

# Why are computer programs so frustrating?

Caitlin Kelleher

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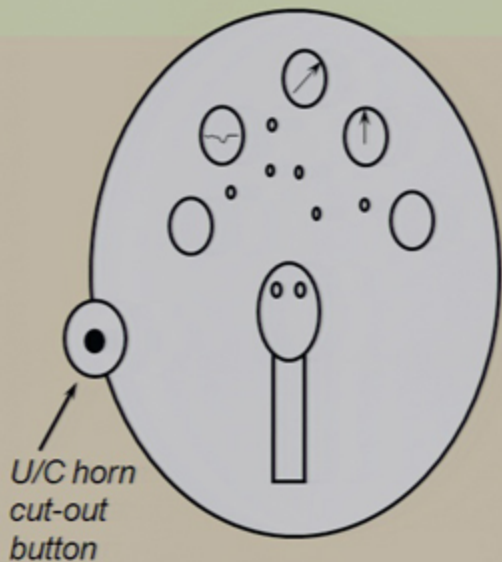
# Harvard Airplane (WWII)



You don't always want  
the landing gear down.



# The Harvard Control Panel

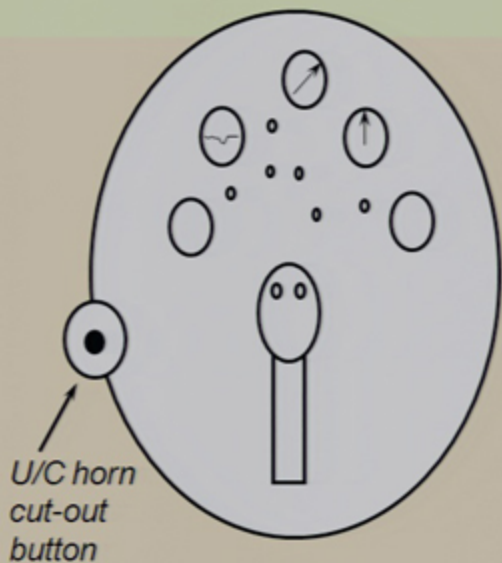


Problem #1: Conditioned response

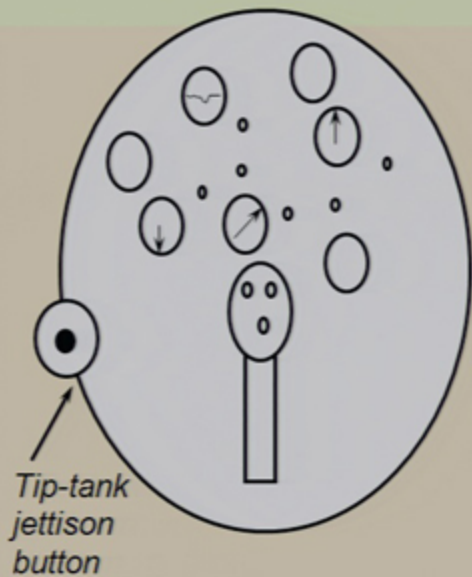
stall -> push button; therefore stimulus nullified



## The Harvard Control Panel



## The T-33 Control Panel



Problem #2: Negative transfer

T-33's: tip-tank jettison button in same location



Who's fault was it that these  
planes crashed?



# What makes a great hammer?



Efficiency: It can drive in nails faster.

# What makes a great hammer?

Make the head move faster by lengthening the handle.



Make the head heavier



Eventually, you end up with a  
hammer than no human can lift.

Do you blame the human?



Instead of blaming your user,  
build a better tool.



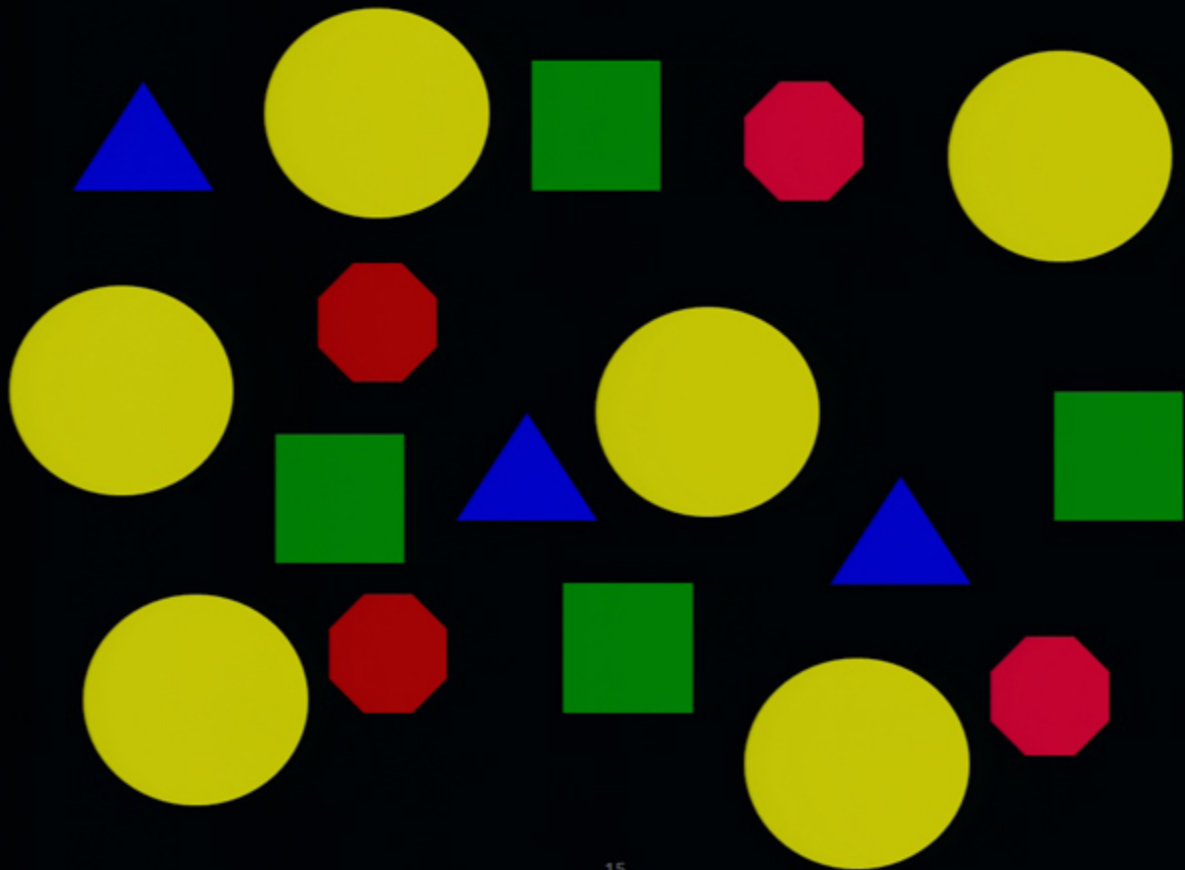
You can't just build it the way  
you that makes sense to you.



