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Northern Illinois University
USA

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Danielle Gross, USA

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Ciphers and Language in Game Design

A Unity based narrative game focusing on ciphers and de-coding language utilizing 2D and 3D game design elements.

The goal of our project is to translate the idea of communicating through ciphers and codes into a video game that makes an attempt to decipher an unknown language.

Refining and Re-working the original idea.

After presenting on the first milestone, we encouraged the students to think of a unifying idea for the game. The student re-thought their original idea of a straightforward adventure narrative and presenting a new concept.

The new concept builds on the initial premise of using cyphers and de-coding language as a way to build understanding and cooperation between different characters, and to build language skills through interacting with the developed codes and cypher in the environment. By learning the language the player can impact the environment and unlock levels.

Each level was assigned an aspirational quality to unify the design, game play and puzzles.

Key Ideas

- **Mystery** - By researching how cypers and cryptology has been used throughout history, part of the compelling aspect is the interaction with the unknown, the solving of a mystery.

- **Knowledge** - Part of writing systems is to help expand knowledge and record specific ways of understanding and interacting with the world.

- **Communication** - fundamentally language and codes are about communication

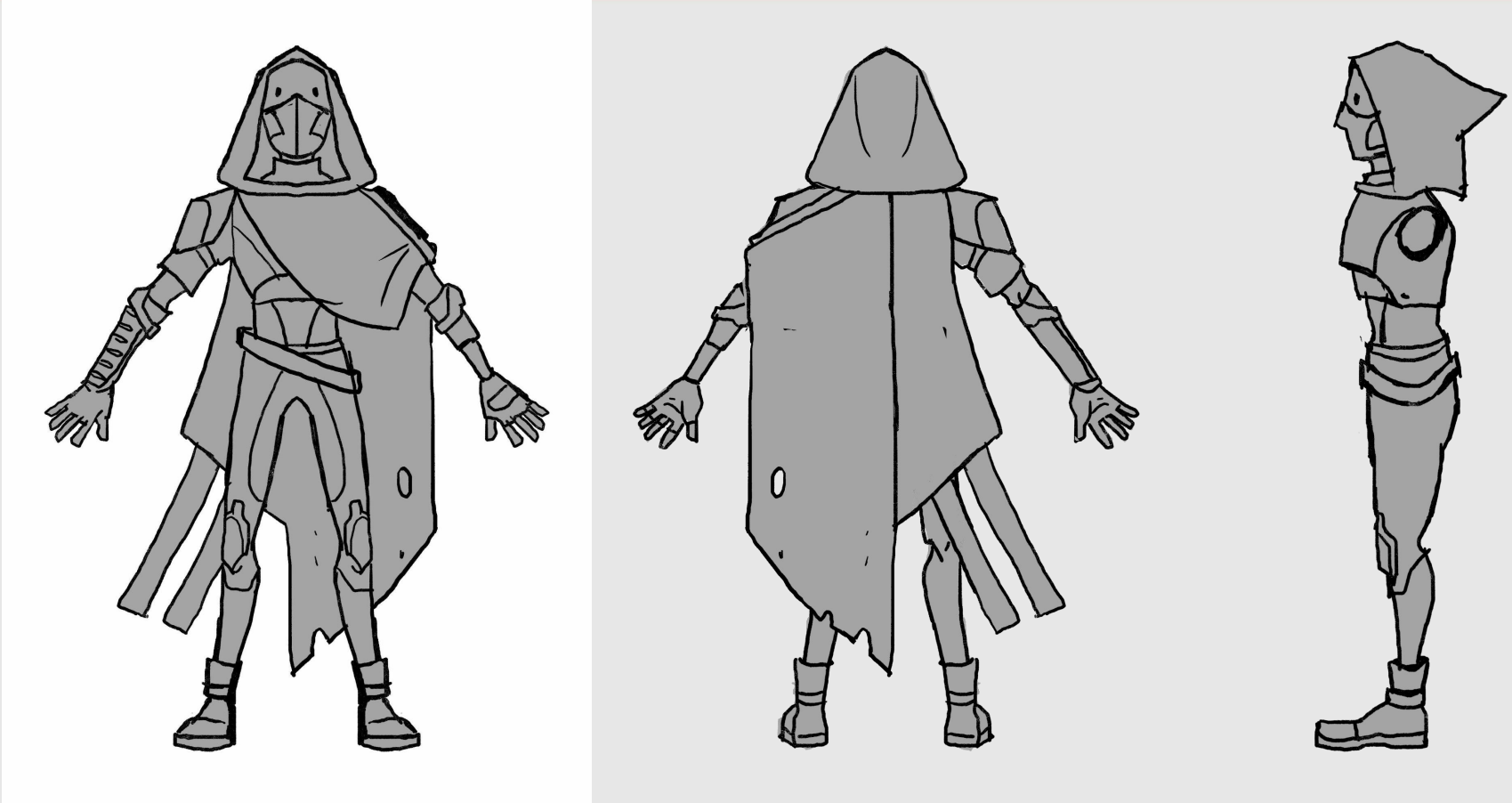
- **Interpersonal Relationship**s - the students took these ideas of mystery and communication and focused on aspects of two characters learning to communicate, interact, and cooperate.

