OPTAVIA Healthy Habits Game Design Challenge

About the **OPTA**VIA Healthy Habits Game Design Challenge

Whether in school or at home, kids engage in gameplay every single day. They create their own games on their own and with their friends and classmates. The *OPTAVIA Healthy Habits Game Design Challenge* seeks to tap into this creative energy and inspire students to create games that build, develop, and encourage healthy habits!

Physical games, whether card, dice, or board, present great opportunities to connect, compete, and learn from others. In the *OPTAVIA Healthy Habits Game Design Challenge*, students will engage in a hands-on STEM experience with their friends and classmates. The Challenge will encourage learning, computational thinking, and fellowship, as well as many other 21st-century skills. This virtual experience will enable K-12 students to learn more about game development, healthy habits, and their own creativity!

We are excited to provide all learners with an opportunity to design a game, no matter their age or previous experience. All students will create a:

- Game Design Document
- Physical Prototype
- Gameplay Video

To assist teachers with integrating this experience into their classroom, lesson plans with templates and handouts for each portion of the *OPTAVIA Healthy Habits Game Design Challenge* are provided below.

About the Theme: Healthy Habits

As the platinum sponsor of the Healthy Habits Game Design Challenge, **OPTA**VIA has challenged you to design a game that promotes healthy habits. There are countless healthy habits, so we encourage you to think about habits in the context of the Habits of Health. Developed by **OPTA**VIA co-founder, Dr. Wayne Andersen (Dr. A), the Habits of Health gets your mind and body working together and helps you replace unhealthy habits with healthy ones. The Habits of Health are simply broken down into macroHabits and microHabits.

macroHabits: The foundations of optimal health and well-being.
- **Healthy Eating & Hydration** – A focus on portion control, meal frequency, nutrients, eating a balanced diet, and the importance of water and proper hydration.
- **Healthy Motion** – Formal exercise as well as smaller activities and strategies for moving your body throughout the day.
- **Healthy Sleep** – Proper sleep as well as focus and productivity.
- **Healthy Mind** – How you make choices, understand patterns and triggers, and maintain calm and resilient with self-awareness and mindfulness.
- **Healthy Surroundings** – The people, places and things you surround yourself — which all affect health. Build a "health bubble", a sense of healthy connections, including a support system and lasting relationships.

microHabits: The building blocks of the Habits of Health in bite-sized pieces.
- Daily, incremental steps that make the behavior easy to do so that, over time, the larger macroHabits are adopted successfully.
- The idea is to take each desired macroHabit and decrease its complexity into a small, doable daily action that fits into a repeated loop.
- Have you heard of the phrase – "Eat an elephant a bite at a time"? That is a microHabit.

At **OPTA**VIA, we believe that everyone should have the access and education to create healthy habits, no matter where you live and how old you are… your games will help us achieve that goal!

Lesson 1: Game Concept and Planning

The first step of any large project is to determine the base components of the project and make a plan on how to bring these together. In this lesson, students will work to create an initial design for their game. Then, they will make a plan to bring that design to life.

This lesson is supported by a presentation from [Unexpected Games](#) on November 4th at 5 pm EST: Theme and Storytelling in Games. You can find the presentation and presentation recording on the [main Challenge website](#).

Objective

Students will:
- Develop skills needed to plan projects and timelines
- Develop critical thinking and creative problem-solving skills
- Practice project management
- Utilize knowledge from other studies in a new context
- Practice technical writing skills

Materials:
- Appendix A: Game Design Document & Timeline

Procedure

To encourage fellowship and collaboration, students can work independently or in teams of up to 5 people for this project.

1. Talk with students about games, including video games, tabletop/board games, and sports/playground games. Have them discuss components of games that they appreciate and that they find fun. Guide them towards discussing:
   a. Score, winning, and objective tracking
   b. The story, lore, and setting/environment
   c. Characters
   d. Rules and game mechanics