## Quick Test...

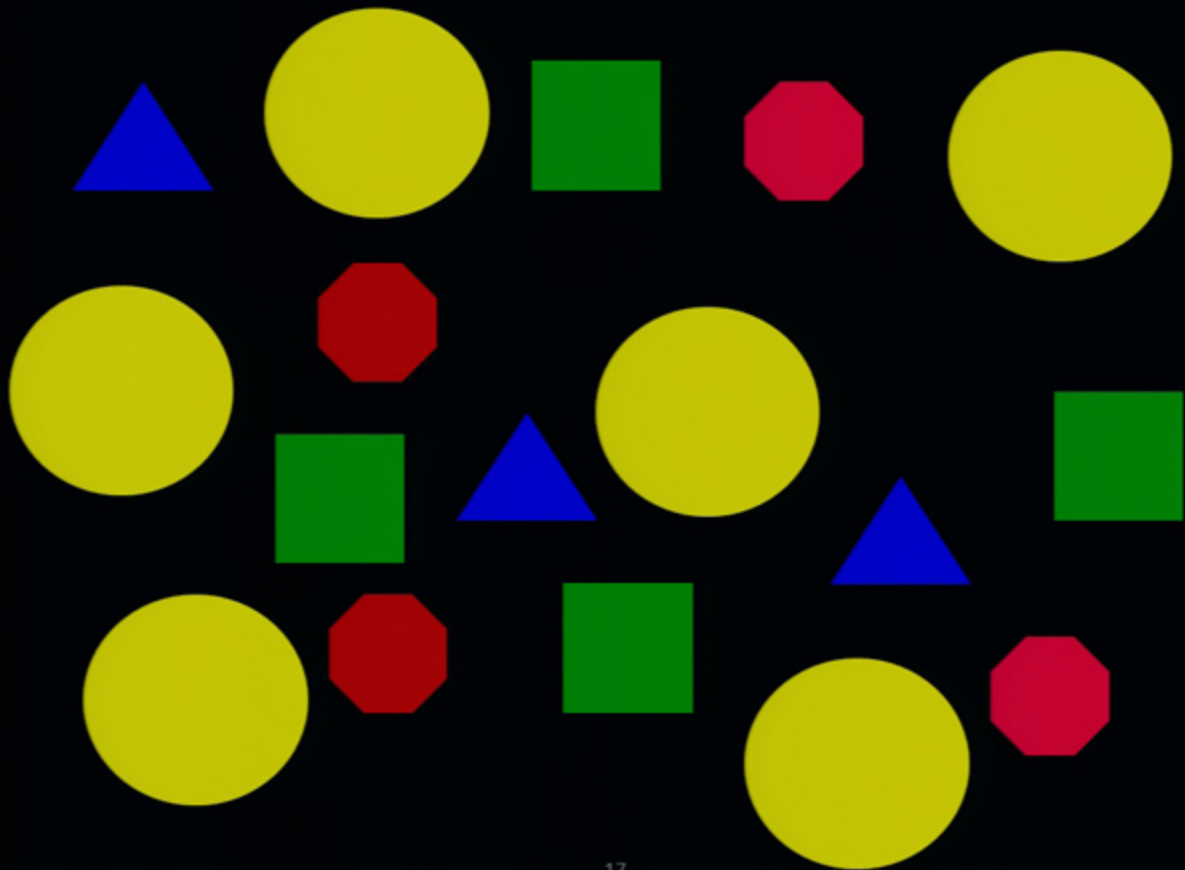


**Count the green squares...you  
will have three seconds...**

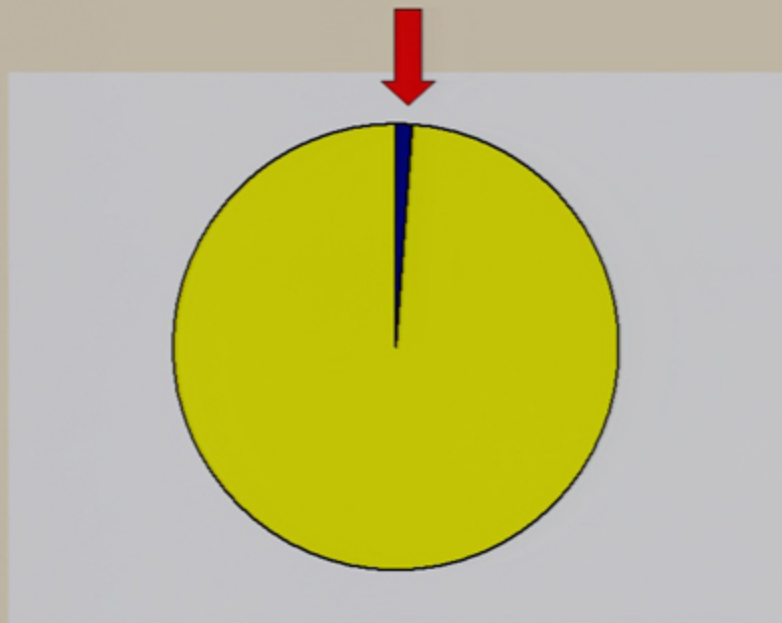


**How many were  
there?**

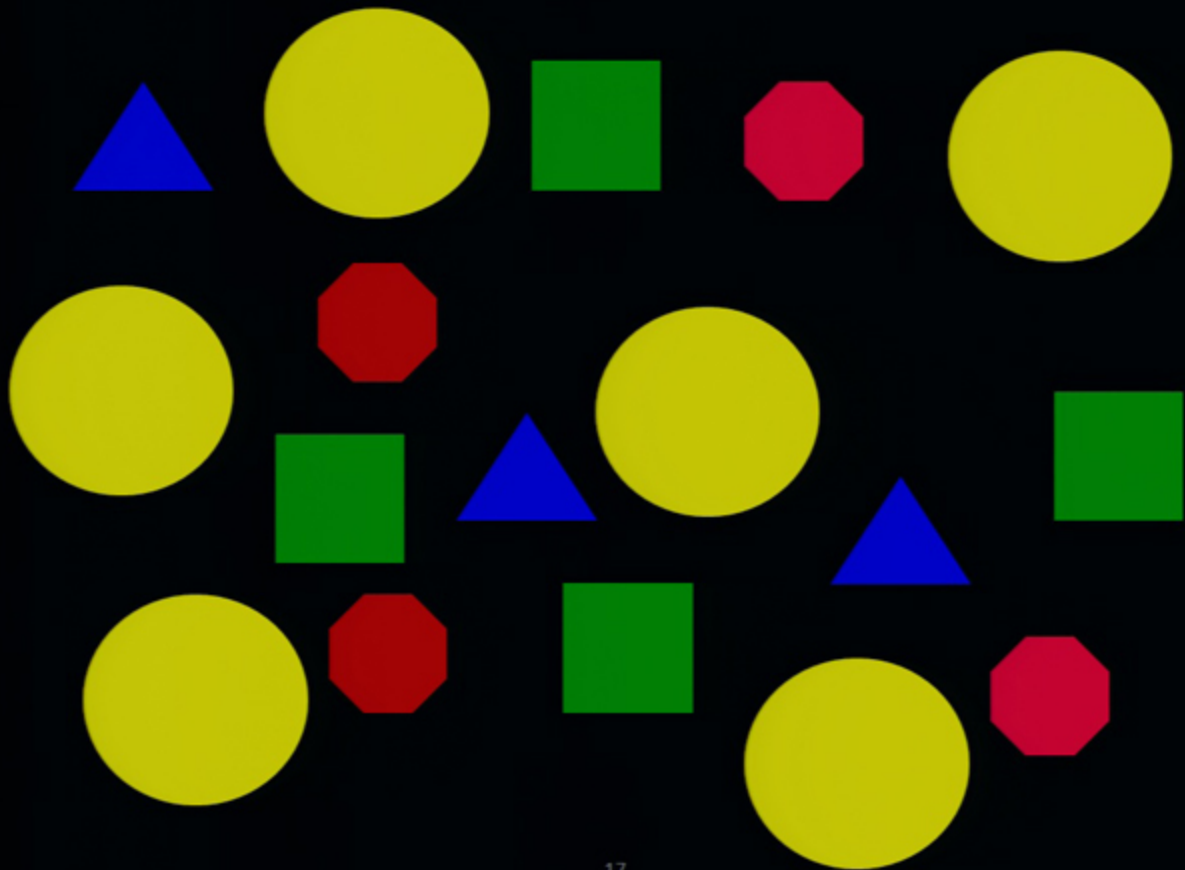




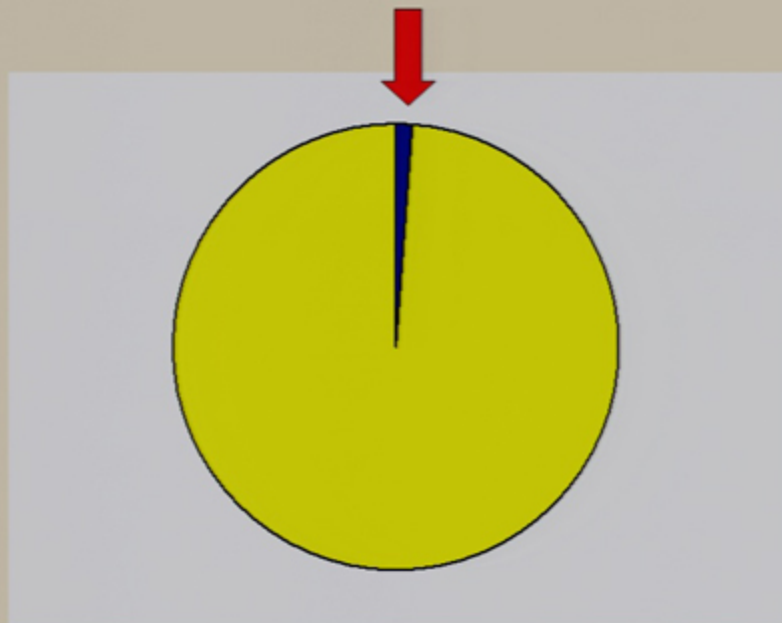
You are here.







You are here.



# Ever felt this way?



What works for you may not  
work for others.



To make software that works for  
real people, you have to get  
inside the heads of real people.





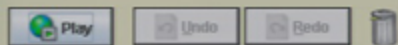
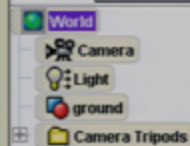


# Storytelling Alice Demo

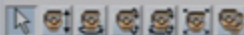
Warning: This demo shows cartoon characters kissing





Objects done adding objects
 single view  quad view

