

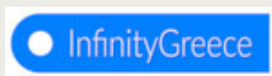
Games for the Goals

A Guide for Gamification and Games-Based Learning



Development Perspectives is a Global Citizenship Education (GCE) NGO based in Drogheda, Ireland, and is the lead partner of this project. Our work explores, examines and acts upon a range of issues and challenges that face our world. In order for this to work effectively, we use participatory and interactive learning methods to ensure the greatest impact for participants of our programmes.

This project was conducted with the support of the following partner organisations; **Par – Repostas Sociais, Be You – European Youth Association The Medeina Foundation, Vice Versa, Eine Welt Netz NRW, Vice Versa, and InfinityGreece.**



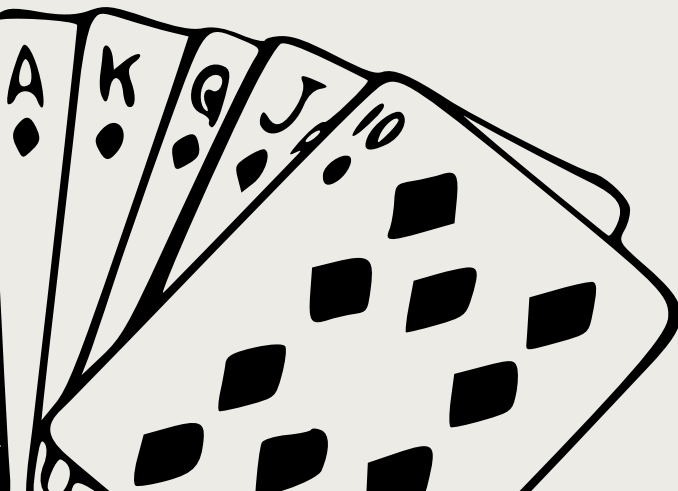
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This guide is a recap of the 2023 Games 4 The Goals training course. It will cover the learning objectives of the programme. This guide outlines gamification and games-based learning, and the principles that underpin them. It also shows examples of the games created during this course. This guide concludes by directing towards further resources about gamification.



Learning Objectives

Explore meaning and principles of gamification and its uses in non-formal education

Use games based learning approaches to explore key Global Citizenship Education (GCE) pillars such as critical thinking, problem solving and active citizenship

Examine the use of games (online, video games, board games, role play) in GCE

Equip youth workers with knowledge and skills to tackle key global issues such as climate change, conflict and migration

Allow a space for youth workers to use gamification tools to explore the SDGs



Recap of Gamification & Games-Based Learning

Gamification is the application of aspects and principles of games to learning methodologies. Yu Kai-Chow who developed the Octalysis Framework (which is outlined later) described gamification as the taking of game elements, to emphasis human motivations in real-world scenarios and activities.

Games-based learning is using games as a tool in learning. This involves including games into lessons, as a way to engage students. Games are used to support the teaching methodology.

Gamification

Applying aspects of games and game mechanics to learning methodologies

Games-Based Learning

Including games in methodologies.

We explored games in the context of Global Citizenship Education, Development Education, and Youth Work. At the intersection of these fields, we work to provide young people with an awareness of global issues, of inequality, injustice, climate change, conflict, and migration. This can also mean involving the United Nations Sustainable Development Goals (SDGs) as a framework to conceptualize and understand global issues.



By making games with Global Citizenship Education and Youth Work in mind, we adopted non-formal methodologies to facilitate learning about global issues.

▲ United Nations Sustainable Development Goals

Octalysis Framework

One of the ways that we understood game elements and what makes games fun and engaging was the Octalysis Framework created by Yu Kai-Chow. It avoids a *Function-Based approach* to games, which see games purely in terms of goals, to be achieved quickly and directly. This approach neglects the innate emotions and humanity that we feel when we play games.



