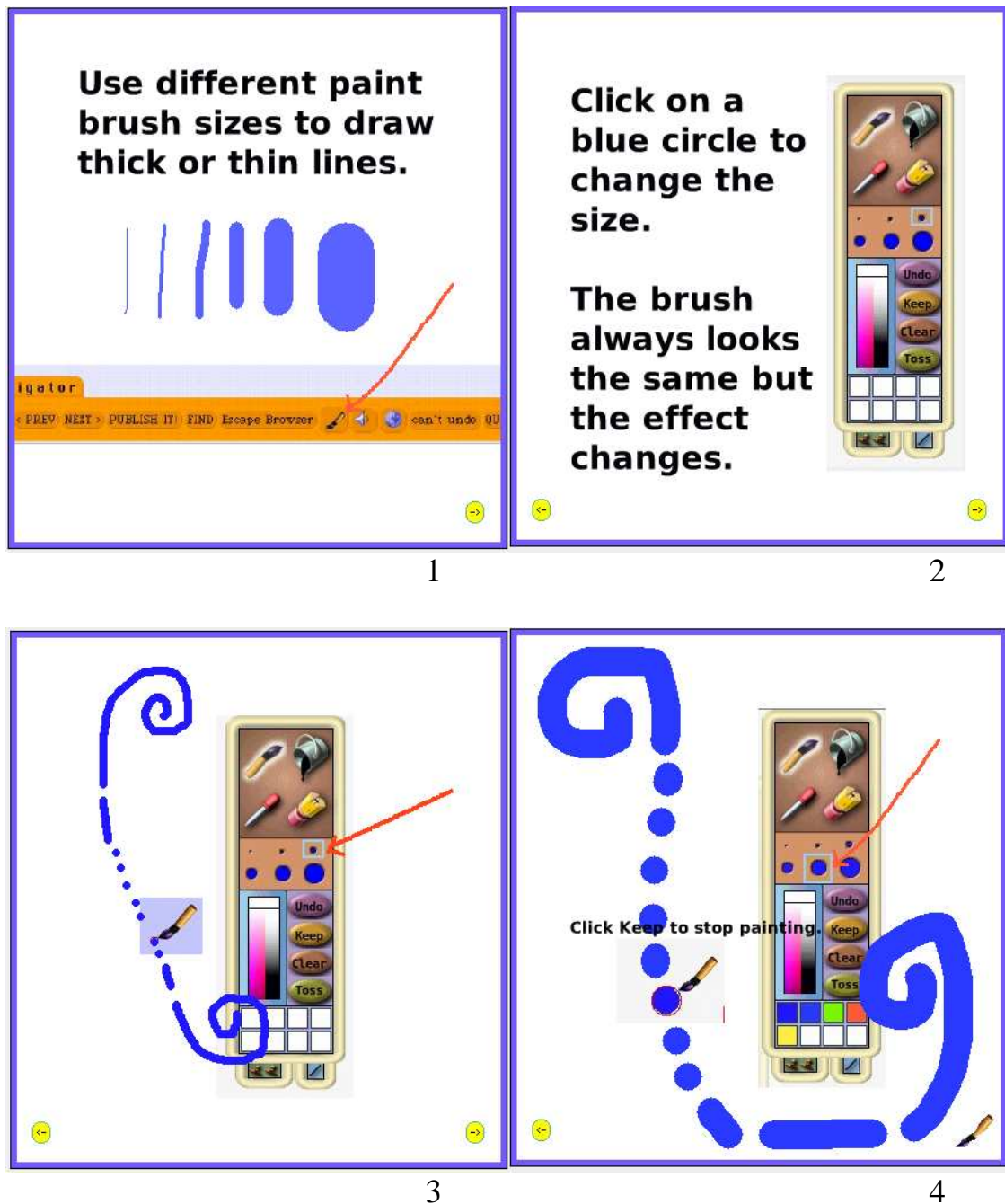
Choose.



