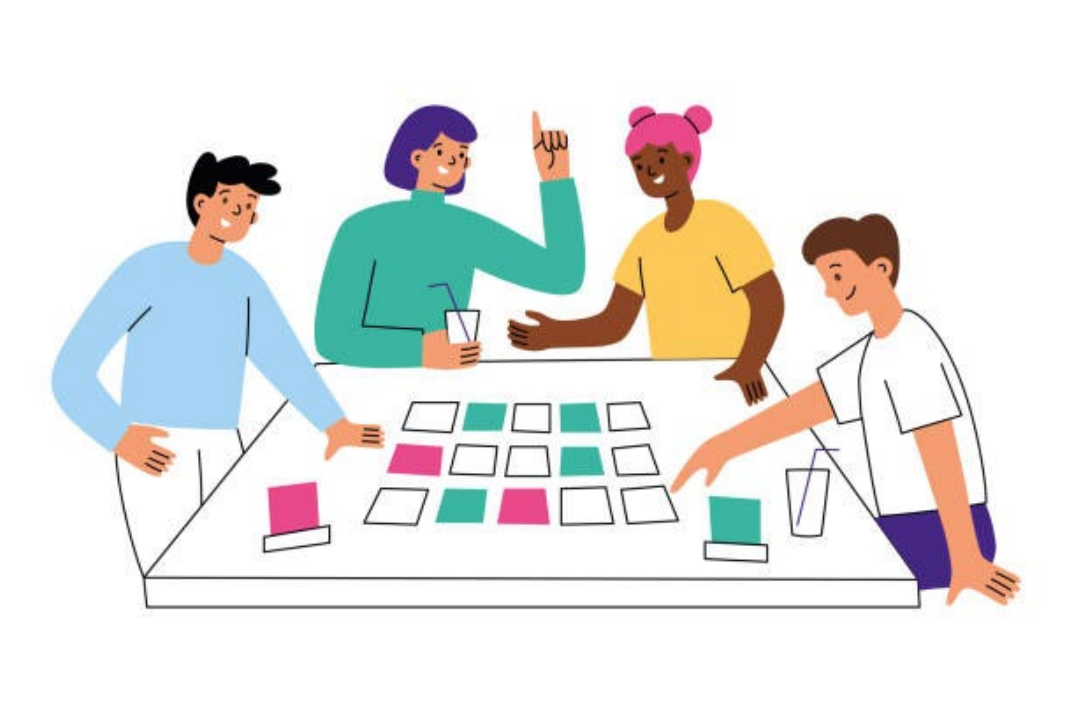
# Gamification & Learning in Higher Ed

4 February 2025

# The Premise…

Congratulations! You unlocked your first achievement!



Using the MakerLab

Gamifying Classroom Components

Core Elements & Tools

Designing & Implementing a Gamified Class

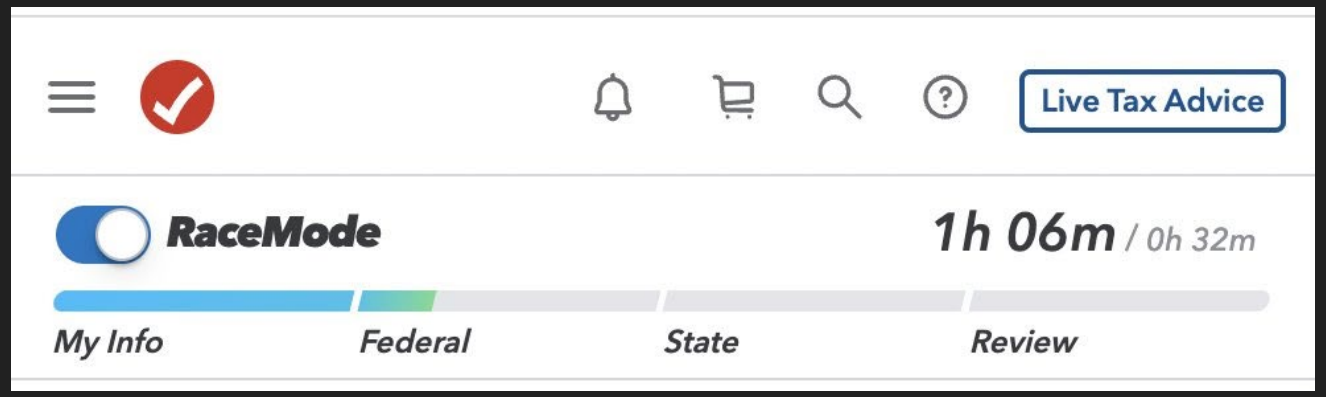
What is gamification?

Implementation Work Day

Your Gamified Class

# The definition, err definitions?

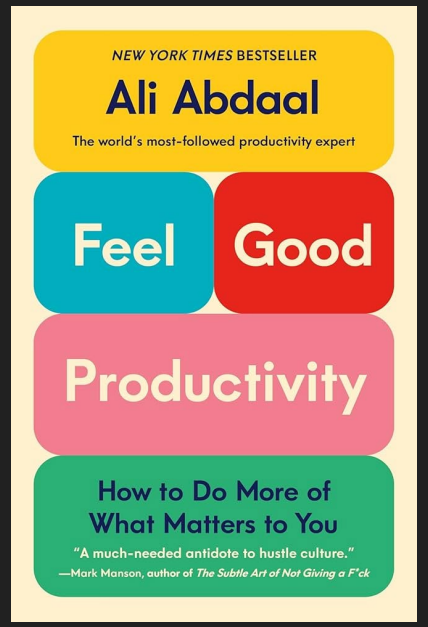
- The process of game-thinking and game mechanics to engage used and solve problems (Zichermann and Cunningham 2011)
- The use of game design elements in non-game contexts (Deterding, et al. 2011)
- Using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems (Kapp 2012)

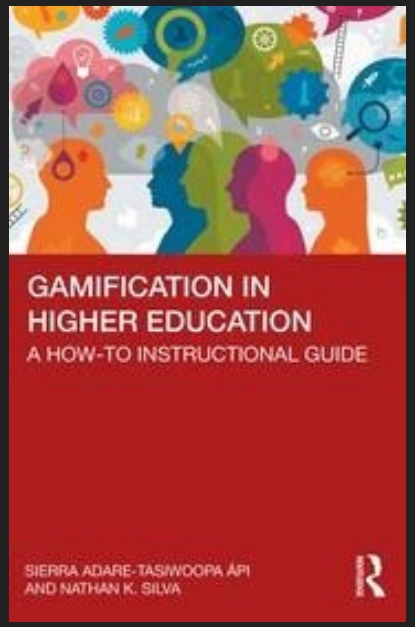



Slido.com → 2002042

To what extent do you currently deploy gamification in courses as part of your teaching?

**Using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems (Kapp 2012)**




Let's play a game!

# Answer these questions based on what you know or assume about gamification.

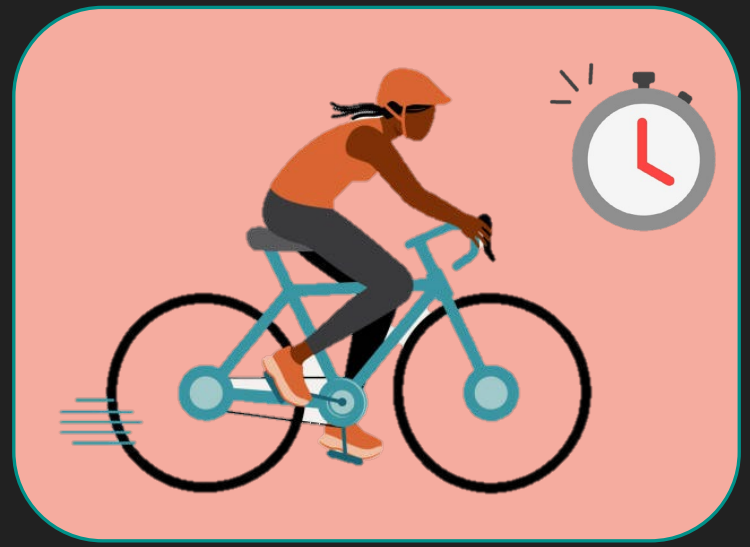
Achievement Unlocked:
Gamification Pre-Test

# Association between real-world experiential diversity and positive affect relates to hippocampal–striatal functional connectivity

Aaron S. Heller, Tracey C. Shi, C. E. Chiemeka Ezie, Travis R. Reneau, Lara M. Baez, Conor J. Gibbons & Catherine A. Hartley

*Nature Neuroscience* **23**, 800–804 (2020) | Cite this article

Making every day tasks an adventure increases satisfaction

Intrinsic Motivation: Challenge, Curiosity, Control, Context

# Reframing Classes as a Place for *Learning* Rather than Grades

Trying is often penalized with a loss of points, how can we change the narrative and mitigate the risks of failing in the classroom?

What are the most important outcomes from your class?


Extrinsic Motivation: Praise, Punishment, Public Recognition, Prizes

# What if we were better at encouraging trying?

- You learn through failing!
- For play to work: low stakes (lots of opportunities to fail!) and encourages relation (to others, to content, to format)
- Reinforces growth mindset, "practice makes better"
- "If we weren't so concerned with failure, how much more could we learn?"

Improving student performance through loss aversion.

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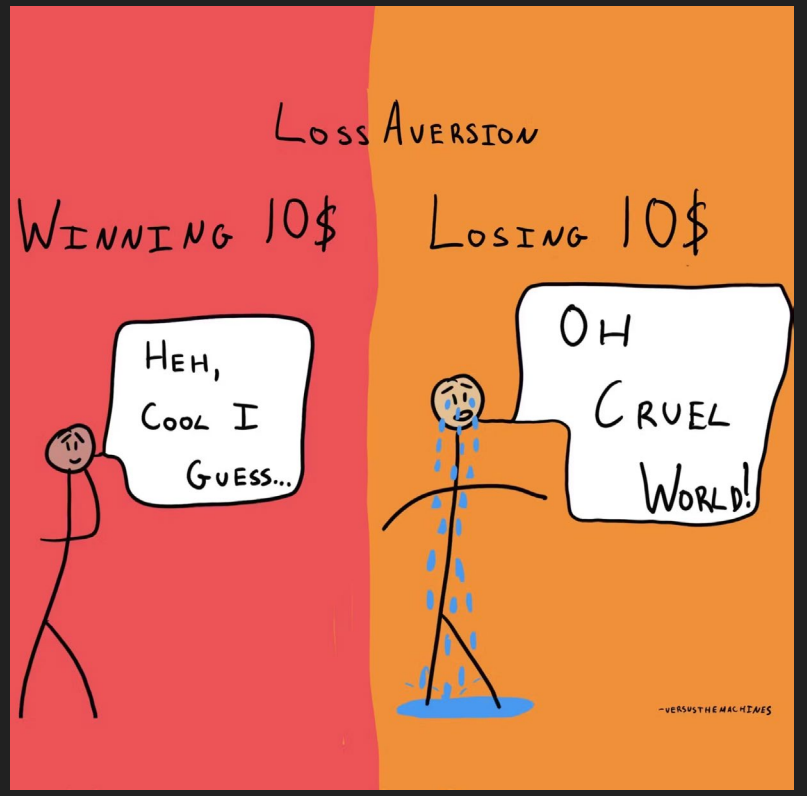
Smith, B. O., Shrader, R., White, D. R., Wooten, J., Dogbey, J., Nath, S., O'Hara, M., Xu, N., & Rosenman, R. (2019). Improving student performance through loss aversion. *Scholarship of Teaching and Learning in Psychology, 5*(4), 278–288. https://doi.org/10.1037/stl0000149




# Effects of Gamifying Course Content

Don't take my word for it, let's look in the literature!

TABLE I
RESULTS OF THE PRETEST AND THE POST-TEST

| GROUP | PRE-TEST | | POST-TEST | | LEARNING GAINS | | WILCOXON SIGNED-RANKS TEST FOR PAIRED SAMPLES | |
|---|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD | p-value | Effect size (r) |
| Control (N=81) | 3.3 | 2.1 | 5.4 | 2.3 | 2.1 | 2.6 | < 0.001 | 0.45 |
| Experimental (N=99) | 3.4 | 1.6 | 6.3 | 2.0 | 2.9 | 2.4 | < 0.001 | 0.54 |

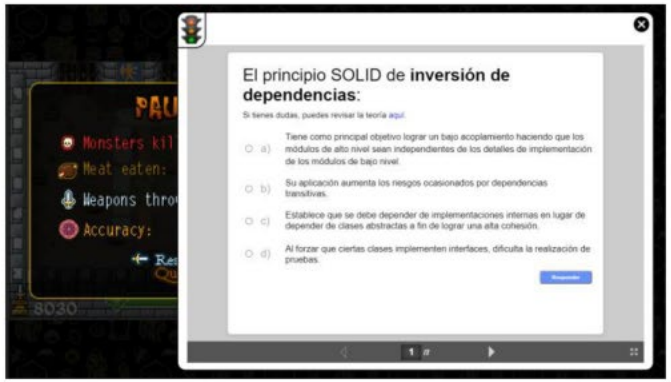



Fig. 2. Multiple choice question integrated into the educational video game.

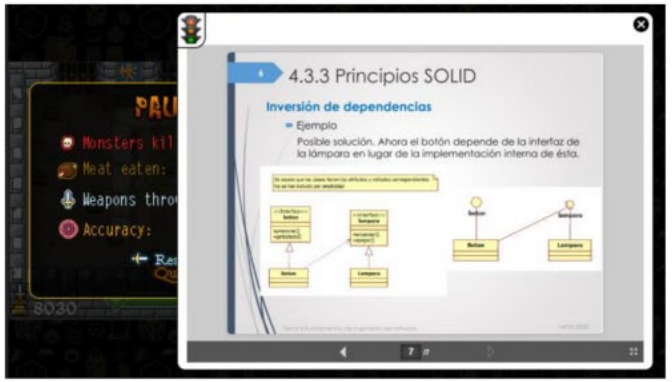



Fig. 3. Slide with theoretical content integrated into the educational video game.

Not only did gamifying increase test performance, students liked it!

TABLE II
ITEMS OF THE QUESTIONNAIRE

| Item | |
|---|---|
| 1 | My overall opinion on the learning methodology used is positive. |
| 2 | The learning methodology helped me learn. |
| 3 | The learning methodology was appealing and motivating. |
| 4 | The learning methodology made learning fun. |
| 5 | I needed help to complete the activities. |
| 6 | All the resources were suitably integrated into the platform from which I access them. |
| 7 | I would like to learn using the same methodology in the future. |
| Items only included for the control group | |
| 8a | My overall opinion on the videos is positive. |
| 9a | I prefer to learn using videos than playing educational video games. |
| Items only included for the experimental group | |
| 8b | My overall opinion on the educational video game is positive. |
| 9b | I prefer to learn playing educational video games than using videos. |

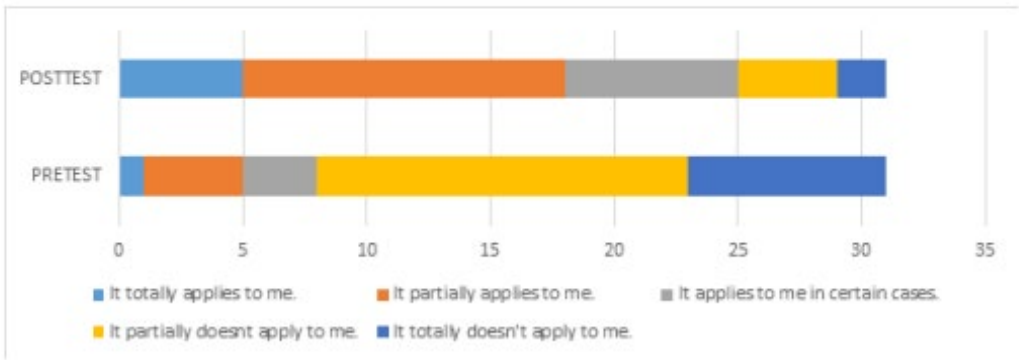
TABLE III
RESULTS OF THE QUESTIONNAIRE

| Item | Control group | | Experimental group | | Mann-Whitney U Test | |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | p-value | Effect size (r) |
| 1 | 4.0 | 1.0 | 4.5 | 0.8 | 0.003 | 0.20 |
| 2 | 4.0 | 1.0 | 4.1 | 1.1 | 0.265 | 0.05 |
| 3 | 3.6 | 1.1 | 4.2 | 1.0 | < 0.001 | 0.27 |
| 4 | 3.2 | 1.1 | 4.2 | 1.0 | < 0.001 | 0.43 |
| 5 | 2.0 | 1.4 | 2.1 | 1.5 | 0.790 | 0.06 |
| 6 | 4.5 | 0.8 | 4.3 | 1.0 | 0.471 | - 0.01 |
| 7 | 4.0 | 1.0 | 4.4 | 0.9 | 0.006 | 0.19 |
| 8 (a/b) | 4.1 | 1.0 | 4.3 | 1.0 | 0.128 | 0.08 |
| 9 (a/b) | 3.6 | 1.1 | 4.2 | 1.0 | < 0.001 | 0.26 |