Function-Based Approach

Reduces games to goals, and neglects the humanity of games

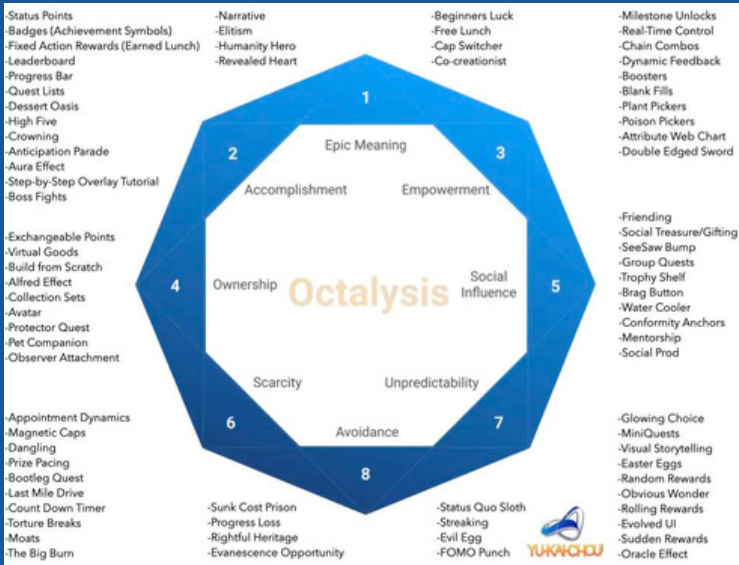


Human-Focused Approach

Emphasizes the innate human emotions felt in games.

The Octalysis Framework is made up of eight '**Core Drives**' that outline human motivations in games, and captures why we find games fun. This emphasis on human motivation is part of a *Human-Focused* approach to game design.

These core drives can help to create games that are compelling, as well as engaging, in youth work and learning.



Core Drives of Octalysis

Epic Meaning

Epic Meaning and Calling is the drive where people are motivated because they believe they are engaged in something that is bigger than themselves or they are “chosen” to do something.

Empowerment

Empowerment of Creativity & Feedback is when users are engaged in a creative process where they have to repeatedly figure things out and try different combinations.

Social Influence

Social Influence and Relatedness is the drive that incorporates all the social elements that drive people, including mentorship, acceptance, social responses, companionship, competition, envy as well as attachment to emotional associations and the feeling of nostalgia.

Unpredictability

Unpredictability & Curiosity is the main force behind our infatuation with experiences that are uncertain and involve chance. If you don't know what's going to happen, your brain is engaged and you think about it often.

Accomplishment

Development & Accomplishment is the internal drive of making progress, developing skills, and eventually overcoming challenges. The word “challenge” here is very important, as a badge or trophy without a challenge is not meaningful at all.

Ownership

Ownership and Possession is the drive where users are motivated because they feel like they own something. When they feel ownership, they innately want to improve it, protect it, and get more of it.

Scarcity

Scarcity and Impatience is the drive that motivates users simply because they are either unable to obtain something immediately, or because there is great difficulty in obtaining it.

Avoidance

Loss & Avoidance drive is based upon the avoidance of something negative happening. On a small scale, it could be to avoid losing previous work. On a larger scale, it could be to avoid admitting that everything you did up to this point was useless because you are now quitting.

Importance of Gamification and Games-Based Learning in youth work

It's important to remember just exactly *why* games are powerful in our work.

PLAY

Higher level of engagement and motivation

Making learning fun and interactive, games increase individuals' motivation to engage with issues, products and learning experiences. They promote engagement by creating challenges and tracking users' progress as they learn.

LEVEL UP

Improved retention

The basis of gamification, or making the learning process fun, has been proven to have a positive impact on retention.

Connect learning to the real world

Gamification is also an excellent way to connect lessons to real-world problems and applications. The rewards and challenges of gamified learning create a risk-free environment in which participants can learn how their choices within the game result in consequences or rewards and how to apply the knowledge or skills they're gaining.

Improved problem-solving, critical thinking skills

Games foster skills like understanding *causation*, *logic* and *decision making* they can use in life outside of school.

Enhance the overall learning experience

Regardless of age groups, gamification helps make the overall learning experience *much more effective*. If learners are having fun and are getting excited about learning, then they are more likely to actually acquire information.

