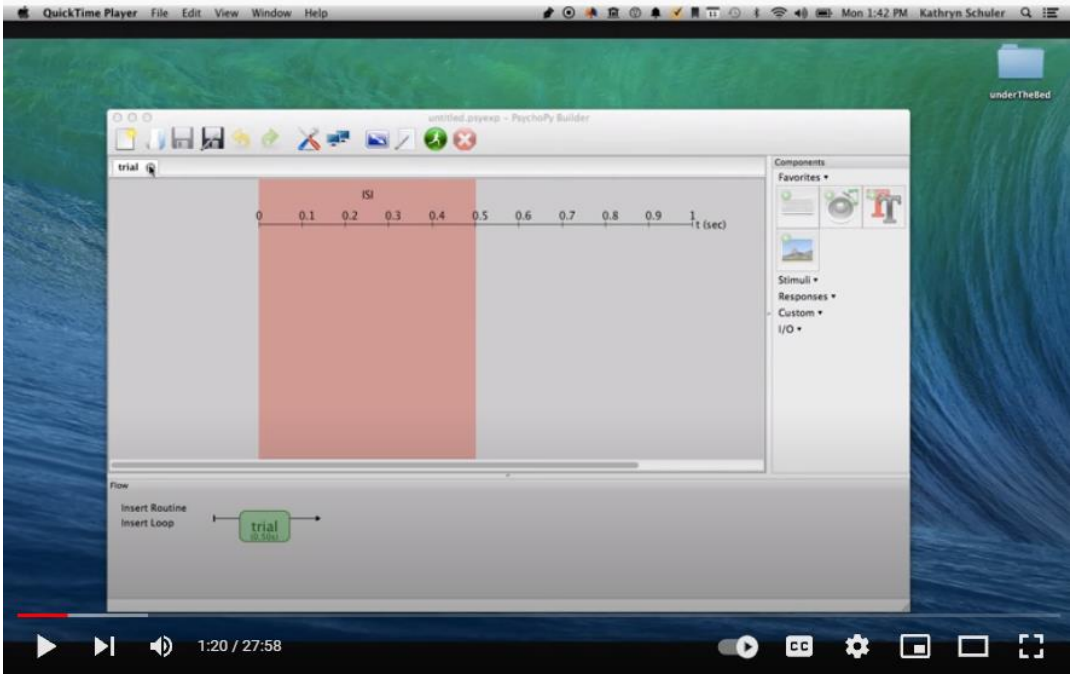
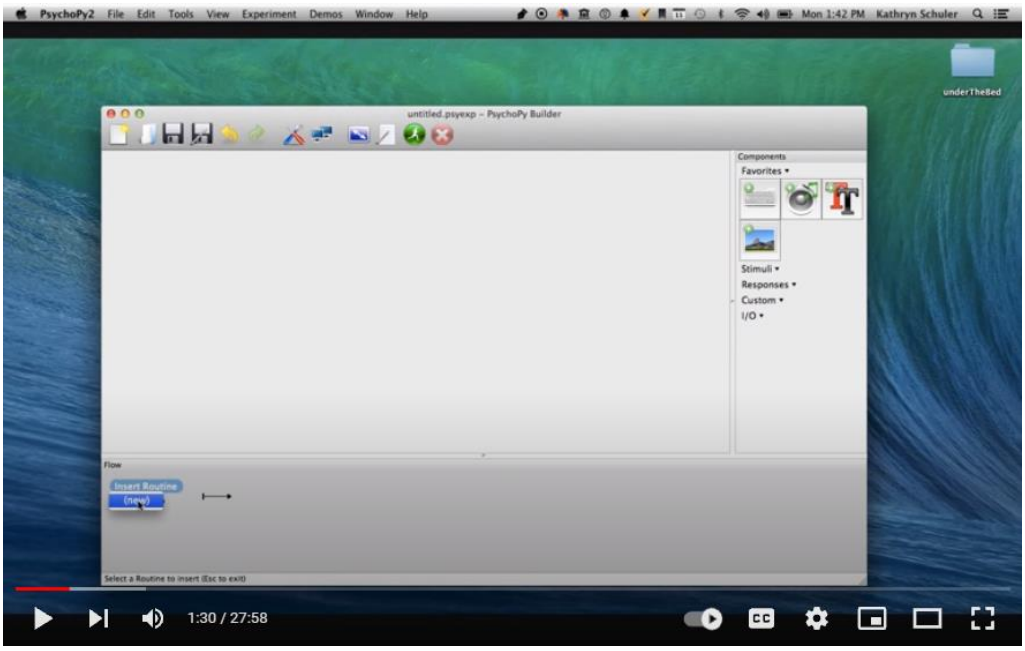
Doing a language experiment in Psychopy

Time required to create: Approximately 25 min

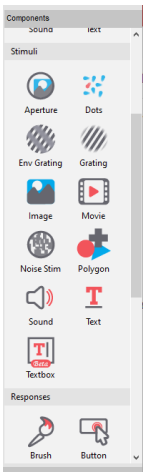
Follow the steps below



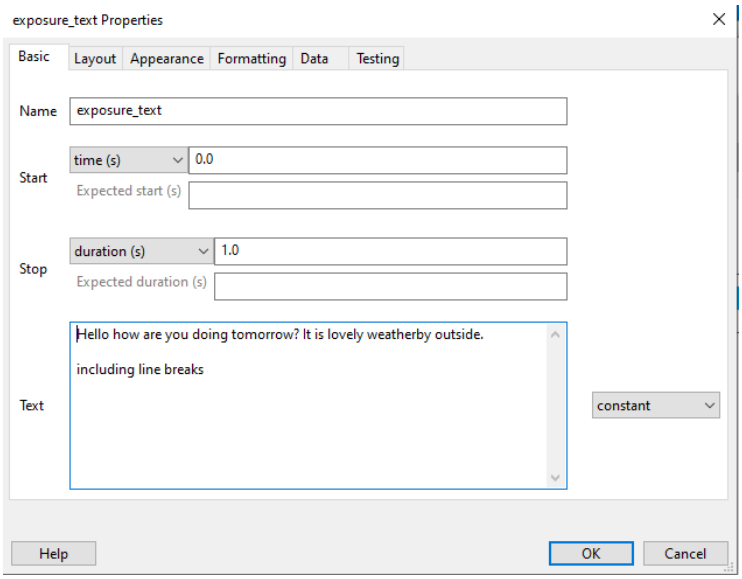
Click the x to delete the trial routine tab.



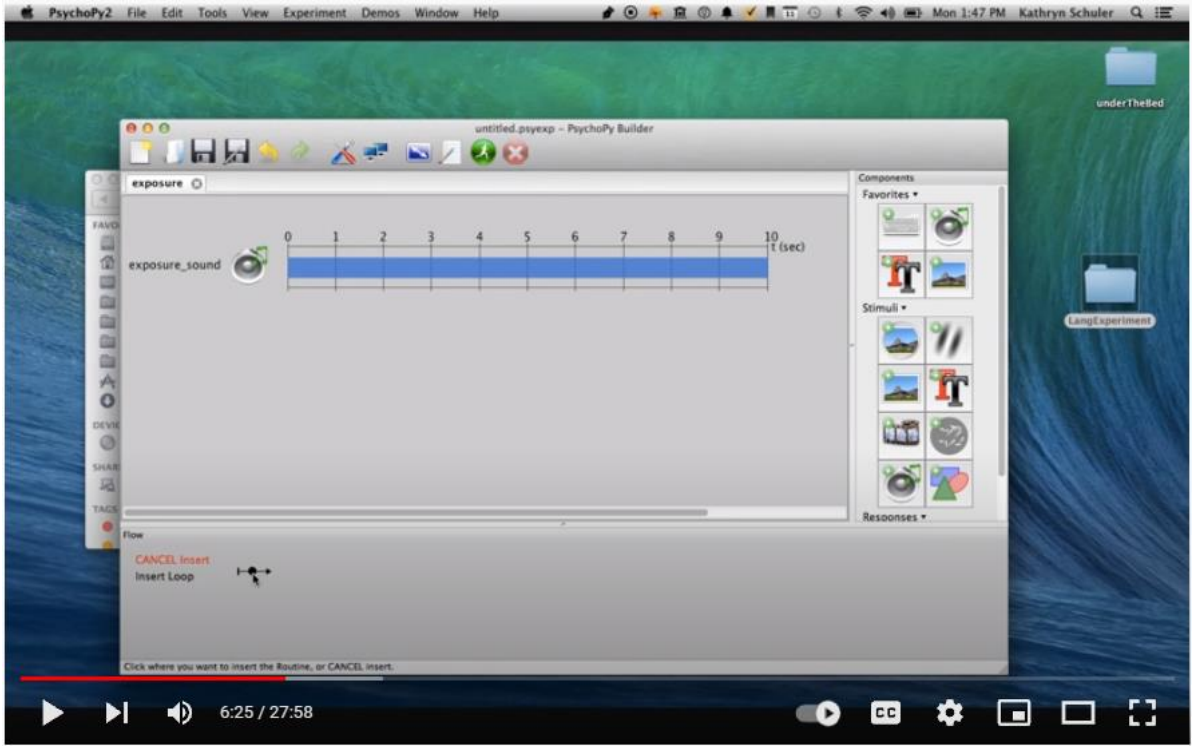
Click insert routine. Name it exposure.



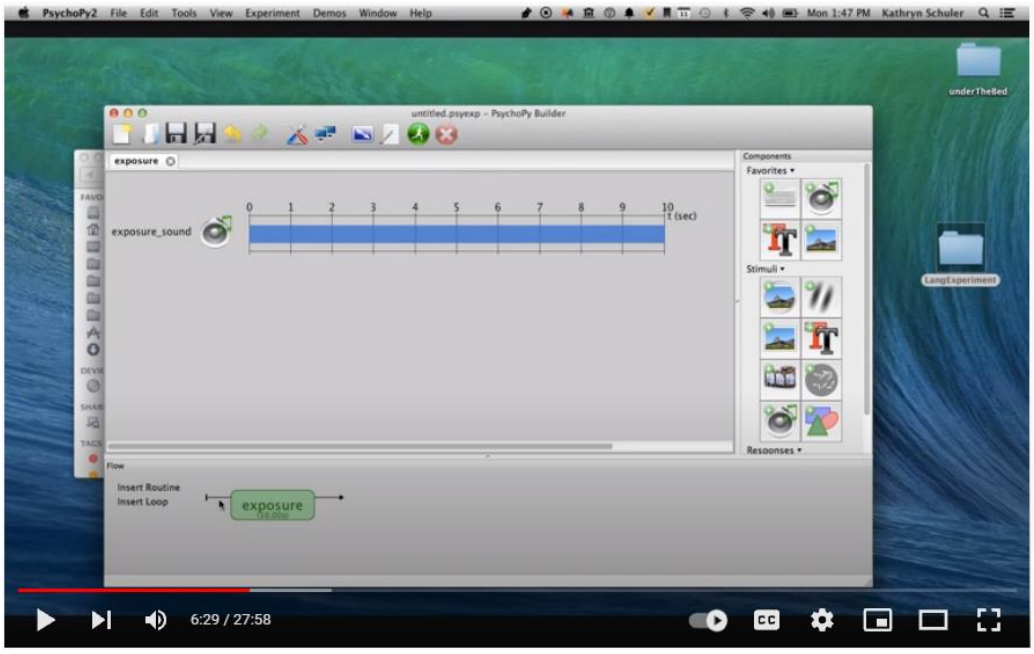
Click on text stimulus.



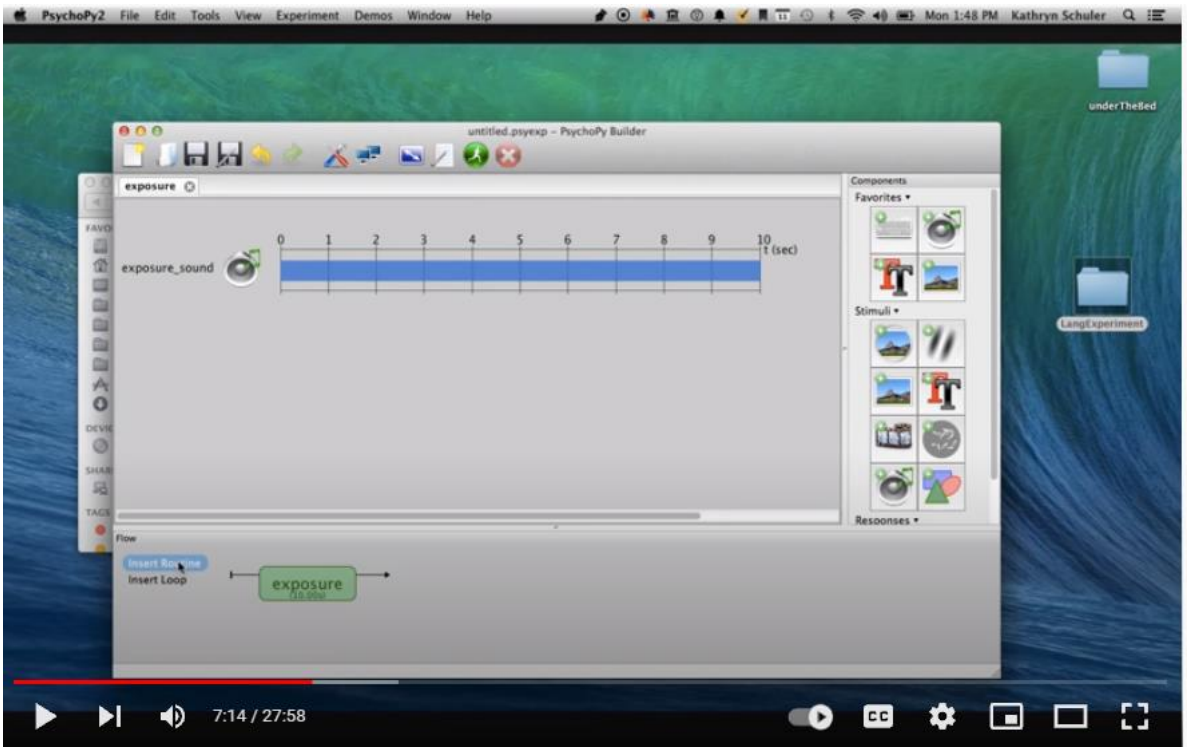
Change name to exposure_text. Set stop box to 1 second. Ensure everything else looks the same as above.