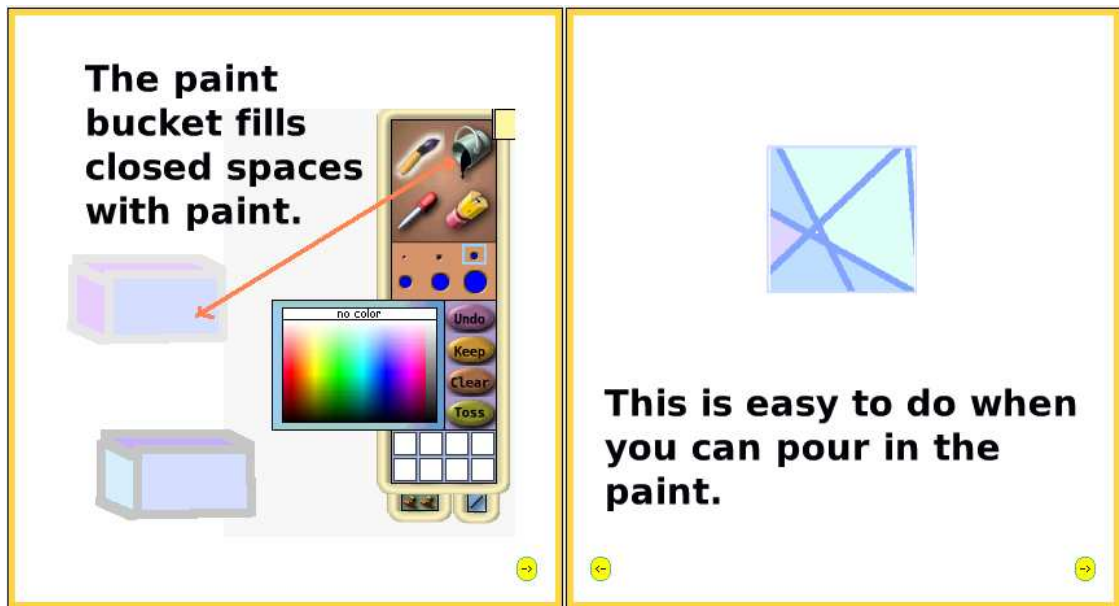
4



Paint Brush Sizes

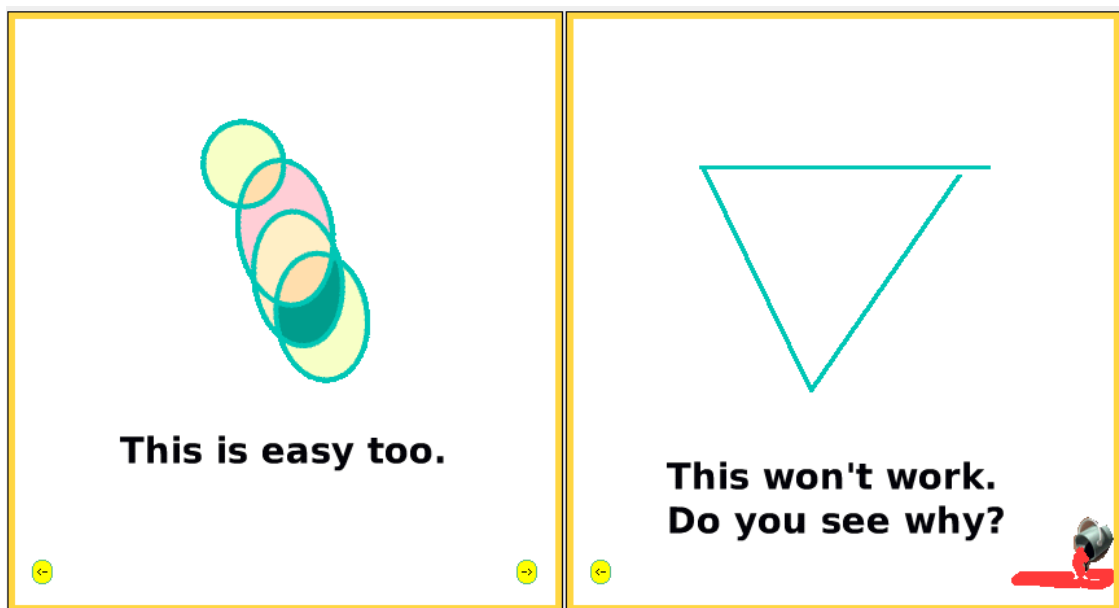


Paint Bucket Tool



1

2



3

4

16

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Paint Color Match Eye-dropper





The eyedropper matches colors exactly.

