



## KELP Module 1

### Topic: Writing a Program

# ACTIVITY 6: Plant Growing

## VOCABULARY

**Scene:** The stage at a particular time

**Show:** Makes a sprite appear or reappear on the stage

**Hide:** Makes a sprite disappear from the stage

**Change Background:** Change the background picture for the stage

## ACTIVITY GOAL

In this project, you will make scene changes.

## BACKGROUND

To make scene changes in Octopi you must use a few different blocks that will program not only your sprite, but also the stage.

### Scenes

Like a scene in a play, movie, or game, the scene may change when the character travels to a different location or moves to a higher level. Different scenes are distinguished by which sprites are visible and what the background looks like.

For each scene change, you must determine *when* it is going to happen, what the *new background* will be, which sprites in the first scene need to *disappear* (hide) for the second scene, and which sprites hidden in the first scene need to *appear* (show) for the second scene.

The first step is to change the background.

### Change Background

The backgrounds are controlled by the sprite named **Stage**. Found in the sprite list. The scripts for the stage sprite can change the way the background looks using the block above.






### Hide/Show Sprites

The blocks to the right determine which sprites are showing on the stage at a particular time.



\* In a previous lesson we learned how to **initialize** sprites when you click the green flag. Since we now have more things that can change such as the background, we will have more things to initialize on the green flag.

- 1) If you change the background, use 
- 2) If you hide or show a sprite, use  and 

### EXPLORE

Your teacher will play the completed Plant Growing project for you before you begin. This is the sequence of scenes you are going to copy.

- 1) Open the project Lesson6PlantGrowing.
- 2) Does the stage look like the first scene is supposed to? What is different about it? Write your answer below.

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- 3) Click on the green flag. Then click on the cloud that says "Click Me".
- 4) A scene change is supposed to happen, but it doesn't. What three changes should have happened? Write the three things below.
  1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
- 5) You can use the **broadcast & receive** blocks to let the other sprites know about a scene change. (like in the CA Geography lesson)
- 6) Look at the **costumes** available for each sprite (in the costumes tab)
- 7) Look at the **backgrounds** available for the stage (click on the stage in the sprite's list and the background tab).
- 8) You will need to use all of these blocks to create the story with the scene changes you saw earlier.

## PROGRAMMING CHALLENGE: Plant Growing

Your goal is to take the sprites, costumes, and backgrounds and program them to match the example project.

### PLAN

**Step 1:** Open the Lesson6PlantGrowingExample again. Click the green flag. Follow the directions and record what happens below.

- When I click on the cloud these changes happen...

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- When I click on the "Next" button these changes happen...

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- When I click on the Sun these changes happen...

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### CREATE

Now it is time to create your project. Decide which **blocks** you will need to make all of the changes you wrote above in the *Plan* section. Try to use some of the things you have learned in earlier projects.

Below are some examples of blocks you might use for this project.

**Broadcast**

**Receive**

**Costume Changes**

**Hide**

**Show**

**Background Changes**

*\* You have already been given some blocks in the scripts tab to help you remember the different things you need to do.*

**Step 1:** Match the order of the scenes with the example project

**Step 2:** Make the changes happen when the correct sprites are clicked

## IMPROVE

If you finish early, try improving your project by doing the following:

1. Make the cloud rain for a while, then stop raining and then move off screen. Which blocks would you use to make this happen?

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2. Make the sun switch between its two costumes a few times. Remember that you need to include a "Wait" block between each costume change.
3. Make the sun get bigger when it changes to the costume with the rays coming out.
4. Are there any other changes you could make to improve your project? Describe them below.

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## REFLECT

Is there anything you found surprising when you were completing this project?

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Did anything work differently from how you thought it should or would?

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