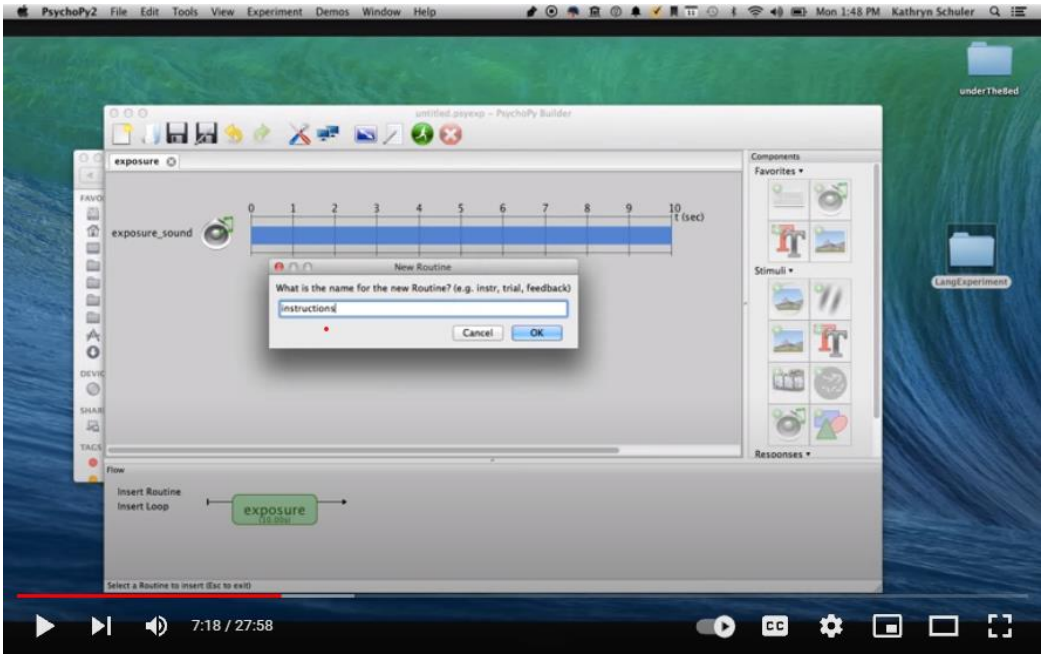
The black dot shows where you want to put the routine, so you click on it,



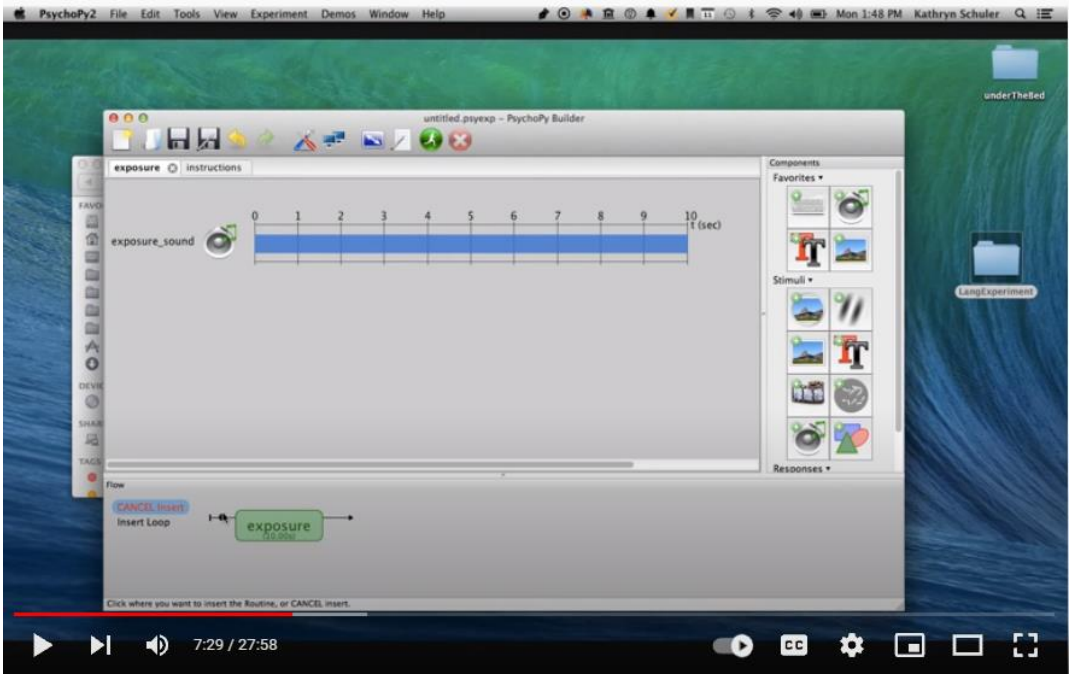
And then it loads the 1 second exposure routine.



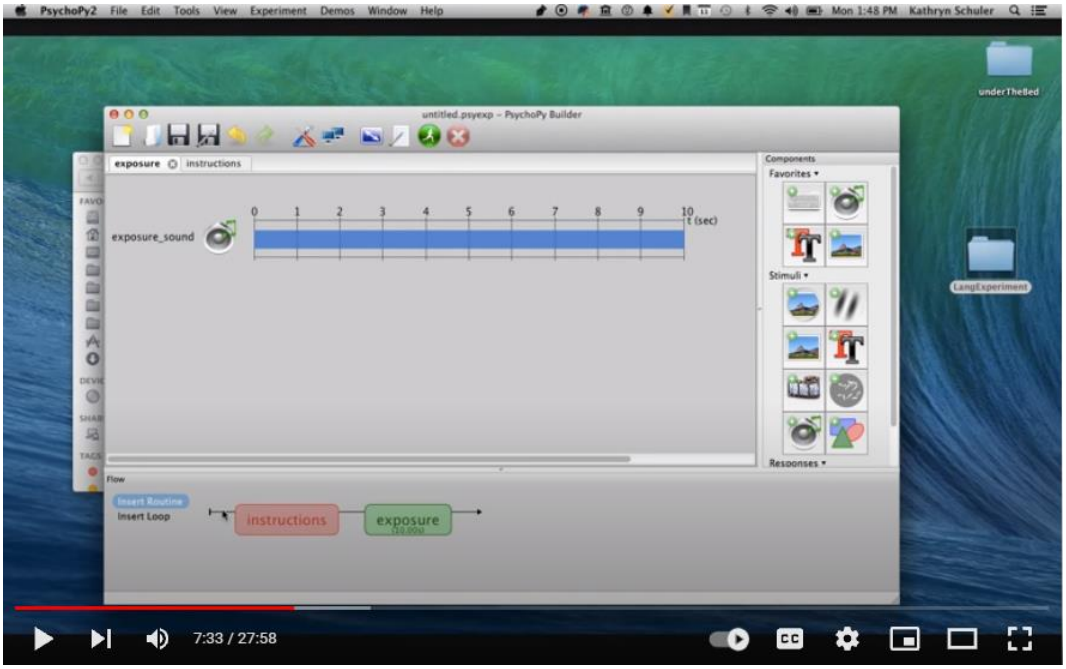
Now, insert another routine with a text component to provide instructions to participants before the experiment begins. Click insert,



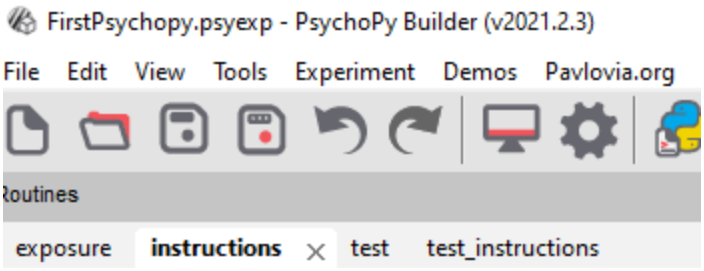
… and name it instructions



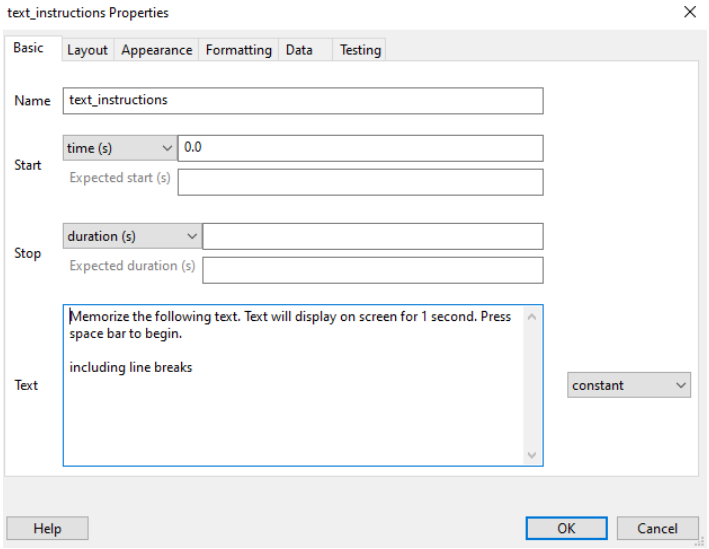
Click on the lefthand black dot that shows when you hover your mouse over it.



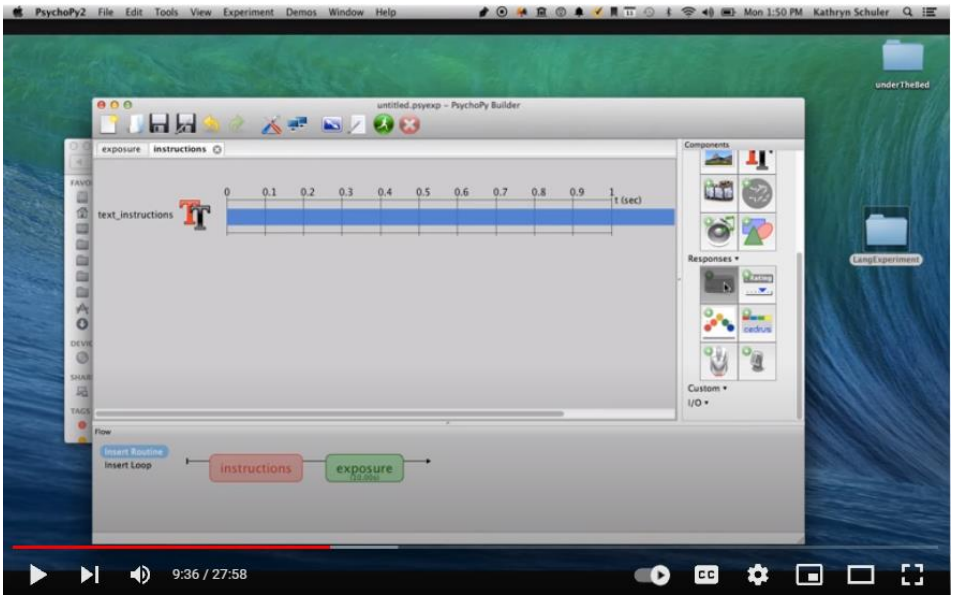
And then instructions automatically appears in the flow diagram. Now we can add the next text component.



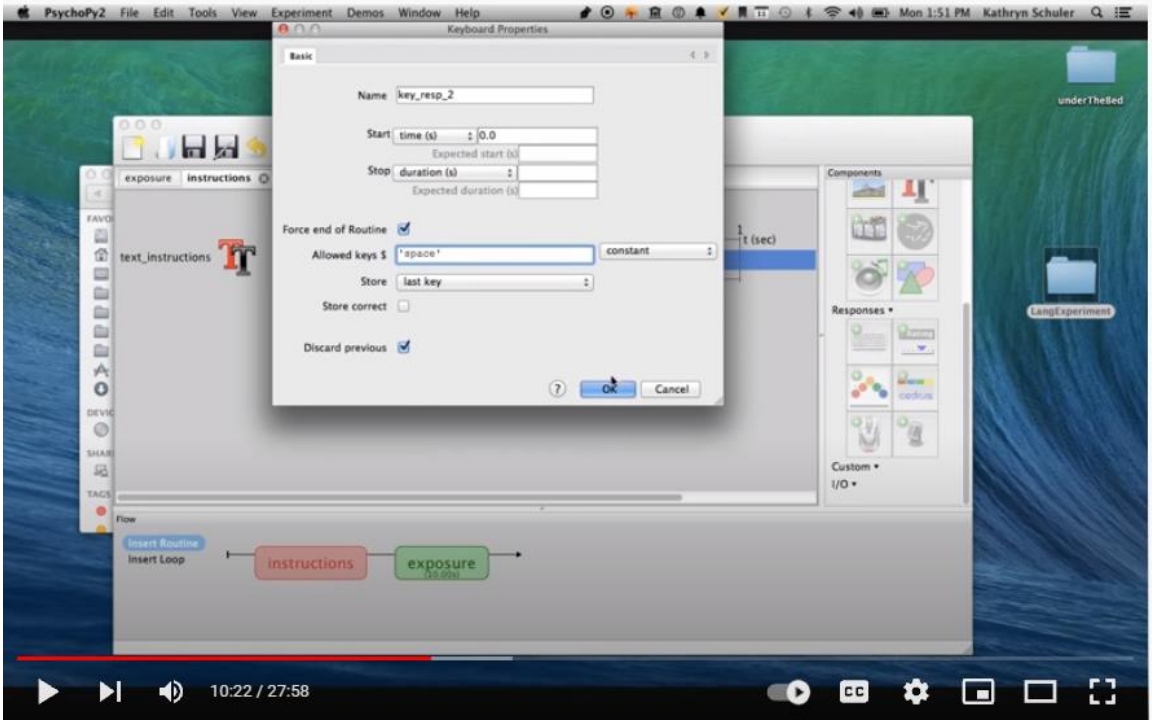
Click on the instructions tab at the top lefthand corner, which will show the blank instructions routine screen.



In the components panel at the righthand side of the screen, click the text component icon.
For the name, call it text_instructions.
Change the stop (point) to infinite by leaving the box blank. We do that because we want the participant to press a button when they are ready to move on. We want the instructions to appear on the screen forever until the participant presses a button to move on.
In the big box where it says text, you can type whatever text you want. I will type "listen carefully to this language you have never heard before. Press space bar to begin.