**WITH GAMIFICATION TO COLLABORATIVE LEARNING IN CHEMISTRY LESSONS**

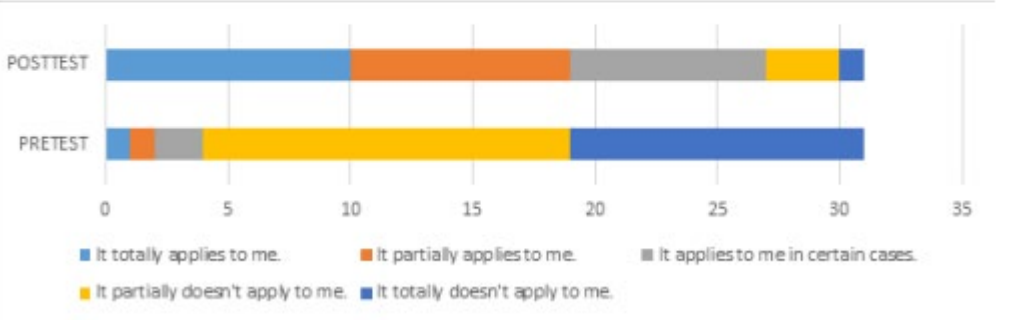
**Elena Rudolf**
*Secondary School of Economics Maribor, Slovenia*

**Figure 13**
*The Influence of Cooperative Learning on the Understanding of Learning Content (Comparison of Pre-test and Post-test)*




Gamification increased students' appreciation of the benefit of cooperative learning on content knowledge

**Figure 14**
*The Influence of Collaborative Learning on Learning Motivation (Comparison of Pre-test and Post-test)*




Collaborative learning, by way of gamification, increased students' motivation for learning

# Gamification in education: a mixed-methods study of gender on computer science students' academic performance and identity development

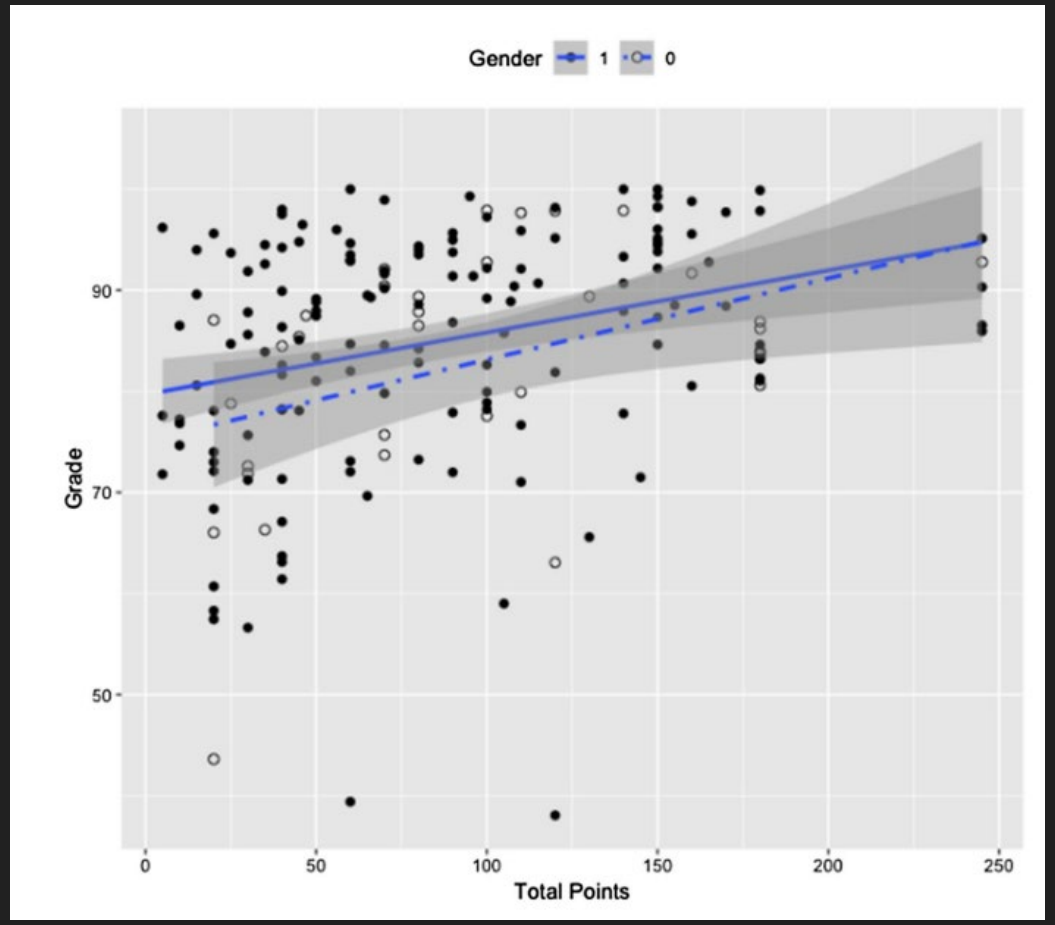
Leila Zahedi[1] · Jasmine Batten[1] · Monique Ross[1] · Geoff Potvin[2] · Stephanie Damas[3] · Peter Clarke[1] · Debra Davis[1]

Team-based gamification closed gender –based achievement gap!

In the beginning, I had a hard time, like I was kind of struggling with it, but I don't know, it's just you have to learn a whole new thing. But now that I've kind of got into it, I like the challenge. It's definitely a challenge, but it's something I'm willing to put effort into… Because even if I'm not like a hundred percent confident, I feel like I'm getting there. Like I can easily work my way towards that.—Sarah.

What I did like about SEP-CyLE, though, is the point system. So, groups would basically go against each other, and that does motivate a lot of students… It's like how people are addicted to games, because of reward systems… We would always be on top of it and be like "Yo, do your SEP-CyLE assignment so we can get more points, so we can get extra credit."—Jinx.

like, oh I'm going to get points! I like that… [I felt] proud… Like I really, really love it… Competitiveness can be fun. So, it's kind of like a fun way of learning.—Nicole.

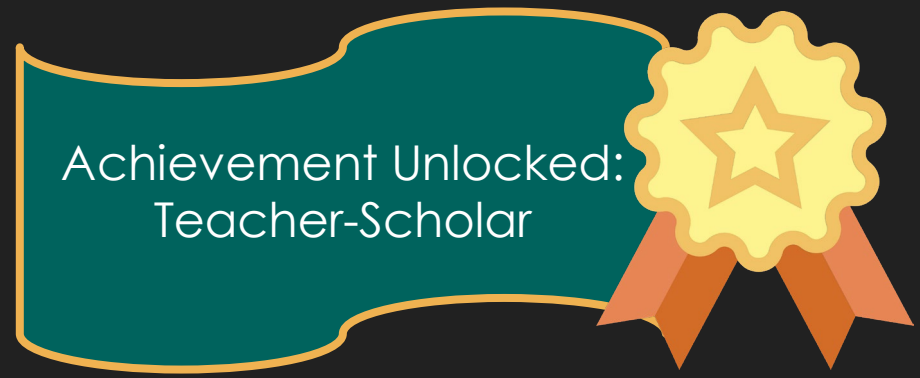


# The Impact of In-Classroom Non-Digital Game-Based Learning Activities on Students Transitioning to Higher Education

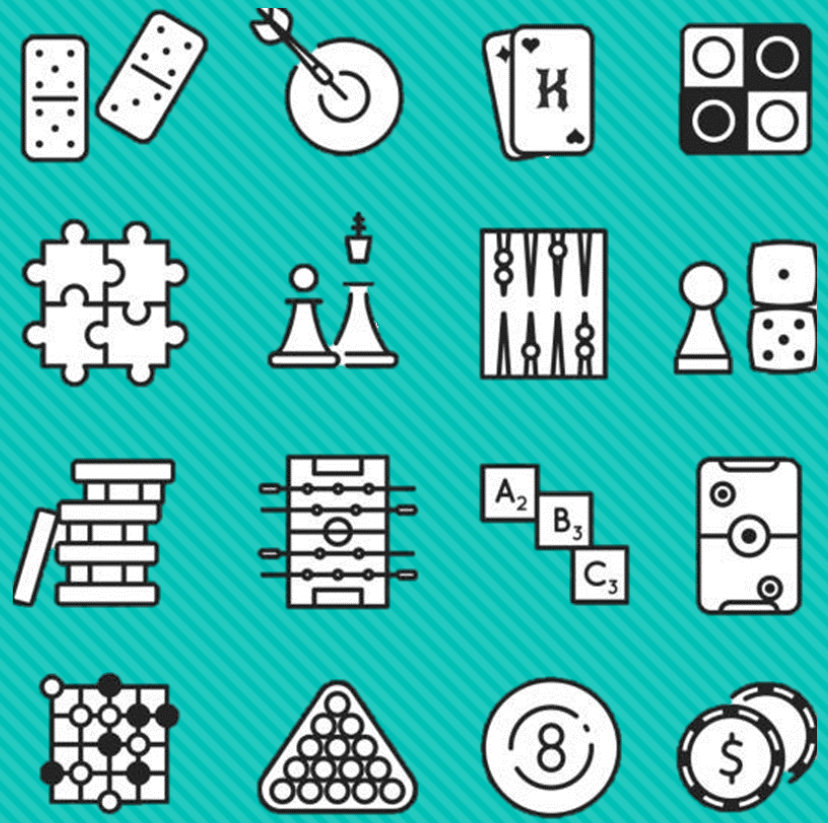
by Chitra Balakrishna

Gamification increased student attendance and engagement

Collaborative learning, by way of gamification, increased students' motivation for learning



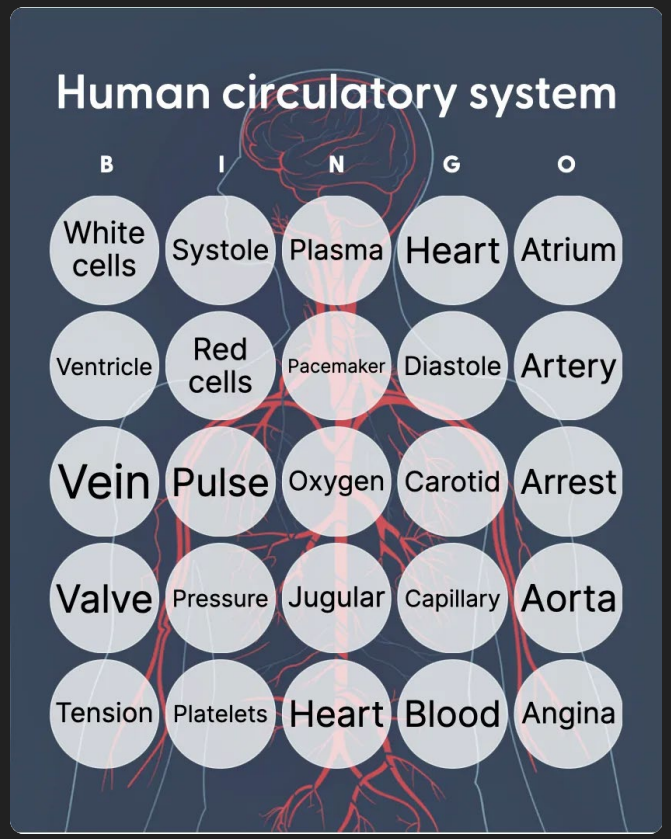

| Data | Experimental Group | Control Group |
|---|---|---|
| Avg weekly attendance for the module (%) | 87% | 74% |
| Avg weekly attendance for three other modules | Module 1 (74%)/Module 2 (70%)/Module 3 (72%) | Module 1 (74%)/Module 2 (70%)/Module 3 (72%) |
| EoM Q3: How actively did you participate in the classroom activities | 4.71 (very actively) | 3.2 (somewhat actively) |
| Average assignment score mean (Std dev) | 74 (11.41) | 67 (11.02) |
| Average group component score mean (Std dev) | 86 (8.12) | 71 (9.80) |
| Average score across three other modules (Std dev) | 65 (10.63) | 69 (10.42) |




# Types of Games

# Classic Standbys

## BINGO

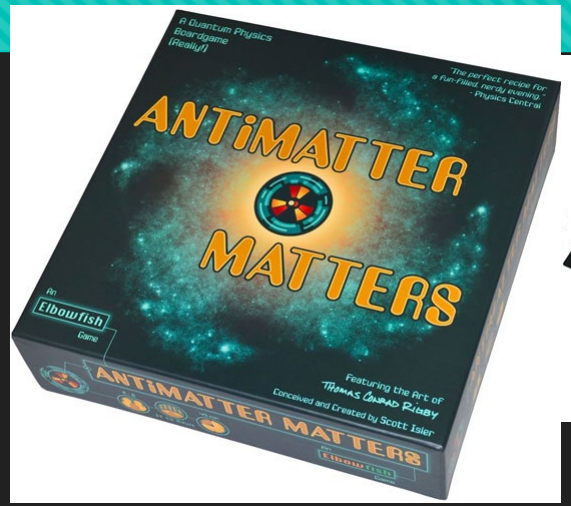



## Quiz Bowl

| Periodic Table | Atoms | Elements, Compounds, and Mixtures | Chemical Bonding | Ions and Isotopes |
|---|---|---|---|---|
| $1 | $1 | $1 | $1 | $1 |
| $2 | $2 | $2 | $2 | $2 |
| $5 | $5 | $5 | $5 | $5 |
| $10 | $10 | $10 | $10 | $10 |
| $20 | $20 | $20 | $20 | $20 |

