

## IT Girl 2007 – 2008 Curriculum

### Fall Lessons:

DMWT = Don't Mess with Texas game

Week	Hours	Description
1 <i>9/15/07</i>	4	<b>Introduction to Scratch</b> Beginning business: <ul style="list-style-type: none"> <li>• Pre-survey, collect permission forms</li> <li>• Get to know the group and leaders: icebreakers, create code of conduct</li> <li>• Overview of year, award possibilities</li> <li>• How to work on stuff at home, pass out install CD</li> <li>• Learn basic interface and make a simple game using Scratch.</li> </ul> Icebreaker: Action Syllables Name Game Guest speaker: female professional
2 <i>9/18-19</i>	1.5	<b>Introduction to Python &amp; Pygame</b> <ul style="list-style-type: none"> <li>• What is programming? What's an algorithm?</li> <li>• Transition from Scratch to Python</li> <li>• Examples of Python / Pygame</li> <li>• Introduction to Dr. Python</li> <li>• Start DMWT: Type in and play with simple "trash bounce" program</li> </ul> Icebreaker: How to Make an Algorithm Sandwich
3 <i>9/25-26</i>	1.5	<b>Explore educational game types and content</b> <ul style="list-style-type: none"> <li>• Play with sample games</li> <li>• Pick your game type and topic</li> <li>• Write short description of Spring game</li> </ul> Begin game design doc: fill in name, creator, description, genre, and educational objective. Icebreaker: Design Star
4 <i>10/2-3</i>	1.5	<b>Boolean Logic, If Statements</b> <ul style="list-style-type: none"> <li>• Intro. to Boolean logic and operators</li> <li>• Discuss event types, if and else-if</li> <li>• Add to DMWT: click on trash to make it disappear</li> </ul> Discuss games vs. movies; Start storyboard for Spring game Icebreaker: Recipe Puzzle
5 <i>10/9-10</i>	1.5	<b>For and While Loops</b> <ul style="list-style-type: none"> <li>• Loops in Scratch and Python</li> <li>• Add to DMWT: randomize the speed of the trash, event.type KEYBUTTONDOWN to make trash re-appear</li> </ul> Continue working on Spring game storyboard Icebreaker: Two Minutes of Where
6 <i>10/13/07</i>	4	<b>Create Graphics</b> <ul style="list-style-type: none"> <li>• Learn Photoshop</li> <li>• Photograph trash on "green screen"</li> <li>• Create the graphics for DMWT</li> <li>• Think about graphics and possible characters for Spring game, make a note of these for your design document</li> </ul> Icebreaker: Storyboard Switch

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		Guest speaker: female professional
7 <i>10/23-24</i>	1.5	<b>Display Graphics</b> <ul style="list-style-type: none"> <li>Add to DMWT: randomize the trash's starting position, add a piece of trash to the game (empty can)</li> </ul> Spring game design doc: Fill in suggested age group, number of players, player's objective, list basic activities Teambuilding Activity: Zapping
8 <i>10/30-31</i>	1.5	<b>Objects, Sprites, and Groups</b> <ul style="list-style-type: none"> <li>Add to DMWT: Create Trash class (inherits from Sprite class), add sound when trash is clicked on, initialize 2 pieces of trash</li> </ul> Spring game design doc: Fill in Objects and Characters, and Media Requirements Icebreaker: Rules of the Road traffic simulator
9 <i>11/6-7</i>	1.5	<b>Objects, Sprites, and Groups, continued</b> <ul style="list-style-type: none"> <li>Add to DMWT: add lots more trash to the screen in a Litter group, make trash re-appear after a delay</li> </ul> Spring game design doc: Fill in Game Activities and Controls Icebreaker: These Shoes were Made for Grouping
10 <i>11/13-14</i>	1.5	<b>Displaying Text</b> <ul style="list-style-type: none"> <li>Add to DMWT: Keep track of score and display score on the screen (add point when Trash is clicked); display a win / game over screen when there is no trash on the screen</li> </ul> Spring game design doc: Fill in Scoring and Winning Icebreaker: Line Up
11 <i>11/17/07</i>	4	<b>Poster Session Preparation</b> <ul style="list-style-type: none"> <li>Elements of design, create game poster</li> <li>Public speaking coaching, create 2-minute pitch</li> </ul> Icebreaker: Influencing People Guest speaker: female professional
12 <i>11/27-28</i>	1.5	<b>Extra Lesson</b> If there's time, add to DMWT: <ul style="list-style-type: none"> <li>Add start screen with game instructions</li> <li>Create Wildlife class (inherits from Sprite class)</li> <li>Add lots of wildlife to the screen</li> <li>Subtract point when Wildlife is clicked</li> </ul> Icebreaker: Run Away with the Circus
13 <i>12/1/07</i>	2	<b>Poster Session &amp; Celebration</b>
14 <i>12/4-5</i>	1.5	<b>Poster Session Debrief</b> <ul style="list-style-type: none"> <li>Debrief from poster session, More public speaking coaching based on reviews</li> <li>Revise design doc and sample screen based on feedback</li> <li>Mid-year survey</li> </ul> Icebreaker: Constructive Feedback

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### Spring Lessons:

#	Hours	Description
1	1.5	Overview of semester Get re-acquainted with your game, form game companies How to give an elevator pitch about your game, practice giving pitches
	4	FIELD TRIP – Kelly Gaither lecture & work on sprites for game
2	1.5	Elevator Pitch Practice Sprite movement Define update functions for sprites
3	1.5	Elevator Pitch Practice Basic user input and the event loop: mouse clicks and key presses Selecting sprites in a group Implement event loop actions in game
4	1.5	Elevator Pitch Practice Basic user input and the event loop: mouse clicks and key presses Selecting sprites in a group Implement event loop actions in game
	4	FIELD TRIP – Programming Day
5	1.5	Elevator Pitch Practice Code your game rules 1
6	1.5	Elevator Pitch Practice Special Topics Lesson Work on game
7	1.5	Elevator Pitch Practice Special Topics Lesson Work on game
8	1.5	Elevator Pitch Practice Code your game rules 2
?	4	Focus group testing at Expanding Your Horizons conference
	4	FIELD TRIP
9	1.5	Elevator Pitch Practice Compile game to Windows executable Create your marketing materials: booth, brochure, and CD cover
10	1.5	Demo practice and feedback
11	3	Trade show + Celebration + Game Awards Post-survey