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| I: Critical Thinking About Games | | | |
|  | * Ground Rules & Procedures   + Managing devices / use of computer access   + What is school appropriate?   + Care of studio   + Notebooks * Foundation Computer Skills:   + File management   + Typing speed & accuracy   + Managing online accounts (login credentials) * Game Theory:   + Analytical frameworks (Layered Tetrad, MDA, etc.)   + What makes a game   + Fun & games – what makes a game engaging   + Vocabulary |  | Content:  Career Exploration:  21st Century Skills: |
|  | Lesson | Success Criteria | Assessment |
| 1 | Quick introduction and overview of the class.  Device policy – ask everyone to put away, confiscate any that are still out. E-mail home.  Notebooks (rubric & assessment; open notes tests)  - Names  - Tape in rubric.  - Set up – totally explicit instructions  Get to know you activities (learn names of team members).  **XXX --- Lesson – maybe game elements --- XXX**  Homework – e-mail: names of team members parent e-mail.  End of class routine – reflection, goals, plans. Clean up. |  |  |
| 2 | Call for homework  Notebook & device reminder  **XXX --- Lesson: Strong I, we, you - Start Bartok critique? --- XXX**  End of class routine |  |  |

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| Game Design & Programming 1 | | | |  |
|  | Learn how to analyze games (both physical and digital), turn game ideas into designs, and how to build a playable prototype of a digital game. |  |  | |
| Level 1: Critical Thinking About Games | | | | 8 blocks |
|  | **Statement of Inquiry:** How do we think about games / what are useful ways to approach games if we want to understand them better? Can we say what makes a game “good” or what we would like to change about a game? What do we mean when we call something a game? Do games change people? Can they change the world? What are the responsibilities of the creators of games?  **Objectives:**   * Define “game” and contrast with similar experiences. * Apply widely used frameworks to analyze games:   + MDA   + Formal Elements (Tracy Fullerton)   + Layered Tetrad (Gibson) * Fun and games:   + Raph Koster   + Ian Bogost   + **‎**[Mihaly Csikszentmihalyi](https://en.wikipedia.org/wiki/Mihaly_Csikszentmihalyi)(Flow) * Careers in game criticism and journalism * Awareness of game rating systems in the US and other countries. * Ability to use the vocabulary of game criticism. * Awareness of major events in game criticism (e.g., Gamergate). * Understanding of the impact of games on society. * Games vs. boredom (the benefits of boredom and the risks of an “unbored” life. * Games and addiction. * Awareness of venues where designers communicate and collaborate. Awareness (and start practicing with) of the methods and tools.   **Summative Assessment:** Select one option and write a blog post addressing it:   * Critique of a game that tries to influence understanding and/or behavior. * Take a position on a current debate on the role of games in society. * Profile of a notable game critic – how did they get started, what do they stand for, who influenced them, examples of their work. * Personal statement: what is the responsibility of a game designer.   Your post should be formatted in Markdown and should make use of the vocabulary from this level. Support your positions by citing from the readings and from respected people in the field. Images are encouraged. A length of 500 to 1000 words will probably be adequate (if you are on the short side your subject should be very well defined and the article carefully edited). Produce a draft, offer it for peer review, then post the final version. Do at least two reviews, 2x for a first review, 1x for a second, 0.5x for third or more on a post.  Assess writing growth – reward developing skill, setting goals and working to improve written work. Have a general rubric for written work, use it to set goals. Score each writing assignment on the general rubric and, possibly, an assignment specific one. | Facts:  Concepts:  Debates:  **Lessons:**   * Essential GitHub – enough to create blog posts and do critiques via forks and pull requests. Nothing on the local computer. Use Guides (Hello World, GitHub Flow, Markdown). * Frameworks – overview of the reasons and some big ones, assign to groups to create a poster and an analysis using their assigned framework. All on same game. * Fun – boredom, addiction. * Xello – intro, assessments, look at critic jobs and compare to self. Get critic as speaker. Try to record, rotate live speakers to different classes. Others get to watch video. Prep ahead with questions that they want to ask. | Major Resources:   * Rubric for summative assessment. * Examples of game critiques – especially game that attempt to change the world and games that are being critiqued for stereotypes, violence, etc. * Sample games to critique. * Hot current topics in game criticism.   + Active shooter game on Steam (May 2018)   + Gamergate () * Videos and short readings on major concepts. * Markdown cheat sheet.   Tools:   * GitHub account with repository for GitHub Pages account. * Markdown (basic formatting, links, images).   Methods:   * “Flip” classroom, have materials for next class available on Canvas. Watch and write “memo” – share in Canvas discussion before class for self-directed learner points. * Short (< 10 min) video and written piece for each class session on frameworks, and “fun and games.” * Vocabulary quiz before journal time on each day that a substantial amount of new vocabulary is introduced. | |
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| Level 2: The Design Process | | | | 12 blocks |
|  | Statement of Inquiry:  Objectives:  Summative Assessment: A playable “paper” prototype – based from at least two “external” iterations ­ of a game of your own design. May be a team project if there are clearly defined roles and accountability. | Facts:  Concepts:  Debates:  Lessons:   * Instant game design workshop. * Project management. | Major Resources:  Tools: | |
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|  | Drive this unit towards the toolkit, including the scripts.  Develop a character, a mission, and interactions.  At least two playtest cycles on paper.  Aim for a playable prototype.  Game documentation on GH. |  |  | |
| Level 3: Digital Games & Digital Tools | | | | 10 blocks |
|  | **Statement of Inquiry:** What are the tools that designers use to create games? How do they fit together? What problems do they solve?  **Objectives:**   * Understand the category & purpose of common tools. * Know and be able to use some common design patterns. * Know the Unity UI. * Know the major Unity workflow and concepts. * Problem drives tool selection, and vice versa (tools can constrain where you can go with a project). * Characteristics of image file formats.   **Summative Assessment:** Create a character (concept with sketches, reference art), translate it into a sprite, give it sounds, and put it into a game. | Facts:  Concepts:  Debates:  Lessons:   * Forking and cloning a repository. * Building and publishing a game on the web. * Working with Piskel and Photoshop * Using Audacity (2 blocks) | Major Resources:  **Tools:**   * Audio recording * Game engine / editor * Graphics (sprite creation) * IDE (code editor) * Screen capture & recording * Version control   **Methods:**   * Set up an overall task, while people are working meet with small group to learn Audacity and Photoshop. Start with flipped assignment to be ready. [SDL]. * App experts train others. [LEAD]   Online method search before lesson with vocab and core concepts. Same searches after. Keep honest with pushed commit before and after. [SDL] | |
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|  | Orientation to Unity  Create some simple object sprites.  Create a character sprite, of your own design, maybe with simple animation  Several styles of game  Add audio  Add UI |  |  | |
| Level 4: Final Project | | | | 15 blocks |
|  | Statement of Inquiry:  Objectives:  **Summative Assessment**: Given a design problem create a game design and prototype that addresses the problem, playtest multiple iterations of the prototype. Test other’s games and provide feedback. | Facts:  Concepts:  Debates: | Major Resources:  Tools: | |
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| Game Design & Programming 2 | | | |  |
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| Level 5: Programming for Designers | | | | 5 blocks |
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| Level 6: Unity Foundations | | | | 10 blocks |
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| Level 7: Advanced Unity | | | | 10 blocks |
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| Level 8: Final Project | | | | 20 blocks |
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