Exactly, not almost, not close, not sort of, exactly.



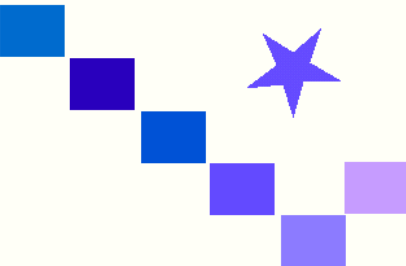
1

Each color is a mix of red, green, blue. The numbers tell how much of each.

 r: 0.71 g: 0.903 b: 0.0)	 r: 1.0 g: 0.613 b: 0.097)
 r: 0.613 g: 0.0 b: 0.806)	 r: 0.0 g: 0.742 b: 0.677))

2

Put the star on the color that matches exactly.



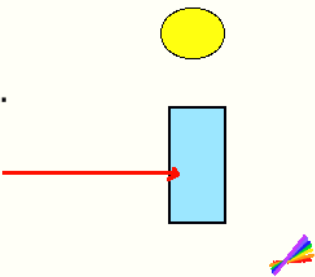
If you are right, the star turns.

3

Try. Open a script viewer for the ellipse.

Choose color and border.

Bring its color eye dropper all the way down, down, down, down, down to here. Match.



4

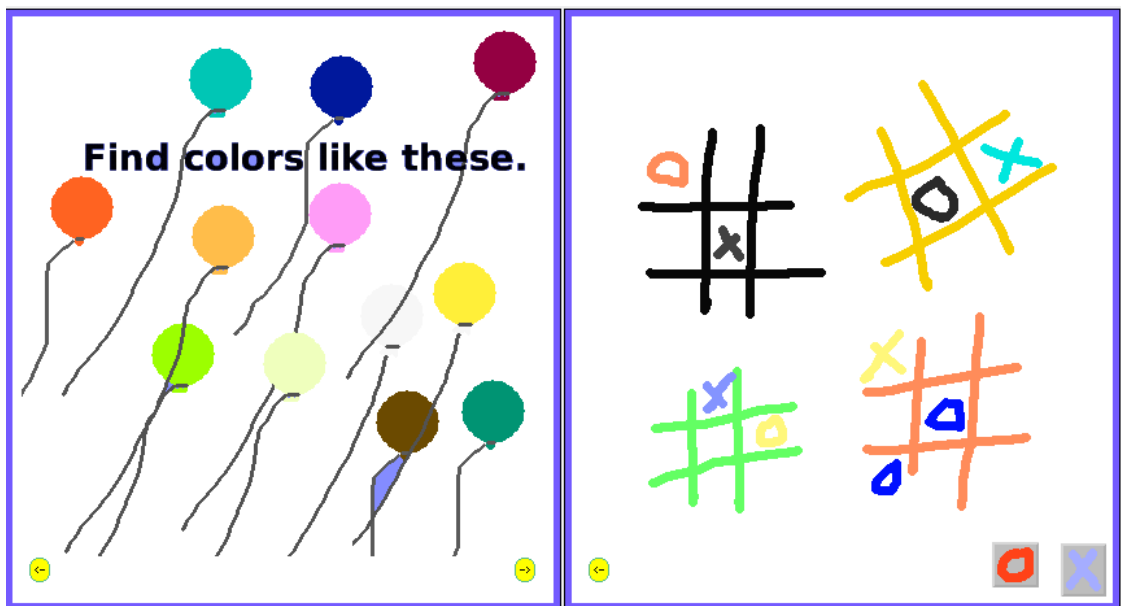


Paint Colors Palette



1

2

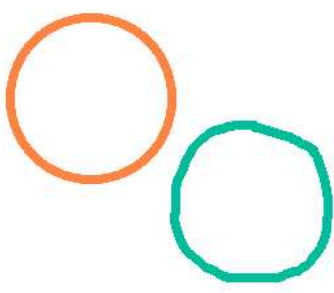


3

4


Paint Ellipse Tool

Use the paint brush to draw circles.