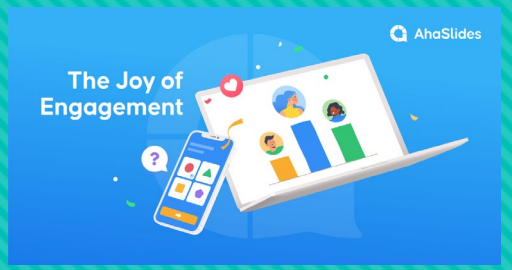
## Jeopardy

# Readymade Games & Apps



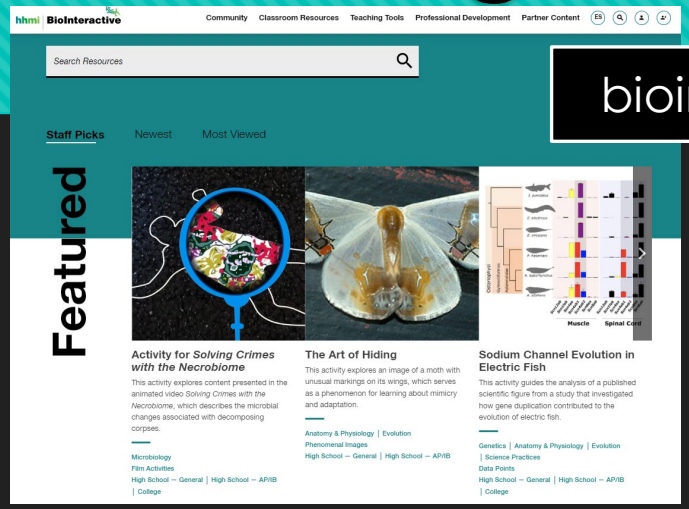






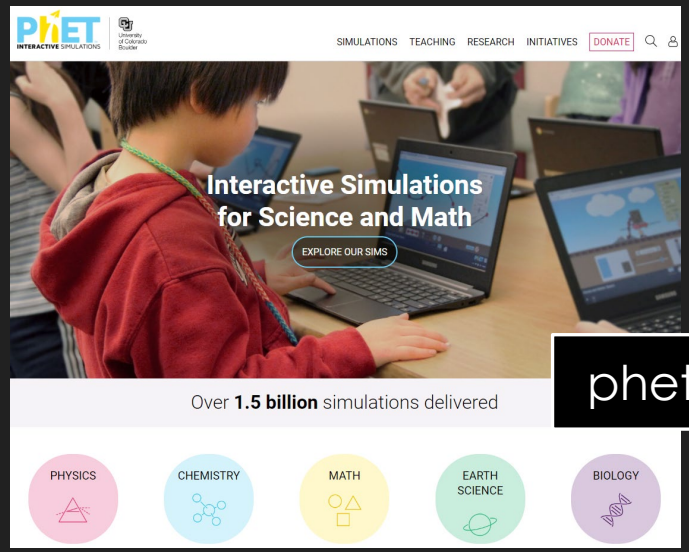


# Building from Resources & Databases

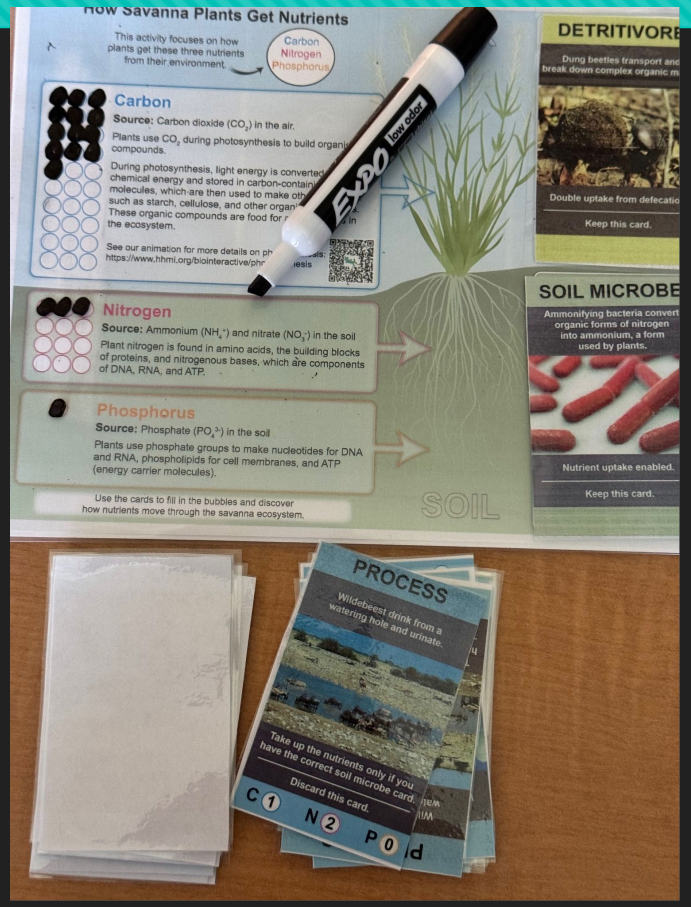


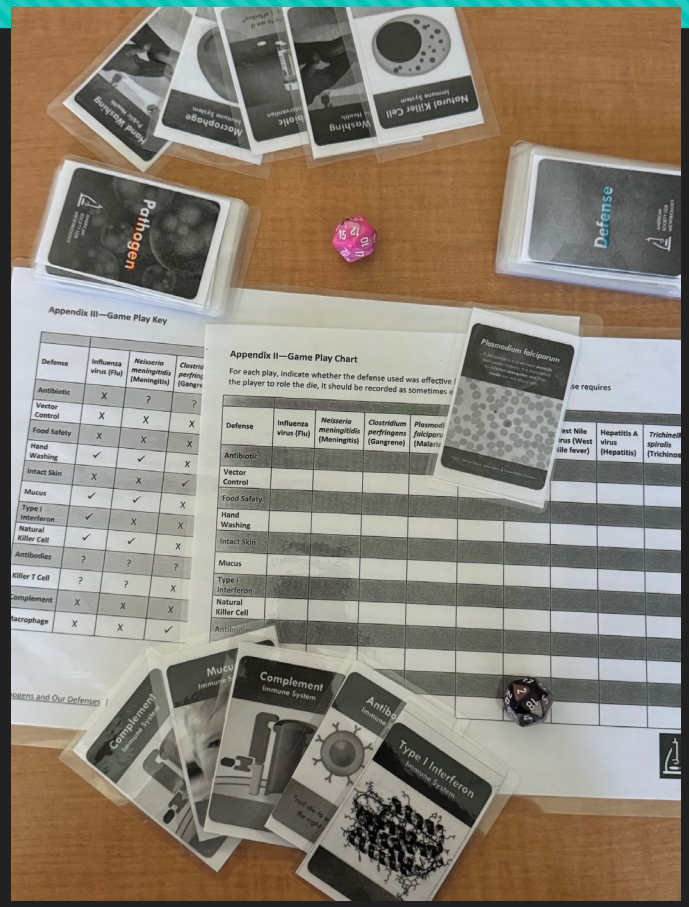

biointeractive.org

There are tons of activities, simulations, and worksheets you can gamify available in public databases and repositories



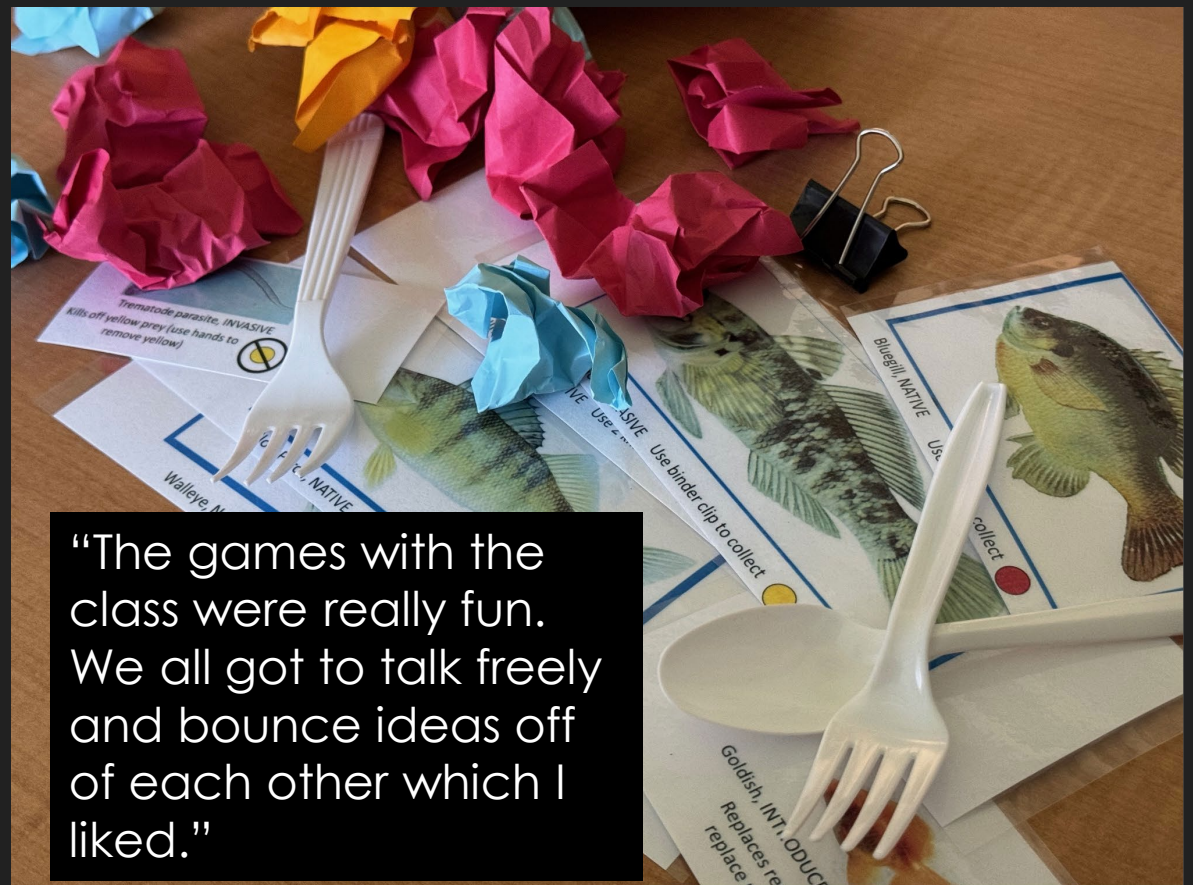

phet.colorado.edu



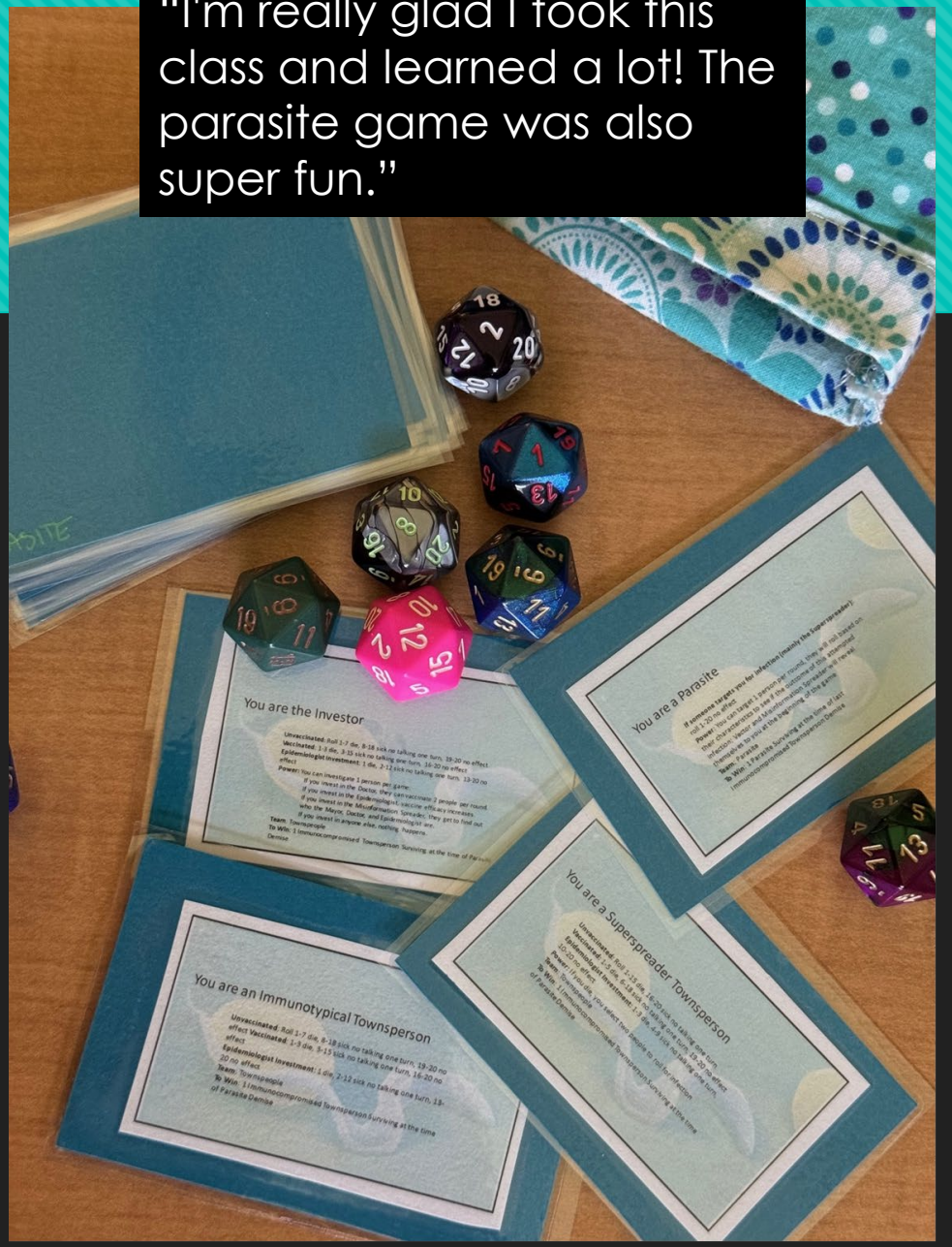
# Make your own!

Species Competition Game ↓



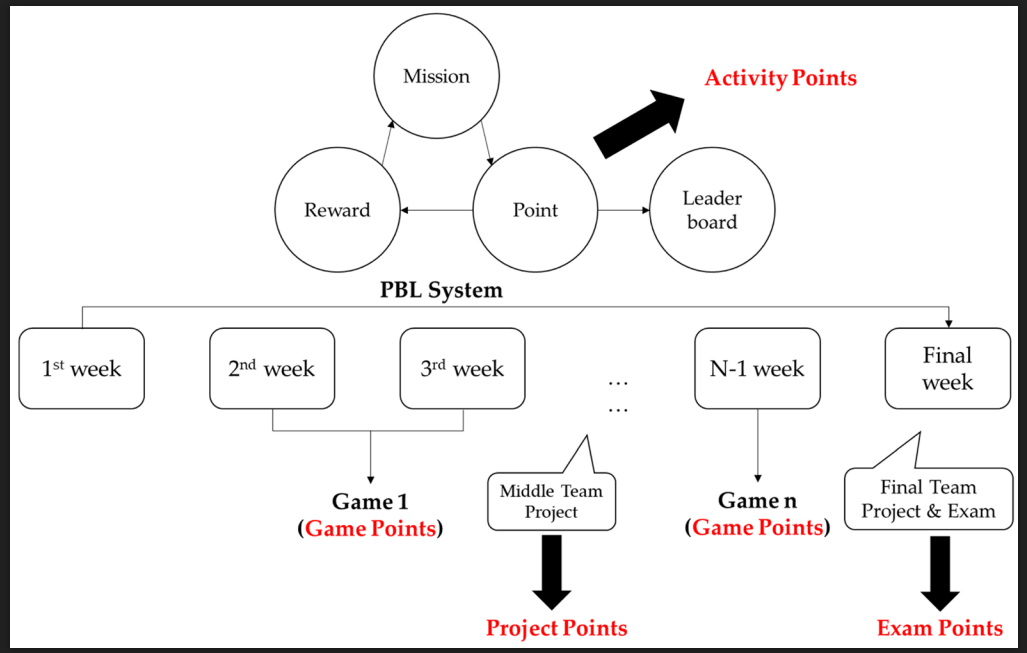

"The games with the class were really fun. We all got to talk freely and bounce ideas off of each other which I liked."

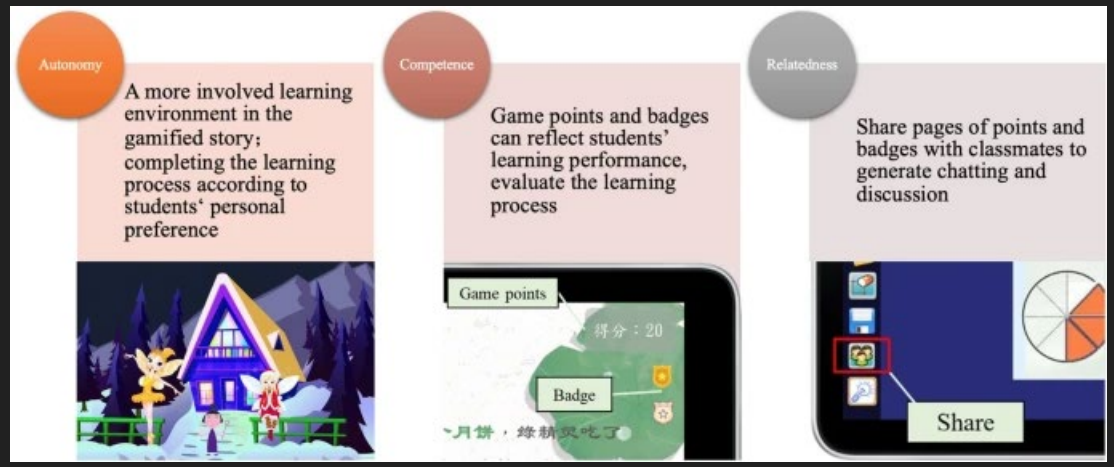
Parasite →




"I'm really glad I took this class and learned a lot! The parasite game was also super fun."