Move Objects Freely


 affect subparts

more controls >>

World's details

properties methods functions
scene 1 method edit
create new method

Home > Local Gallery > characters

Search Gallery

Adults


on your computer

Fantasy


on your computer

Funny


on your computer

Future


on your computer

Heroic


on your computer

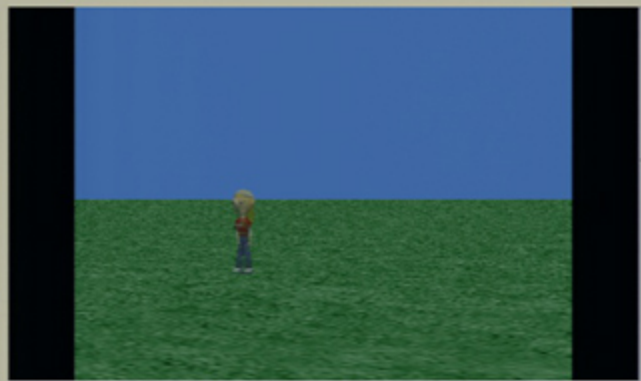
Kids


on your computer

Play
 Undo
 Redo

Objects done adding objects

- World
- Camera
- Light
- ground
- kristen
- Camera Tripods



single view
  quad view

Move Objects Freely

affect subparts

more controls >>

World's details



Home > Local Gallery > Characters > kids

Search Gallery

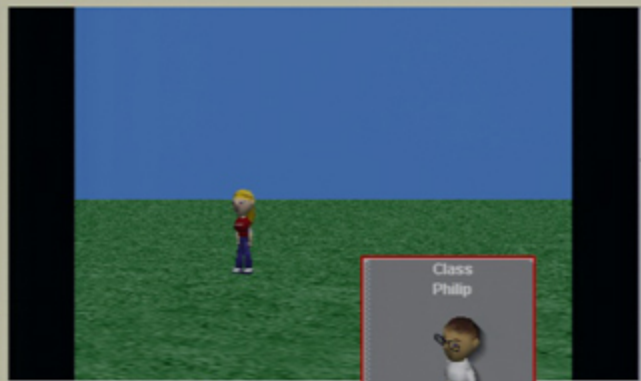
Kayla: Modeled by Moshe Mahler, Painted by Moshe Mahler