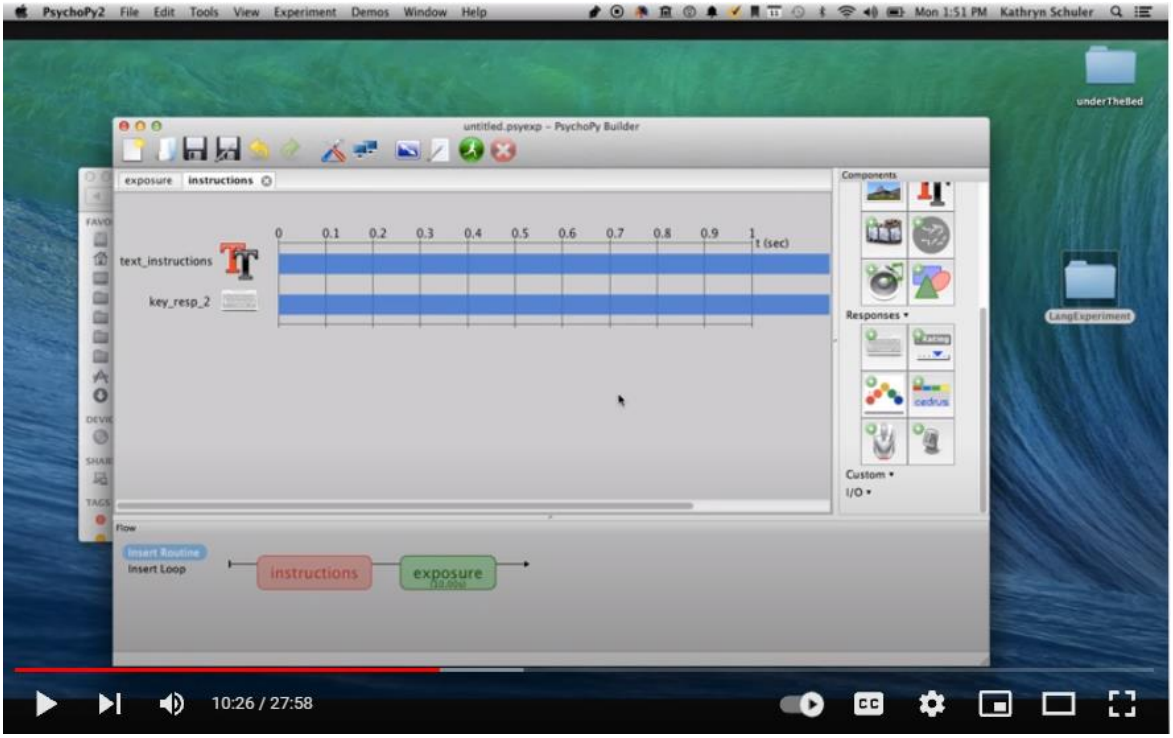


Now we need to tell psychopy to listen for the space bar. So we need to add a keyword response component. You find that in the components panel under 'responses'. Click on the keyboard image

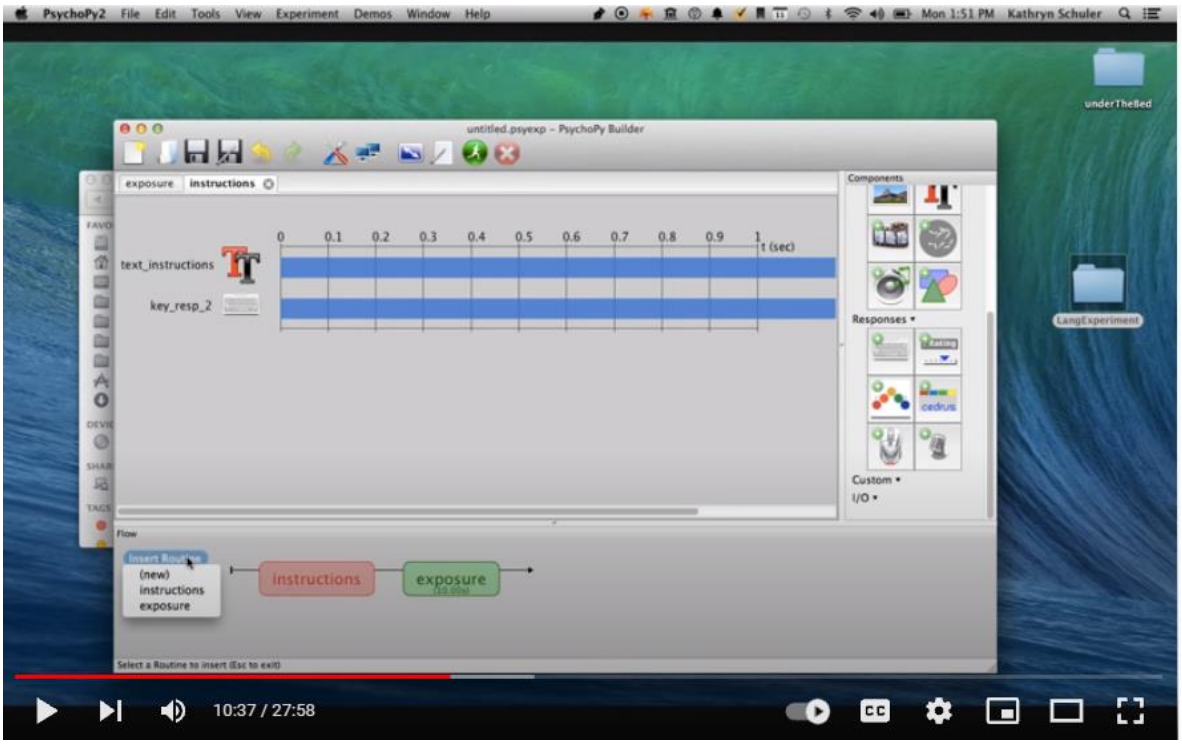


We keep the name as it is. Again, we set stop to infinite, as we want it to keep going until the space bar is pressed.

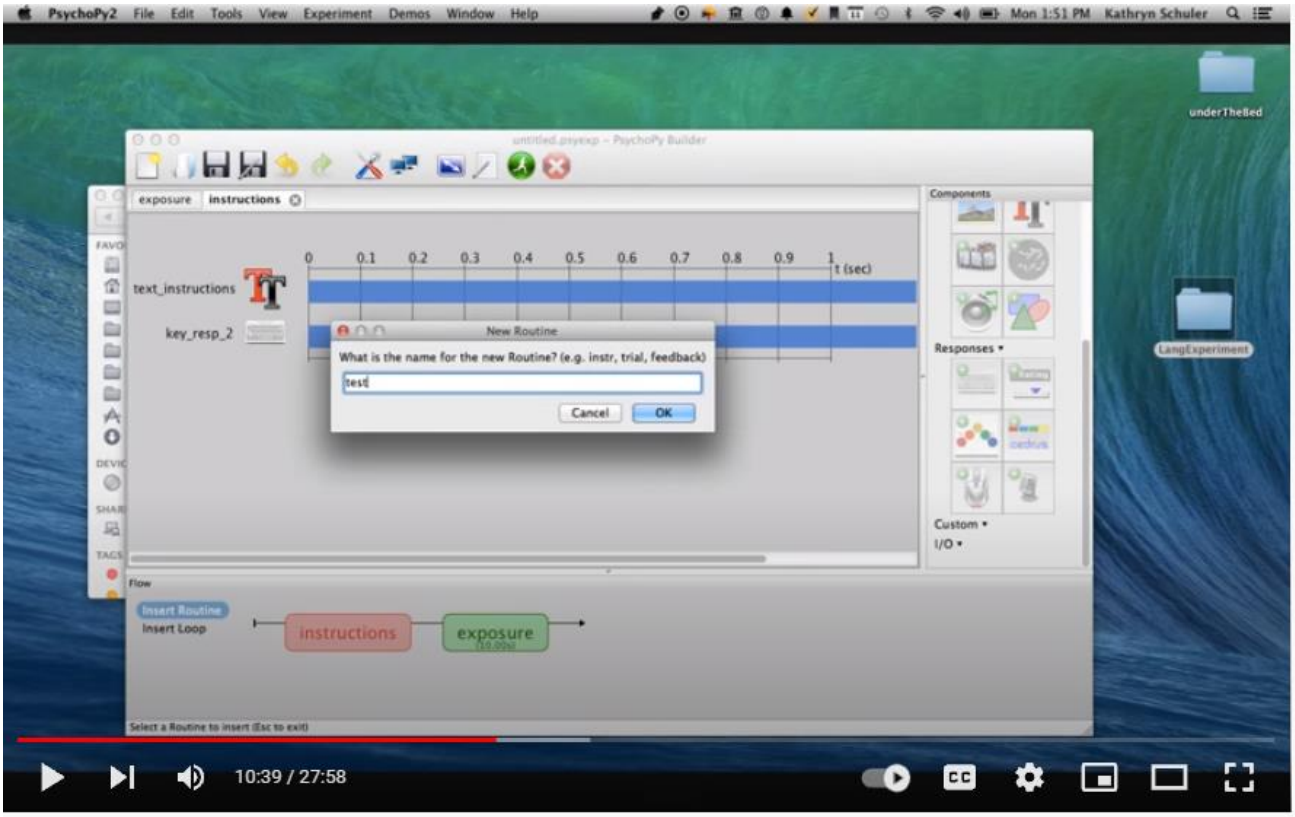
Under allowed keys, we backspace everything except 'space'. Then click ok.



Now we see our routine appear for the instructions.



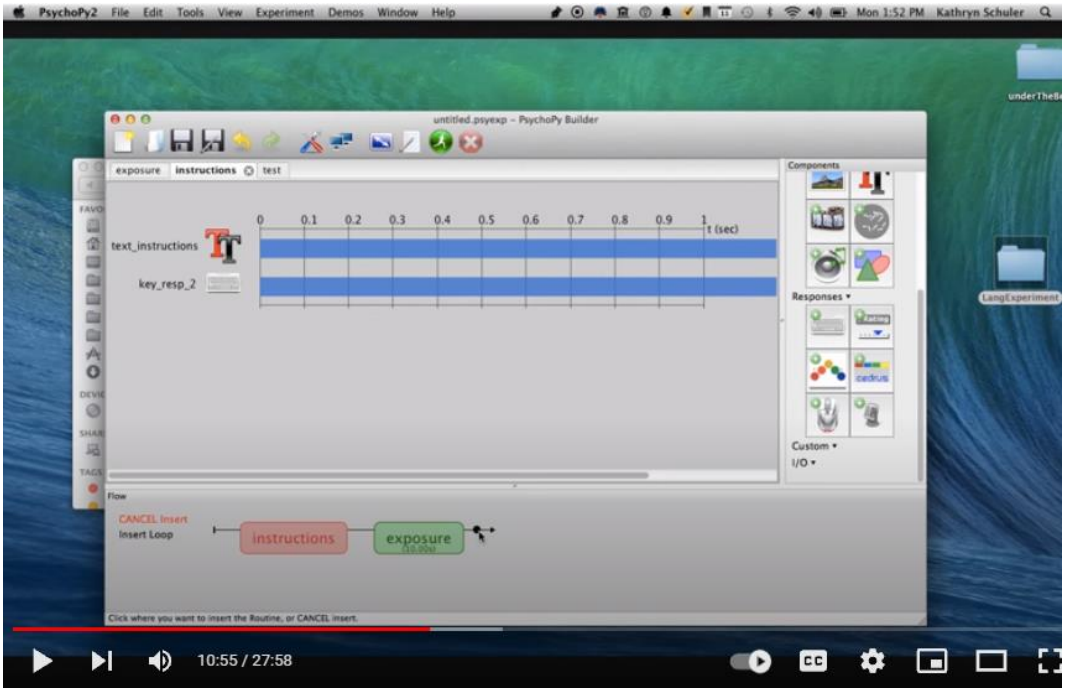
Now all that's left to do is collect our data in a test phase. So we want to select another routine, as shown above.



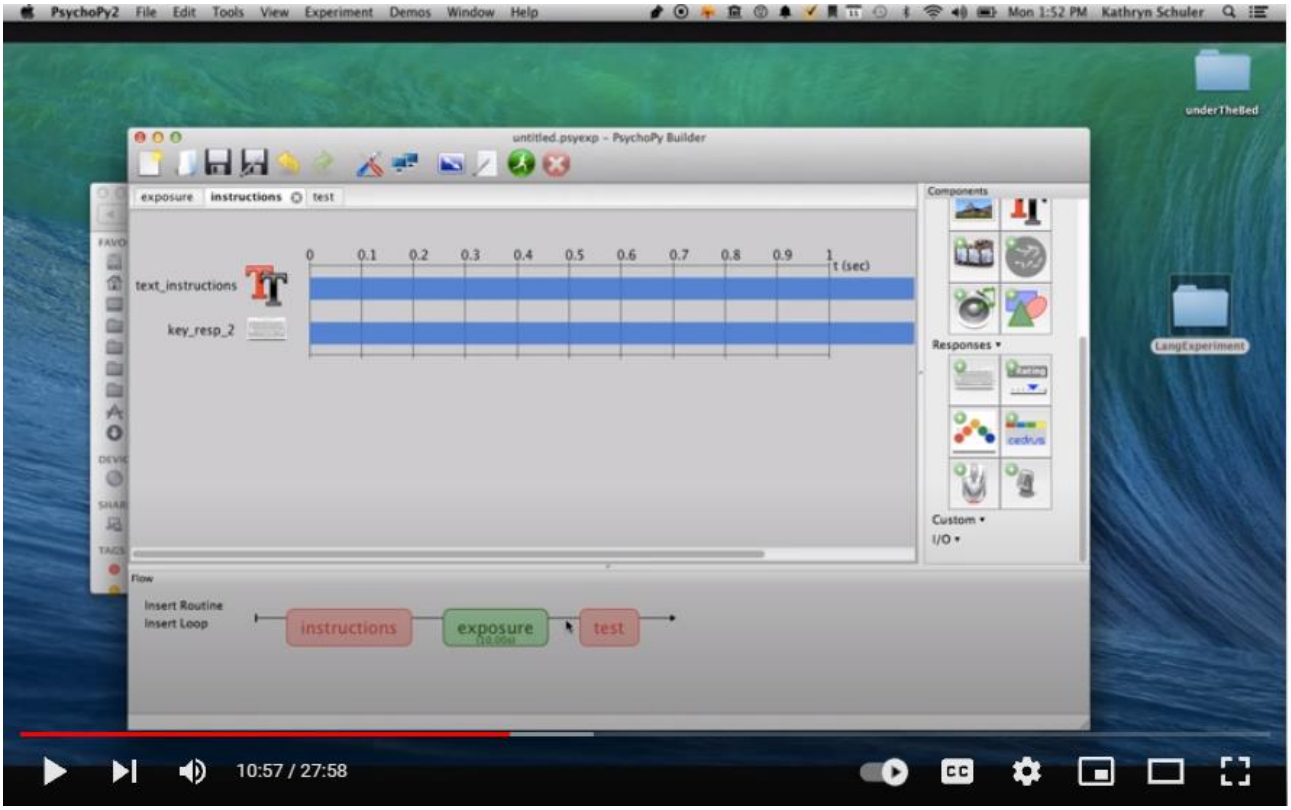
And call it test.