# Gamify your class from top to bottom!



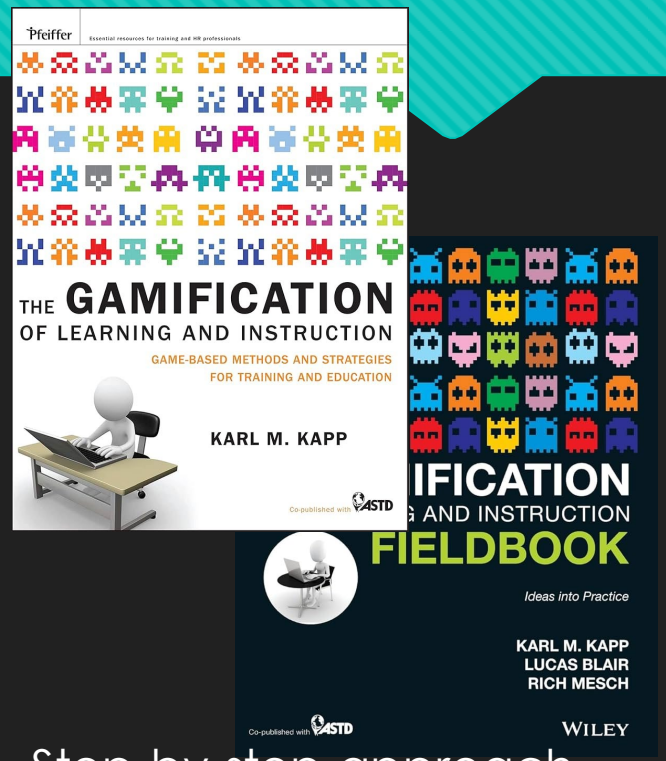

**Learning Performance Styles in Gamified College Classes Using Data Clustering**

by Sungjin Park and Sangkyun Kim *

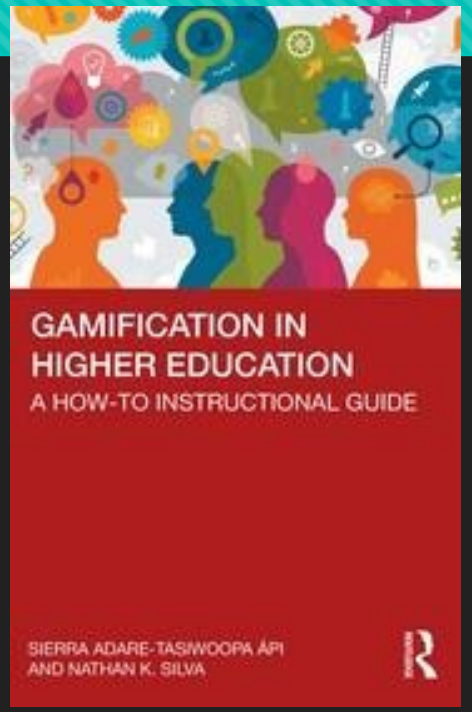
**Effects of gamified interactive e-books on students' flipped learning performance, motivation, and meta-cognition tendency in a mathematics course**

Jiahua Zhao[1] · Gwo-Jen Hwang[2] · Shao-Chen Chang[3] · Qi-fan Yang[4] · Artorn Nokkaew[5]

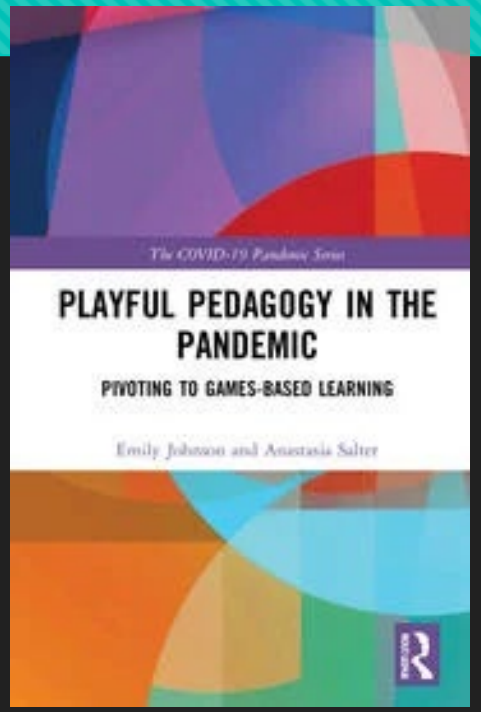
# Want to Learn More?



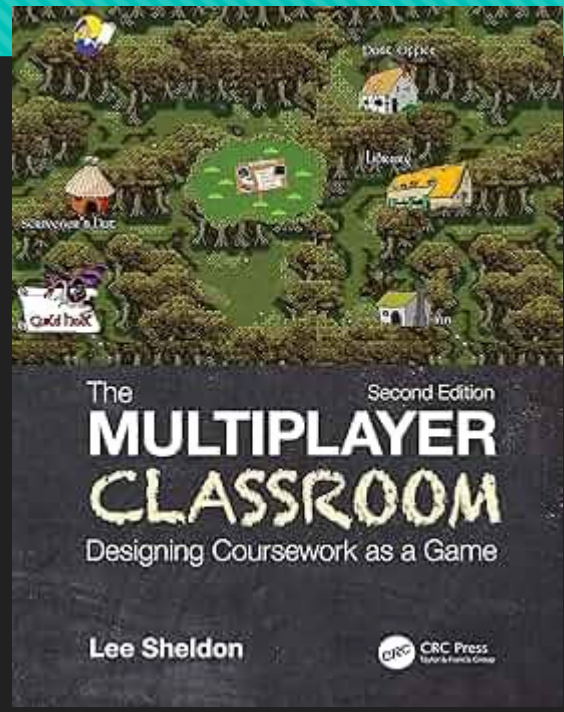

Step-by-step approach to applying the concepts of gamification, learn & apply




This text provides a lot of idea at varied levels of activation energy




An account of how to use gamification in the online learning with applications for on-ground, hybrid, and eLearning settings




This guide provides a roadmap to a complete gamification of your course – detail & plans!

**Congratulations! You have completed Level 1: What is gamification?**

Questions? Submit them here!

**Join us next Tuesday at 3pm in the MakerLab!**

# Gamification & Learning in Higher Ed

## Core Elements & Tools for Gamification

4 March 2025

Gamifying Classroom Components

Designing & Implementing a Gamified Class

Implementation Work Day

Core Elements & Tools

What is gamification?

Using the MakerLab

Your Gamified Class

Login Streak Bonus!

# Core Elements

| Gaming Elements | Closest Course Analogs |
| --- | --- |
| Points, Badges, Leaderboards, or Levels – How is progress measured and communicated? | Grades |
| Quests: The meat of the course | Assignments and Assessments |
| Rewards: Extrinsic motivation | Grades? |
| Social Components: Competitive or collaborative | Group work, discussion, grades? |
| Rules: Every games has guardrails | Course policies, Syllabus |
| Narratives: The fun, this makes the game memorable and immersive | Application |


# Points, Badges, Leaderboards, & Levels

How is progress measured and communicated?

# How to represent progress:


- Things to consider:
  - What is your goal?
  - What are you aiming to communicate?
  - How can you share this information with students?
  - What kind of motivation are you hoping to tap into?

| Last Name | Student Name | Rank | | Total XP | AdVENTURER | Blog Level | Geologic Time | Evolution | Charity Fair |
|---|---|---|---|---|---|---|---|---|---|
| Last name 1 | Name 1 | | Trapper | 15330 | | | | | |
| Last name 2 | Name 2 | | Apprentice | 1291 | | | | | |
| Last name 3 | Name 3 | | Ranger | 59350 | | | | | |
| Last name 4 | Name 4 | | Guardian | 126994 | | | | | |
| Last name 5 | Name 5 | | Ultimate survivor | 785610 | | | | | |
| Last name 6 | Name 6 | | Ranger | 70222 | | | | | |

# Let's Discuss:

- What progress communication strategy might work best for your course?
- What strategy do you find the most motivating?
- Which strategy do you think communicates best with students?

# Quests

The **stuff** of a gamified course

# What is a quest?

## An activity

**Viral Diversity Activity Worksheet**

**Case Title**: *The Case of the Mysterious Viral Outbreak*

**Objective:**

The goal of this activity is to explore the diversity of viruses, including their classification, structure, replication cycles, and host interactions. You will learn how different viral families contribute to outbreaks and adapt to their hosts.

**Instructions:**

1. **Read the Case Brief** below and investigate the possible viral suspects using the tools provided.
2. Complete the **Analysis Questions** as you work through the case.
3. Use your knowledge of **viral classification**, **genetics**, and **host interactions** to form a conclusion and propose strategies for controlling the outbreak.

**Case Brief:**

In a small town, an unexpected viral outbreak has caused a series of flu-like symptoms in the population. The symptoms include fever, fatigue, cough, and muscle aches, and some patients have developed respiratory distress. There have been no prior reports of similar outbreaks in this area. Your task is to identify the virus causing the illness, analyze its potential origin, and recommend actions for containment.

**Step 1: Classify the Virus**

Using the viral characteristics provided in the table below, determine the viral family to which the suspect virus belongs. Consider factors such as **genetic material**, **capsid symmetry**, **envelope presence**, and **method of replication**.

| Characteristic | Virus A | Virus B | Virus C | Virus D |
|---|---|---|---|---|
| Type of Genetic Material | ssRNA | dsDNA | ssRNA | dsRNA |
| Capsid Shape | Helical | Icosahedral | Helical | Icosahedral |

## An assignment

**Title: "Journey Through Space: Mastering Proportions and Rates"**

**Objective:**
This worksheet will help you practice solving problems involving proportions and rates, using the theme of space travel and exploration.

**1. Rocket Speed and Distance**

**Problem:**
A rocket travels 400 kilometers in 5 hours. At the same rate, how far will the rocket travel in 8 hours?

**Equation:**

Distance 1Time 1=Distance 2Time 2\frac{\text{Distance 1}}{\text{Time 1}} = \frac{\text{Distance 2}}{\text{Time 2}}

**Solve:**
Set up a proportion and solve for the unknown distance.

**2. Fuel Efficiency in Space**

**Problem:**
A spaceship uses 120 liters of fuel for every 4 hours of travel. How many liters of fuel will it use if it travels for 10 hours?

**Equation:**

Fuel 1Time 1=Fuel 2Time 2\frac{\text{Fuel 1}}{\text{Time 1}} = \frac{\text{Fuel 2}}{\text{Time 2}}

**Solve:**
Set up the proportion and solve for the unknown fuel consumption.

**3. Astronaut Travel Time**

**Problem:**
An astronaut can travel to a space station in 18 hours. If they travel at the same rate, how long will it take them to reach another space station that is 1.5 times farther away?

## An assessment

**Title: "Pirates of the Engineering Seas: The Quest for the Golden Gear"**

**Storyline:** Ahoy, engineers! You've just joined the notorious pirate crew of the *Black Wind*, captained by the infamous Captain Gearhart. The crew is on a quest to find the legendary Golden Gear, a treasure said to hold the secrets of engineering mastery. But first, you must prove your skills in solving engineering challenges, or face being marooned on a deserted island!

You'll have to answer the following questions correctly to advance to the treasure. Fail, and you'll be left with nothing but a rusty compass and a ship full of disappointed pirates!

**1. Ship Design: The Sea-Bound Vessel**

**Captain Gearhart has ordered a new ship design to withstand fierce waves and high winds. You are tasked with calculating the ship's hull strength.**

Which of the following factors most affects the buoyancy of the ship?

A. The material used to build the ship
B. The shape of the ship's hull
C. The weight of the crew
D. The size of the sails

*Hint: Think of Archimedes' principle!*

**2. The Wind and the Sails: A Wind-Driven Dilemma**

**The wind is howling, and the crew is raising the sails to catch the breeze. But Captain Gearhart needs you to determine the force generated by the wind.**

If a sail is 10 meters by 15 meters, and the wind speed is 20 m/s, how would you calculate the force exerted by the wind on the sail? Use the formula for aerodynamic force:
F=12×Cd×ρ×A×v2F = \frac{1}{2} \times C_d \times \rho \times A \times v^2

Where:

- CdC_d is the drag coefficient (assumed to be 1.2 for simplicity)
- ρ\rho is the air density (1.225 kg/m³)
- AA is the area of the sail
- vv is the velocity of the wind

What is the force acting on the sail?

**Viral Diversity Activity Worksheet**

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**Case Title**: *The Case of the Mysterious Viral Outbreak*

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**Objective:**

The goal of this activity is to explore the diversity of viruses, including their classification, structure, replication cycles, and host interactions. You will learn how different viral families contribute to outbreaks and adapt to their hosts.

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**Instructions:**

1. **Read the Case Brief** below and investigate the possible viral suspects using th ols provided.
2. Complete the **Analysis Questions** as you work through the case.
3. Use your knowledge of **viral classification**, **genetics**, and **host interactions** to m a conclusion and propose strategies for controlling the outbreak.

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**Case Brief:**

In a small town, an unexpected viral outbreak has caused a series of flu-like symptoms in the population. The symptoms include fever, fatigue, cough, and muscle aches, and some patients have developed respiratory distress. There have been no prior reports of similar outbreaks in this area. Your task is to identify the virus causing the illness, analyze its potential origin, and recommend actions for containment.

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**Step 1: Classify the Virus**

Using the viral characteristics provided in the table below, determine the viral family to which the suspect virus belongs. Consider factors such as **genetic material**, **capsid symmetry**, **envelope presence**, and **method of replication**.

| Characteristic | Virus A | Virus B | Virus C | Virus D |
|---|---|---|---|---|
| Type of Genetic Material | ssRNA | dsDNA | ssRNA | dsRNA |
| Capsid Shape | Helical | Icosahedral | Helical | Icosahedral |

Keep it on theme

Link to specific objectives

Clear, consistent, language

Want to link to the theme, key objectives, course content, and consistent verbiage

The narrative

But it is still course content

# What is a quest?

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## An assignment

**Title: "Journey Through Space: Mastering Proportions and Rates"**

**Objective:**
This worksheet will help you practice solving problems involving proportions and rates, using the theme of space travel and exploration.

**1. Rocket Speed and Distance**

**Problem:**
A rocket travels 400 kilometers in 5 hours. At the same rate, how far will the rocket travel in 8 hours?

**Equation:**

Distance 1Time 1=Distance 2Time 2\frac{\text{Distance 1}}{\text{Time 1}} = \frac{\text{Distance 2}}{\text{Time 2}}

**Solve:**
Set up a proportion and solve for the unknown distance.

**2. Fuel Efficiency in Space**

**Problem:**
A spaceship uses 120 liters of fuel for every 4 hours of travel. How many liters of fuel will it use if it travels for 10 hours?

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**3. Astronaut Travel Time**

**Problem:**
An astronaut can travel to a space station in 18 hours. If they travel at the same rate, how long will it take them to reach another space station that is 1.5 times farther away?

## An assessment

**Title: "Pirates of the Engineering Seas: The Quest for the Golden Gear"**

**Storyline:** Ahoy, engineers! You've just joined the notorious pirate crew of the *Black Wind*, captained by the infamous Captain Gearhart. The crew is on a quest to find the legendary Golden Gear, a treasure said to hold the secrets of engineering mastery. But first, you must prove your skills in solving engineering challenges, or face being marooned on a deserted island!

You'll have to answer the following questions correctly to advance to the treasure. Fail, and you'll be left with nothing but a rusty compass and a ship full of disappointed pirates!

**1. Ship Design: The Sea-Bound Vessel**

**Captain Gearhart has ordered a new ship design to withstand fierce waves and high winds. You are tasked with calculating the ship's hull strength.**

Which of the following factors most affects the buoyancy of the ship?

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*Hint: Think of Archimedes' principle!*

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**The wind is howling, and the crew is raising the sails to catch the breeze. But Captain Gearhart needs you to determine the force generated by the wind.**

If a sail is 10 meters by 15 meters, and the wind speed is 20 m/s, how would you calculate the force exerted by the wind on the sail? Use the formula for aerodynamic force:
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Where:

- CdC_d is the drag coefficient (assumed to be 1.2 for simplicity)
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Practice & Repetition

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Instructions but with narrative

This might be questionable,
I would probably adjust this language…

The narrative does double duty by helping students thinking about how they might apply principles in "the real world"

Importantly, the actual question can make sense independent of the narrative.

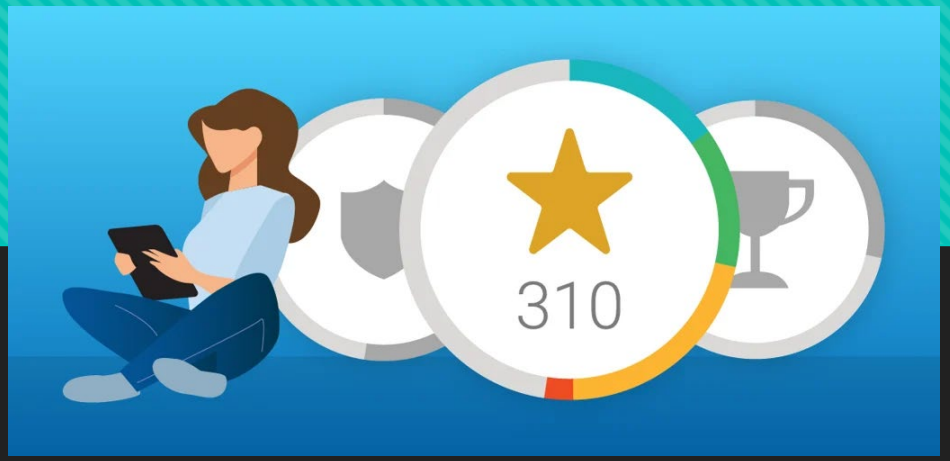
# Side Quest:

How do you think incorporating a narrative or theme might impact student motivation?
Would they think its cheesy?
Would it help them think about content different?

# Rewards

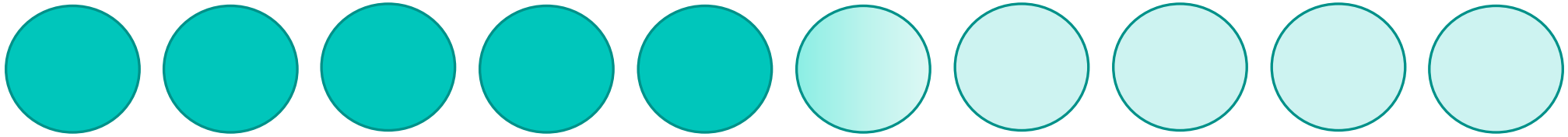
Grading and other learning acheivements

# Grading in Gamified Classes




- Could be graded the normal way you've always done it
  - What if these were labeled "XP"?
- Could label the accumulation of points with "levels" (a mystery/detective themed course: Gumshoe, Private Investigator, Sergeant Investigator, Detective, Chief)
- Could link tasks, assignments, and assessments to standards (see Standards-Based Grading)
- Could be other types of "rewards"
  - "Item drops" – opportunities for students to practice that must be unlocked by action
  - Institution of time limits or time bonuses – turn your homework in early and get early access to the quiz

# You're making GREAT progress!



# Social Components

Every person for themselves or Better together?