<p>Class Joey</p> <p>on your computer</p>	<p>Class Kayla</p> <p>on your computer</p>	<p>Class Kristen</p> <p>on your computer</p>	<p>Class Lana</p> <p>on your computer</p>	<p>Class Leon</p> <p>on your computer</p>
---	--	--	---	---

Play
 Undo
 Redo

Objects done adding objects

- World
- Camera
- Light
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- kristen
- Camera Tripods



single view
  quad view

Move Objects Freely

affect subparts

more controls >>

World's details



Home > Local Gallery > Characters > kids

Search Gallery

philip

<p>Class Lana</p> <p>on your computer</p>	<p>Class Leon</p> <p>on your computer</p>	<p>Class Melly</p> <p>on your computer</p>	<p>Class Philip</p> <p>on your computer</p>	<p>Class Sparky</p> <p>on your computer</p>
---	---	--	---	---

Play
 Undo
 Redo

Objects done adding objects

- World
- Camera
- Light
- ground
- kristen
- philip
- Camera Tripods



single view
  quad view

Move Objects Freely

affect subparts

more controls >>



World's details



Home > Local Gallery > Characters > kids

Search Gallery

philip

<p>Class Lana</p> <p>on your computer</p>	<p>Class Leon</p> <p>on your computer</p>	<p>Class Melly</p> <p>on your computer</p>	<p>Class Philip</p> <p>on your computer</p>	<p>Class Sparky</p> <p>on your computer</p>
---	---	--	---	---

Play
 Undo
 Redo

Objects done adding objects

- World
- Camera
- Light
- ground
- kristen
- philip
- Camera Tripods



single view
  quad view

Move Objects Freely

affect subparts

more controls >>



World's details



Home > Local Gallery > Characters > kids

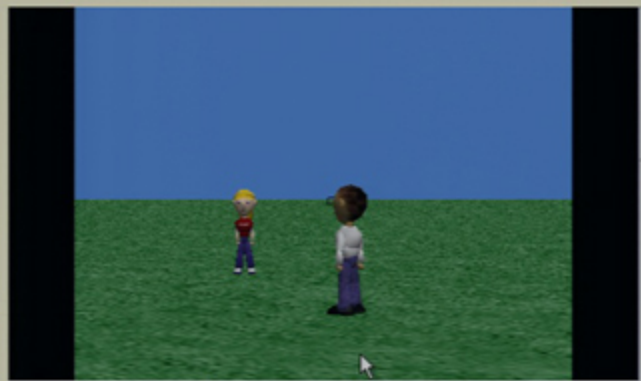
Search Gallery

philip

<p>Class Lana</p> <p>on your computer</p>	<p>Class Leon</p> <p>on your computer</p>	<p>Class Melly</p> <p>on your computer</p>	<p>Class Philip</p> <p>on your computer</p>	<p>Class Sparky</p> <p>on your computer</p>
---	---	--	---	---

Objects

- World
- Camera
- Light
- ground
- kristen
- philip
- Camera Tripods



single view
  quad view

Move Objects Freely

affect subparts

World's details



Home > Local Gallery > Characters > kids

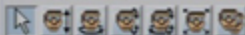
philip					
	Class Lana		Class Leon		Class Melly
	Class Philip		Class Sparky		
ter	on your computer	on your computer	on your computer	on your computer	on your computer

Objects done adding objects

- World
- Camera
- Light
- ground
- kristen
- philip
- Camera Tripods


 single view
  quad view

Move Objects Freely

 affect subpartsmore controls >>

World's details

properties methods functionsscene 1 method editcreate new methodHome > Local Gallery > characters 

Search Gallery

Adults



on your computer

Fantasy



on your computer

Funny



on your computer

Future



on your computer

Heroic

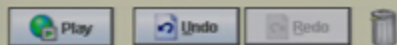


on your computer

Kids



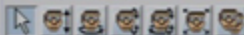
on your computer

Objects done adding objects

- World
- Camera
- Light
- ground
- kristen
- philip
- Camera Tripods


 single view  quad view

Move Objects Freely


 affect subparts

World's details


[Home](#) > [Local Gallery](#) > [Character](#) > adults

Class Coach



on your computer

Class JoeMearie



on your computer

Class Little red



on your computer

Class LunchLady



on your computer

Class Magician



on your computer

on yo



Play
 Undo
 Redo

Objects done adding objects

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods



single view
  quad view

Move Objects Freely

affect subparts

more controls >>

World's details

properties **methods** functions

scene 1 method edit

create new method



Home > Local Gallery > Content > cafeteria

Search Gallery

Cafeteria: Modeled by Moshe Mahler, Painted by Moshe Mahler

Class	Class	Class
CafeChair	CafeTableLong	Cafeteria
on your computer	on your computer	on your computer

Play
 Undo
 Redo

Objects done adding objects

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods



single view
  quad view

Move Objects Freely

affect subparts

more controls >>

World's details

properties | methods | functions

scene 1 method edit

create new method



Home > Local Gallery > Content > cafeteria

Search Gallery

Cafeteria: Modeled by Moshe Mahler, Painted by Moshe Mahler

Class	Class	Class
CafeChair	CafeTableLong	Cafeteria
on your computer	on your computer	on your computer

Play
 Undo
 Redo

Objects done adding objects

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods



single view
  quad view

Move Objects Freely

affect subparts

more controls >>

World's details

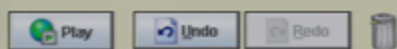
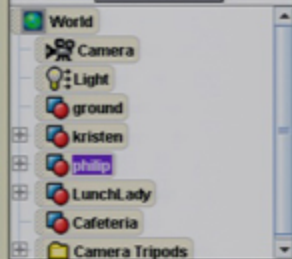


Home > Local Gallery > Content > cafeteria

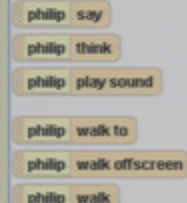
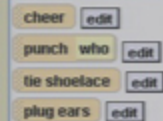
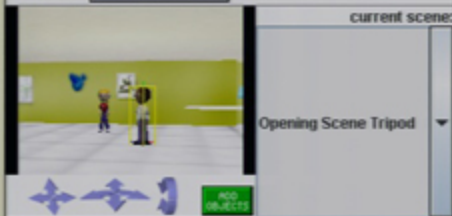
Search Gallery

Cafeteria: Modeled by Moshe Mahler, Painted by Moshe Mahler

Class	Class	Class
CafeChair	CafeTableLong	Cafeteria
on your computer	on your computer	on your computer

Objects 

philip's details

properties  Scenes 

World.scene 1 method

World.scene 1 method

No variables

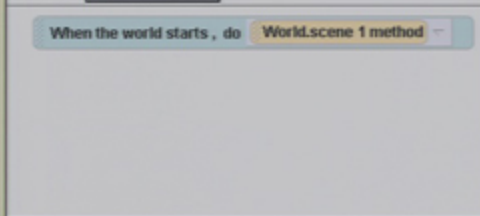
philip say Kristen, I love you... more...









