GAMIFYING EDUCATION
THE LIBRE WAY

Phylo
WESTERN PA EDITION
GAMIFYING EDUCATION
THE LIBRE WAY

- Gamification
- The Phylo(mon) Project
- Phylo: Western PA Edition
- DocGen
- Education
- Q&A
GAMIFICATION

The application of game design principles in a non-game context.

It is about motivation and forming habits.

Gamification is *not* Educational Gaming.
GAMIFICATION

Rewards

Players earn badges and trophies for meeting certain fitness goals.

Players earn items and events based on which goals they accomplish.

Players earn points and place on leaderboards if they do well.
GAMIFICATION

Narrative

Character progression which is fueled by accomplishing tasks.

Players become Heroes who explore the brain and unravel mysteries.
GAMIFICATION

Social

Events where players team up, work together, and compete.

Players can share data and goal accomplishments with others.

Players can form a party where accomplishing each other's goals furthers the quest of the entire group.
THE PHYLO(MON) PROJECT
THE PHYLO(MON) PROJECT

Created by Ian Rahmadi Kumiawan
from Noun Project
THE PHYLO(MON) PROJECT
Let's work together!

**Pawpaw**
*Asimina triloba*

Photosynthetic

9 ☀️

Plantae, Angiosperms, Magnoliids

Scott Bauer

1 POINT

*Pawpaws have a creamy, custard-like flesh with a complex combination of tropical fruit flavors. It’s North America’s largest native fruit.*

**Cicada**
*Neotibicen linnei*

Herbivore

4 🍃

Animalia, Anthropoda, Insecta

Mark F. Levisay

4 POINTS

MOVE of 2

**Wild Turkey**
*Meleagris gallopavo*

Herbivore

6 🍃

Animalia, Chordata, Aves

danielle.briggs

3 POINTS

MOVE of 2
Goals

- Know and demonstrate how arts can communicate experiences, stories or emotions through the production of works in the arts.
- Choose from a range of materials and methods of traditional and contemporary artistic practices to plan works of art and design.
- Incorporate the effective and safe use of materials, equipment and tools into the production of works in the arts at work and performance spaces.
- Analyze works of arts influenced by experiences or historical and cultural events through production, performance or exhibition.

In this blog post, students will learn how to make their own card game and how games can be used to share knowledge and experiences with others. Focusing specifically on climate change, students can download a printable version of a card game called Phylo Western PA Edition. By playing the game, students can learn about the various flora and fauna of Western Pennsylvania, as well as experience firsthand how the ecosystem is affected by human intervention. For the second part of the blog post, students can also make their own version of Phylo.

Here is a link to a website where students can make their own card designs, which they can download and print to make their very own version of the Phylo card game.

About Creator

Giselle Jhunjhnuwala

Giselle is an artist, self-taught programmer, and Outreachy alumna. They like to explore the intersections of art, science, and technology, and have been exclusively using open source in their practice for several years. They have worked in technology and at an import/export multinational company, which enabled them to travel back and
PHYLO: WESTERN PA EDITION
DOCGEN
(Document Generator)

A free and open source utility to convert spreadsheet data into a beautiful, multi-page document.

Originally developed for creating playing cards, DocGen can be leveraged to create any kind of document from multiple data records.
DocGen requires knowledge of HTML/CSS as well as experience with manipulating a spreadsheet or CSV.

For Phylo, we wanted a much simpler way for students to be able to create their own decks.

We created a web application version of DocGen specifically for creating Phylo cards.

https://thinkcolorful.org/docgenphylo/phylo_docgen.html
Gamification can create meaningful experiences that extend outside of a game.

Dr. Scott Nicholson's "**Meaningful Gamification**" builds on 3 precepts: **Mastery, Autonomy, and Relatedness**.
EDUCATION

Principles of Meaningful Gamification/ Self-Determination Theory as applied to Free and Open Source Software:

The 4 Freedoms:

- Run
- Study
- Share
- Build Upon

Mastery

Autonomy

Relatedness
EDUCATION

Principles of Meaningful Gamification as applied to Education:

- **Mastery**: creation in public, for the public encourages competency

- **Autonomy**: curriculum encourages sharing and collaboration, and the freedom to take the project in new directions

- **Relatedness**: groups and communities can form around the subject or connect to existing groups in that subject
CREDITS

• Phylo(mon) Game (phylogame.org/)
• Creative Learning Network (creativelearningpgh.org/)
• Habitica (github.com/HabitRPG/habitica)
• Eyewire (eyewire.org)
• A RECIPE for Meaningful Gamification by Dr Scott Nicholson (scottnicholson.com/pubs/recipepreprint.pdf)
• Giselle's website: thinkcolorful.org
• Charlie's website: cerrax.com
• DocGenPhylo (gitlab.com/charles.w.koch/docgenphylo)
• DocGen (gitlab.com/charles.w.koch/docgen)
• Slides for this talk (gitlab.com/ephemeralwaves/libreplanet2021)