For the test routine, we want the participant to see some text, and then tell us whether they think that text was exactly the same as the first bit of text they were shown for that brief second.

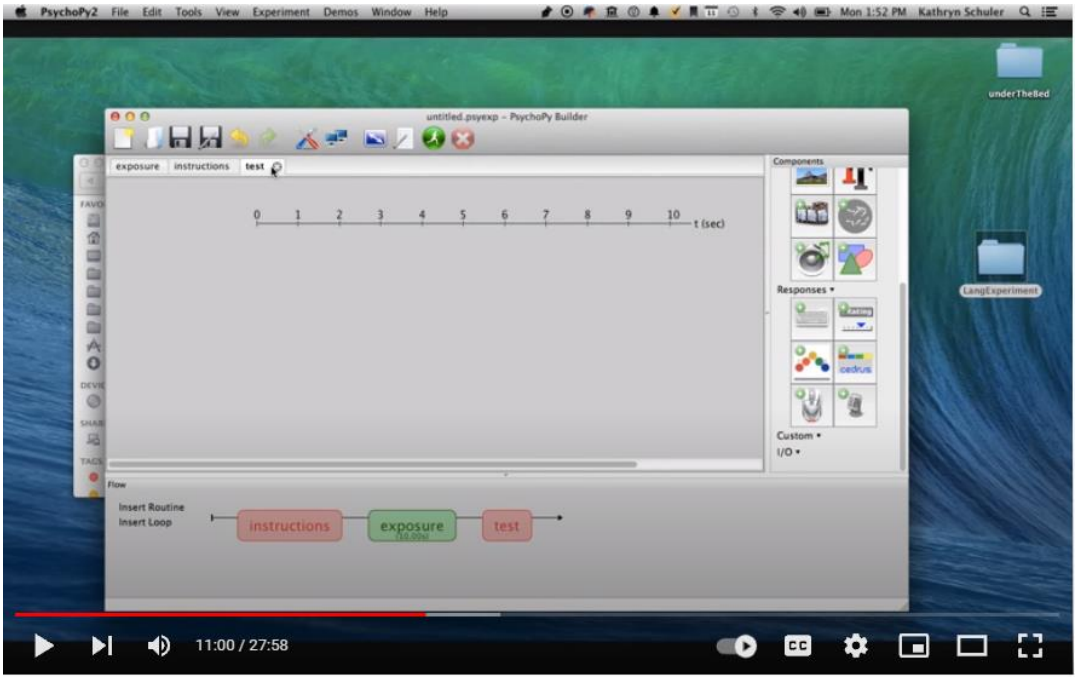
So we'll add another text component, called test text.



But first, insert the test routine by clicking the black dot at the very end.

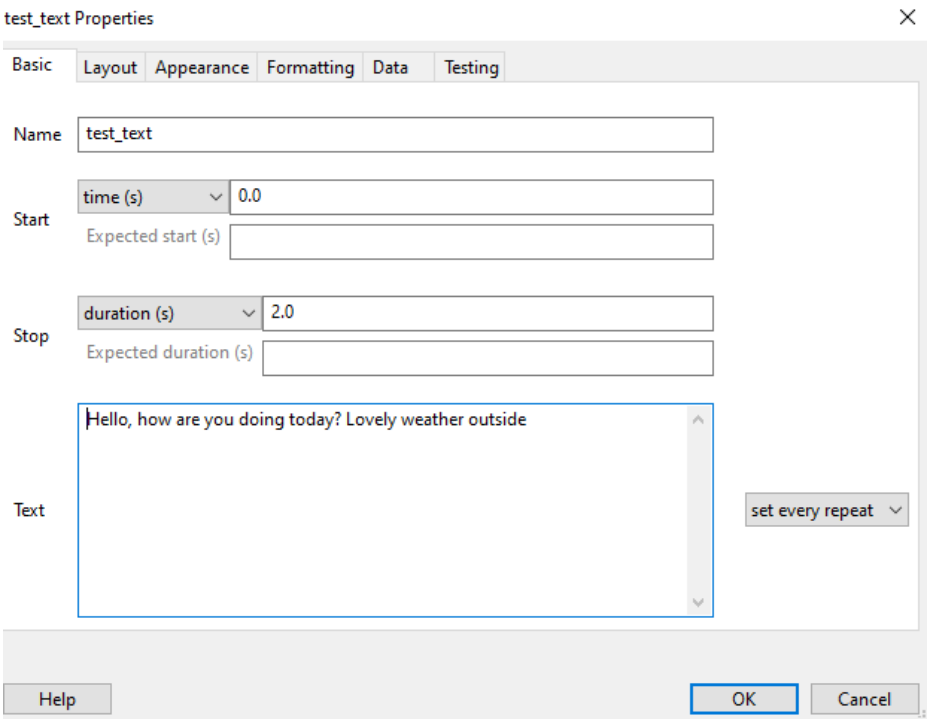


And test automatically appears at the end.

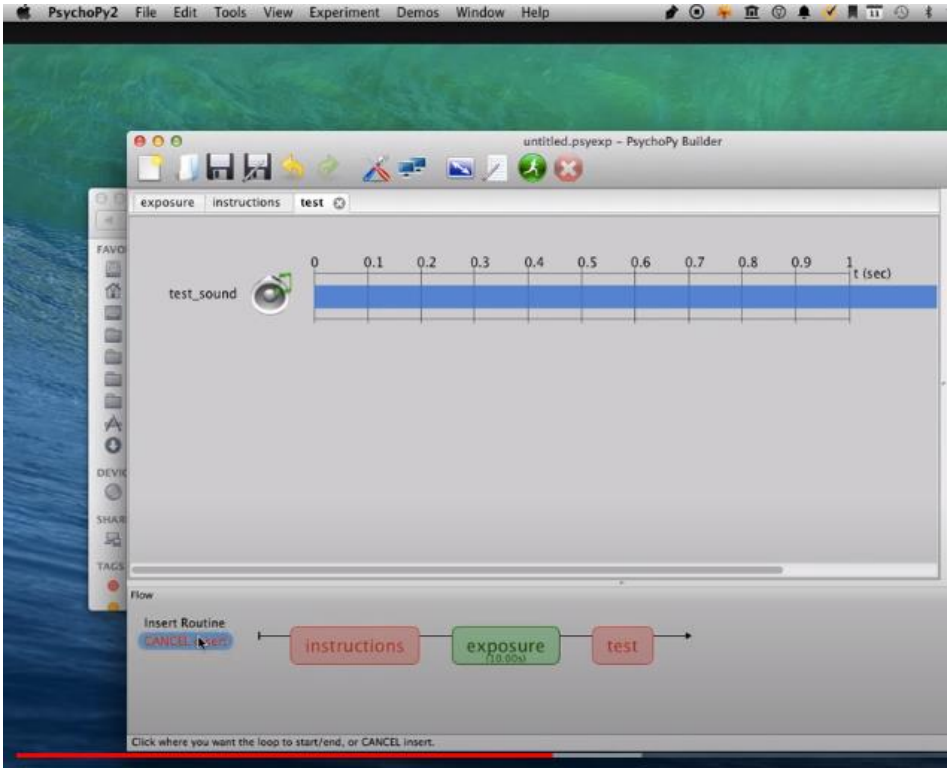


Ensure that you have the blank test tab open.

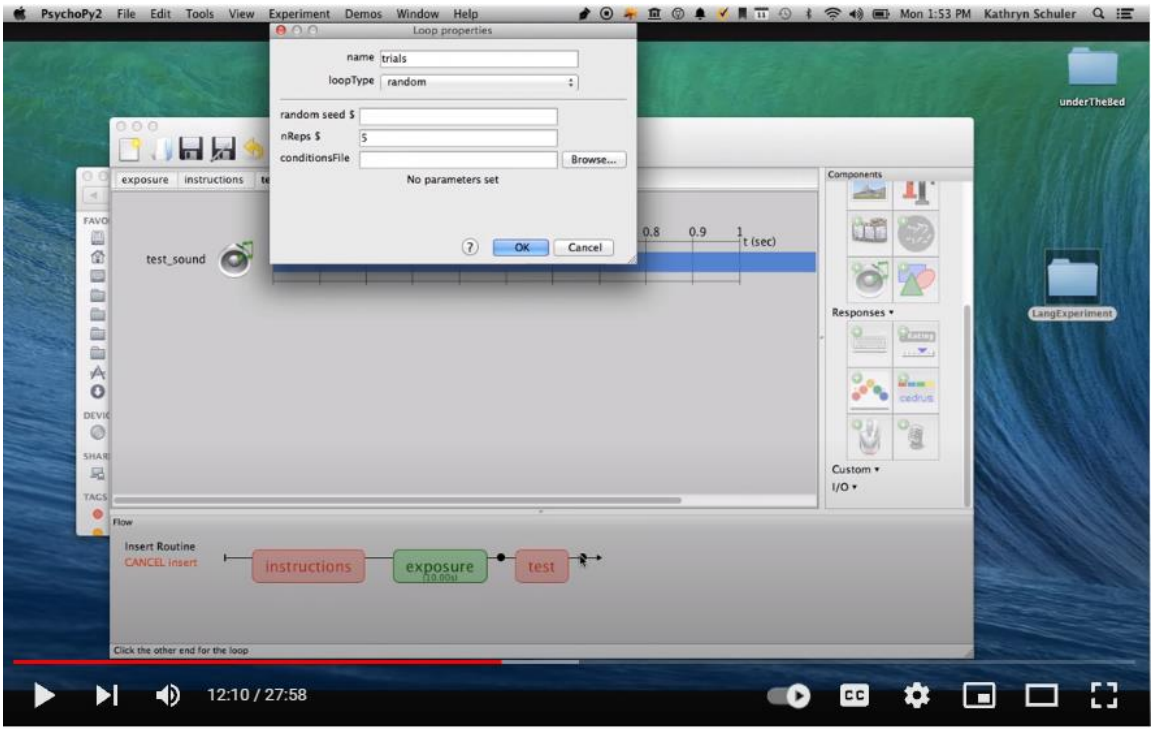
Then click on the text stimuli component.



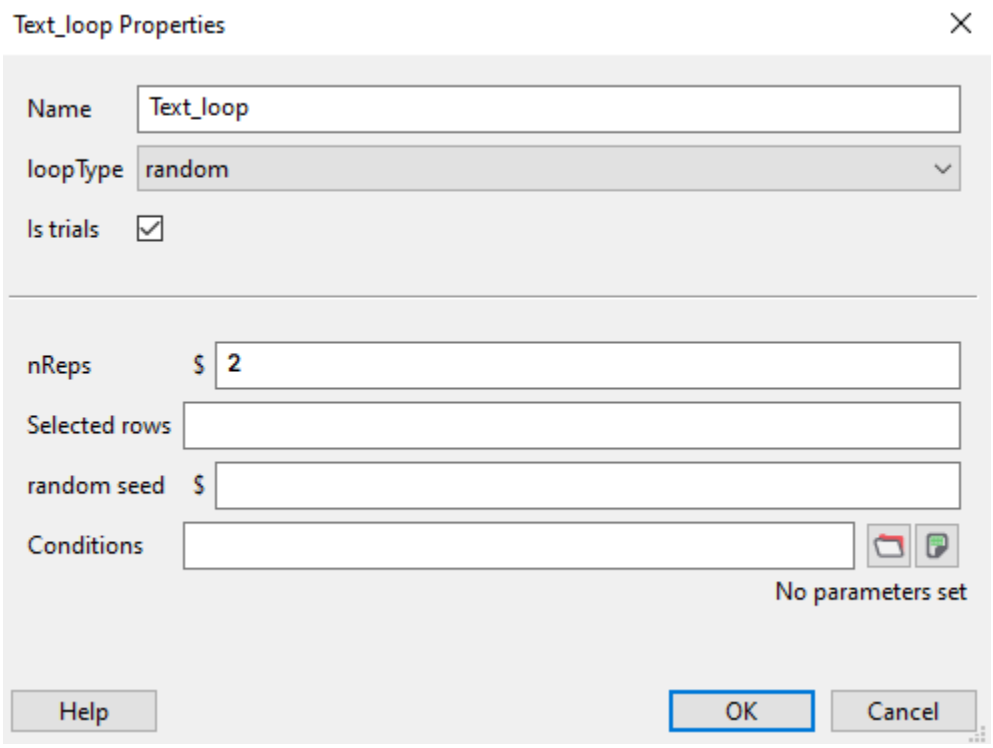
Ensure that the above information is in the box that pops up, including set every repeat.



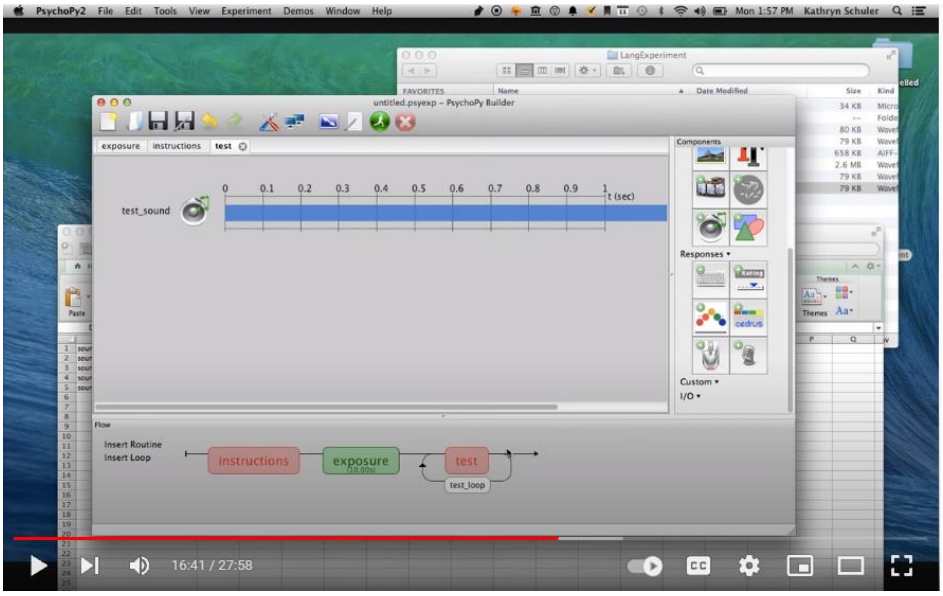
Now we want to insert a loop. Then the black dots appear again when we hover over the flow, and we want the loop to loop around the test text. So we're going to specify with the conditions file, what text to play for the test. And psychopy is going to go through the loop, and read each test item from the list, and keep doing this portion over and over again.



