Announcements

• Assignment 3 storyboard due today!
• Assignment 3 worlds due Thursday
  – Turn worlds in on Blackboard
  – Name textfile “README” or README.txt
  – 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:**

```plaintext
georgeBeetle move up 0.5 meters duration = 0.5 seconds more...
```

What are the parameters?
What are the arguments?
How many of each?

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
  - **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