# The Social Aspect

Competitive Set-Up

Some students are very motivated by competition:

- Competitive Perfectionists
- Risk-Takers & Challenge-Seekers
- Social Status Seekers
- High Achievers

# The Social Aspect

Collaborative Set-Up

Some students are very motivated by competition:

- Community-Oriented Students
- Constructivist Thinkers
- Empathetic & Inclusive Students
- Accountability-Driven Students

How have these student types shown up in your class in its current format?

# Striking the Balance

- **Individual Mastery-Based Grading Strategy:** Use a grading scale that rewards personal improvement rather than ranking against peers.
- **Example:** A biology class allows students to **reattempt quizzes** and improve scores, rewarding persistence and self-competition rather than just raw performance.
- **Who Benefits Most?**
  - *High Achievers* – Motivated to push for top scores.
  - *Goal-Oriented Students* – Encouraged to track their own progress.
  - *Competitive Perfectionists* – Have a chance to refine their work without fear of failure.

- **Team-Based Assessments Strategy:** Use **group projects** where students collectively solve problems, submit reports, or create presentations.
- **Example:** In a computer science course, students work in teams to **develop an app**, with each member assigned a role. The project is graded on both individual contributions and overall team effectiveness.
- **Who Benefits Most?**
  - *Community-Oriented Students* – Thrive in cooperative learning.
  - *Constructivist Thinkers* – Prefer co-creating knowledge.
  - *Accountability-Driven Students* – Feel responsible for their team's success.

# Striking the Balance

- **Competitive Collaboration: Team vs. Team Challenges (Supports Both)**
- **Strategy:** Create **inter-team competitions**, where collaboration is required but there is still a winning outcome.
- **Example:** In a physics course, students participate in an **engineering challenge**, designing and testing structures against other teams. The best design wins, but all teams receive credit for participation and effort.
- **Who Benefits Most?**
  - *Team-Oriented Competitors* – Engage in friendly rivalry while working together.
  - *Team-Oriented Problem-Solvers* – Enjoy working together toward a goal.
  - *Competitive Perfectionists* --Strive for excellence within a high-stakes team environment where both individual contributions and collective success matter

- **Balanced Grade Distribution (Supports All)**

A well-structured grade breakdown might look like this:

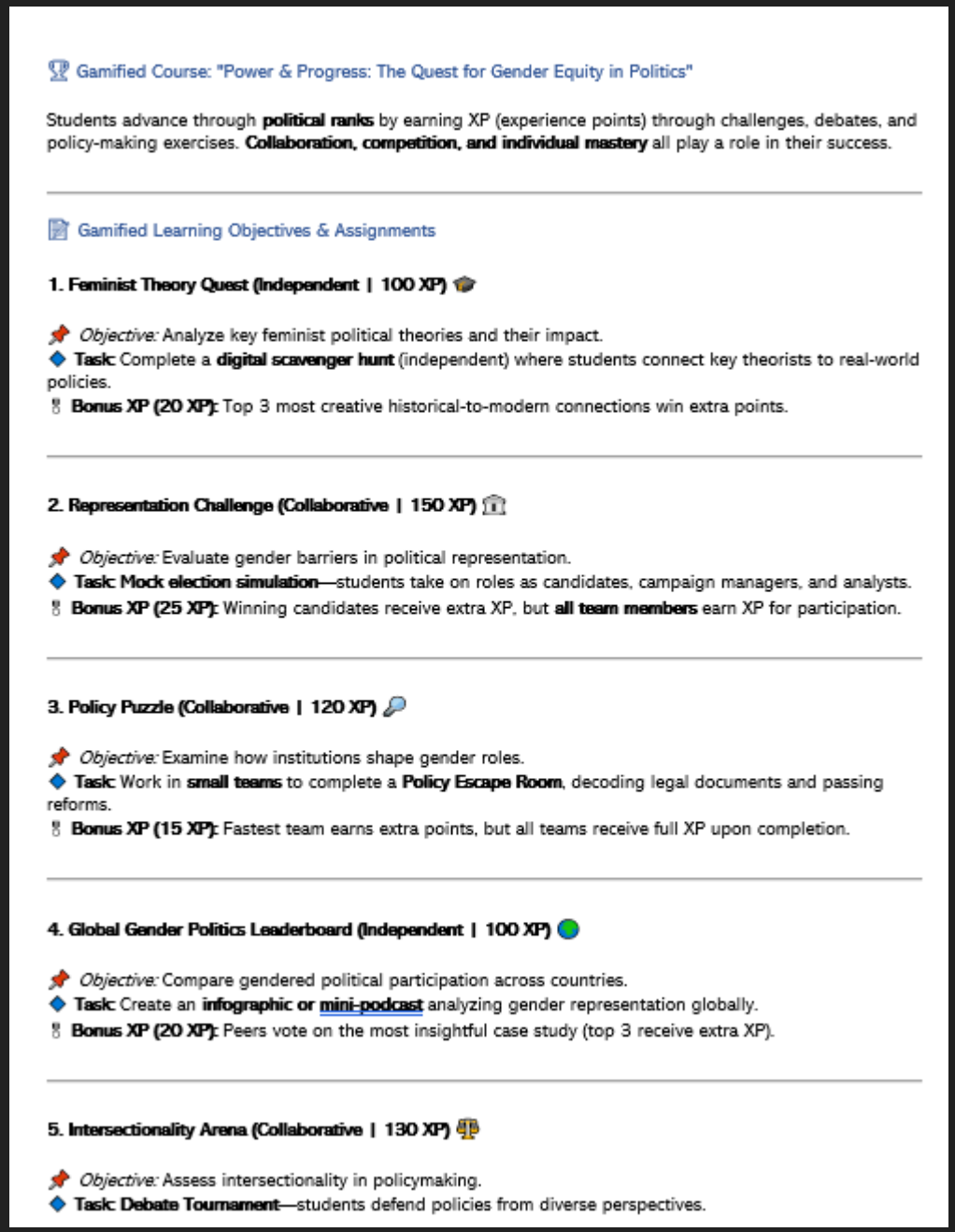
- **50% Individual Mastery** (quizzes, exams, personal improvement opportunities)
- **30% Group Work** (projects, discussions, team-based assessments)
- **10% Peer Review & Teaching** (critiques, mentoring)
- **10% Optional Competitive Challenges** (extra credit or bonus assignments)
- **Who Benefits Most?**
  - *Everyone* –There is something for each type of student here and it combines the strengths and weaknesses of each type of student for a well-rounded class.

# Rules

Making the Class Make Sense and Keeping the Guardrails Up

# Rules for a Gamified Course

- Define the objective for the game/course
  - Link learning objectives to game components
- Be clear how students progress through the game/course and what kinds of activities contribute directly vs. indirectly to that progress
  - Set milestones
  - Be transparent
- Explain rewards and be sure that they're attainable for all learners
- Delineate collaborative and independent work
- Set expectations about participation or engagement
- Specify how competition impacts student grades



🏆 Gamified Course: "Power & Progress: The Quest for Gender Equity in Politics"

Students advance through **political ranks** by earning XP (experience points) through challenges, debates, and policy-making exercises. **Collaboration, competition, and individual mastery** all play a role in their success.

---

📝 Gamified Learning Objectives & Assignments

**1. Feminist Theory Quest (Independent | 100 XP)** 🎓

📌 *Objective:* Analyze key feminist political theories and their impact.
🔹 **Task:** Complete a **digital scavenger hunt** (independent) where students connect key theorists to real-world policies.
🎖️ **Bonus XP (20 XP):** Top 3 most creative historical-to-modern connections win extra points.

---

**2. Representation Challenge (Collaborative | 150 XP)** 🏛️

📌 *Objective:* Evaluate gender barriers in political representation.
🔹 **Task: Mock election simulation**—students take on roles as candidates, campaign managers, and analysts.
🎖️ **Bonus XP (25 XP):** Winning candidates receive extra XP, but **all team members** earn XP for participation.

---

**3. Policy Puzzle (Collaborative | 120 XP)** 🔎

📌 *Objective:* Examine how institutions shape gender roles.
🔹 **Task:** Work in **small teams** to complete a **Policy Escape Room**, decoding legal documents and passing reforms.
🎖️ **Bonus XP (15 XP):** Fastest team earns extra points, but all teams receive full XP upon completion.

---

**4. Global Gender Politics Leaderboard (Independent | 100 XP)** 🌍

📌 *Objective:* Compare gendered political participation across countries.
🔹 **Task:** Create an **infographic or mini-podcast** analyzing gender representation globally.
🎖️ **Bonus XP (20 XP):** Peers vote on the most insightful case study (top 3 receive extra XP).

---

**5. Intersectionality Arena (Collaborative | 130 XP)** ⚖️

📌 *Objective:* Assess intersectionality in policymaking.
🔹 **Task: Debate Tournament**—students defend policies from diverse perspectives.

# 🏆 Important Rules Takeaways

✅ **Clear progression system**—students understand exactly what they need to pass.
✅ **No one "fails" just because they didn't win competitions**—everyone can progress by engaging.
✅ **Flexibility for different learning styles**—students can focus on **individual mastery, teamwork, or a mix of both.**
✅ **Engagement-driven motivation**—students are incentivized to **push beyond the minimum.**

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# The Narrative

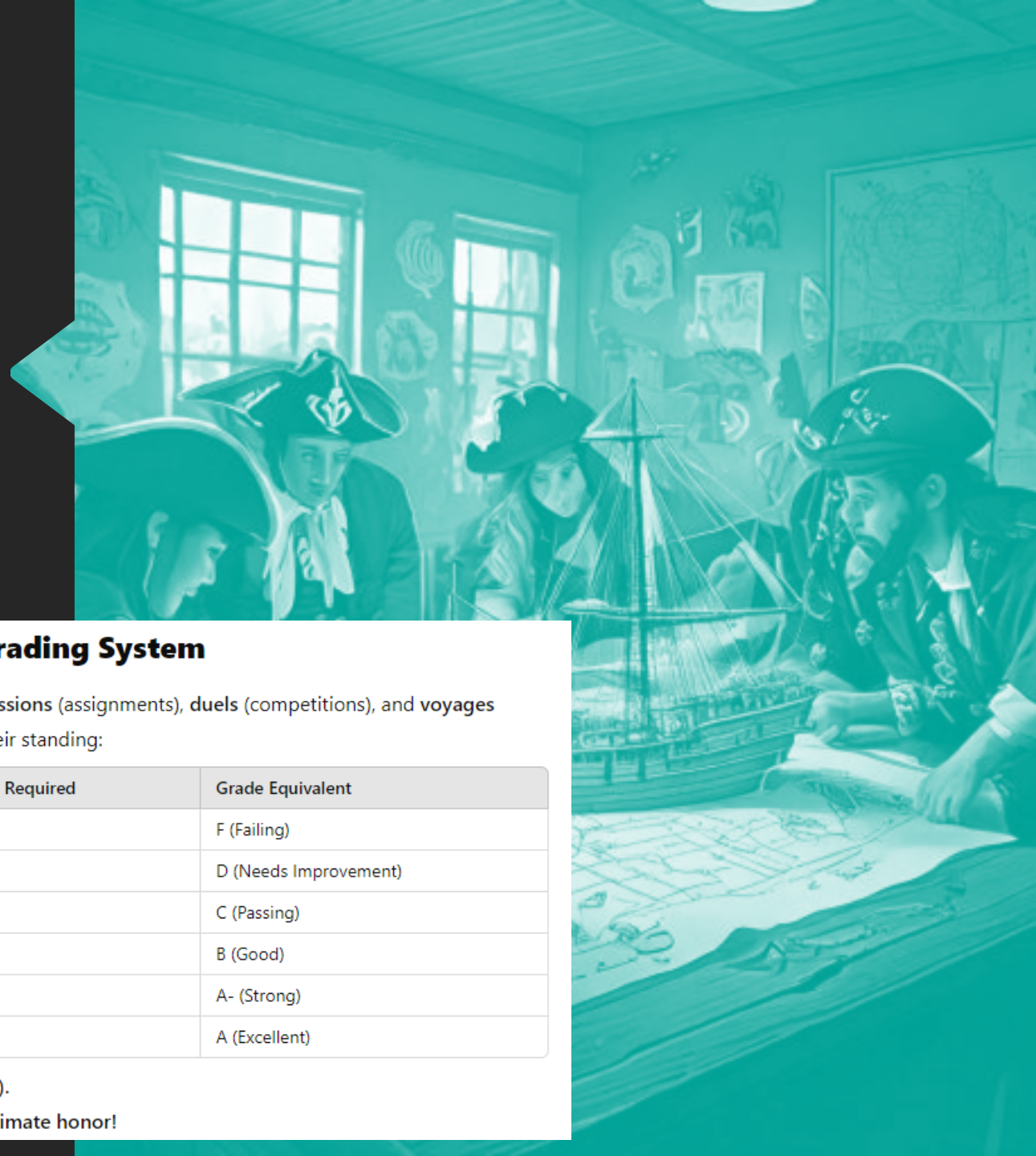
- Points, Badges, Leaderboards, or Levels: Gumshoe, Private Investigator, Sergeant Investigator, Detective, Chief
- Quests: Investigate the cause of death of a victim wherein the suspects are pathogenic microbes; Clues are the characteristics of the infection, symptoms of the victim prior to death; Interrogation of “known accomplices” aka closely related organisms
- Rewards: Item/Clue Drops, New Abilities, Time Limits/Bonuses, Level Advancement
- Social Components: In class discussions/investigation comparisons, reveal of clues, mixed level groups, etc.
- Rules: Follow the process, Preserve the chain of custody, Avoid random guessing, Use the scientific method,

# 🏴‍☠️ Engineering the High Seas: A Pirate's Guide to Innovation

## 🌊 Course Description

Set sail on an **engineering adventure** where students become pirate-engineers, solving real-world engineering challenges inspired by the high seas! This junior-level course combines **mechanical, structural, and fluid dynamics principles** with immersive **team-based roleplay** and a **gamified XP-based grading system**. Students will work in pirate crews, taking on specialized roles as **Navigators, Shipwrights, Canoneers, Boatswains, and Engineer's Mates** to design, test, and optimize ships, weapons, and survival systems.

The course culminates in an **interactive mini ship-building project**, where teams construct, test, and refine scale-model ships to compete in a **final fleet battle**—a test of speed, stability, and combat resilience!



### 🏗️ Course Topics & Activities (Aligned with Junior Engineering Level)

| Topic | Mission (Assignment) | Concepts Covered | Type (Indiv/Collab) | XP |
|---|---|---|---|---|
| Naval Architecture | *Ship Design & Buoyancy Challenge* 🚢 | Fluid mechanics, stability, center of gravity | Individual | 100 XP |
| Projectile Motion & Ballistics | *Cannonball Trajectory Simulation* 🎯 | Kinematics, aerodynamics, impact physics | Collaborative | 150 XP |
| Navigation & GPS Systems | *Treasure Map Navigation* 🗺️ | Bearings, GPS coordinates, error analysis | Individual | 120 XP |
| Aerodynamics & Wind Energy | *Sail Efficiency Optimization* 🌬️ | Lift, drag, mechanical energy | Collaborative | 100 XP |
| Materials Science & Structures | *Hull Strength Stress Test* ⚓ | Shear force, bending moments, corrosion | Individual | 130 XP |
| Resilience & Safety Engineering | *Stormproofing Pirate Ships* ⛈️ | Structural reinforcement, hydrodynamics | Collaborative | 140 XP |
| Ethics & Engineering Judgment | *The Pirate's Code: Ethics Dilemmas* ☠️ | Engineering ethics, sustainability | Individual | 80 XP |
| Capstone Project | *Fleet Battle: Design, Build, Compete* ⚔️ | Systems engineering, teamwork, optimization | Collaborative | 180 XP |

**Bonus XP** is earned through **"duels" (challenges), "raids" (competitions), and "legendary feats" (extra credit projects).**

## 📊 Rank Progression & Grading System

Students earn **gold (XP)** by completing **missions** (assignments), **duels** (competitions), and **voyages** (projects). Their **pirate rank** determines their standing:

| Rank | Gold (XP) Required | Grade Equivalent |
|---|---|---|
| **Landlubber** | 0 XP | F (Failing) |
| **Deckhand** | 300 XP | D (Needs Improvement) |
| **Gunner** | 600 XP | C (Passing) |
| **Quartermaster** | 800 XP | B (Good) |
| **Captain** | 1000 XP | A- (Strong) |
| **Pirate King/Queen** | 1200 XP | A (Excellent) |

➡️ **600 XP required to pass (Gunner rank).**

➡️ **1200 XP (Pirate King/Queen) is the ultimate honor!**

# What kind of narrative would be fun to explore for your course?

Game Designer

# Tools

# Tools & Apps for Gamification

### XP & Progress Tracking

- **Google Sheets / Excel** – Create a custom XP tracking system with formulas for automatic leveling up.
- **Gradecraft** – A gamified LMS that helps track XP, leaderboards, and progress-based learning. (Limited free trial)

### Badges & Achievements

- **Blackboard –** LMS platforms allow badge creation and distribution. Here's how: https://youtu.be/EDXfewsV4DA
- **Canva** – Design custom digital badges for achievements. (Free with some limits on design features)
- **Canvas Badges (Badgr)** – Issue verifiable digital badges for skill-based achievements. (Free tier available) https://www.youtube.com/watch?v=q3dkGupx0ac

### Interactive Quizzes & Engagement

- **Kahoot / Quizizz / Blooket** – Gamify assessments with real-time, competitive quizzes. (All have free basic versions)
- **Socrative** – A tool for interactive quizzes and formative assessments. (Free version has limited quizzes; only app-based no web version)
- **H5P** – Create interactive content like branching scenarios, quizzes, and games. (Free for basic content creation, requires HTML)

### Collaboration & Storytelling

- **Miro / Trello / Notion** – Organize quests, track progress, and structure gamified lesson plans. (All have free versions with some limitation on storage; Some learning curve)
- **Twine** – Build interactive, choose-your-own-adventure style learning activities. (Free & Open Source; Some learning curve)) https://www.youtube.com/watch?v=iKFZhlHD7Xk&list=PLklITFhXtPCCKadv-0Gcbqoj3OCev695D
- **Deck of Cards** – Create challenge decks or randomized rewards. (You can do this is Powerpoint!)

