Olivia Schmidt
Week 14: Final Game
08 December 2022

Final Game

In absence of a Construct3 file, here is a link to my game, in addition to a QR code that can be scanned on a mobile device:

The application "Metaverse" will need to be downloaded on a mobile device in order to run the experience. Download Metaverse on iOS or Android.

---

a) A list of improvements since unsafe play-testing

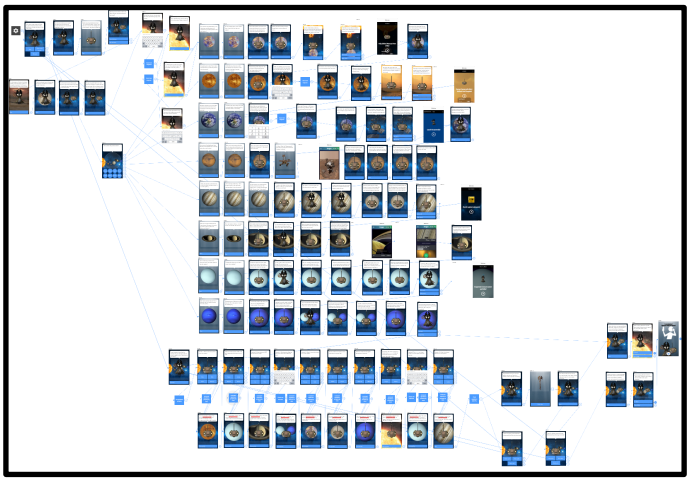
1. Fixed text cropping bug
2. Added image description to photographs, as suggested by a playtester.
3. If a player scores a 10/10 on the quiz, they're given Emperor Jupiter's staff as an item reward. They will transition to an ending screen where the staff is no longer seen on Emperor Jupiter's back. If a player scores any less than a 10/10, they will not be awarded a staff, and the staff will still be seen on Emperor Jupiter's back.

b) Who did what document for the entire group project: equitable distribution of work

Olivia Schmidt
Week 14: Final Game
08 December 2022

Space Pathfinders (PC version): As a group with Ali and Jeramy, I contributed to our game through my 2D assets, which include the characters (Emperor Jupiter and Europa) and the planetary backgrounds. In addition, I also helped develop ideas for minigame development, one of which was used (word unscrambler).

Space Pathfinders (Mobile version): For the development of my game, I worked separately from Ali and Jeramy (although they offered their assistance, I was at a stage where working alone was more productive). The work that was put into this game includes the development of the branching narrative; character/world building; using logic to create the quizzes that total up a player's score; creating aesthetic value (backgrounds, high-resolution photographs, effects, etc.); researching the planetary information, almost all of which was taken from NASA's website; development of the minigames, and elements used in the minigames; creating questions based off the content of the narrative; bug and playtesting; etc.



Completed map of AR Space Pathfinders branching narrative

c) Summarize future development plans

While I have no immediate future development plans, I'd like to pitch the idea of using AR Space Pathfinders to my school's middle school science teacher, as her students are currently studying the planets of our solar system.

Game Elements Summary

Achievement of Learning Goal

10-question asssessment at the end of the experience gauges students retention and achievment of initial learning goal - learning about the planets in our solar system. Playtest revealed that students, through one run through of the game, retained the majority of the information presented

in the experience; scores were 70%, 85%, and 90%. Under a different learning environment, (without a playtesting facilitator present), and without the constraint of time (time was constrained in order to playtest with all three students) scores could see an improvement.

Educational Value

The educational value of the game would be determined by the context in which it is being used; in a science classroom, the game would be ideal to supplement ongoing lessons on the solar system. Did students learn more from my game-based, AR experience than from traditional approaches to the subject matter? I'd argue that, rather than simply being a flashier, more 'techy' way of maintaining the same level of knowledge transfer normally achieved in classroom instruction, the AR aspect of my game, in combination with a narrative-branching storyline, gamified elements such as the minigames and item reward, and fully fleshed-out wordbuilding and characters, contributed to the students long-term knowledge. When prompted about the AR aspect, all three stuents answered that they saw it as "interesting", and "cool" - but also a functional part of the game. The novelty of AR helped students' remember details about the planet, as well helped shape the picture of what the planet looked like in their memory.

Isomorphism

The gameplay and educational content are woven together; the narrative-based gameplay aspect of the experience takes students through the order of the planets, reinforcing educational concepts about these planetary bodies. The minigames are based around an educational concept, such as Mercury's minigame - defending the planet from the very real CMEs (coronal mass ejections) that threaten its surface.

Gameness and Re-playability

Replayability is encouraged in this game at several levels: achieving the best possible score in the 10-question assessment, beating other players to get the top score on the leaderboard in the minigames, and going through the planet narratives at ones own rate (players can always close the experience, and return at a later time, starting at the planet they left off on). A full run-through of this game can always be replayed in the future to refresh one's memory of the planets in a gamified format.

Instructions

There are simple tutorials for each of the minigames that describe how players should play the game. While there is no explicit tutorial for how to progress through the narrative portion of the

experience, players should have no trouble understanding how to navigate through the different scenes, as pressing the “next” button is the only way to progress. There are, however, a few slides where context of the game is given, such as the characters elaborating that players will be learning about the planets in the solar system.

Assets

Character assets were designed using Clip Studio.

Scope

Olivia Schmidt
Week 14: Final Game
08 December 2022

The game was completed at a steady rate; I did not add on any more details to the game than I thought were necessary, or that I thought would put me behind the scheduled due date for our final game.

User interface and aesthetics

I aimed for a cohesive, clean look for the game, that considered all elements used without any jarring distractions from the gameplay and educational content. I believe that the user interface, as well as background graphics, and character design, accomplishes this. One playtester, in the unsafe playtest, noted how they enjoyed the look and feel of the game.