Tutorial on Kangaroo visiting his animal friends - parameters, events

Susan Rodger
Duke University
June 2008

Start with new world
- Add a Kangaroo and several animals of different heights, spread around the world
- I picked bunny, cow, horse1, ladybug, tortoise, turtle – any animals will do

Problem
- The kangaroo wants to visit each animal where “visit” means: the kangaroo and the animal face each other, the kangaroo moves close in front of it, the kangaroo says “hi” and then the Kangaroo jumps over it. However, the kangaroo can only jump 1 meter high.

Parts of the Tutorial
- Part 1: Kangaroo visit each friend
- Part 2: Kangaroo either go around or jump over
- Part 3: Create an event to click on animal to visit
Part 1: Kangaroo visit Cow

- Create a “Kangaroo” method called visit

See the new Kangaroo visit method

Enter the following code

Add the remaining code
Change “when the world starts” to Kangaroo.visit and “Play”

• For the third line
  • drop the move forward first
  • under “kangaroo”, “functions”, drag in “distance to” and drop over the number
  • Then click on the last white arrow on the line to select “Math” and then the minus and 2
  • The kangaroo will stop two meters in front of the center of the cow...
How to visit any friend –
Add a parameter named friendToVisit
- type should be Object – click ok

Now click and drag friendToVisit on
top of the four occurrences of Cow

Part 2: Going around or over friend

- Kangaroo can only jump 1 meter high
- If friend is shorter than 1 meter, it is ok to
  jump over
- If friend is 1 meter or taller, then go around
  them

Change “when the world starts” back
to myFirstMethod
Drag in visit for each friend and “Play”
First drag in an If/Else from the bottom of the window, placing after the “say”

Select “world”, “functions” and scroll to find math functions, then click and drag “a<b” selecting 1’s

Drag in “cow’s height” from the cow functions, then drop “friendToVisit” over cow

Move the kangaroo jump over code and put after the if. Then add code after the else to “go around”. Then Play
Part 3 – create an event to visit friend clicked on
First, disable code in myFirstMethod

Create a new event
When the mouse is clicked on something

Drag over the visit code and select “expressions”, “object under mouse cursor”

Here is the event.
Now click “play” and click on different animals, but not the kangaroo...