### Roleplay & Immersive Learning

- **Dungeons & Dragons (D&D Beyond / Roll20)** – Use role-playing elements for storytelling-based lessons. (Literally limitless options; Some game books available through the library and tons of content online)
- **Scenario-based Learning (Branched Learning Paths)** – Tools like Articulate Storyline (Free Trial) or Forms allow for branching scenarios. (Free!)

### Full Gamification Platforms

- **Breakout EDU** – Classroom escape-room style games that challenge students through puzzles. (Many free games, full library requires a subscription) https://www.youtube.com/watch?v=oH1Tmhhy6mg
- **GameLab** – A flexible platform for creating fully gamified courses. (Free for individuals, some limit on use) https://code.org/educate/gamelab

### Books on Gamification in Education

- **"The Gamification of Learning and Instruction" – Karl M. Kapp** – A foundational book on gamification strategies for educators.
- **"Reality Is Broken" – Jane McGonigal** – Explores how game mechanics can improve education and real-world engagement.
- **"For the Win: How Game Thinking Can Revolutionize Your Business" – Kevin Werbach & Dan Hunter** – Covers game-based learning principles applicable to teaching.
- **"Play to Learn: Everything You Need to Know About Designing Effective Learning Games" – Sharon Boller & Karl M. Kapp** – A practical guide to implementing game-based learning.
- **"Level Up Your Classroom: The Quest to Gamify Your Lessons and Engage Your Students" – Jonathan Cassie** – Focuses on gamification techniques for classroom instruction.

You should have received an email with these links!

**Congratulations! You have completed Level 2:** *Core Elements & Tools for Gamification*

Questions? Submit them here!

**Join us March 18th at 3:30pm**

# Gamification & Learning in Higher Ed

## Gamifying Classroom Components

18 March 2025


Login Streak Bonus!

# Let's Gamify these Key Classroom Elements


Syllabus

Blackboard

Tests

Attendance

# Syllabus Escape Room

Incentivize and gamify students inventorying and interrogating your syllabus

- Ask them to find key items
- Highlight the important tasks or projects they need to flag
- Challenge them to reflect on why a policy is in place

## Puzzle 1: The Office Hours Vault

***"The key to success is knowing when to ask. I'm always here for you, but not on campus 24/7. When and where can you find me?"***

A fun twist? Have students come find your office and reward them with some XP or an "item drop"

**Unlock Code:** (The correct office hours listed in the syllabus)

**How to Implement:**

In-person: Have students find the office hours in the syllabus and write them down to show the instructor or TA.

Online: Use a Google Form where they must enter the correct office hours before moving on.

## 🔒 Puzzle 2: The Grading Gridlock

***"Some tasks are small, some weigh more. To reach the goal, you must explore. What kind of task or assignment is worth the most?“***

🔑 **Unlock Code:** (The highest-weighted assignment in the grading breakdown)

💡 **How to Implement:**

In-person: Provide a multiple-choice sheet where students circle the correct answer.

Online: A dropdown menu or short-answer question in a Blackboard quiz.

Emphasizes that not all tasks are created equal. Could also emphasize the importance of small tasks like, “If I never complete the homework on time what the highest grade I could earn?”

**Puzzle 3: The Deadlines Dilemma**

***"Wait too long, and doors will close. When must the first big task be completed?"***

**Unlock Code:** (The date of the first major assignment)

**How to Implement:**

In-person: Have hidden envelopes with different due dates; only the correct one has the next clue.

Online: A short-answer question that requires the exact due date.

You can also use something like this to highlight your late or missed work policies.

## 💻 Puzzle 4: The Plagiarism Paradox

***"If you copy, if you steal, your grade will surely take a hit. Where can you find the rule that tells you this?"***

🔑 **Unlock Code:** (The section in the syllabus about academic integrity)

💡 **How to Implement:**
In-person: Have students highlight the relevant passage in the syllabus.
Online: A fill-in-the-blank or dropdown selection in a quiz.

I love to emphasize this part with posing “What if” scenarios and asking the students how they would handle them using the student handbook and syllabus policies (great place to bring us using GenAI too !).

## 🏆 Final Challenge: The Course Success Treasure

***"You've cracked the code and reached the chest! But one final test remains. Tell me—what is one key to success in this course?"***

Let’s remember why we’re here!

🗝️ **Unlock Code:** (Any key takeaway from the syllabus—students must write their own answer!)

💡 **How to Implement:**
In-person: Have students write responses on sticky notes to share.
Online: A short reflection question.

**BIO 101: The Quest for Life – An Adventure into Biology**

**Semester:** Fall 2025
**Instructor:** Dr. Brittany Peterson
**Office Hours:** By appointment or via "guild council" (group mentoring sessions)
**Contact:** bripete@siue.edu

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### 📖 Course Overview (The Grand Adventure)

Welcome, explorers! In this course, you are **biologists-in-training**, embarking on a journey through the mysteries of life. Your mission? To uncover the secrets of cells, genetics, evolution, and ecosystems—earning XP, leveling up, and becoming a **Biology Trailblazer** by the end of the semester!

This course uses **gamification** to make learning interactive and rewarding. Instead of grades, you'll earn **Experience Points (XP)** through quests (assignments), boss battles (exams), and side missions (extra credit).

---

### 🛠 Tools of the Trade

All great biologists need equipment! Here's what you'll use:

- 📖 **Textbook:** *Biology: The Science of Life (10th Edition)*
- 💻 **Online Tools:** Blackboard (XP tracker), Kahoot (quizzes), and OneDrive (collaborative work)
- 🧪 **Lab Preparation:** Please wear closed-toe shoes, long pants/skirts, with hair tied back and bring a pencil with you to lab!

---

### ⚖ XP System & Grading

**Instead of traditional grades, you'll level up by earning XP. Each level corresponds to a themed rank:**

| Rank | Grade | XP Required | Description |
|---|---|---|---|
| Trailblazer | A | 11,500+ XP | A legendary explorer, revered for unmatched knowledge and survival skills. |
| Pathfinder | B | 10,000 XP | A skilled adventurer who can navigate any terrain with confidence. |
| Scout | C | 8,500 XP | A resourceful explorer who can handle the challenges of the wild. |
| Forager | D | 7,000 XP | Learning the basics but struggling with survival. |
| Wanderer | F | Below 7,000 XP | Disoriented in the wilderness—at risk of never making it back. |

---

### 📜 Course Quests & XP Breakdown

Your XP is earned through completing different quests:

| Quest Type | XP Available | Individual/Collaborative | Description |
|---|---|---|---|
| 🏹 **Main Quests (Labs & Homework)** | 6000 XP | Labs: Collaborative, Homework: Individual | Hands-on lab reports and research activities (one per week) |
| ⚔ **Boss Battles (Exams)** | 4500 XP | Individual | Major assessments that test mastery of key concepts |
| 🎯 **Daily Missions (Classwork & Participation)** | 1000 XP | Collaborative | Engage in discussions, mini-experiments, and activities |
| ⏳ **Side Quests (Extra Credit & Challenges)** | 1000 XP | Individual or Collaborative (varies) | Optional bonus assignments for extra XP |

---

### ⚔ Boss Battles – Face the Challenge!

Boss Battles are major assessments that test your mastery of key concepts. Just like in any great adventure, these high-stakes encounters will challenge you to apply what you've learned and prove your skills as a wilderness explorer.

#### 🔹 Boss Battle Format

Each Boss Battle is designed to assess your knowledge through a mix of question types:

- **Multiple-Choice Questions (40%)** – Test your recall and understanding of fundamental concepts.
- **Short Answer Questions (30%)** – Demonstrate deeper comprehension by explaining key processes.
- **Problem-Solving Scenarios (20%)** – Apply your knowledge to analyze biological situations.
- **Explorer's Challenge (10%)** – A special question requiring critical thinking or data interpretation.

#### ⏳ Time Limit & Structure

# Use the syllabus as a place to set the narrative (see Week 2 handout)

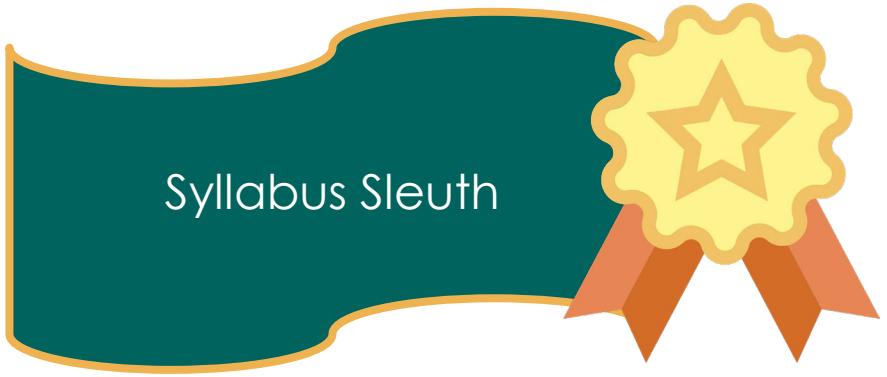
# Let's Gamify these Key Classroom Elements


Syllabus

Blackboard

Tests

Attendance



Quiz Tournament

Adaptive Release

Achievements / Badges

Partner Integrations

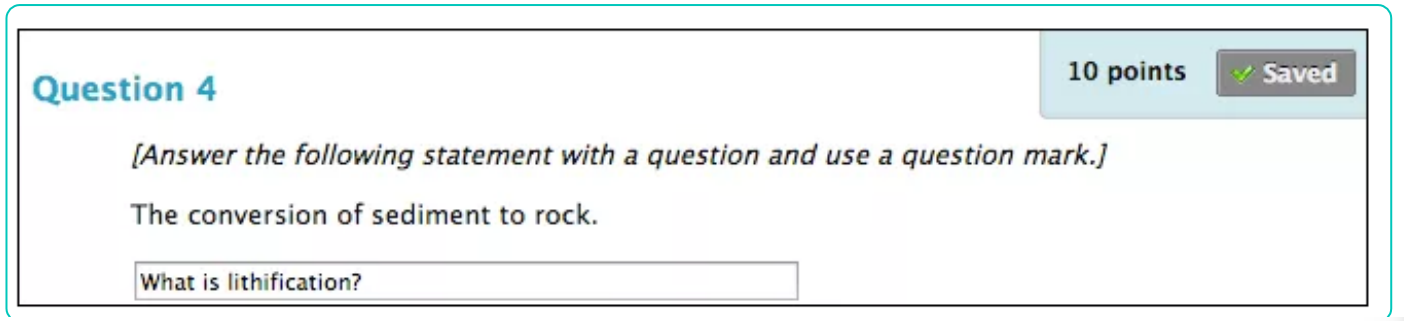
Cengage, Pearson,
Duolingo, Kahoot

ECP Program

Gamified Grading

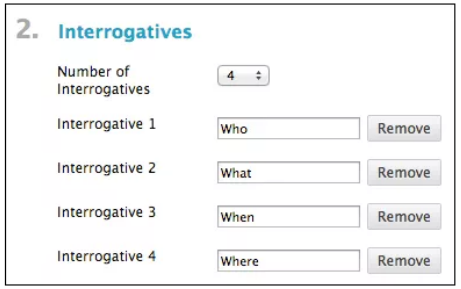
Progress Tracking
Grading Schemas

# Create a Tournament using the Quiz Bowl Feature




## Create a Quiz Bowl question

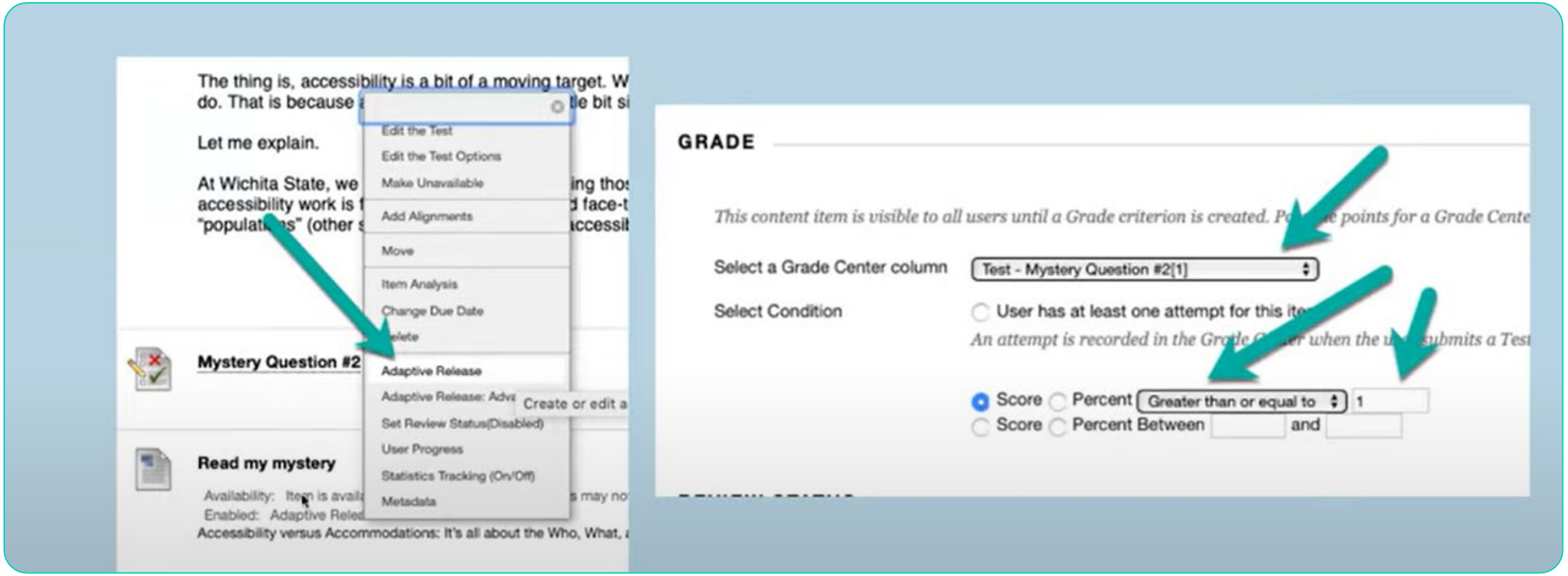
1. Access a test, survey, or pool. From the *Create Question* menu, select *Quiz Bowl*.
2. Type a statement that students can provide the question for.
3. Select the *Number of Interrogatives* from the menu. You can add up to 103 interrogatives.




4. If necessary, type or edit the interrogatives. Select *Remove* to remove interrogatives.
5. Type the answer phrase. Optionally, select the number of answer phrases if more than one is needed. The maximum number of answer phrases is 100.
6. Optionally, type feedback for correct and incorrect answers.
7. Select *Submit*.