Old Character Design

New Character Design

New Character Design

New Character Design



New Character Design

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New Character Design

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Environmental Design - Peace

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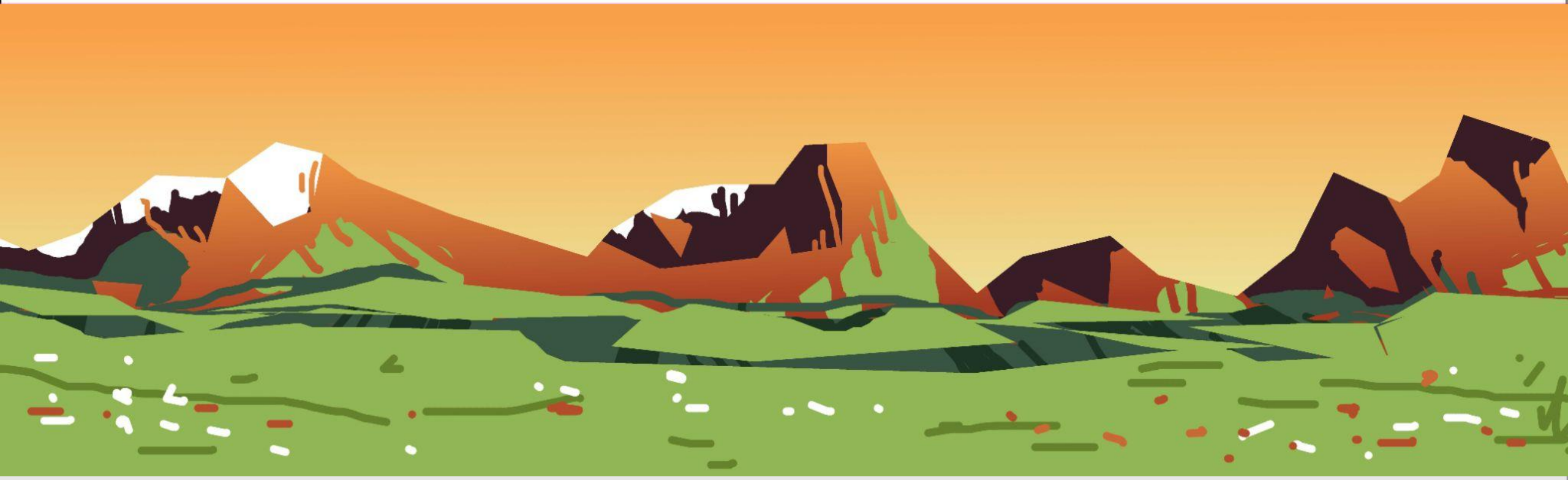

Environmental Design - Motivation

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Environmental Design - Friendship

Environmental Design - Patience

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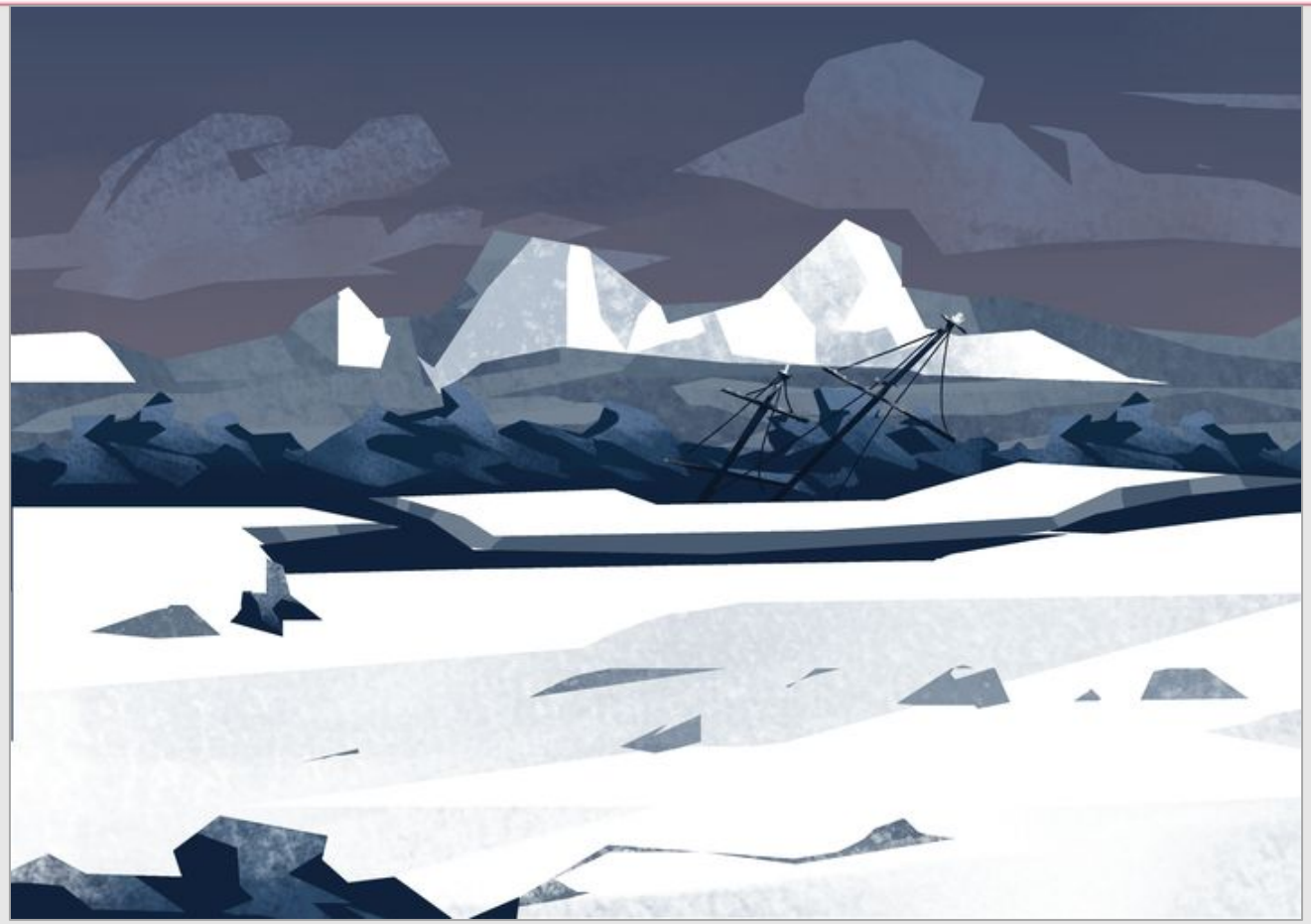