Events 

Objects

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods

Scenes

current scene: Opening Scene Tripod

Events

When the world starts, do

World.scene 1 method
  philip.kiss

philip's details

properties | methods | functions

- cheer
- punch who
- tie shoelace
- plug ears
- kiss
- 
- philip say
- philip think
- philip play sound
- philip walk to
- philip walk offscreen

philip.kiss No parameters

No variables

(Do Nothing)

Objects

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods

Scenes

current scene: Opening Scene Tripod

Events

When the world starts, do World.scene 1 method

World.scene 1 method
  philip.kiss

philip's details

properties | methods | functions

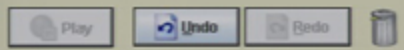
- cheer
- punch who
- tie shoelace
- plug ears
- kiss
- 
- philip say
- philip think
- philip play sound
- philip walk to
- philip walk offscreen

philip.kiss No parameters

No variables

(Do Nothing)

- target
- the entire World
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera
- Light
- Camera Tripods
- expressions



Objects

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods

philip's details

properties methods functions

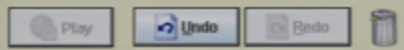
- cheer
- punch who
- tie shoelace
- plug ears
- kiss
- 
- philip say
- philip think
- philip play sound
- philip walk to
- philip walk offscreen

Scenes  Events

World Running...

Speed: 1x

s, do World.Scene 1 method



Objects

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods

philip's details

properties methods functions

- cheer
- punch who
- tie shoelace
- plug ears
- kiss
- 
- philip say
- philip think
- philip play sound
- philip walk to
- philip walk offscreen

Scenes

World Running...

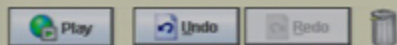
Speed: 1x



Events

s, do





Objects

- + kristen
- + philip
- + hips
  - + lower Torso
    - + upper Torso
      - + neck
        - + head
        - + rightUpperArm

Scenes

current scene:

Opening Scene Tripod

Events

When the world starts, do

## head's details

properties

- 
- 
- 
- 
- 

+ Seldom Used Methods

World.scene 1 method  philip.kiss

No variables

Play Undo Redo

Objects add new objects

- kristen
- philip
- hips
  - lower Torso
    - upper Torso
      - neck
        - head
  - rightUpperArm

head's details

properties methods functions

- head turn
- head roll
- head straighten up
- head move
- head resize

Seldom Used Methods

Scenes create new scene Events create new event

World Running...

Speed: 1x

Pause Resume Restart Stop Take Picture

philip.hips.lower Torso.upper Torso.neck.head roll right 0.1 revolutions more...

Do in order Do together If/Else Loop While For all in order For all together Wait print

Play Undo Redo

Objects add new objects

- kristen
- philip
  - hips
    - lower Torso
      - upper Torso
        - neck
          - head
        - rightUpperArm

head's details

properties methods functions

- head turn
- head roll
- head straighten up
- head move
- head resize

Seldom Used Methods

Scenes create new scene Events create new event

World Running...

Speed: 1x

Pause Resume Restart Stop Take Picture

philip.hips.lower Torso.upper Torso.neck.head roll right 0.1 revolutions more...

Do in order Do together If/Else Loop While For all in order For all together Wait print

Play Undo Redo

Objects

- + kristen
  - + philip
    - + hips
      - + lower Torso
        - + upper Torso
          - + neck
            - + head
          - + rightUpperArm

head's details

properties methods functions

- head turn
- head roll
- head straighten up
- head move
- head resize

Seldom Used Methods

Scenes  Events

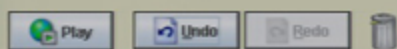
World Running...

Speed: 1x

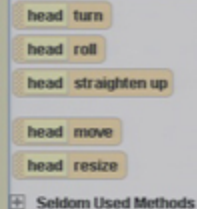
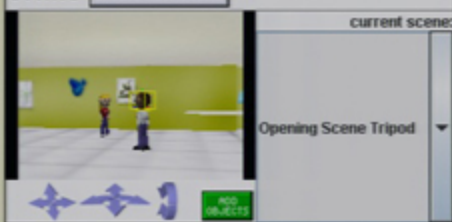
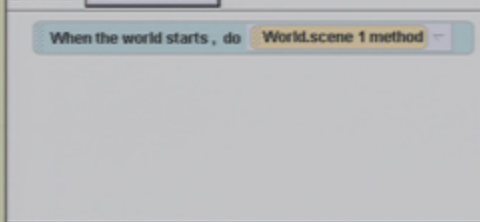
World.scene 1 method

philip.hips.lower Torso.upper Torso.neck.head roll right 0.1 revolutions more...

Do in order Do together If/Else Loop While For all in order For all together Wait print

Objects 

## head's details

properties  Scenes Events 
 World.scene 1 method
  philip.kiss
philip.kiss *No parameters**No variables*

philip walk to kristen amount = 0 more...

Do together

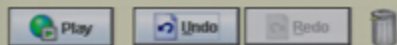
philip touch kristen side = left more...

philip touch kristen side = right arm = leftArm more...

Loop 2 times times 

philip.hips.lower Torso.upper Torso.neck.head roll left 0.1 revolutions more...

philip.hips.lower Torso.upper Torso.neck.head roll right 0.1 revolutions more...



Objects

- + kristen
- + philip
- + hips
  - + lower Torso
    - + upper Torso
      - + neck
        - + head
        - + rightUpperArm

Scenes

current scene:

Opening Scene Tripod

Events

When the world starts, do

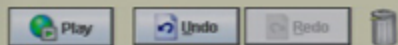
head's details

properties

- 
- 
- 
- 
- 
- + Seldom Used Methods

World.scene 1 method  philip.kiss

No variables



### Objects

add new objects

- kristen
- philip
- hips
  - lower Torso
    - upper Torso
      - neck
        - head
        - rightUpperArm

### Scenes

create new scene

current scene: Opening Scene Tripod

### Events

create new event

When the world starts, do World.scene 1 method

### head's details

properties | methods | functions

- head turn
- head roll
- head straighten up
- head move
- head resize
- Seldom Used Methods

World.scene 1 method   philip.kiss

philip.kiss No parameters create new parameter

No variables create new variable

philip walk to kristen amount = 0 more...