## Competitive Element:

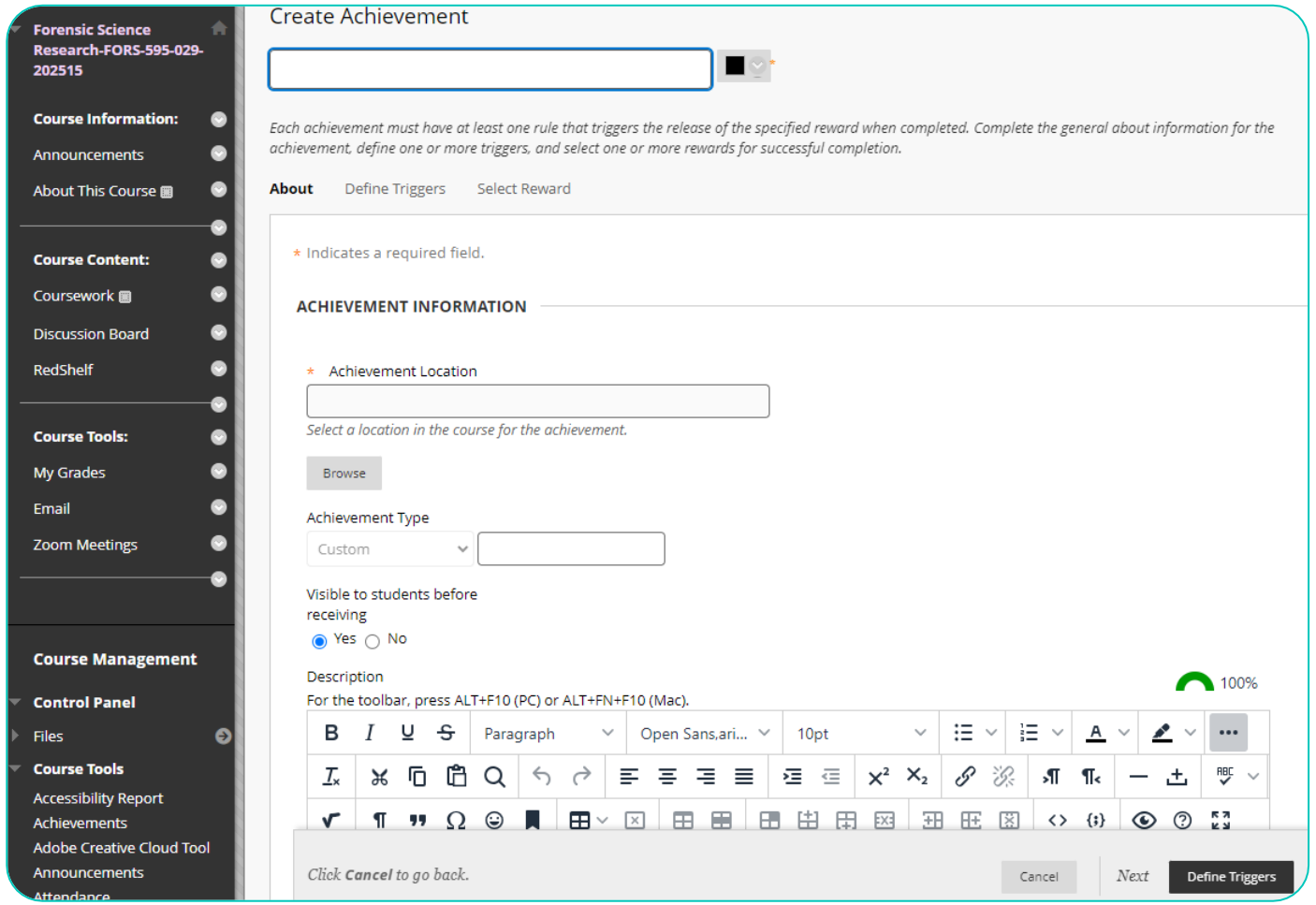
- **Scoring:** Points could be awarded based on speed and accuracy, potentially with bonus points for correct answers within a certain time frame.
- **Leaderboard:** A leaderboard could be displayed to show students' progress and rankings during or after the quiz.
- **Team-Based:** The quiz could be structured as a team competition, with points awarded to teams based on their members' performance.




# Adaptive Release

- You can completely customize how things are released:
  - Achievement
  - Engagement
  - Date

# Achievements



# Exemplary Course Program

Offered by Anthology

**COURSE DESIGN**
Course Design addresses elements of instructional design. For the purpose of this rubric, course design includes such elements as structure of the course, learning objectives, organization of content, and instructional strategies.

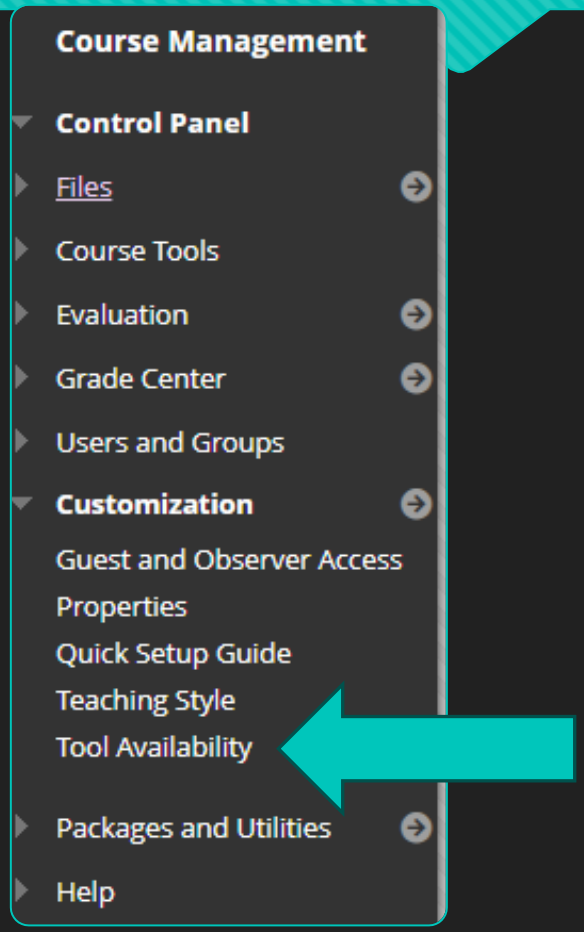
**INTERACTION AND COLLABORATION**
Interaction and Collaboration can take many forms. The ECP criteria place emphasis on the type and amount of interaction and collaboration within an online environment.

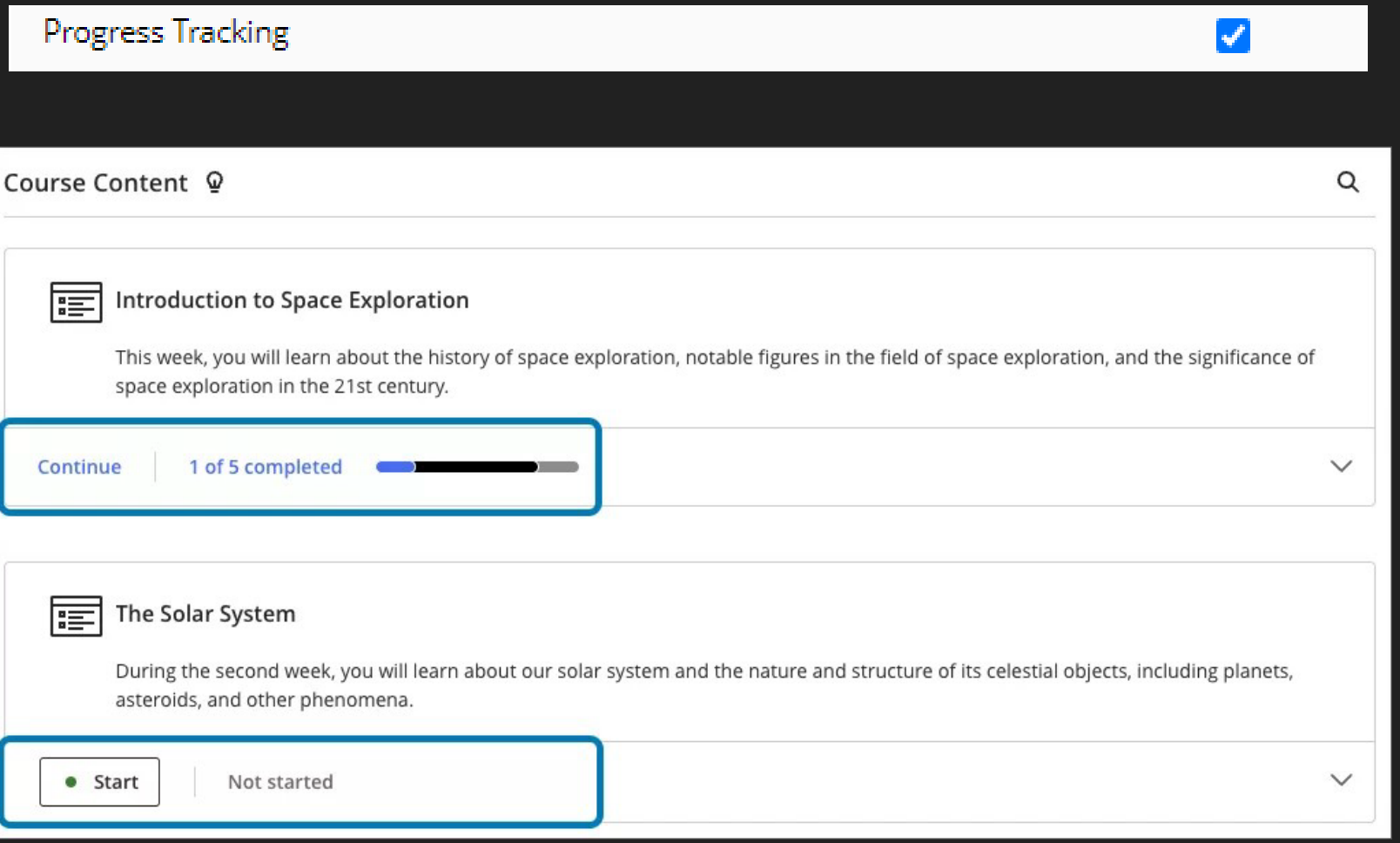
Interaction denotes communication between and among learners and instructors, synchronously or asynchronously. Collaboration is a subset of interaction and refers specifically to those activities in which groups are working interdependently toward a shared result. This differs from group activities that can be completed by learners working independently of one another and then combining the results, much as one would when assembling a jigsaw puzzle with parts of the puzzle completed separately then assembled. A learning community is defined here as the sense of belonging to a group, rather than each learner working independently.

**ASSESSMENT**
Assessment focuses on instructional activities designed to measure progress toward learning outcomes, provide feedback to learners and instructors, and/or enable grading or evaluation. This section addresses the quality and type of learner assessments within the course.

**LEARNER SUPPORT**
Learner Support addresses the support resources made available to learners taking the course. Such resources may be accessible within or external to the course environment. Learner support resources address a variety of learner services.

# Add progress tracking as a visual cue



# Thinking Creatively About Grade Display

- You can create up to 100 grading schemas in BB!
- You can have course level or individual assignment levels
- Report out both XP (points) and rank within the Gradebook

1. **Go to Blackboard Grade Center**
   - Navigate to **Full Grade Center** in your course.
2. **Create a New Grading Schema**
   - Click **Manage → Grading Schemas → Create Grading Schema**
3. **Name the Schema**
   - Example: `"XP Adventure Ranks"`
4. **Define XP-to-Grade Mapping**
   - Modify the grading scale with the converted XP percentages:

| Percentage Range | Letter Grade | Rank |
|---|---|---|
| 100% and above | A | **Trailblazer** |
| 87% – 99% | B | **Pathfinder** |
| 74% – 86% | C | **Scout** |
| 61% – 73% | D | **Forager** |
| 0% – 60% | F | **Wanderer** |

5. **Save the Schema**
   - Click **Submit** to apply the XP-based grading.

- Under **My Grades**, students will see their **current XP total** alongside their **rank title (Trailblazer, Pathfinder, etc.)** instead of traditional letter grades.

# Let's Gamify these Key Classroom Elements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Attendance

# Gamifying Exams

- Keep them on theme
- Give them a fun name (Boss Battles, Firewall Test, Rounds Review, Diagnostic Challenge, Arcane Trials, Hack-a-Thon)
- Present them as an opportunity to level up
- Link content to specific learning objectives (I love how this works in standards-based grading)
- This doesn't affect the content just the context and the language you use!

**Step 2A: Using the Microscope**

You place the sample under a light microscope. What is the best type of microscopy for viewing **unstained, live bacteria**?

A. Brightfield microscopy (**Go to Step 3A**)
B. Phase contrast microscopy (**Go to Step 3B**)

**If Incorrect → Challenge Question**

What is the main advantage of phase contrast microscopy?

- **Correct Answer:** It enhances contrast in **unstained** samples. (**Go to Step 3B**)
- **Incorrect Answer:** Try again before moving forward!

# Choose your own adventure exam format

- Decision Tree
- Answer additional questions if incorrect answers are selected
- Could be routed in Forms, Qualtrics, or Blackboard

**Step 3B: Phase Contrast Microscopy**

You successfully observe **small, motile bacteria**. What structure allows bacterial motility?

A. Pili (**Incorrect → Challenge Question**)
B. Flagella (**Go to Step 5B**)

**Challenge Question for Incorrect Answer**

What is the main function of bacterial pili?

- **Correct Answer: Attachment and DNA transfer** (**Go to Step 5B**)
- **Incorrect Answer:** Try again!

# Choose your own adventure exam format

- Decision Tree
- Answer additional questions if incorrect answers are selected
- Could be routed in Forms, Qualtrics, or Blackboard

# Let's Gamify these Key Classroom Elements

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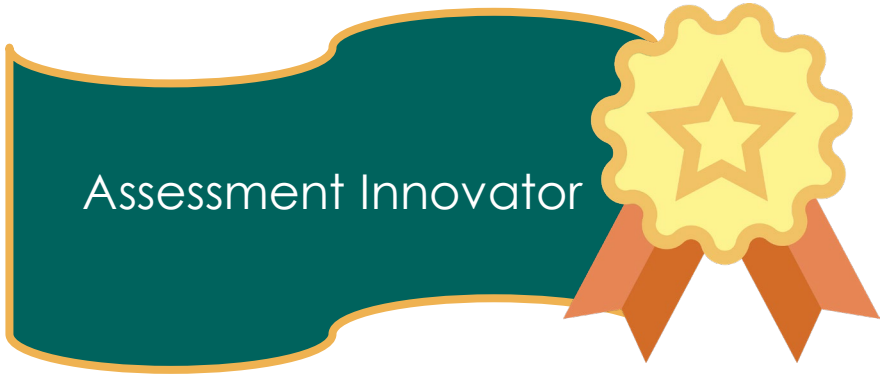


# Starting off Class

**Entry Quests** 🏆

- Students complete a **quick challenge** (e.g., a one-question poll, riddle, or discussion prompt) to be marked present.
- Example: "Solve this microbiology riddle: I have no nucleus but can outnumber human cells in your body. What am I?"

**Themed Check-Ins** 🎭

- Tie attendance to your course theme. For a **pirate-themed course**, students might enter by sharing a **"Captain's Log"** (idea or reflection).

**XP for Attendance** 🎮

- Track attendance **as experience points (XP)**. Students who reach milestones (e.g., perfect attendance for 3 weeks) earn **small perks**, like extra hints on a quiz.

**Mystery Seat or Role** 💺

- Assign a **"secret role"** (e.g., The Scribe, The Spy, or The Captain) to one random attendee who gets a small reward or responsibility for the day.

**Team-Based Check-Ins** 🤝

- Students **earn points for their team** when they attend, reinforcing group accountability.

# In the Middle of Class

**Checkpoint Challenges** 🚀

- Drop an unannounced **mid-class challenge** that earns participation credit.
- Example: "Everyone who contributes an answer to this discussion gets a +1 to their Attendance XP!"

**Roll to Attend (Dice Game)** 🎲

- Have students **roll a die** when they answer a question. If they get a certain number, they **unlock a bonus XP** toward attendance milestones.

**Surprise Attendance Boss Battle** 🏴‍☠️

- Occasionally, announce a **mini-game** where present students compete in a rapid review challenge. Those who participate get **attendance XP or small rewards**.

# Gamification & Learning in Higher Ed

## Designing & Implementing a Gamified Course

8 April 2025


Login Streak Bonus!