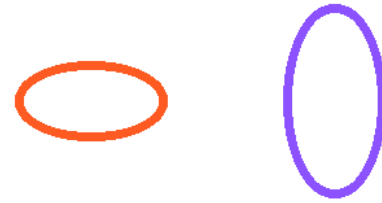
1

Click and drag down to open these tools.




2

Use the ellipse tool to make more of these.



3

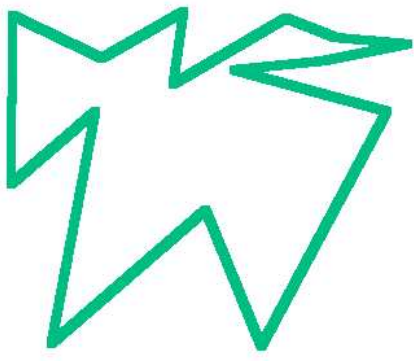
Hold down the 'Shift' key on the keyboard and use the ellipse tool to draw a perfect circle.




4

Paint Polygon Tool

Using the polygon tool in paint palette.



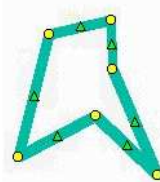
1



**Click to open.
Click to close.**

2

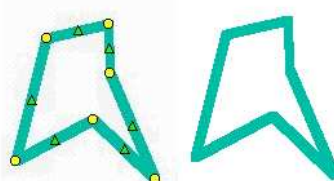
The polygon tool will draw a closed shape with as many edges and vertices as you wish.



Every yellow circle and green triangle is another handle.

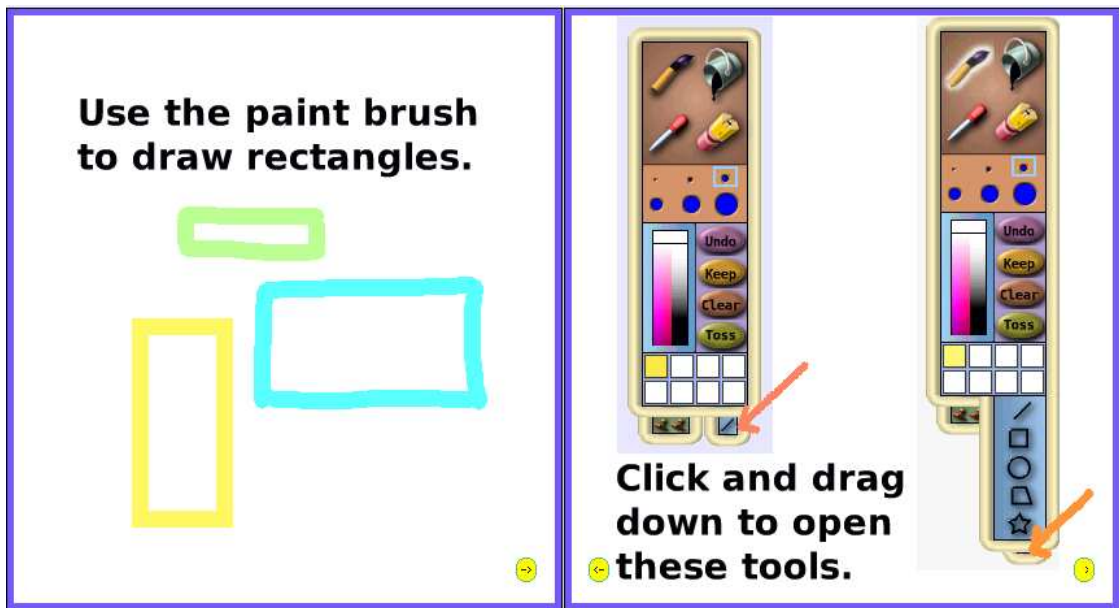
3

But when they are gone, they won't come back.



