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## INTERIMS, FUTURE FLASTESTING OF LESSONS

We hosted our internal interims on Tuesday this week, having all of the team members play through or run around each other's worlds. It was incredibly informative, even though our team is far from a target audience. There were two examples that really stood out.

Yotam's scientific method lesson was likely the best received, as the structure allowed us to really explore the world. There was an archery range, where players were encouraged to see how far they could fire an arrow - contingent mostly upon the angle of the shot. The lesson would also encourage teamwork in experimentation: arrows have a quality of disappearing quickly in Minecraft, so a partner was useful in reporting the actual flight distance. The map also featured pits of different materials to test TNT explosion radii as affected by surrounding material, as well as a minecart ramp and launcher to demonstrate the conservation of momentum within the world of Minecraft. What we had once perceived as

a weakness of Minecraft for education, its unique physics, has hopefully been turned into a strength as students are curious to explore the game world's laws of physics. Teachers can also use these lessons to draw parallels and highlight differences to real-world physics.

Eugene's minecart race featuring synonyms and antonyms was especially promising. However, even as a roomful of graduate students, we found ourselves breaking the system. We discovered edge cases and holes in the design that will be cheat- and grief-proofed to make the lesson truly fun and productive.

We're looking forward to getting feedback from Joel and our previous teacher playtesters from Elizabeth Forward Middle School during Halves week, March 19-23. After polishing based on that feedback, we'll be taking our lessons to actual classrooms in EFMS the following week to see how our lessons actually play out.

## PROGRAMMING UPDATE, QUIZ BLOCKS

The quiz blocks are coming along – they're a fairly complicated feature that we're hoping to make as intuitive and useful in as many situations as possible. We've created a new texture for them and successfully implemented the block itself in-game. On the user interface side, we've added handy tools that were absent from the game's code: namely, radio buttons and drop-down lists. We've almost fully implemented saving and loading questions from outside the game, as well as storing answers from students. We intend to have unique quiz blocks, allowing for multiple questions in-game, easily edited from an outside-the-game interface. We're also giving a teacher the ability to push a question out to all students without an actual block, and the blocks themselves will also be able to function as redstone switches with a correct answer, if teachers wish to create a machine in-game.

## THE ROAD TO HALVES

The Pixel Pushers are officially on break until March 18 – one of us is already at the Digital Media and Learning Conference in San Francisco, while the rest of us will be there for the Game Developers' Conference next week. The week after is Spring Break – we won't be keeping our core hours, but we will be doing some work on our Half Presentation and making sure our lessons are ready to be shown to teachers to get the most valuable feedback we can from them.