Do together

- philip touch kristen side = left more...
- philip touch kristen side = right limb = leftArm more...

Loop

- philip upperTorso.neck.head roll left 0.1 revolutions more...
- philip upperTorso.neck.head roll right 0.1 revolutions more...

1 time

2 times

5 times

10 times

infinity times

0.1 times

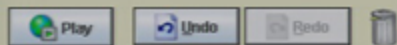
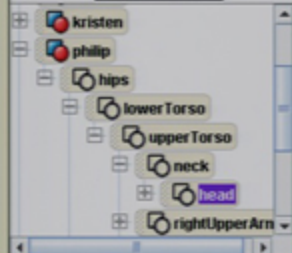
0 times

expressions

math

other...

Do in order   Else   Loop   While   For all in order   For all together   Wait   print

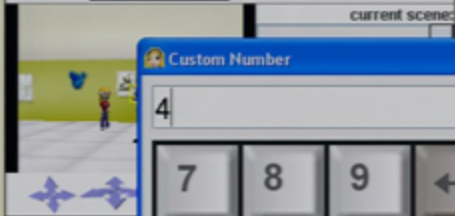
Objects 

head's details

properties  

- 
- 
- 
- 
- 

⊕ Seldom Used Methods

Scenes 

current scene:

World.scene

philip.kiss No p

No variables

philip - wa

⊖ Do together

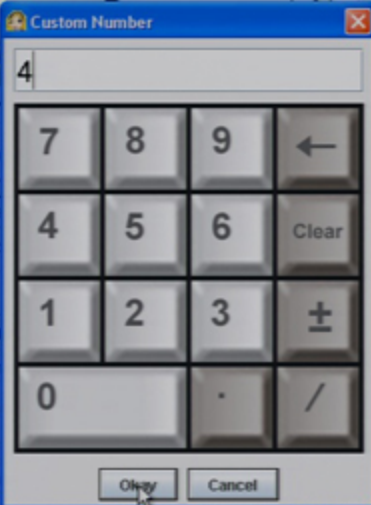
philip -

philip -

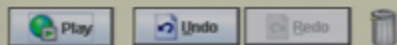
⊖ Loop 2 tim

philip.hips.lower Torso.upper Torso.neck.head - roll left - 0.1 revolutions - more...

philip.hips.lower Torso.upper Torso.neck.head - roll right - 0.1 revolutions - more...

Do in order         Events When the world starts, do 





Objects

- [-] kristen
- [-] philip
- [-] hips
  - [-] lower Torso
    - [-] upper Torso
      - [-] neck
        - [-] head
        - [-] rightUpperArm

Scenes

current scene:

Opening Scene Tripod

Events

When the world starts , do

## head's details

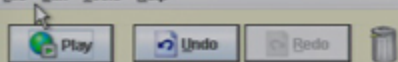
properties

- 
- 
- 
- 
- 

World.scene 1 method  philip.kiss

philip.kiss *No parameters*

*No variables*



Objects

- + kristen
- + philip
- + hips
  - + lower Torso
    - + upper Torso
      - + neck
        - + head
        - + rightUpperArm

Scenes

current scene:

Opening Scene Tripod

ADD OBJECTS

Events

When the world starts, do World.scene 1 method

World.scene 1 method  philip.kiss

philip.kiss No parameters

No variables

philip walk to kristen amount = 0 more...

Do together

philip touch kristen side = left more...

philip touch kristen side = right arm = leftArm more...

Loop 4 times times

philip.hips.lower Torso.upper Torso.neck.head roll left 0.1 revolutions more...

philip.hips.lower Torso.upper Torso.neck.head roll right 0.1 revolutions more...

Do in order Do together If/Else Loop While For all in order For all together Wait print

### head's details

properties **methods** functions

head turn

head roll

head straighten up

head move

head resize

+ Seldom Used Methods

Play Undo Redo

Objects add new objects

- kristen
- philip
- hips
  - lower Torso
    - upper Torso
      - neck
        - head
  - rightUpperArm

head's details

properties methods functions

- head turn
- head roll
- head straighten up
- head move
- head resize

Seldom Used Methods

Scenes create new scene Events create new event

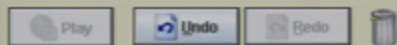
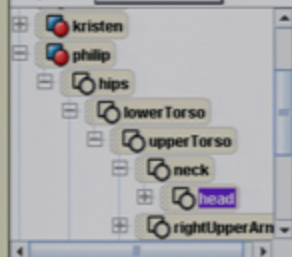
World Running...

Speed: 1x

Pause Resume Restart Stop Take Picture

philip.hips.lower Torso.upper Torso.neck.head roll right 0.1 revolutions more...

Do in order Do together If/Else Loop While For all in order For all together Wait print

Objects 

head's details

properties  

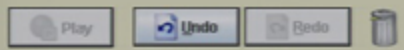
- 
- 
- 
- 
- 

[-] Seldom Used Methods

Scenes 

World Running...


   
        
Events s, do



**Objects**

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods

**Scenes**  **Events**

**World Running...**

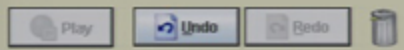
Speed: 1x

s, do World.scene 1 method

**LunchLady's details**

properties | methods | functions

- be hard of hearing
- scream
- scold
- attempt to brainwash who's head
- 
- LunchLady say
- LunchLady think
- LunchLady play sound
- LunchLady walk to
- LunchLady walk offscreen



**Objects**

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods

**Scenes**  **Events**

**World Running...**

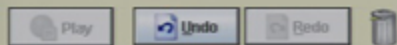
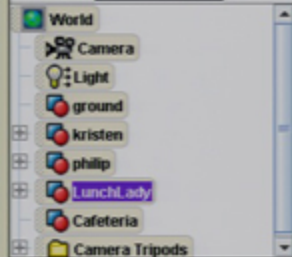
Speed: 1x