Environmental Design

Environmental Design

Environmental Design

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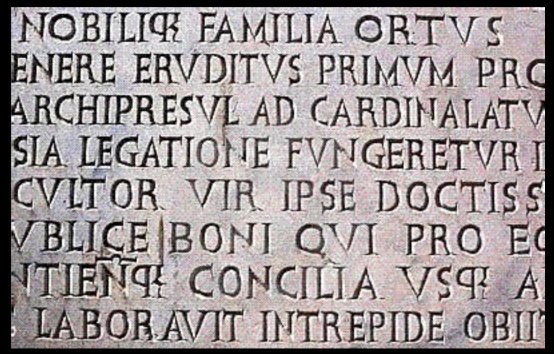
— **Picture writing system**

glyphs (simplified pictures) directly represent objects and concepts.
In connection with this, the following substages may be distinguished:

- **Mnemonic:** glyphs primarily as a reminder
- **Pictographic:** glyphs directly represent an object or a concept such as chronological, notices, communications, totems, titles, and names, religious, customs, historical, and biographical
- **Ideographic:** graphemes are abstract symbols that directly represent an idea or concept

Alphabetic: grapheme represents an elementary sound



Inscription in Latin.

Presentations on Writing Systems.

Work on Ciphers

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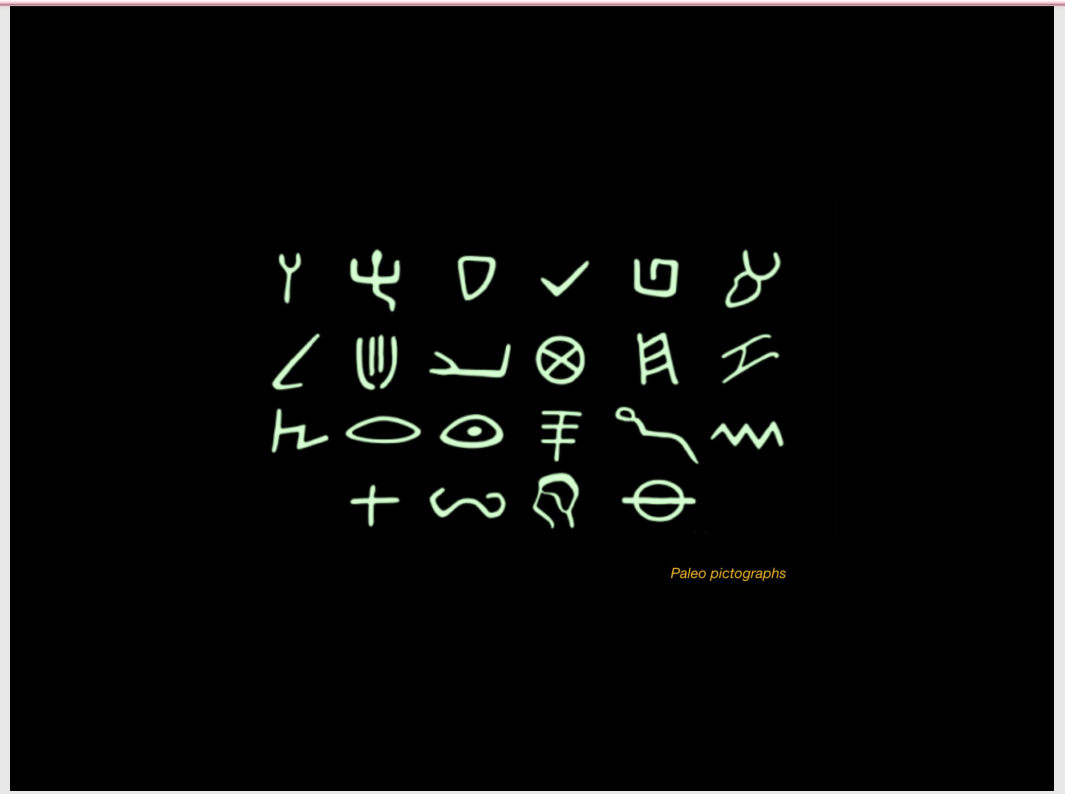
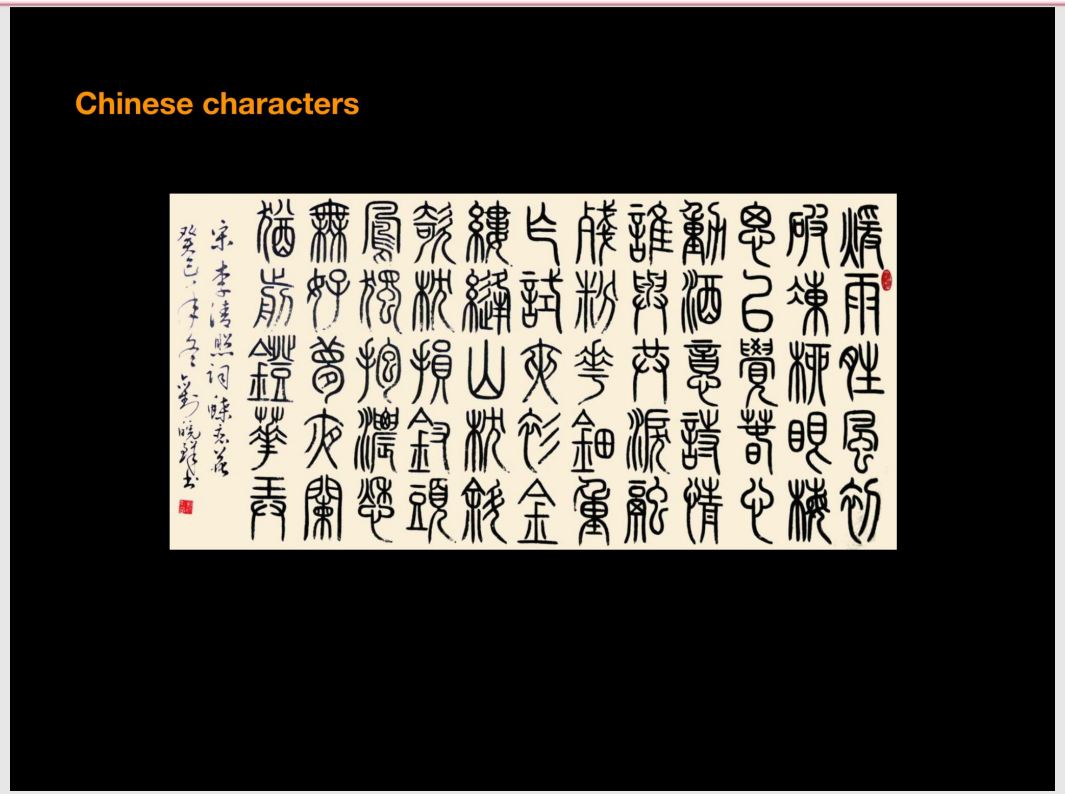
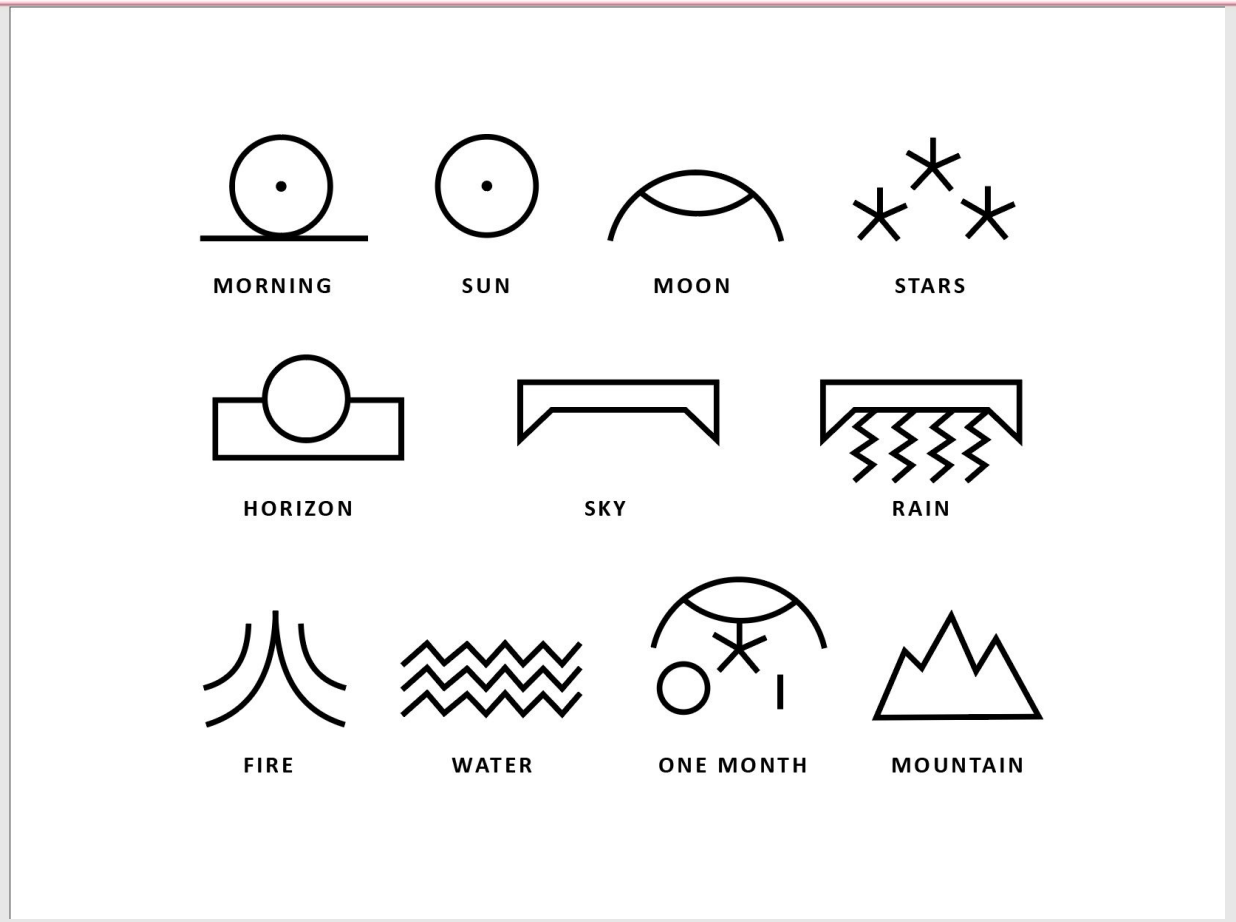