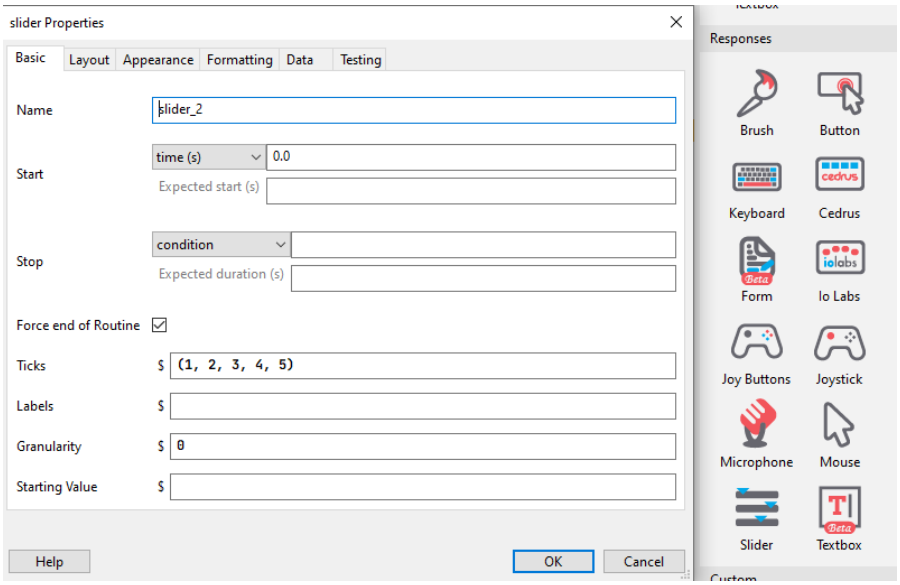
So we start the loop on the last black dot. So click the last black dot, and the above window pops up.



So you can alter everything so that it looks like what is written above.

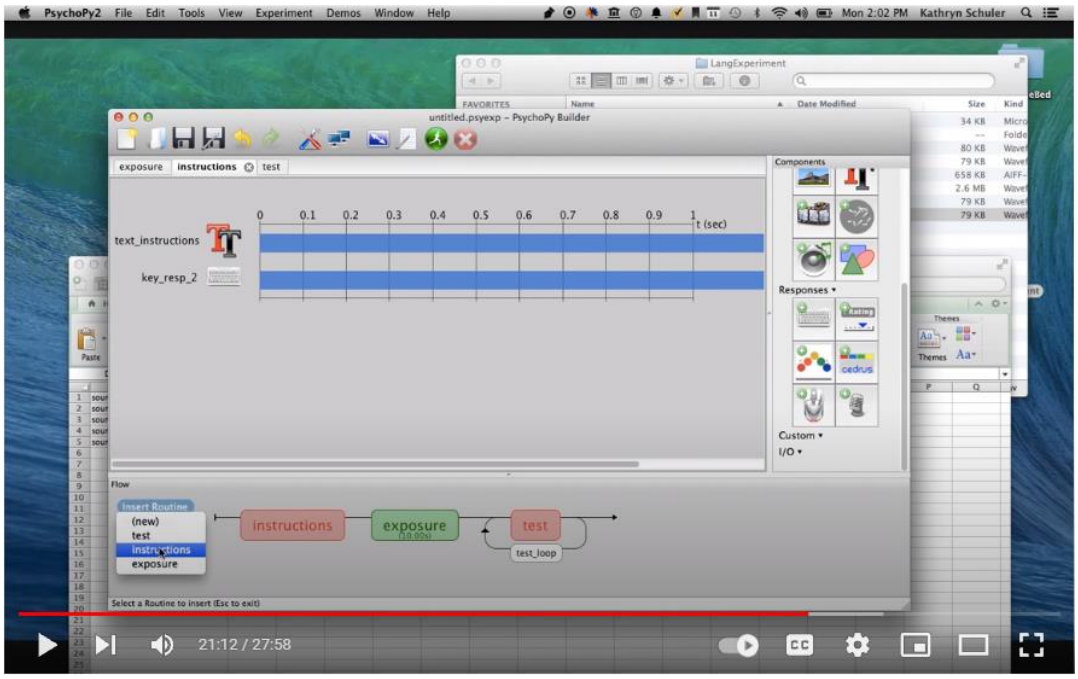


Now you see the loop around test. So whatever is in this test routine is going to be repeated, which we just specified as 2.

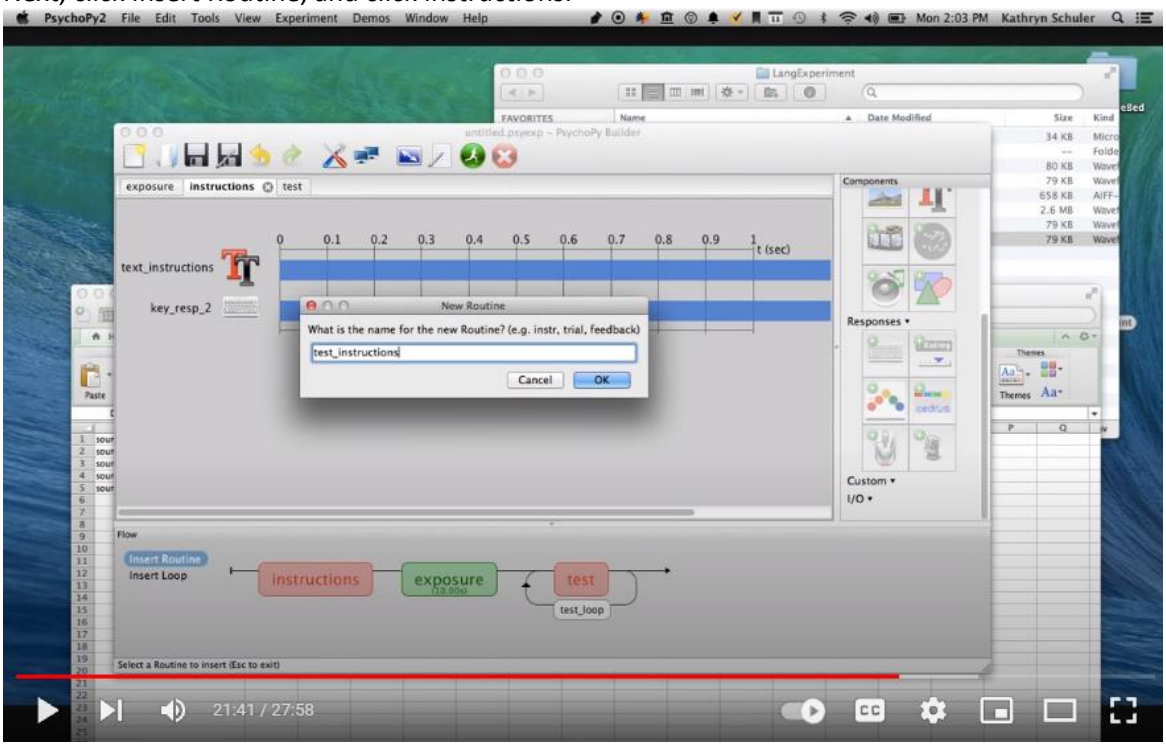


So now, we're going to use a rating scale (slider), because we're going to ask the participant to rate how similar the second sentence shown is to the first sentence.

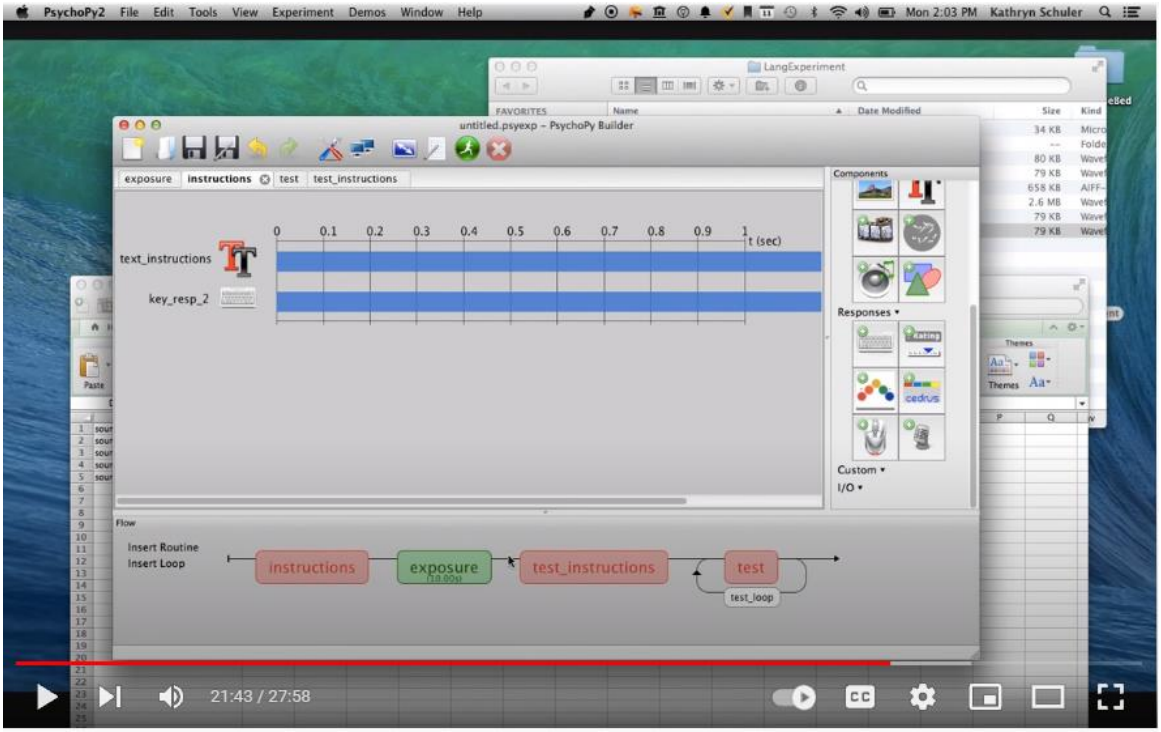
So the scale will be from 1 to 5, and we will set it to infinite again.



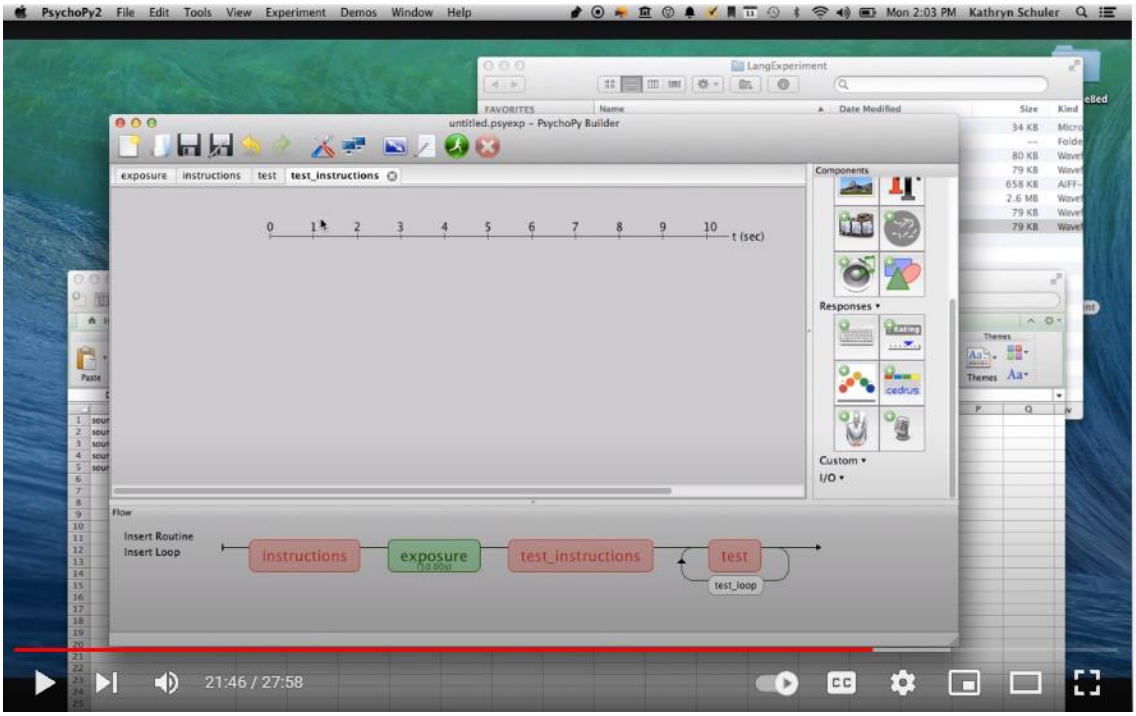
Next, click Insert Routine, and click instructions.



