Announcements

• Assignment 3 storyboard due today!
• Assignment 3 worlds due Thursday
  – Turn worlds in on Blackboard
  – Name textfile “README”
  – Put all three files in a folder named assign3LOGINID
    where LOGINID is your Duke login
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
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
Classwork Today

• Create worlds
  – Beetle band duet
  – Frog Escape