**LunchLady's details**

properties | methods | functions

- be hard of hearing
- scream
- scold
- attempt to brainwash **who's head**
- 
- LunchLady say
- LunchLady think
- LunchLady play sound
- LunchLady walk to
- LunchLady walk offscreen

s, do

Objects 

LunchLady's details

properties  

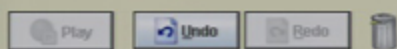
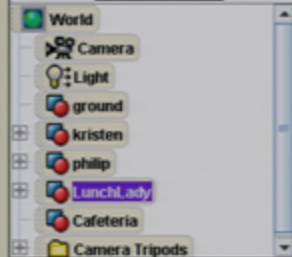
be hard of hearing

scream

scold

attempt to brainwash

Scenes Events s, do

Objects 

LunchLady's details

properties  

be hard of hearing

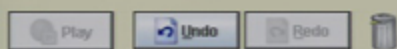
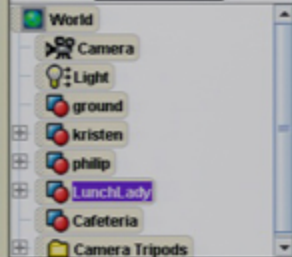
scream

scold

attempt to brainwash

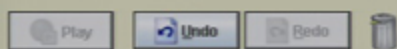
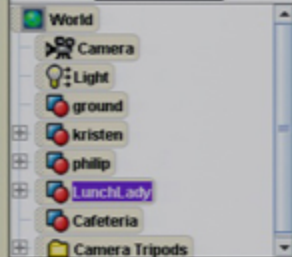
Scenes Events s, do



Objects 

LunchLady's details

properties  be hard of hearing scream scold attempt to brainwash Scenes Events s, do

Objects 

LunchLady's details

properties  
Scenes 
Events s, do

Play Undo Redo

Objects

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods

LunchLady's details

properties methods functions

- be hard of hearing
- scream
- scold
- attempt to brainwash who's head
- 
- LunchLady say
- LunchLady think
- LunchLady play sound
- LunchLady walk to
- LunchLady walk offscreen

Scenes  Events

World Running...

Speed: 1x

s, do World.Scene 1 method

Play Undo Redo

Objects add new objects

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods

LunchLady's details

properties methods functions

- be hard of hearing edit
- scream edit
- scold edit
- attempt to brainwash who's head
- create new method
- LunchLady say
- LunchLady think
- LunchLady play sound
- LunchLady walk to
- LunchLady walk offscreen

Scenes create new scene Events create new event

World Running...

Speed: 1x

Pause Resume Restart Stop Take Picture

s, do World.Scene 1 method

create new parameter

create new variable

Do in order Do together If/Else Loop While For all in order For all together Wait print

Play Undo Redo

Objects add new objects

- World
- Camera
- Light
- ground
- kristen
- philip
- LunchLady
- Cafeteria
- Camera Tripods

LunchLady's details

properties methods functions

- be hard of hearing edit
- scream edit
- scold edit
- attempt to brainwash who's head
- create new method
- LunchLady say
- LunchLady think
- LunchLady play sound
- LunchLady walk to
- LunchLady walk offscreen

Scenes create new scene Events create new event

World Running...

Speed: 1x

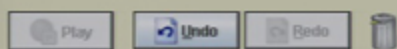
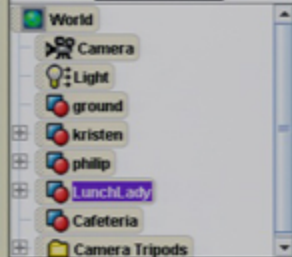
Pause Resume Restart Stop Take Picture

s, do World.Scene 1 method

create new parameter

create new variable

Do in order Do together If/Else Loop While For all in order For all together Wait print

Objects 

LunchLady's details

properties  be hard of hearing scream scold attempt to brainwash Scenes Events s, do

# Why build Storytelling Alice?

1. Enable kids to build their own animated stories because it's fun.
2. Give more kids a little taste of computer science.

When you build a story or a game in Storytelling Alice, you're using the same kinds of blocks that professional computer scientists use to solve important problems.



# Tamagotchi





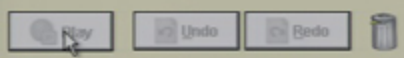
# Tamagotchi



When Tamagotchi needs something, it calls you with a beep and the Attention icon is highlighted. Check what it needs with the Hunger Meter and play, feed or discipline them.

# Caring for a Virtual Dragon





**Objects**

- World
- Camera
- Light
- ground
- dragon
- beetle
- caterpillar
- ladybug
- plate

**World's details**

properties | **methods** | functions

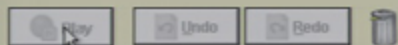
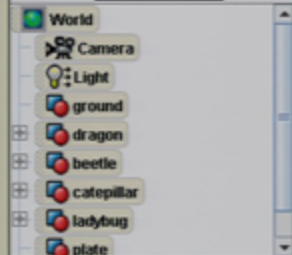
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**Scenes**  **Events**

**World Running...**

Speed: 1x

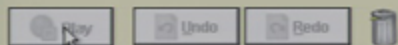
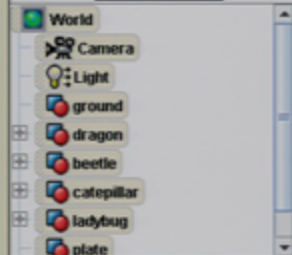
File Edit Tools Help

Objects 

World's details

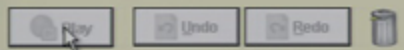
properties  Scenes Events

File Edit Tools Help

Objects 

World's details

properties  Scenes Events



**Objects**

- World
- Camera
- Light
- ground
- dragon
- beetle
- caterpillar
- ladybug
- plate

**World's details**

properties | **methods** | functions

- 
- 
- 
- 

**Scenes**  **Events**

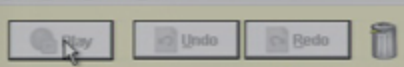


ning

ethHungry --

typed,

eDragon --



Objects

- World
- Camera
- Light
- ground
- dragon
- beetle
- caterpillar
- ladybug
- plate

World's details

properties | **methods** | functions

- feedTheDragon
- updateBugIndex
- putBugOnPlate whichBug
- 

Scenes  Events

World Running...

Speed: 1x

Oh no! Sorin died.