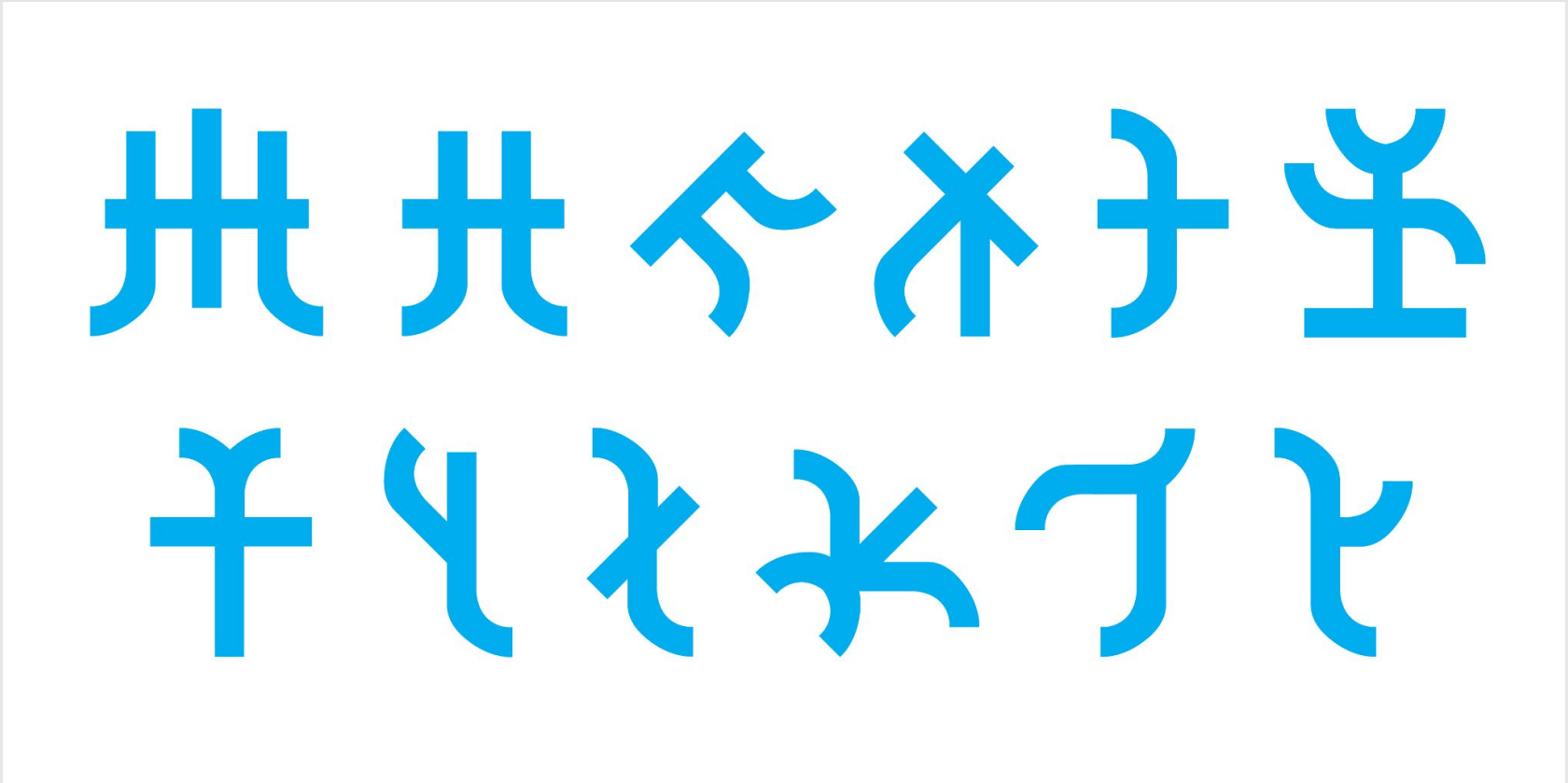
Presentations on Writing Systems.