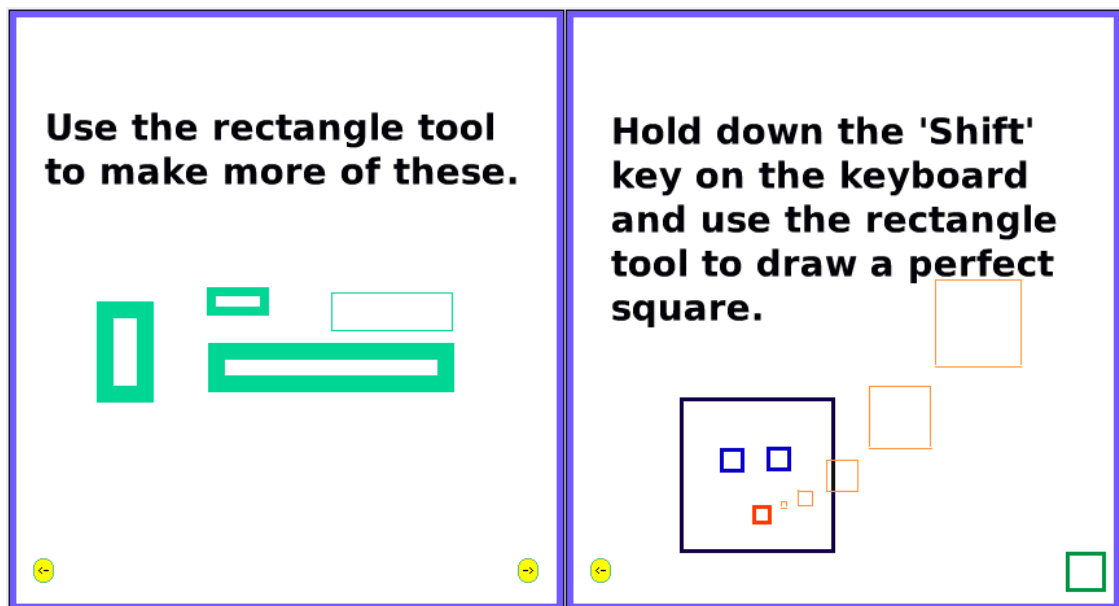
4

Paint Rectangle Tool



1

2

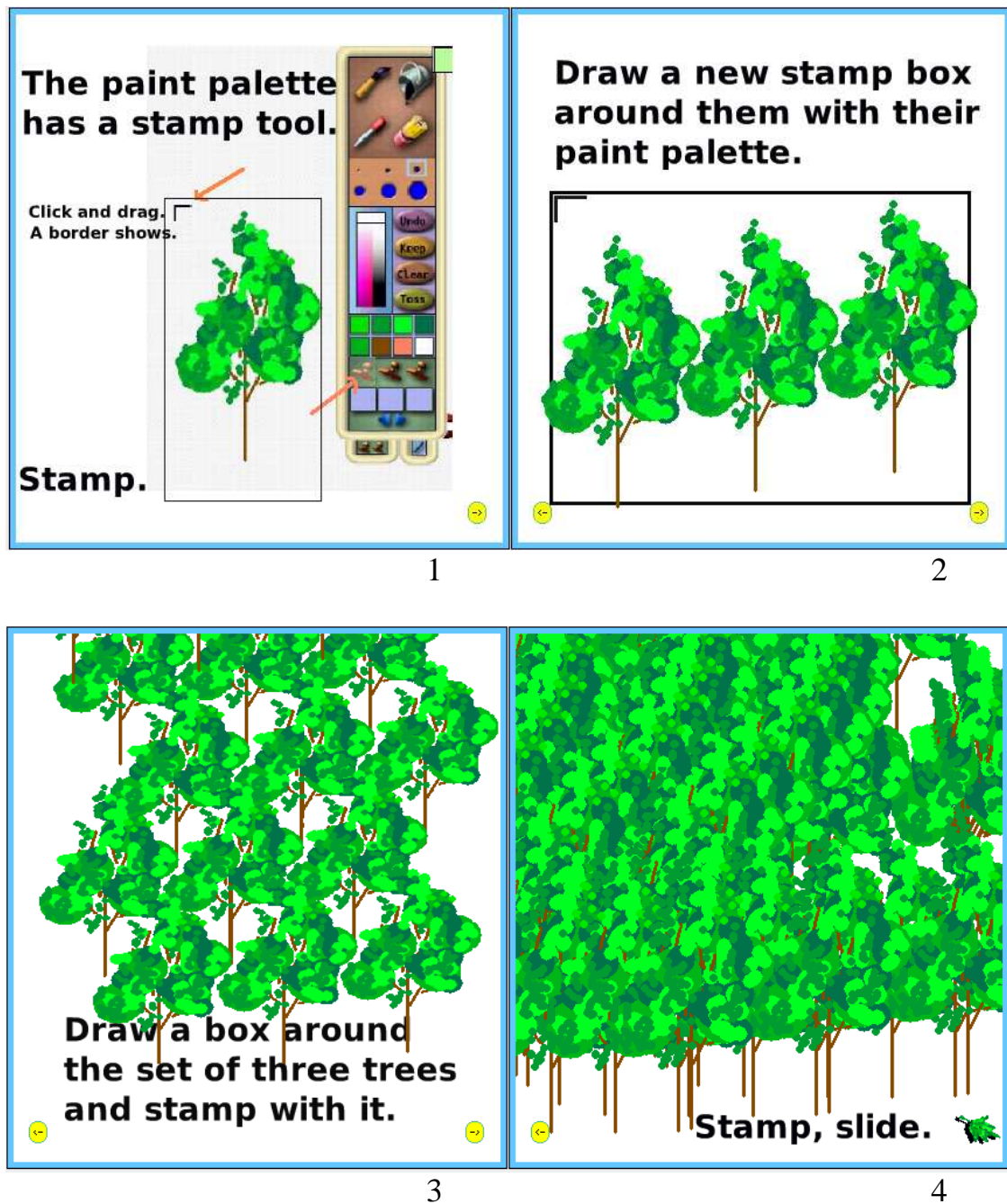