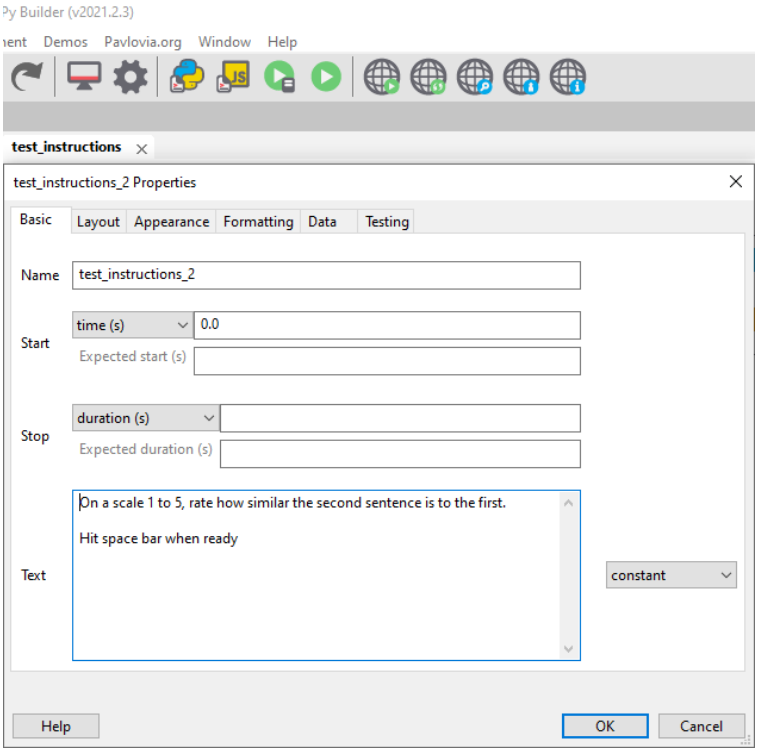
Create new routine called test_instructions



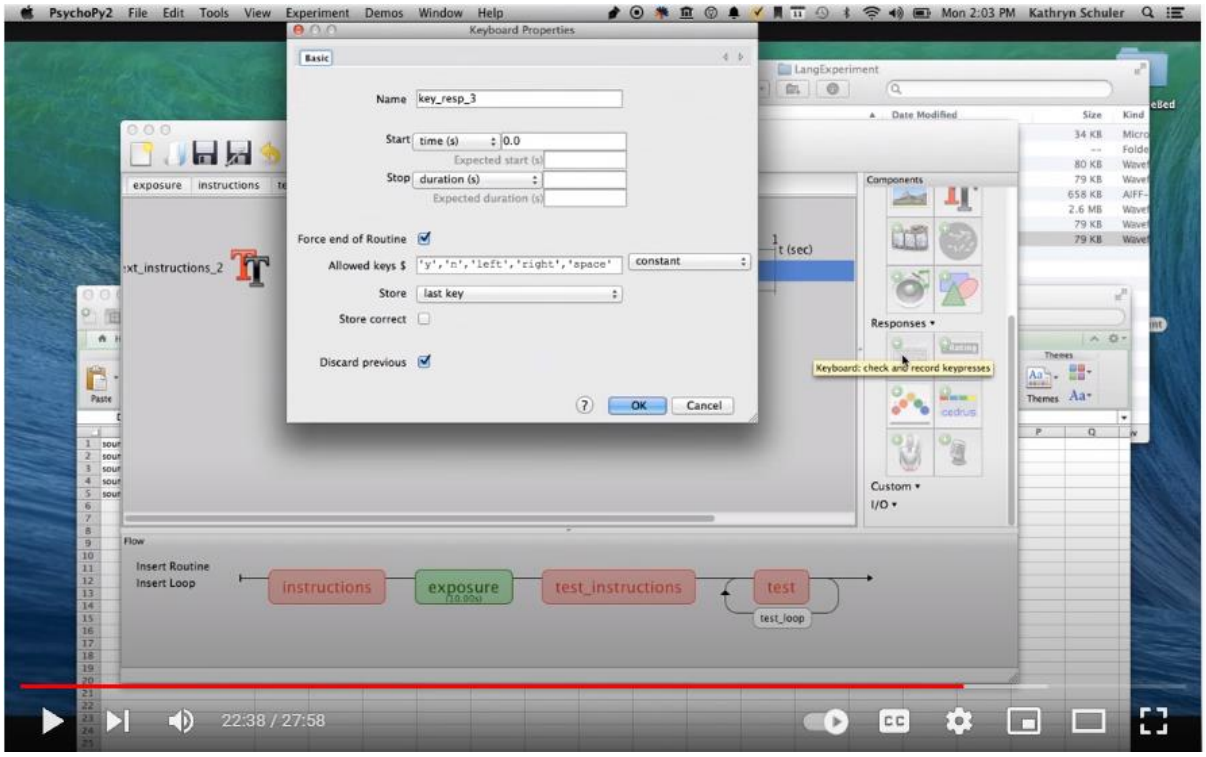
And insert it between exposure and test, but outside of the loop so that it only shows once to the participant.



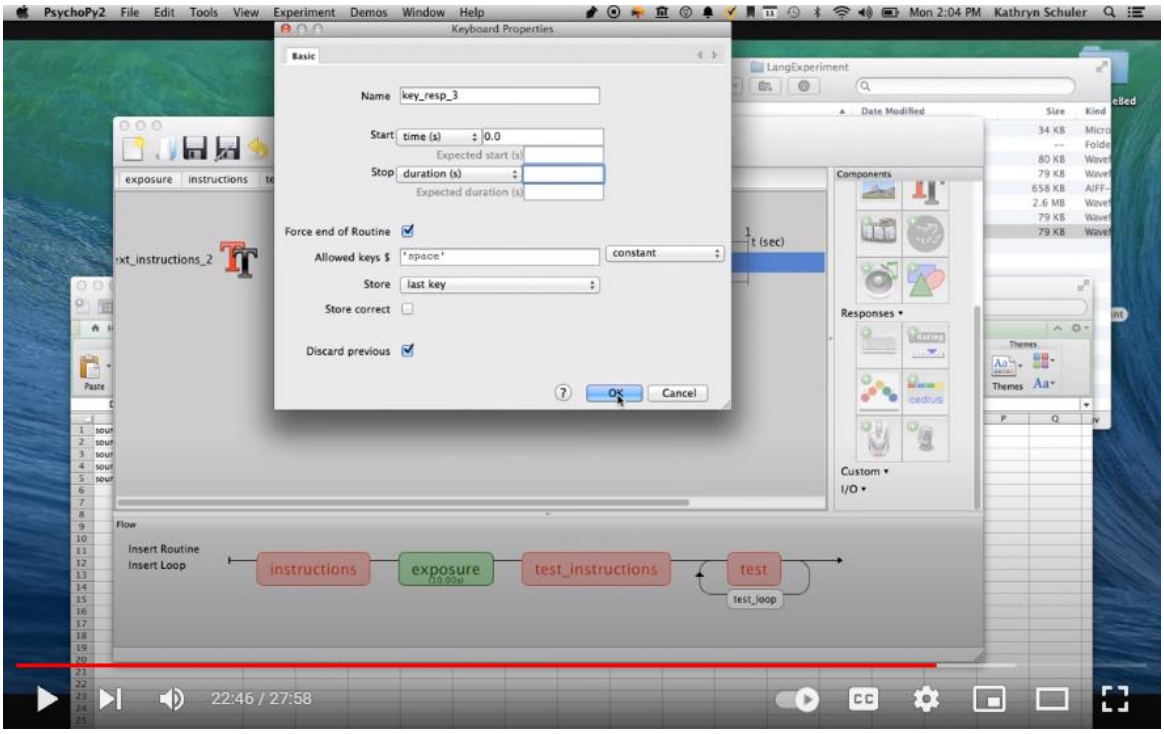
Click the test_instructions tab.



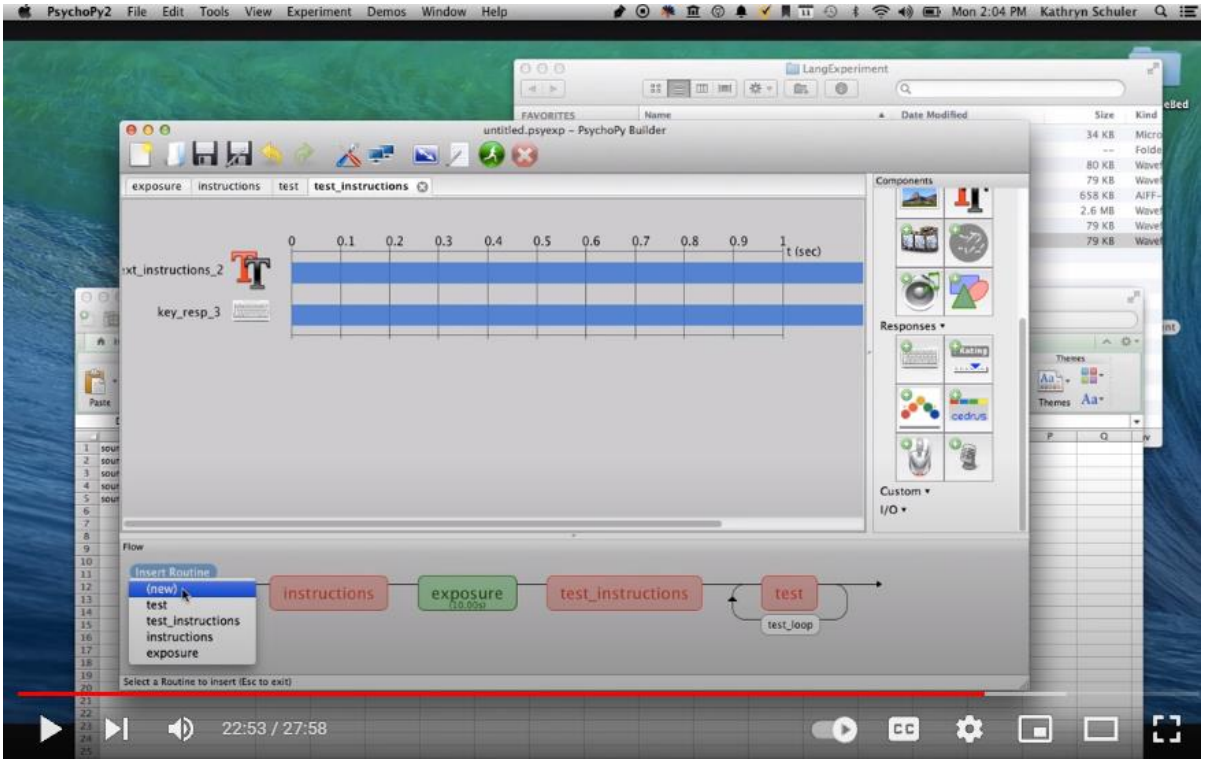
Click the text component icon again. Ensure that the dialog box says the above information. The big text box could say something like: listen and rate on a scale 1 to 5. Hit space bar when ready. Click ok.



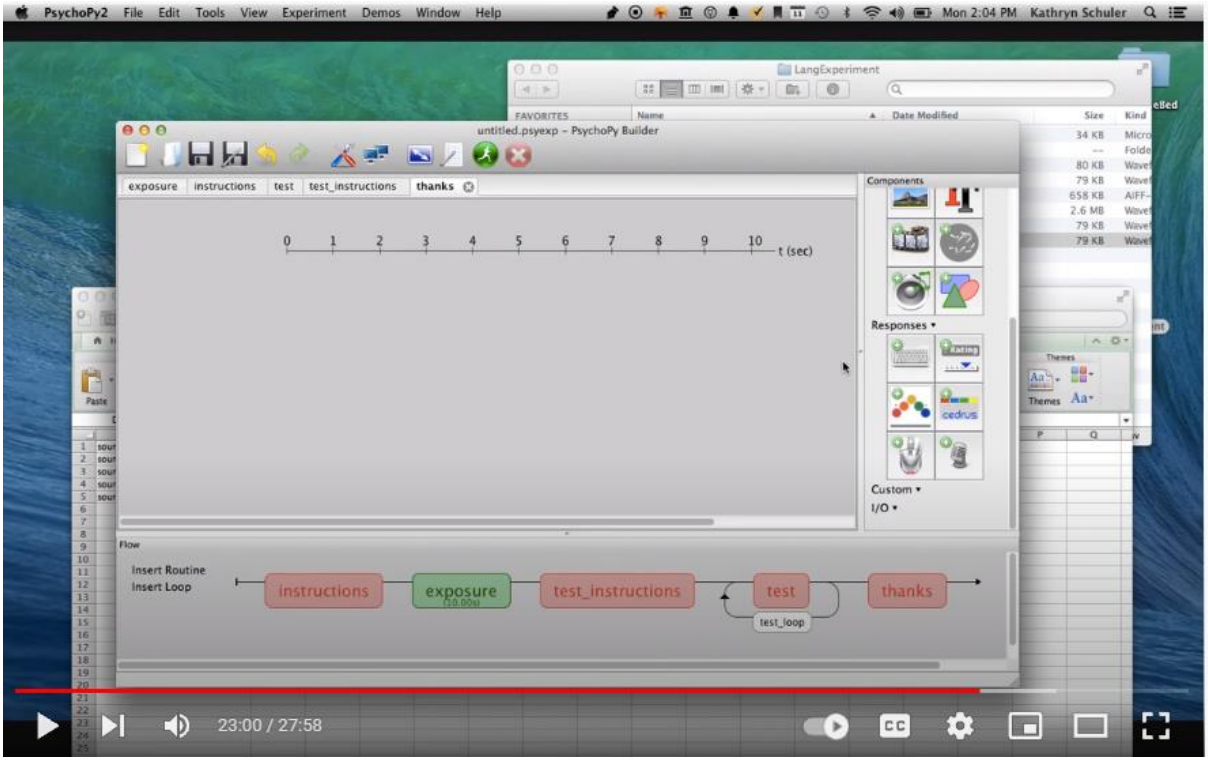
Next, under responses, click the keyboard icon.