Work on Ciphers



Examples of existing Ideograms

Work on Ciphers



Characters designed by Pascal

Ciphers / Puzzles

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sound | cross | between | side by side | different | same

Puzzles

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stone fire air more less light shadow plant

Puzzles

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Puzzles

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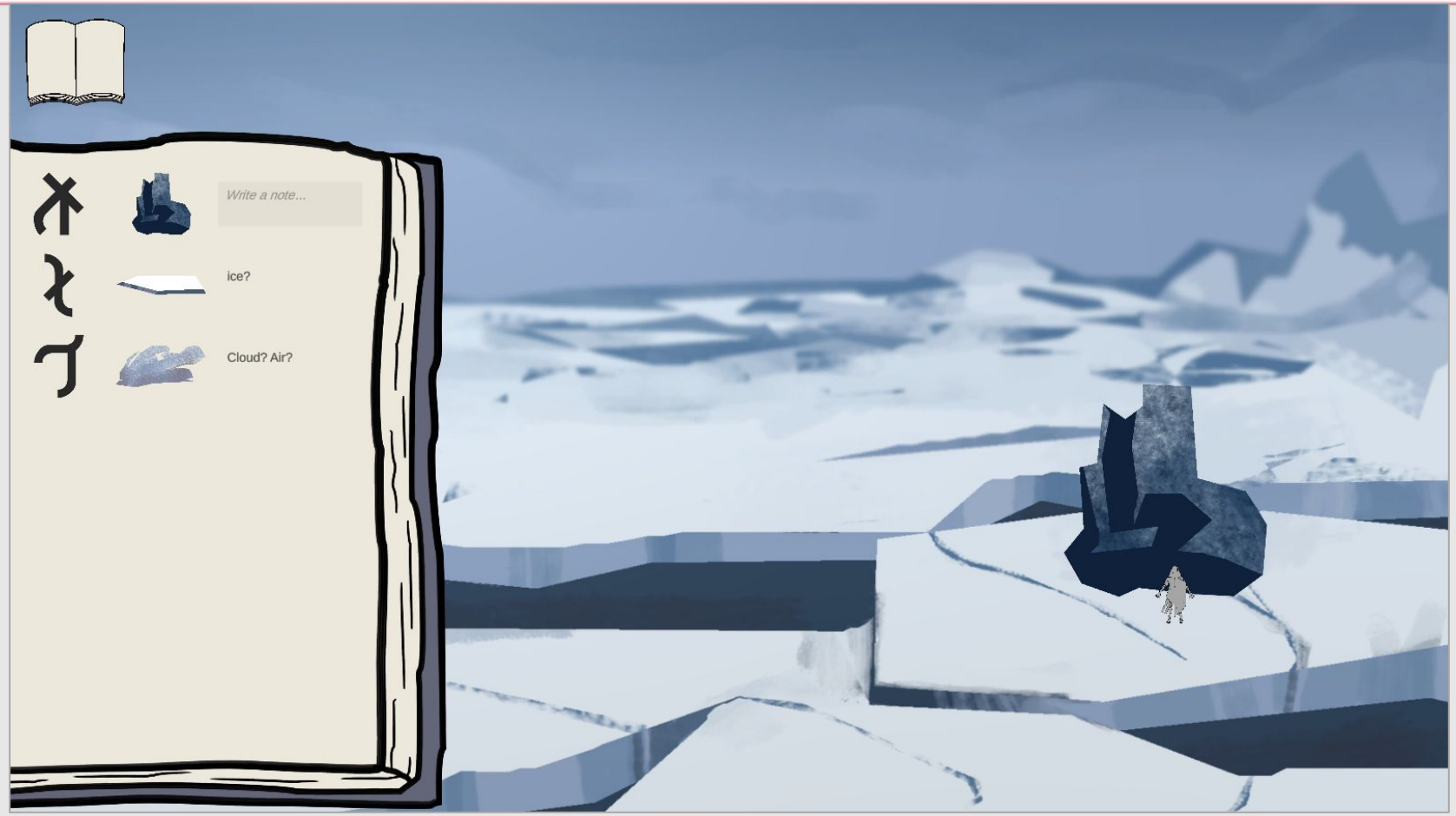
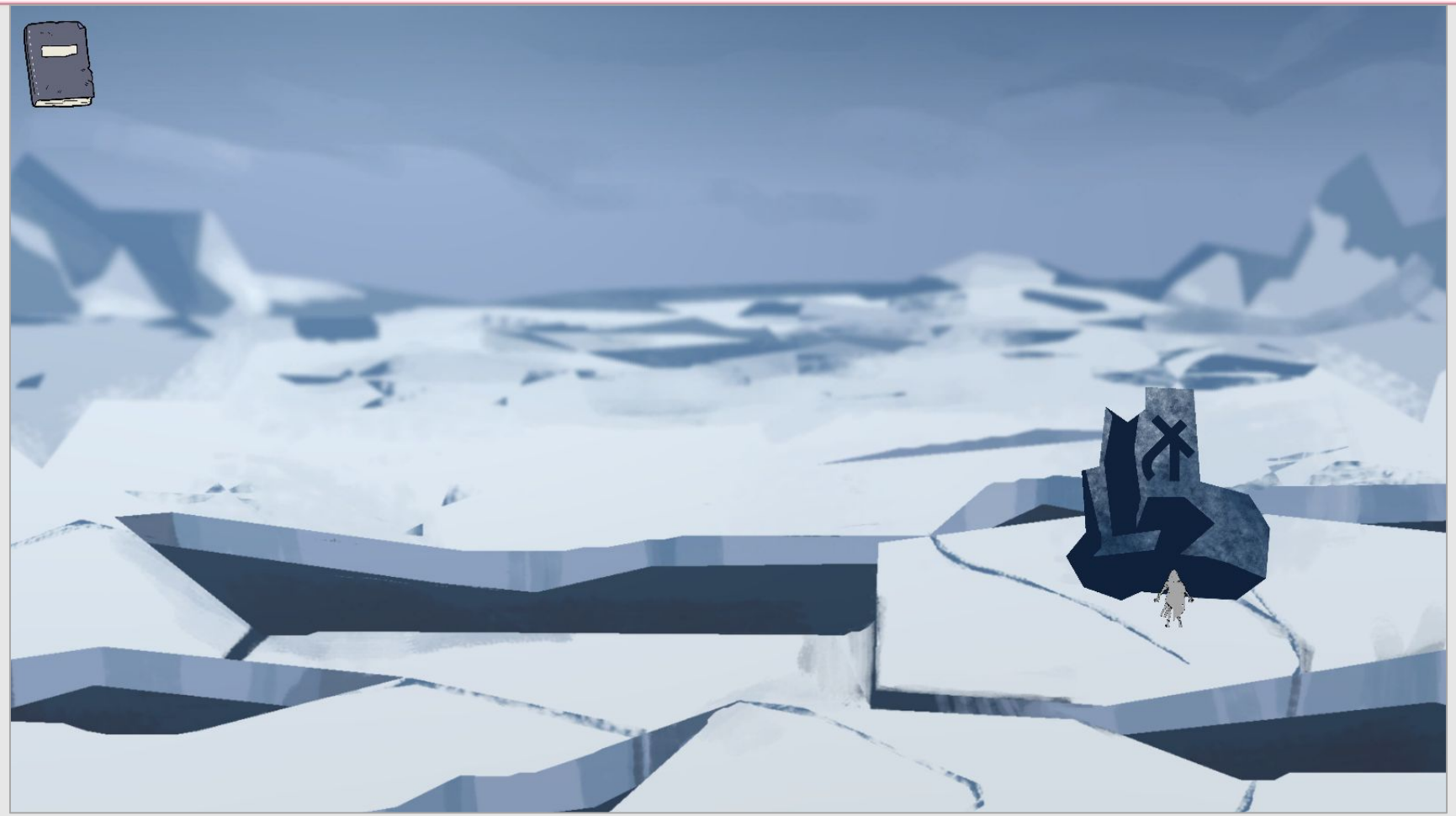