3

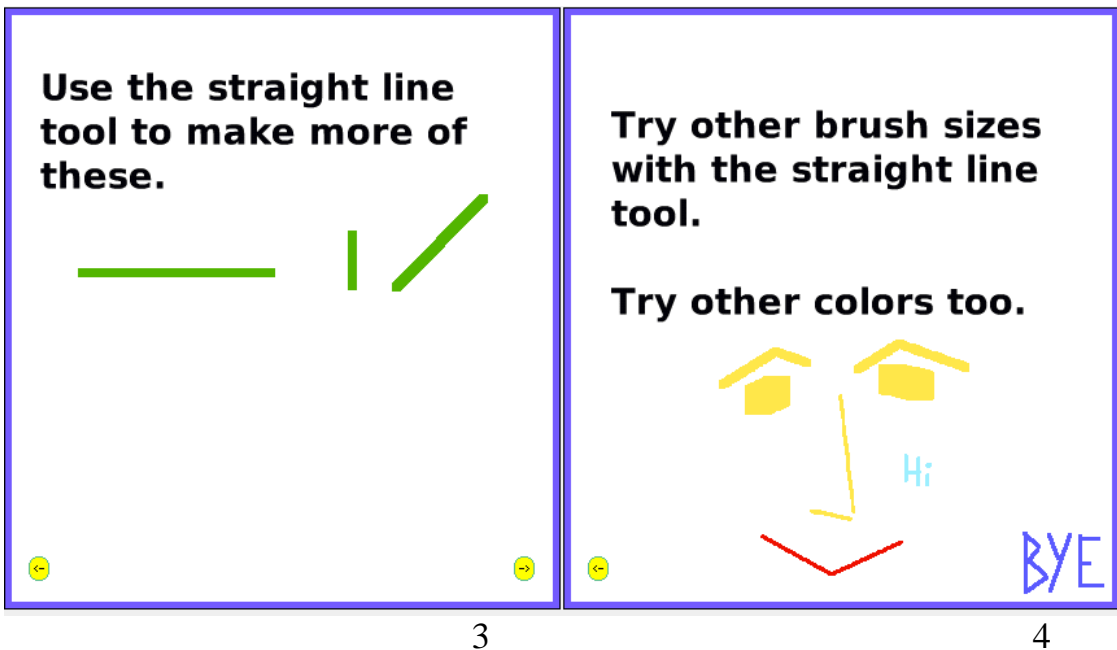
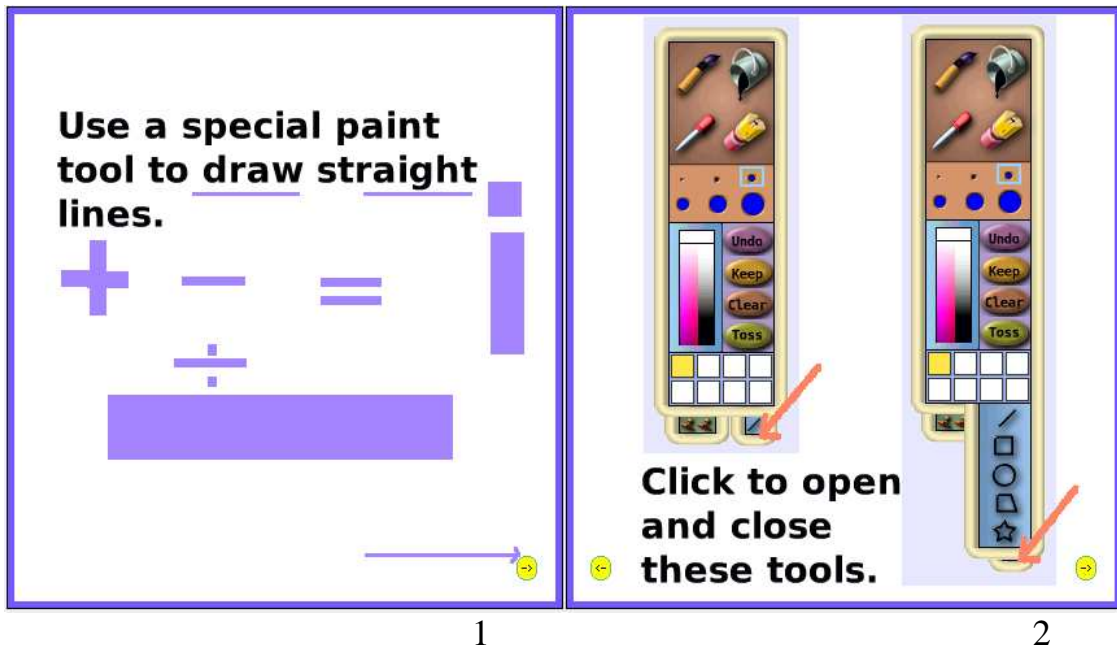
4