Play Undo Redo

**Objects** add new objects

- World
- Camera
- Light
- ground
- dragon
- beetle
- caterpillar
- ladybug
- plate

**World's details**

properties methods functions

- feedTheDragon edit
- updateBugIndex edit
- putBugOnPlate whichBug edit
- turn the plate red edit
- create new method

**Scenes** create new scene **Events** create new event

**World Running...**

Speed: 1x Pause Resume Restart Stop Take Picture

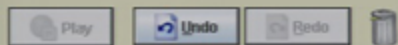
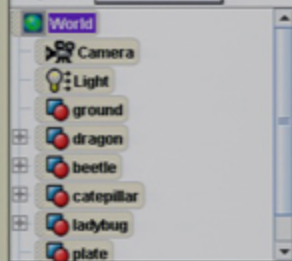
plate red

create new parameter  
create new variable

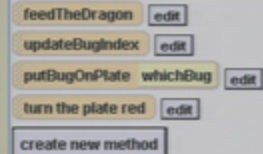
Do in order Do together If/Else Loop While For all in order For all together Wait print

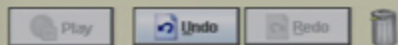
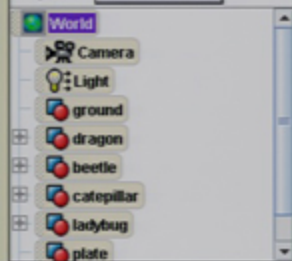


File Edit Tools Help

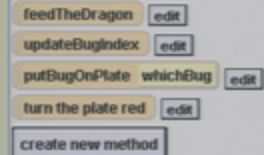
Objects 

World's details

properties  Scenes Events 

Objects 

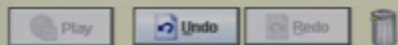
World's details

properties  Scenes 

World Running...

Speed: 1x     Events 

plate red



**Objects**

- World
- Camera
- Light
- ground
- dragon
- beetle
- caterpillar
- ladybug
- plate

**World's details**

properties | **methods** | functions

- 
- 
- 
- 
- 

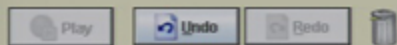
**Scenes**  **Events**

**World Running...**

Speed: 1x

A 3D rendered scene showing a red dragon with yellow underbelly and wings, standing on a green grassy field. A purple plate is on the ground in front of the dragon. The sky is blue.

plate red



Objects

- World
- Camera
- Light
- ground
- dragon
- beetle
- caterpillar
- ladybug
- plate

World's details

properties | methods | functions

- feedTheDragon
- updateBugIndex
- putBugOnPlate whichBug
- turn the plate red
- 

Scenes  Events

World Running...

Speed: 1x

plate red -

File Edit Tools Help

Play Undo Redo

Objects

- World
- Camera
- Light
- ground
- dragon
- beetle
- caterpillar
- ladybug
- plate

World's details

properties methods functions

- feedTheDragon
- updateBugIndex
- putBugOnPlate whichBug
- turn the plate red
- 

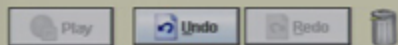
Scenes  Events

World Running...

Speed: 1x

plate red

Do in order Do together If/Else Loop While For all in order For all together Wait print



**Objects**

- World
- Camera
- Light
- ground
- dragon
- beetle
- caterpillar
- ladybug
- plate

**World's details**

properties | **methods** | functions

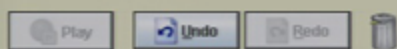
- 
- 
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- 

**Scenes**  **Events**

**World Running...**

Speed: 1x

plate red -



**Objects** add new objects

- World
- Camera
- Light
- ground
- dragon
- beetle
- caterpillar
- ladybug
- plate

**World's details**

properties | methods | functions

- feedTheDragon edit
- updateBugIndex edit
- putBugOnPlate whichBug edit
- turn the plate red edit
- create new method

**Scenes** create new scene

**Events** create new event

**World Running...**

Speed: 1x

Pause Resume Restart Stop Take Picture

late red

create new parameter

create new variable

Do in order | Do together | If/Else | Loop | While | For all in order | For all together | Wait | print

Play Undo Redo

Objects add new objects

- World
- Camera
- Light
- ground
- dragon
- beetle
- caterpillar
- ladybug
- plate

Scenes create new scene Events create new event

World Running...

Speed: 1x Pause Resume Restart Stop Take Picture

World's details

properties methods functions

- feedTheDragon edit
- updateBugIndex edit
- putBugOnPlate whichBug edit
- turn the plate red edit
- create new method

plate red

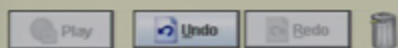
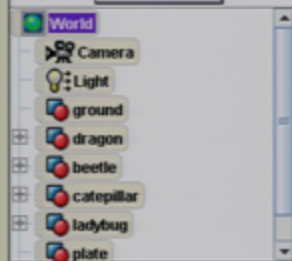
create new parameter

create new variable

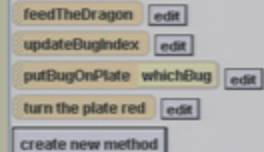
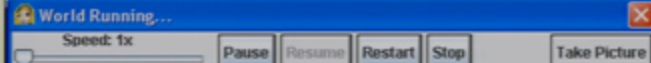
Do in order Do together If/Else Loop While For all in order For all together Wait print



File Edit Tools Help

Objects 

World's details

properties  Scenes 

# So, basically...

We watch the dragon's hunger. When it gets larger than a certain value, we tell the user that it's time to feed him (by turning the plate red).

Where else do we have this same problem?



# Monitoring Patients in a Hospital



A simple computer program monitors patient's heart rates, respiratory rates, etc. If they rise or drop to a dangerous level, the programs sounds an alarm to call a nurse or doctor.

As a computer scientist, you can work on problems in almost any field.

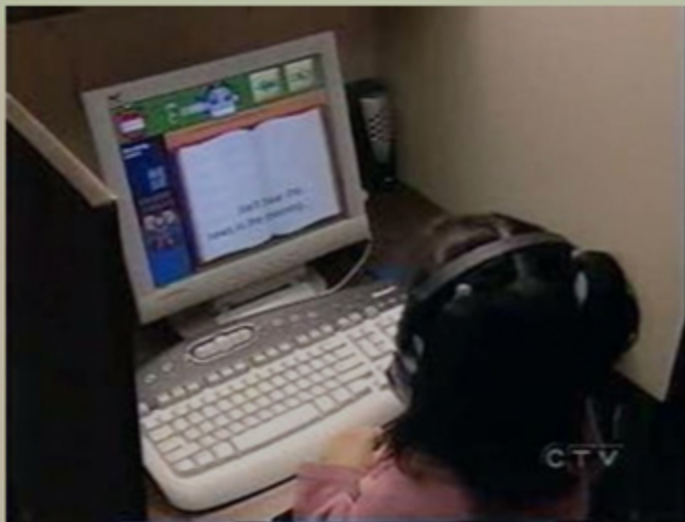


# Computer Science and Psychology



Virtual Reality to help treat phobias:  
arachnophobia (spiders), acrophobia (heights), agoraphobia  
(public places), etc.

# Computer Science and Education



Project LISTEN is a reading tutor that uses speech recognition to listen to and help beginning readers.

# Computer Science and Nursing



NurseBot is a project that seeks to develop mobile, personal service robots that assist elderly people suffering from chronic disorders in their everyday life.

## Try it...

- Download Storytelling Alice from [www.alice.org](http://www.alice.org)