# Your Mission:

- **Game Progression Structure**
  - Linear
  - Open World
  - Hybrid
- **Orientation & Onboarding**
  - Introducing the Game
  - Provide the "why"
  - Early Wins
- **Engagement**
  - More than Progress Trackers
  - Autonomy
  - *In Situ* Feedback (regular & substantial)
- **Apply it!**
  - Planning Design Worksheets
  - ***Planning for Next Time 4/22***

Start End

Linear Progression


Week 1

Week 16

**Ideal for content that builds over the semester or chronologically oriented content.**

# Linear Progression Characteristics

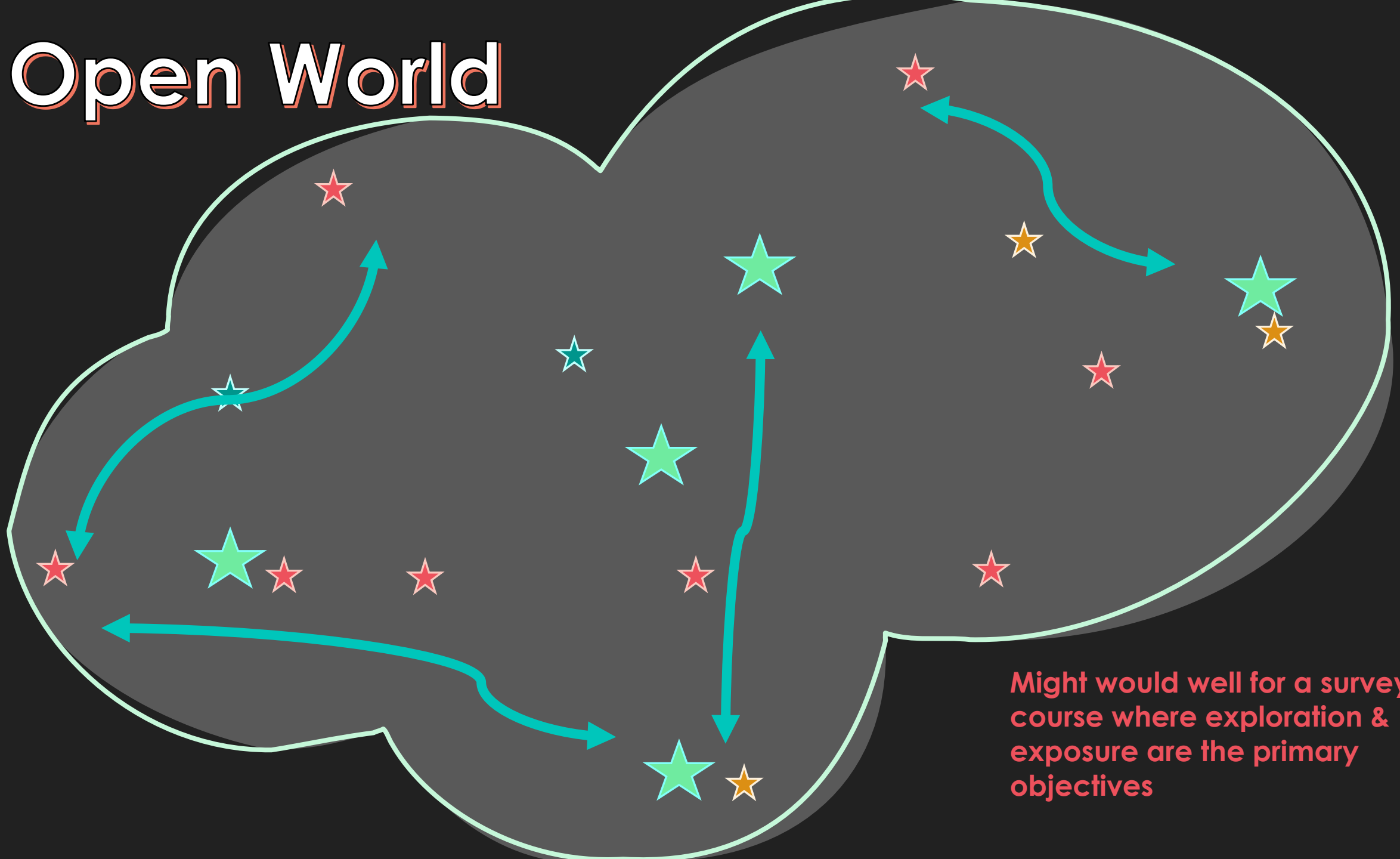
**Advantages**

- Easier for you and your students to know if they are "on track" vs. falling behind
  - *"By week 4 you should be to X point in the course game"*
- Pivoting due to unforeseen challenges is more seamless
- Familiarity: mirrors a traditional course progression
- Conditional release and LMS programming straightforward

**Challenges**

- Limits the autonomy of a students
- Requires one-size-fits-all pacing
- May incentivize points over progress (similar to traditional courses)
  - Grinding to get through a level/module to progress
- Risks repetitive burnout or stale click-through completion
- Inflexible to customized pathways or assignments

# Open World



Might would well for a survey course where exploration & exposure are the primary objectives

# Open World Progression Characteristics

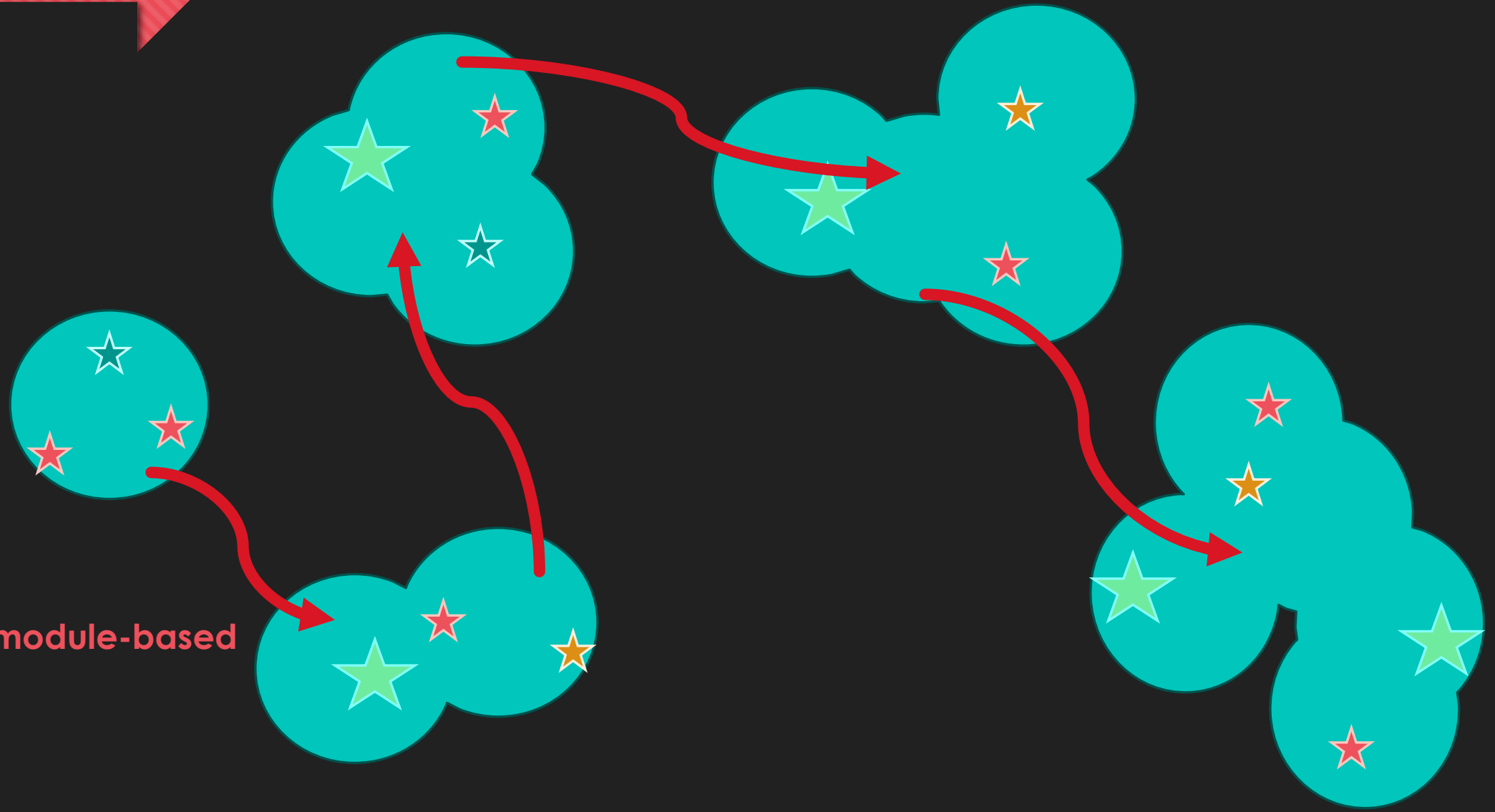
**Advantages**

- Students have control on the pace and structure of their course
- Flexibility: Both for students and faculty
  - There's no set deadline for something
- Emphasizes growth through the accumulation of experience/learning
- Fosters creativity and exploration within the discipline/content area

**Challenges**

- Deviates from the norm, may be confusing
- Difficult to identify students who are falling behind
- Grading is non-linear with lack of clearly defined benchmarks
- Is not suitable for content that is interdependent, progressive, or otherwise must be completed in a certain order
- Incredibly high activation/upstart energy – complex course construction is time consuming

# Hybrid



Works well for module-based content or

# Hybrid Progression Characteristics

**Advantages**

- Balance of guided structure and freedom
  - Core content ensures foundational learning; side quests allow for enrichment or remediation
- Customization: students choose paths that match their interests, skill level, or learning needs
- Boosts Intrinsic and Extrinsic Motivation
- Supports a content mastery mindset
  - Ideal to layer with Specs or Standards-based grading
- Fosters engagement and curiosity that encourages students to go beyond the minimum requirements

**Challenges**

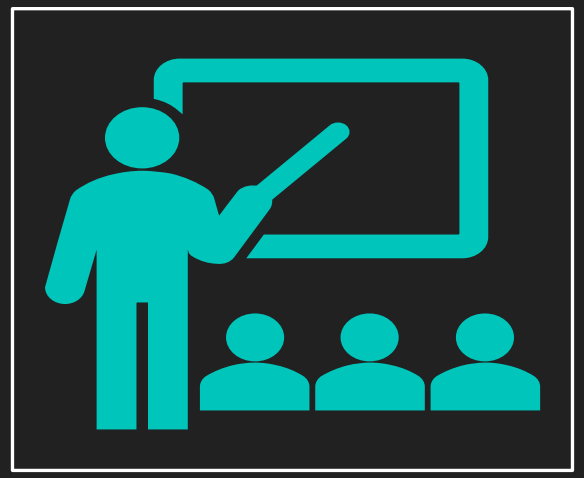
- More complex to design and maintain than either other models
- Too much autonomy risks of uneven coverage of content, particularly challenging topics
- Increased cognitive load can confuse or frustrate learners
- Assessment can be more challenging to grade fairly when students complete different tasks or show mastery in different way
  - Backward design will be ke

# Student Orientation & Onboarding

- Set Expectations Early
- Build a Positive First Impression
- Foster Community in the Classroom
- Explain the Game & It's Purpose

# Set Expectations Early

Emphasize the importance of clear expectations from day one.



Explain how the gamified system is structured to guide learners through the course.

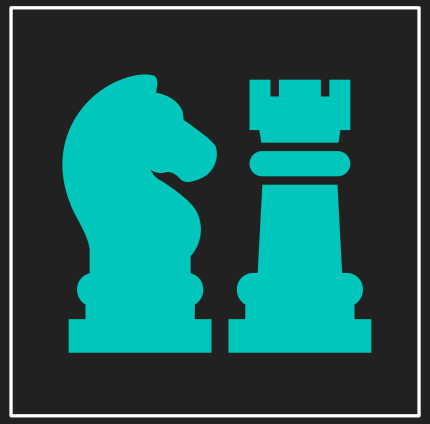
Outline what students can expect regarding progression, challenges, and rewards.

# Build a Positive First Impression

Introduce the game-like elements in an engaging and visually appealing way (e.g., welcome videos, interactive dashboards).

Use real-life analogies (e.g., leveling up in video games) to relate game mechanics to academic growth.

# Foster Community in the Classroom

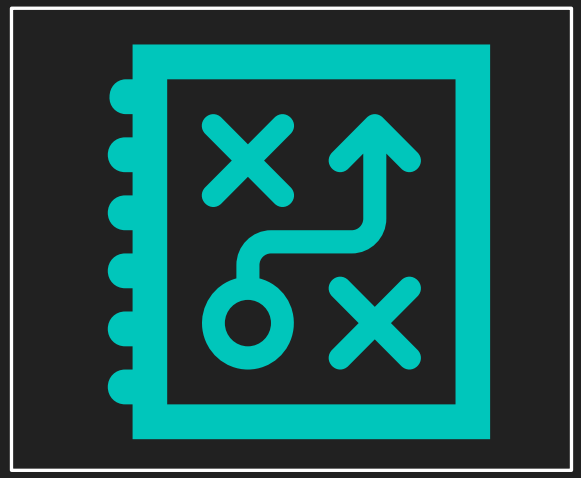


Highlight strategies for team-based activities or peer challenges.

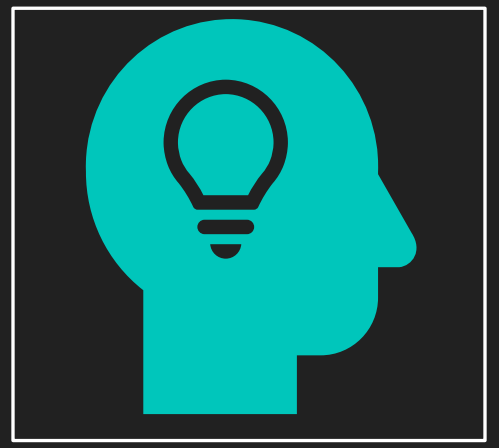
Discuss how gamification can create a sense of belonging and encourage collaboration from the start.

# Explain the Game & It's Purpose

Provide a simple walkthrough of any gamified platforms or tools used, ensuring everyone is comfortable navigating the interface.



Share quick tips or tutorials for common tasks (e.g., accessing assignments, tracking progress).



Explain why gamification is beneficial to the learning

Communication & Community Achievement

# Early Win Ideas

### ✅ "Getting Started" Challenge
- **Task**: Complete your profile, set learning goals, or introduce yourself in a discussion forum.
- **Win**: Badge for "First Steps" or "Ready Player One."
- **Why it works**: Low-stakes, promotes community, gets students interacting with the platform.

### 🔄 Design Tip
Early wins should be:
- **Quick to achieve** (within 1–3 days of orientation)
- **Low risk**, but still meaningful
- **Visible** (on a leaderboard, profile, or XP bar)
- **Tied to a positive identity** (e.g., "Explorer," "Helper," "Scholar")

### ✅ "Help a Friend" Bonus
- **Task**: Answer a peer's question in a discussion thread or help someone find something in the course.
- **Win**: "Ally" or "Mentor-in-Training" badge.
- **Why it works**: Encourages community building and signals that collaboration is part of success.

### ✅ First Challenge or Mini-Game
- **Task**: A fun, lightweight content-based quiz or activity—like a drag-and-drop vocab game, simple concept puzzle, or even a meme submission related to the first topic.
- **Win**: Unlocks a bonus or "hidden level."
- **Why it works**: Immediate application of content in a playful format builds a sense of success and curiosity.

### ✅ Level 1 Completion
- **Task**: Finish the first module or lesson within the first week (includes a simple check-in or formative assessment).
- **Win**: Level Up! First major XP boost and unlock access to a new area of the course map.
- **Why it works**: Feels like real academic progress without the high pressure of a summative assessment.

# Engagement: More Than Just Progress Trackers

**Progress bars are *visual motivation*, not engagement by themselves.**

They're useful, but passive—students can see how far they've come but not necessarily *why* they should care about the next step.

Real engagement comes when students are emotionally and cognitively invested in the experience.

**Ask: What makes students *want* to keep playing?**

Is it curiosity? Challenge? A sense of purpose or belonging?

Good gamification turns learning into something students feel compelled to return to.

**Examples to elevate engagement beyond tracking:**

Hidden or unlockable content (surprise and delight)

Collaborative missions (social investment)

Personalized paths (relevance and choice)

# Autonomy: Let Students Drive

**Gamification shouldn't be a treadmill—it should be a sandbox.**

Build-in side quests, optional challenges, and alternate paths that let students tailor their learning experience.

**Autonomy fuels engagement.**

When students can choose how to approach a topic—or when to level up—they're more likely to take ownership of their learning.

**Simple strategies to support autonomy:**

Let students choose from multiple assignment formats (e.g., essay, podcast, infographic).

Allow skill-based "boss battles" where students pick when they're ready to attempt a summative task.

Use XP systems that reward multiple types of participation, not just assessments.

# *In Situ* Feedback: Regular & Substantial

**Feedback is more effective when it's timely, relevant, and part of the gameplay.**

Think: "level failed, try again" vs. "you'll find out how you did in two weeks."

**Gamified environments thrive on immediate feedback.**

Auto-graded challenges, hint systems, and mastery unlocks give students constant signals about their progress.

**Build feedback into the *ecosystem* of the course:**

Use low-stakes quizzes or practice tasks with immediate scoring and explanations.

Add micro-feedback moments: pop-ups, "XP earned" messages, or visual indicators of mastery.

Provide narrative feedback when possible, like a character giving them advice or a mentor system giving tips.

**Substantial feedback can still be playful:**

A short-personalized message with encouragement and a nudge.

Badges with descriptive labels ("Critical Thinker" vs. "Quiz Passed").

**Congratulations! You have completed Level 4:** Designing & Implementing a Gamified Class

**Join us April 22st at 3:30pm**
**Workshop & Talk**