Puzzles



Puzzles

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Gameplay

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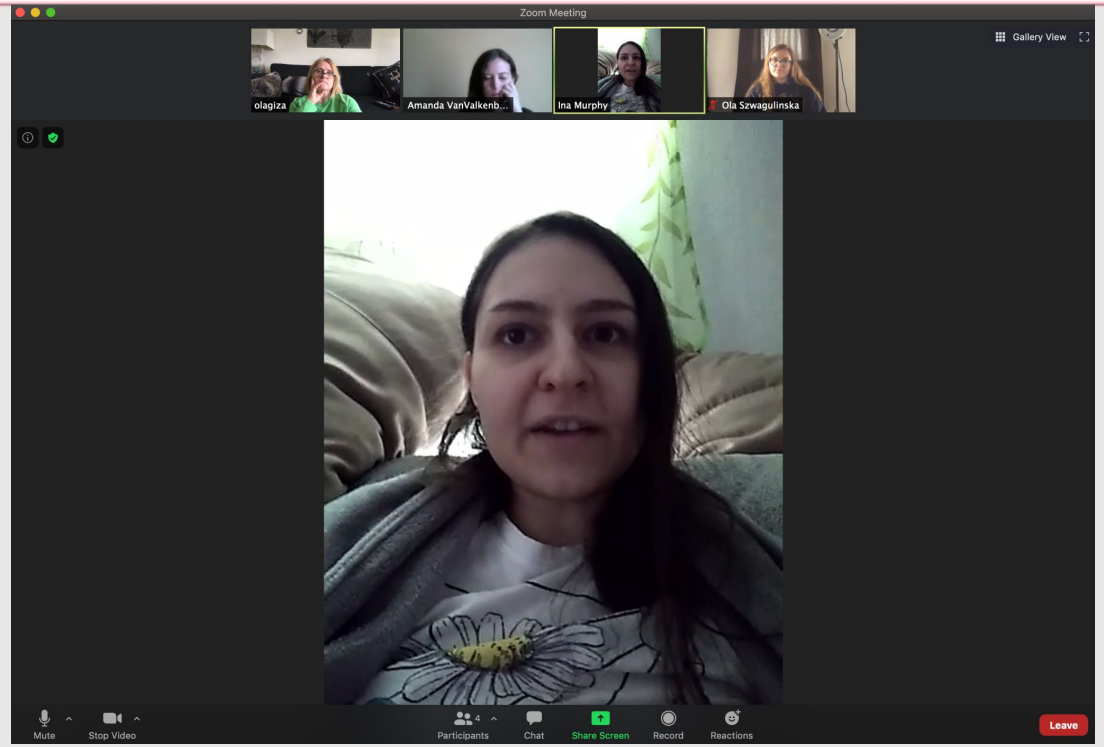