e. Key items
2. Discuss the major steps of game development:
    a. Develop a concept / design for your game
        i. The first stage of game development is to think about all of the game components we discussed earlier -- the mechanics, setting, story, objectives, characters, and items. Not all games make use of all of these components, but you should consider whether your game would benefit from each of them and, if so, what you would like each of them to be.
    b. Plan how to create your design
        i. Once you have an initial design, you need to plan your approach to bring that game to life -- which components need to be built and in what order, which tools you will need, and how the work will be distributed among team members.
    c. Create a prototype of your design
        i. Game developers always create prototypes of games before developing the entire game. Prototypes are used to test gameplay mechanics to ensure they are fun before spending a lot of time on art and other efforts that may have to be changed.
        ii. A prototype should explore a full "game loop", which is the set of core mechanics and behaviors in a game. In Pong, this would be passing the ball between players and scoring a point. In Fortnite, this would be building structures, gathering items, and fighting another player.
        iii. If your prototype is not fun, this is the time to make changes to your gameplay mechanics and try again with another prototype.
    d. Develop the full game
        i. Once the prototype has proved the game's concept is fun, the next step is to build out the full game with art and other features.
    e. Playtest and polish your game
        i. Once you create the game, you then need to test it with other players. Have your friends and classmates playtest your game and give you feedback on their experience.
        ii. After receiving the players' feedback, polish the features that could use extra attention, whether it is because they are confusing to players or because they need more emphasis and flare.

      f.   Market the game

          i.   The final step is an important aspect that many people do not consider -- marketing the game to others. You can create the most fun game in the world, but, if no one hears about it, no one will play it.

          ii.   Marketers identify the audience the game will appeal to most, and then seek how to interest those people within the channels that they frequently visit.

3. Provide students with Appendix A and ask them to create an initial design concept for their game. Students are likely to be extremely excited and involved with this step, so either time-box the amount of time they can use (e.g. "You have 30 minutes to create an initial design") or move on to the next step of the lesson the next day.

4. Ask students to use Appendix A to plan out steps and a timeline of their efforts. If you expect your students to struggle with this task, it might be best to take them briefly through the creation of an example timeline together as a class.

Questions

Ask your students the following questions to assist with their efforts:

1. What is your favorite part of your design?
2. What do you think the risks are of this project?
3. Are there any components you can remove or deprioritize to give your game a better chance of being completed?

Lesson 2: Game Prototyping

In this lesson, students will work to bring their games to life and test out their design idea. It is important for students to understand that ideas are not perfect at the start and that their designs will come to life with iteration and patience.

This lesson is supported by a presentation from [Gamewright](#) on November 9th at 4 pm EST: How to Prototype Your Game. You can find the presentation and presentation recording on the [main Challenge website](#).

Objective

Students will:

- Learn how to follow their own plans
- Practice critical thinking and creative problem-solving skills
- Utilize knowledge from other studies in a new context
- Practice project creation skills

Materials:

- Paper (blank and/or graph paper)
- Scissors
- Pens, pencils, or markers
- Ruler
- Clear adhesive tape
- Dice / counters (optional, depending on design)
- Magazines to clip for images (optional)

Procedure

This lesson does not require a strict set of procedures; instead, it is focused on empowering students to pursue their projects. Each class will need different materials and support based on their age and the type of projects they are creating.

1. Remind students that the goal this week is to create a prototype -- a full "game loop" of their design, which is the set of core mechanics and behaviors in their game.
2. Ask them to review their design and timeline and to make any changes they feel are necessary after further review to keep their project fun and on schedule.
3. Allow students to begin building their paper prototypes.

Lesson 3: Game Development

In this lesson, students will finish the main development of their games. They should have a fully playable game by the end of this section.

This lesson is supported by a presentation from [Calliope Games](#) on November 16th at 3 pm EST: Rolling with Change, How to Develop Your Game. You can find the presentation and presentation recording on the [main Challenge website](#).

Objective

Students will:

- Learn how to follow their own plans
- Practice critical thinking and creative problem-solving skills
- Utilize knowledge from other studies in a new context
- Practice project creation skills

Materials:

- Paper (blank and/or graph paper)
- Scissors
- Pens, pencils, or markers
- Ruler
- Clear adhesive tape
- Dice / counters (optional, depending on design)
- Magazines to clip for images (optional)

Procedure

1. Remind students that their goal this week is to finish their game to the best of their ability. Let them know that they can remove components from their game if they do not think they will finish them on time.
2. Ask them to review their work and timeline and to make any changes they feel are necessary after further review to keep their project fun and on schedule.
3. Allow students to work on completing their game prototype.