Paint Stamp Tool



Paint Straight Line Tool



Pen Trails

Add pen trails to a script.

1

Draw a shape. Write a script.

Click on basic.

Choose pen use.

2


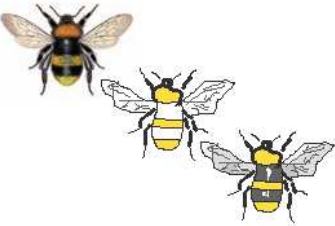
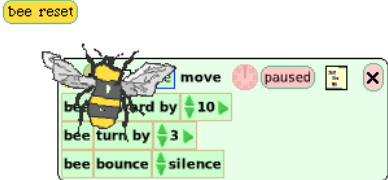
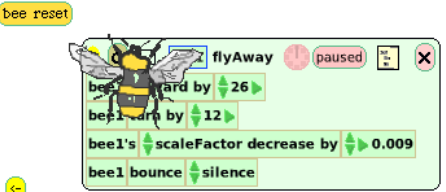
Drag by the big green arrow into your script box.

3

Click to change between false and true.

4

Scale Factor


<p>Add a scaleFactor tile to a project.</p>  <p><small>www.abc.net.au/north/story/t658414.htm</small></p> <p>This image from Google images: bumblebees</p>	<p>Traced with paint tools in Squeak.</p> 
1	2
	<p>scaleFactor is from the Geometry category of script tiles</p> 
3	4



Simple and Detailed Watchers

Find out about simple and detailed watchers.


Move the ellipse left or right. The simple watcher shows the 'x' position on the page.




simple watcher

This is a detailed watcher. blue's x = 208

Pick up the ellipse and move it sideways.



All tiles with a green arrow have watchers.


yellow's y = 317


Press here. →

basic

- yellow make sound croak
- yellow forward by 5
- yellow turn by 5
- yellow's x 200
- yellow's y 317
- yellow's heading 0

The watchers show information even with script viewers closed. Make changes with the watchers too. Click.

