Objects Activity and Project Analysis

Primary Parallel: Core – Object organization and its uses

Novice	Apprentice	Practitioner	Expert
Objects are used to model real-life objects	Objects can be defined with classes	You can define classes for your own objects	Objects can make complex problems simpler
- Knows basic parts of objects (properties, methods, events) - Can identify parts of objects in HTML JavaScript code statements - Can modify existing code to give properties different values	- Can create object instances - Can use objects - Knows relationship of and difference between classes and objects	- Can define class when given a class chart - Can create objects with a defined class file - Can manage array of objects	Can design objects (properties, methods, events) for given problems
Project/Lab - Include GUI in web site *Test* - Desk-check code - Write code for objects - Modify code - Predict output for code	*Project/Lab* - Use *document* and *form* to refer to GUI in web site - Use I/O (keyboard and file) objects in *application* - Use *Applet*, GUI, and *Graphic* objects in applet *Test* - Write code to create objects - Write code to use objects - Predict output for code	*Product/Lab* - Use class to model *Questions* for application *Test* - Desk-check class code - Write code for classes - Write code to create objects from classes - Modify class code for properties or methods - Predict output for code	*Product/Lab* Use class to model more sophisticated grid (and pieces) for application or applet

Notes:
- This is first introduced for Project 2 (GUI) – "Baby objects" encompass Novice and Apprentice levels.
- The object concepts are then continued in Project 3 using the Java language.
- Two main concepts are important in CS1: 1) students learn how to create and use objects (and see them as variables, can be in arrays) and 2) they can define their own objects with custom-made class files. They don't have to know how to design their own class files for a problem yet. This will be refined in CS2.