Lesson 4: Game Playtesting and Polish

In this lesson, students will bring together their projects to playtest, provide feedback, and finalize them. They will practice accepting and providing constructive criticism.

This lesson is supported by a presentation from Ravensburger on December 2nd at 4 pm EST: The Pain and Reward of Playtesting! You can find the presentation and presentation recording on the main Challenge website.

Objective

Students will:
- Provide constructive feedback
- Accept constructive criticism
- Practice technical writing skills

Materials:
- Same materials from Lesson 2 and 3
- Completed projects
- Appendix B: Game Feedback Form
- Appendix C: Game Feedback Collection
- (Optional) Appendix D: Submitting to Contest

Procedure

1. Congratulate students on their hard efforts so far, and note that bringing their own ideas to life is a challenging process.
2. Talk with students about playtesting and constructive criticism, as well as the importance of both.
   a. Playtesting is allowing a person to play your game while observing their interactions and feedback. The intent of playtesting is to understand the aspects of your game that are fun, particularly challenging, or confusing. Playtesting is an important part of the development process, as it helps developers understand how players will interact with their creations.

      b. Constructive criticism is a helpful way of giving feedback that provides specific, actionable suggestions.

          i. Examples of "bad" feedback:

1. "This character looks ugly"
2. "The gameplay isn't fun"

          ii. Examples of constructive criticism:

1. "The character would be easier to see with a brighter color palette"
2. "I don't feel like I am being rewarded for my actions"

3. Issue copies of Appendix B and Appendix C to each student.
4. Divide student groups into two: one group which will be showing their games and one group which will be playing the games. It is recommended to keep the number of game players to only one or two per game, so that the game creators can fully observe the interactions with their game.
5. Ask students to playtest the games for a set amount of time (5-10 minutes) while providing any helpful feedback and constructive criticism, while the game creators record their observations of the playtesters on Appendix C.
6. At the end of the playtesting time, give the students a few extra minutes for the playtesters to record their thoughts on Appendix B and for the game creators to finish up any of their Appendix C notes.
7. Have students rotate who is showing their game and who is playing the game until all have acted as playtesters and observers.
8. Ask students to share what they learned by playing and observing others playing their games:
   a. Did they find any interactions unexpected?
   b. What challenges or misunderstandings did players face?
   c. How could they use this feedback to improve their game?
9. Have students record on Appendix C two or three improvements that could be made to their game based on the feedback and observations.
10. Allow students to work on finalizing and polishing their games based on that feedback.
11. At the end of the lesson, congratulate them on their hard work and collaboration with their teams and playtesters.
12. (Optional) Guide students through the ***OPTA****VIA Healthy Habits Game Design Challenge* submission form using Appendix D.

Appendix A: Game Design Document and Timeline

Game Name: _____

Objective:	Mechanics:
Setting/Story:	Characters:

Timeline

Week 1: Game Concept and Planning

What is the main idea of your game? How will you integrate the theme of "Healthy Habits"?

Week 2: Game Prototyping

What are the core mechanics of your game?

Week 3: Game Development

What do you need to add beyond the core mechanics?

Week 4: Game Playtesting and Polish

What did you learn through playtesting? What final polish are you adding to your game?

Appendix B: Game Feedback Form

Game Name:_____

What parts of the game did you enjoy most?
What parts of the game were confusing?
What do you wish there was more of?
What do you wish there was less of?

Appendix C: Game Feedback Collection

Game Name:_____

What did the player(s) not understand?
What did the player(s) like the most?
What should you keep or increase?
What should you change?

Appendix D: Submitting to Contest

If you would like to submit your game design to the *OPTAVIA Healthy Habits Game Design Challenge*, it must be submitted by 11:59 pm PST on December 15th, 2021.

To submit your game, fill out the form at: https://forms.gle/XhZ8NhAhTDiyTCbU9

For a complete submission, you will need to provide:
- Appendix A: Game Design Document and Timeline
- Up to 5 Game Prototype Photos
- Gameplay Video

The winning teams will be selected by January 13th, 2022. Each submission timely received and not otherwise disqualified will be scored on the following criteria out of a total of 1000 points:

- Creativity and Theme Integration of Game Design Concept: 0 to 350 points
- Completeness and Detail of Submission: 0 to 350 points
- Originality of Game Mechanics and Gameplay: 0 to 300 points