Ellipse3's color =


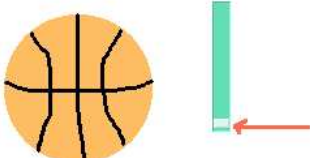
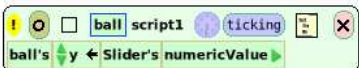
Ellipse3's length = 109



Slider Control



Supplies: slider

Click and drag the bar.

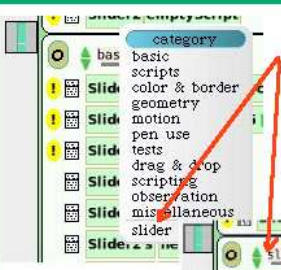
1

Write a script.





Get a slider from Supplies. Click.

2






Find special tiles for slider.



3

Combine tiles.






4




Stamp Tile

A stamp tile will make great patterns.

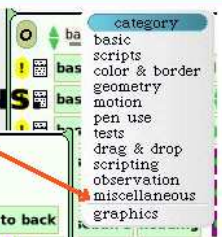


Make a script like this one.

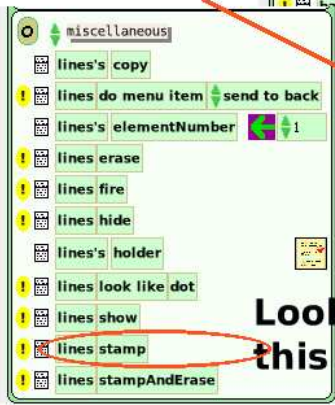


Then click on 'basic' and choose 'miscellaneous'.


Choose miscellaneous



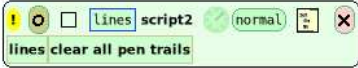
Look for this tile.



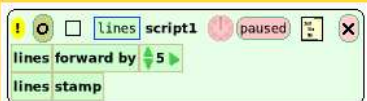


Make the script look like this.



Make this script too.





1

2

3

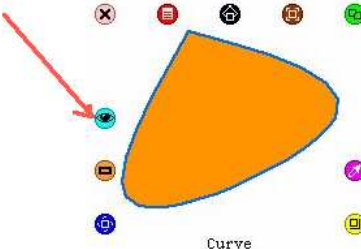
4



Turn By Tile

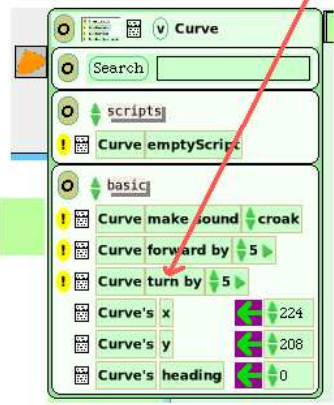
**Turn by 5
Open Supplies.**

**Drag out a curve.
Click on the cyan eye.**



Curve

Click on this tile.




1

2


**Does your tile look
like this now?**

Good.


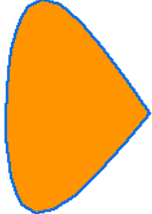


**Or,
does it look like this?**

Not.



**Click here to start
or stop the script.**

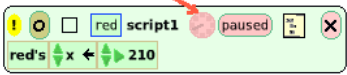

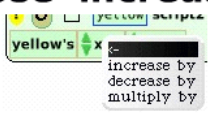

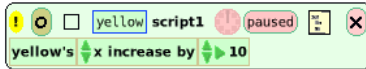
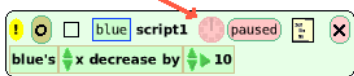

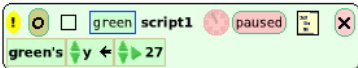






3

4



X and Y Positions

<p>x and y positons</p> <p>Write a script like this. Start it.</p>  <p>Move the red ellipse to other places.</p> 	<p>Click on the 'x' and choose 'increase'.</p>   <p>Change the number to 10.</p> 
1	3
<p>Choose 'x decrease'. Start it.</p>  	<p>Try scripts for the green ellipse's 'y' position.</p>    
3	4

