Note: Thanks to Wanda Dann and Steve Cooper for slide ideas
Announcements

• Assignment 3 storyboard due today!
• Assignment 3 worlds due Thursday
  – Turn worlds in on Blackboard
What we will do today

• Chapter 4 Sec 2 – Parameters
• Classwork
Overview

• The need for more flexible methods
• Creating methods with parameters
• Passing arguments to methods
• Demo
  – Using Alice – methods with parameters
A Beetle Band

- Create an animation for a bug band as an ad for their next concert
- Each band member will perform a short solo
Storyboards

• Each bug member will perform a solo

Do together
Do in order
georgeBeetle move up
georgeBeetle move down
play sound

Do together
Do in order
ringoBeetle move up
ringoBeetle move down
play sound

Do together
Do in order
paulBeetle move up
paulBeetle move down
play sound

Do together
Do in order
lennonBeetle move up
lennonBeetle move down
play sound
Code for georgeBeetle

- We will need four versions of the code, one for each band member
- This code will only work for georgeBeetle
A Better Solution

• Four versions of similar code is tedious.
• The things that change are
  – The beetle
  – The music the beetle plays

• Better Solution: write a more flexible method
Parameters

• Built-in methods provide **flexibility** by providing parameters such as distance and duration

• Parameters allow you to pass in values
  – The values are **arguments**

• **Example:**

  Parameters: distance, duration
  Arguments: 0.5 meters, 0.5 seconds
Types of Parameters

- Alice provides several types of parameters that can be used in your methods.
The Storyboard

• Write one method and use parameters for
  – Which bandmember to perform
  – Which music to play

Solo:
Parameters: `bandMember`, `music`
Do together
  Do in order
    `bandMember` move up
    `bandMember` move down
  play `music`
Creating a Method Named Solo

• Can be used for any band member
• Will need
  – An Object parameter – which band member is to play a solo
  – A Sound parameter – which music should be played
World.solo with parameters
Calling the solo method

- Note that in each call, arguments must be given for both parameters
A Number Parameter

• Add a number parameter for **height** the **bandMember** jumps up and down.

![Create New Parameter dialog box](image)
Classwork Today

• Create worlds
  – Beetle band duet
  – Magic Act