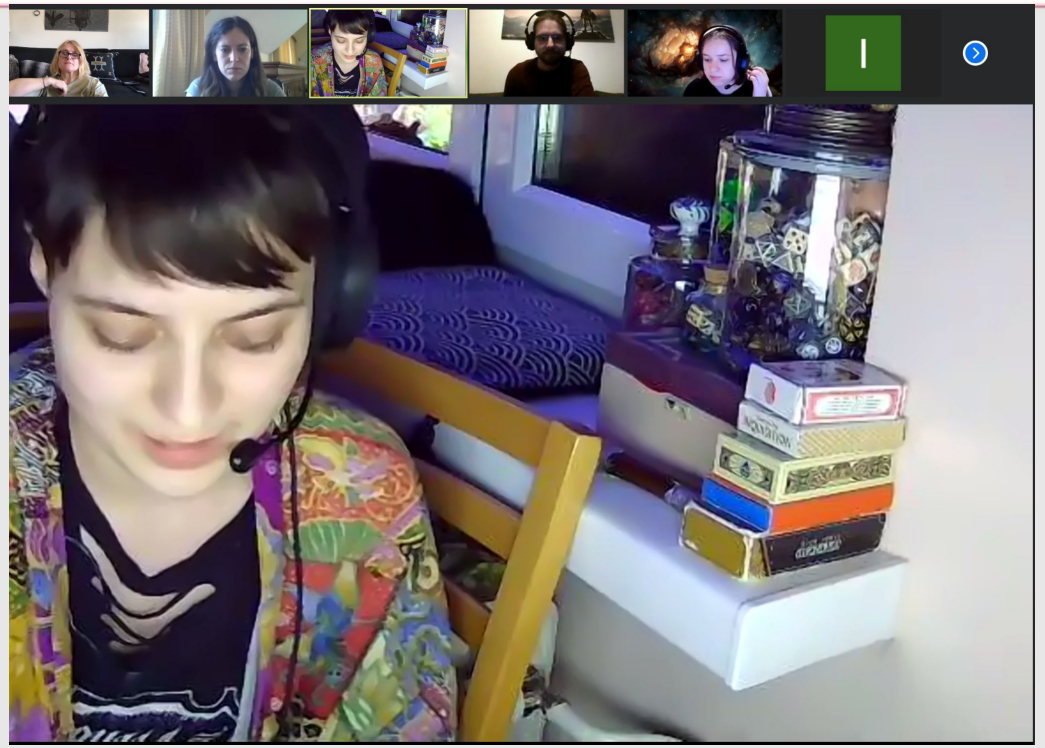
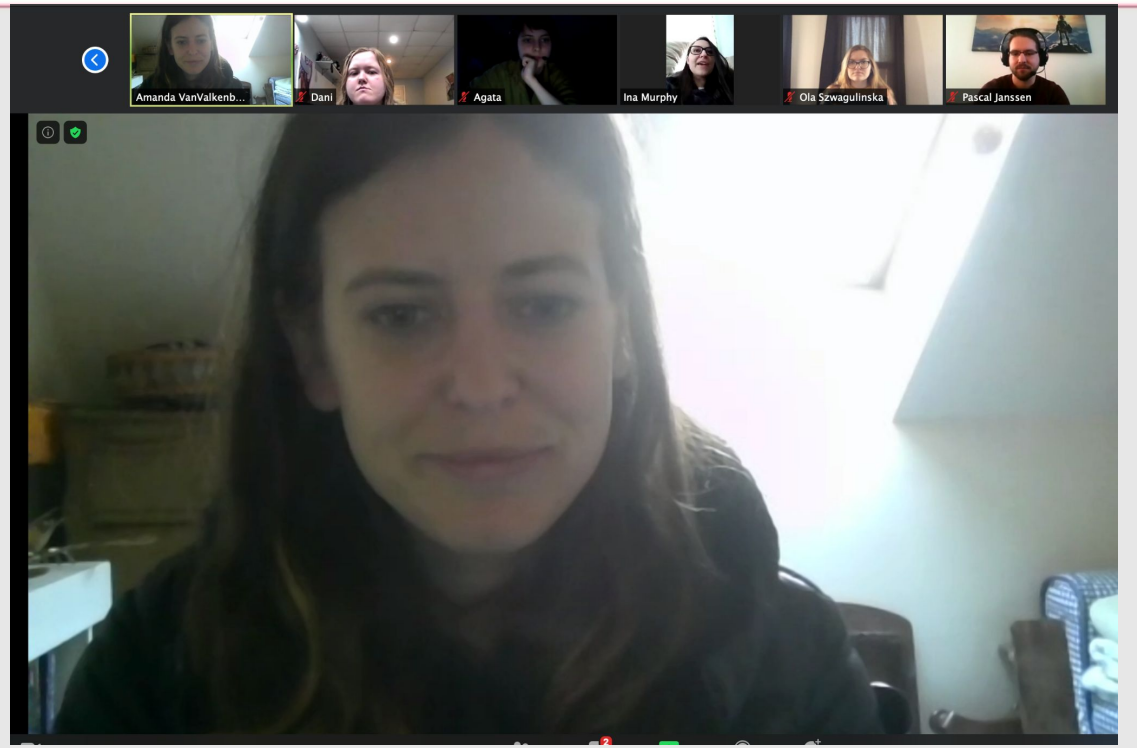


Meeting during which we discussed the characters.

Meetings





Meetings throughout March and April.

Meetings

Thank you.