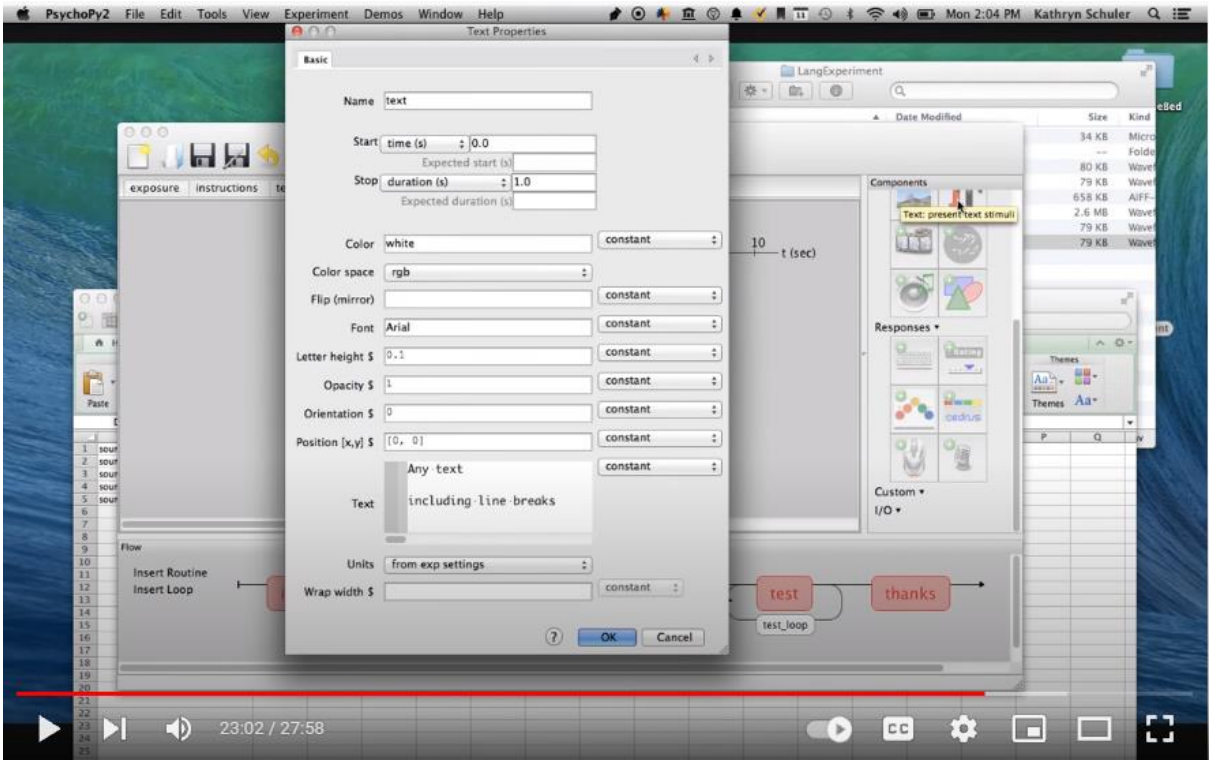
Ensure that allowed keys $ only says 'space'. Ensure everything else looks like above, and click ok.



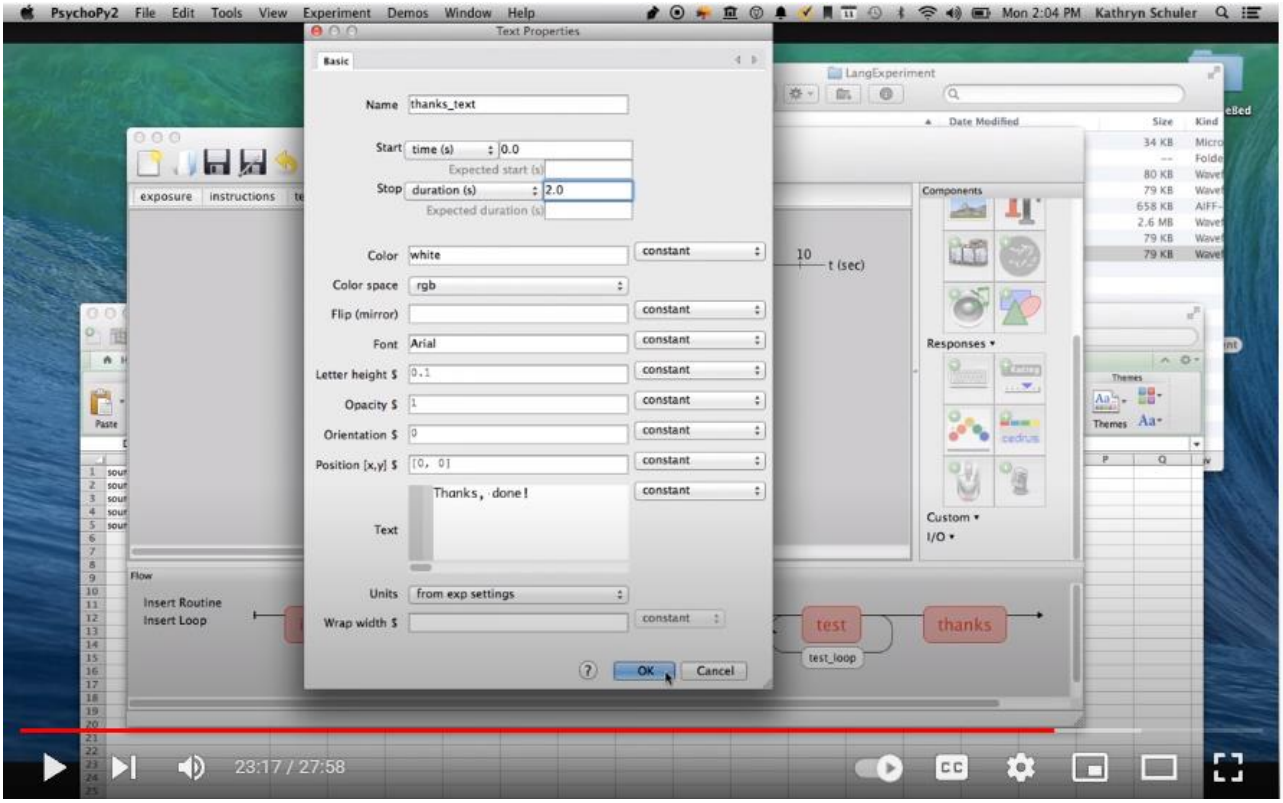
Optional routine to display at the end of the trial: Create a new routine, and name it thanks.



Click on the black dot at the end, to insert it at the end.



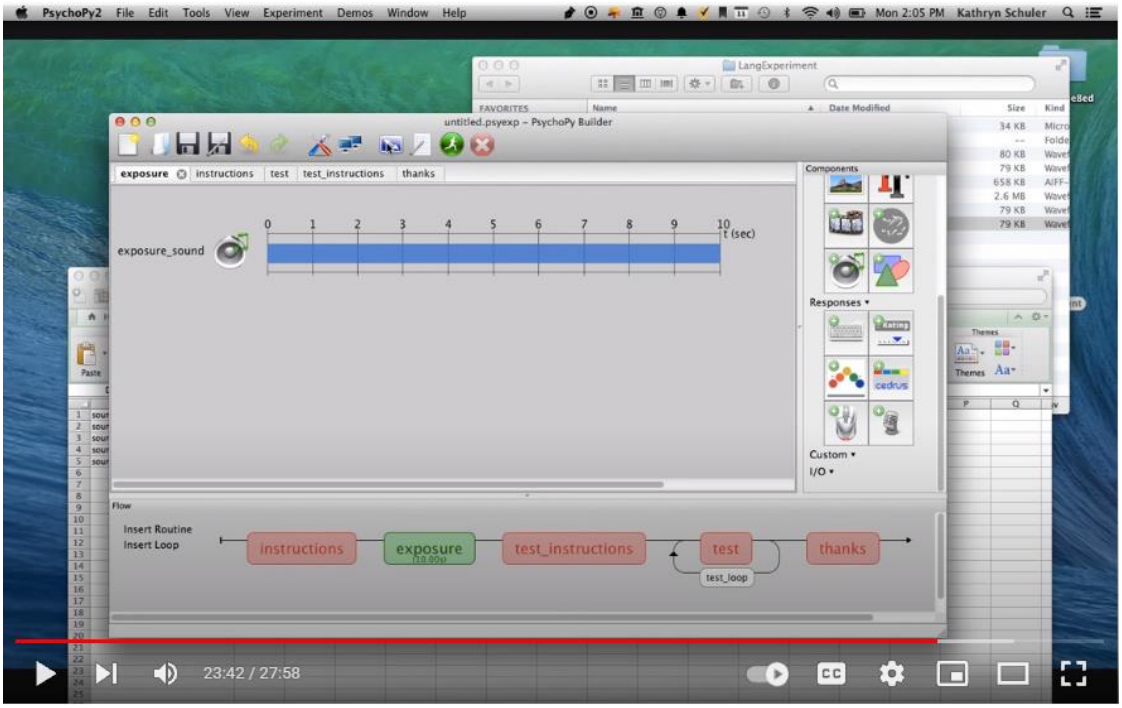
Click on the text icon.



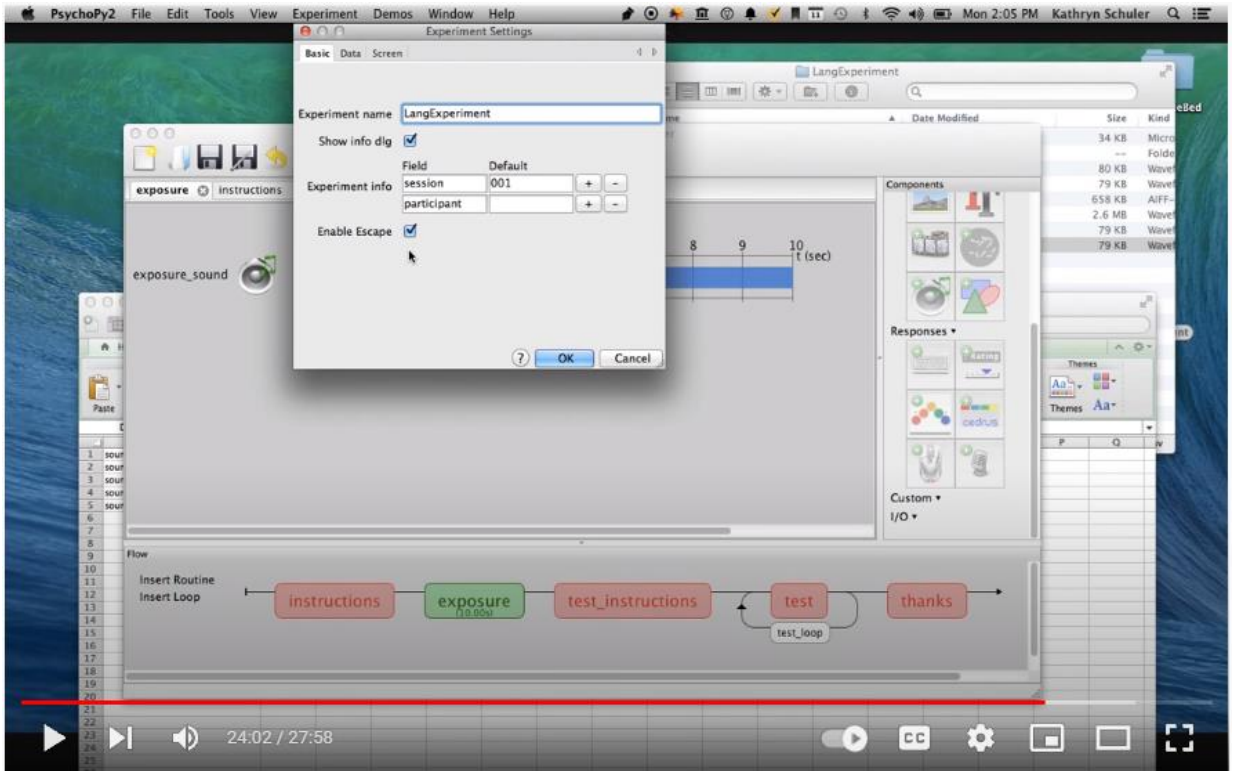
Specify it to show for only 2 seconds, type a message where it says text, and click ok.

Then we go back to the exposure tab, click save. That's the experiment.

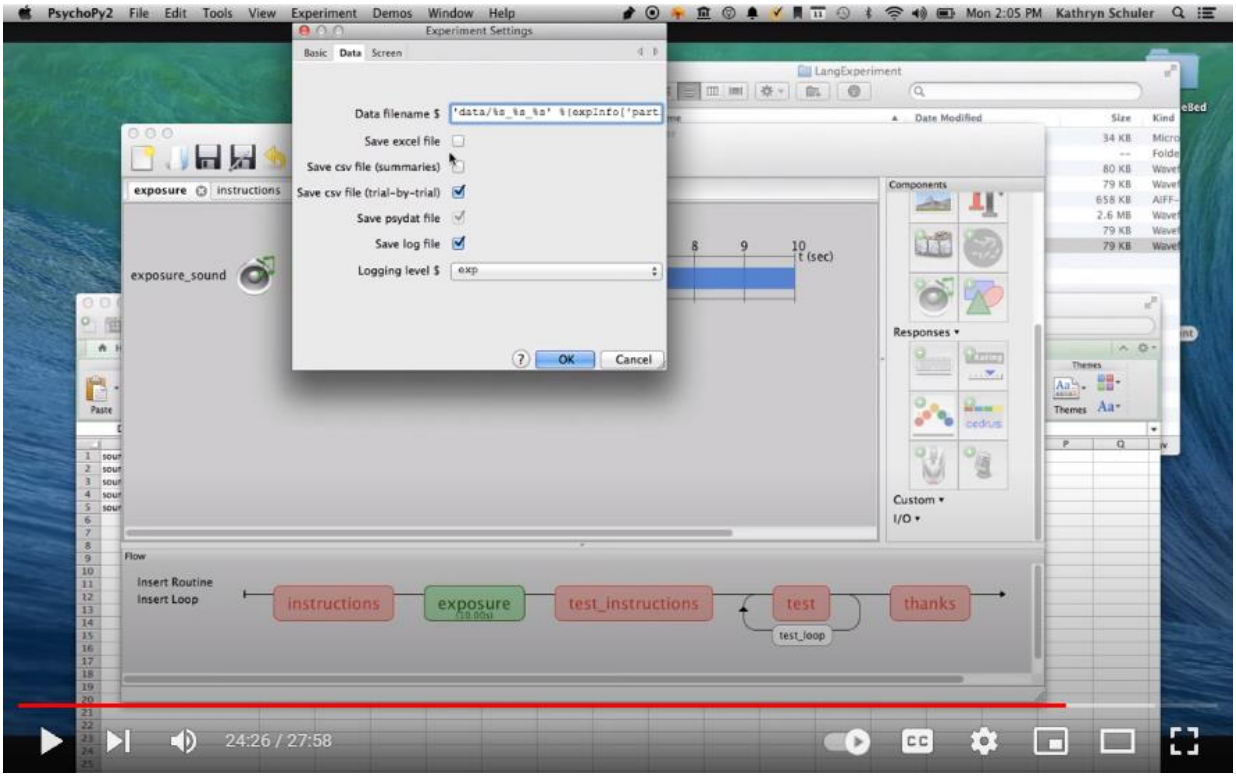
Some other things:



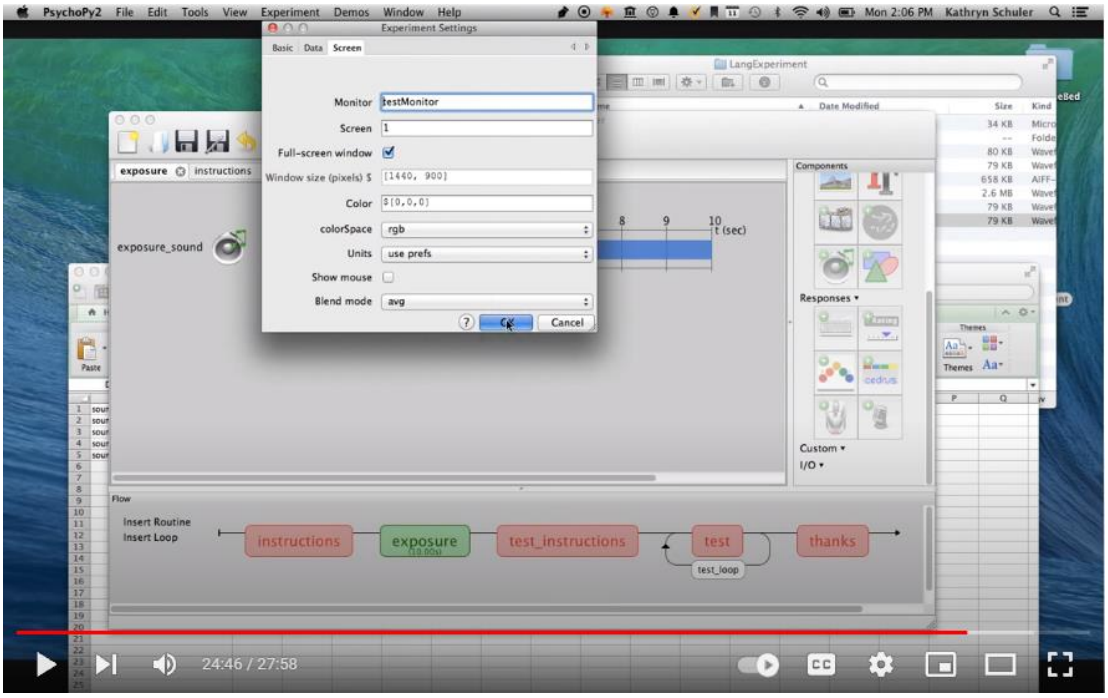
First, look at the experiment settings dialog box (the blue icon at the top).



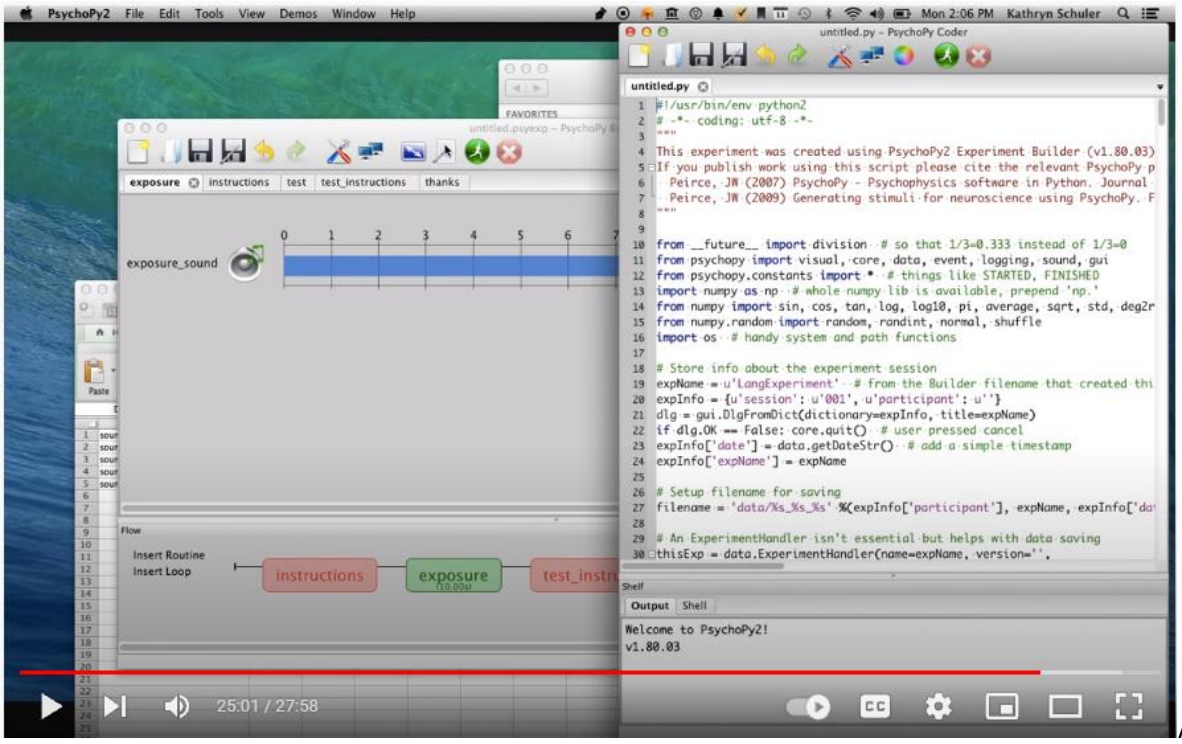
Ensure that Enable ESC is checked, so that participants can press the escape button to exit the trial at any time.



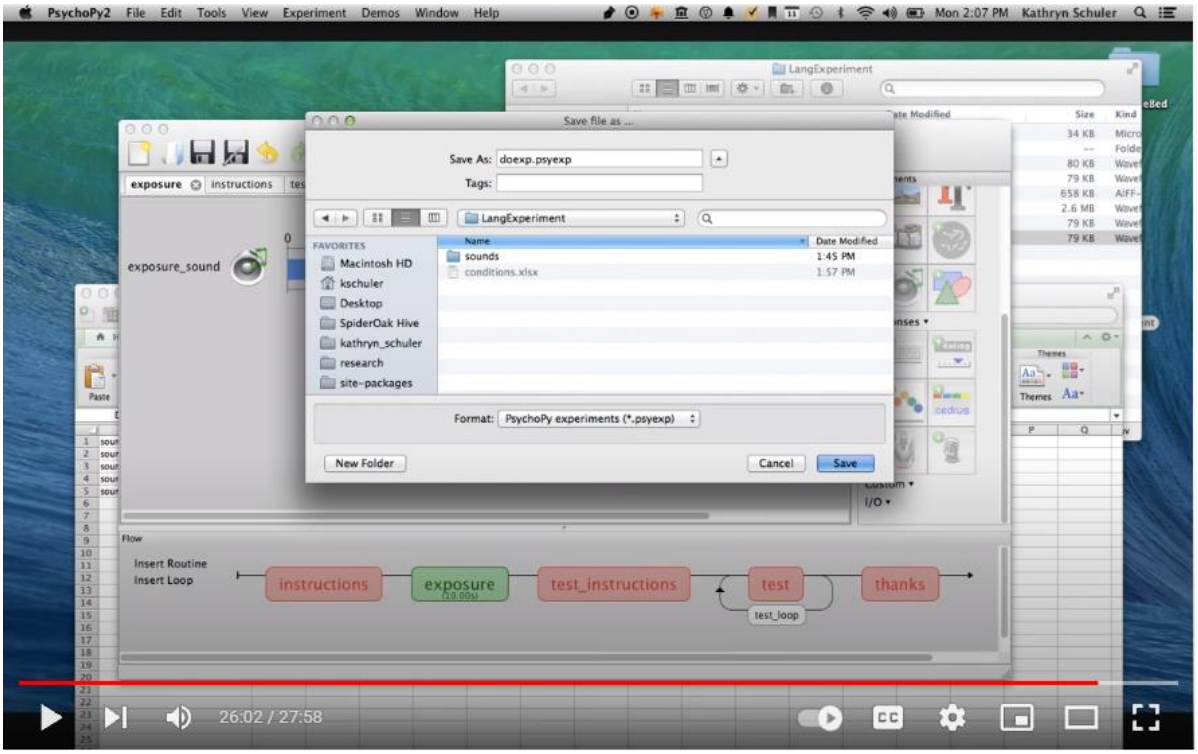
Look over the different things you can check off in the data tab.



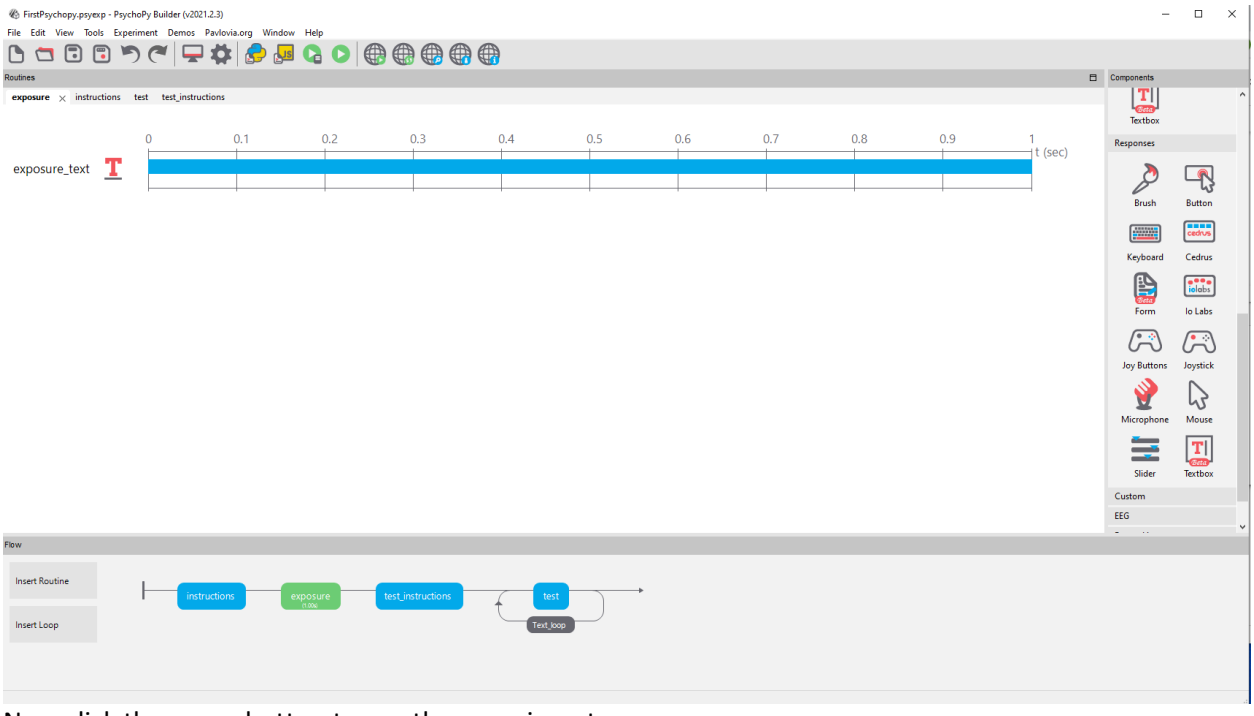
Look over what you can do in the screen tab.



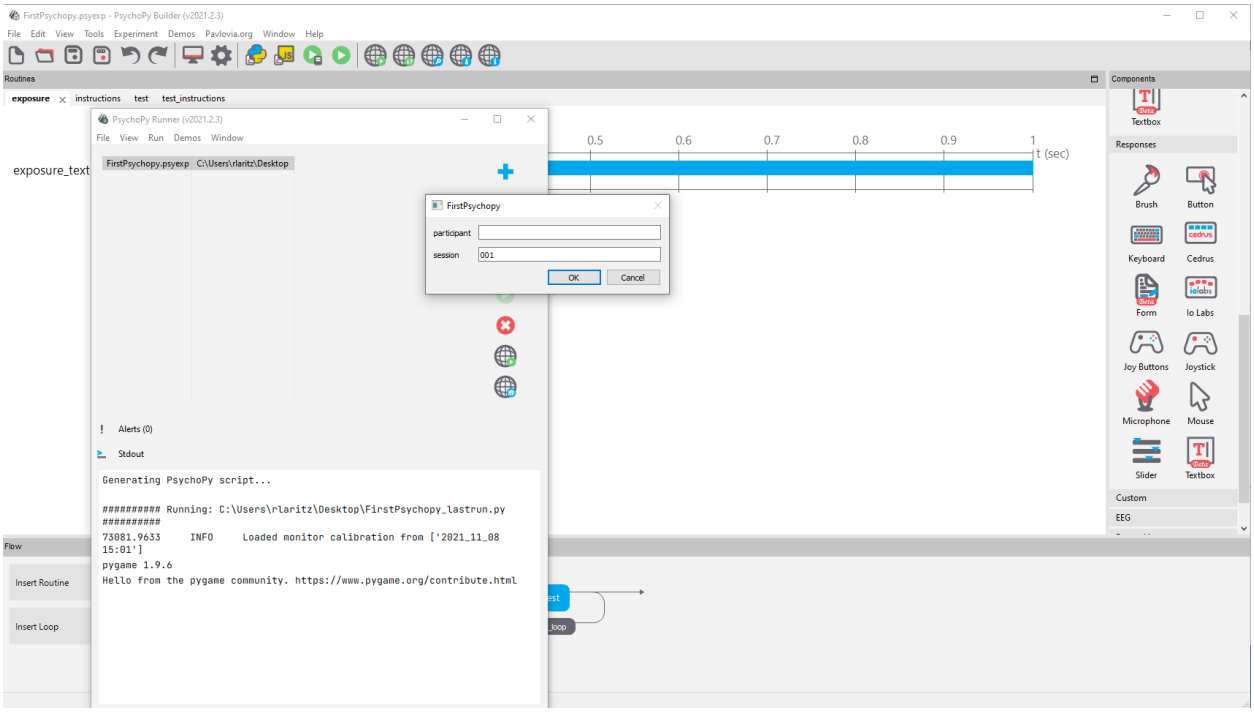
Also, the code format pops up when you click the pen and paper symbol. This is good for reviewing the Python code that creates the experiment you just created, and helpful for learning Python.



Save the psychopy file in the langExperiment folder.



Now click the green button to run the experiment.



Type your name in the box beside participant that pops up, and click ok.

Then the experiment runs.

Here is the link to the original sound experiment video that this experiment is based on: [How to Create a Language Experiment Psychopy]