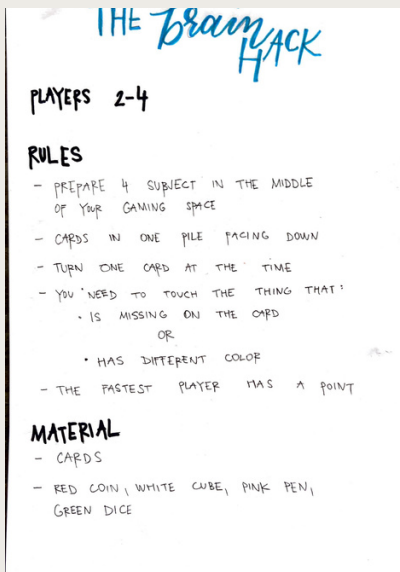




One-Page Games

These are examples of some of the games that we made by ourselves under time pressure of only one hour.

Brain Hack



▲ Instructions and guide for *Brain Hack*

▲ *Brain Hack* materials

Guess What?

Level 2

- Add the first five numbers from one to five and then divided with three, what's the number? Which letter is placed in what number? (write that down)
- Now, add the numbers from the word that answer, riddle number 2, what's the number? which letter is placed there? (write that down)

• Next you have to multiply 3×3 the number that you found from the 1st addition (continue by subtracted with 1 and then divided with 4. What's the number? which letter is placed in what number? (write that down)

• And last, the number from the 2nd addition you have to multiply it with 2 then add 3 and divide with 7.

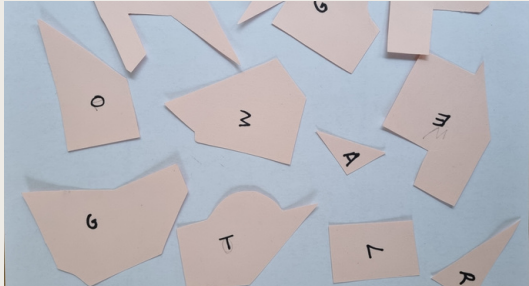
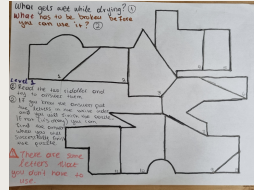
What's the number? which letter is placed there? (write that down)

• Okay, now you have four letters so you need to mix and shape a word by combining those. What's the word?

Good job! The correct answer is (EGGO)

The correct answer for riddle number 1 is : TAUH

The correct answer for riddle number 2 is : EGG



▲ Guess What? playing cards, and materials

Moonwalker

CHAR (with icons of a sun, a gear, and a person)

GEAR (with icons of shoes, bags, jackets, and a house)

COMPANION (+ Jane + Sam + Ann)

Stamina pts $\frac{1}{100}$ / $\frac{1}{100}$ / $\frac{1}{100}$

Exp pts \uparrow

Emotion pts \heartsuit

MOONWALKER (How do I walk to the moon?)

Challenges:

- beginner (+5)
- Explorer (+15)
- Challenger (+20)
- +25

Rules:

- collect Food + H₂O \rightarrow stamina $\frac{1}{100}$
- step tracker \rightarrow unlock new places (real places w/ (i), (s), (e))
- register \uparrow places
 - Bonus \uparrow pts if record animals
 - Higher \uparrow pts photo
 - Steeper \uparrow pts plants

daily > \$1000 encouragement

▲ Moonwalker game board



Group Games

These are games we made in groups, conceptualizing and producing them over a twenty-four-hour period. They were later tested in a Sligo game shop.

Developed to explore the Sustainable Development Goals (SDGs), each game is designed for 2–5 players, and a full play through should last 45 minutes at the longest.

All games are available on the Participants Resources Google Drive folder, a link to which is available in the Resources page at the end of this booklet.

▼ Photos of participants playtesting Group Games in a Sligo game shop.



Consolmate

This is a game concerned with SDG 3, Good Health and Wellbeing. The stories of the game characters are inspired by real people living in Sligo, Ireland. It is a roleplaying game that seeks to explore physical and mental health through these characters.

With anticipation, the surgery appointment approaches. Suddenly, the doctor cancels. Disappointment sinks in, plans disrupted.

Everyone rolls the dice. Adjust your bars in accordance with the results.

CHANCE FACTOR: 4/6

Roll 1-4 => The medical team reschedule for the next day. [Physical Health +1]

Roll 5-6 => You end up bed-ridden for the next year. [Physical Health -3; Energy -2]

▲ Consolmate Event Card

Each player has card with bars measuring values such as charisma, physical health, etc. Each player chooses a value for each bar, deciding based on their character card.

The goal of the game is to ensure that all players reach 10 on all bars.

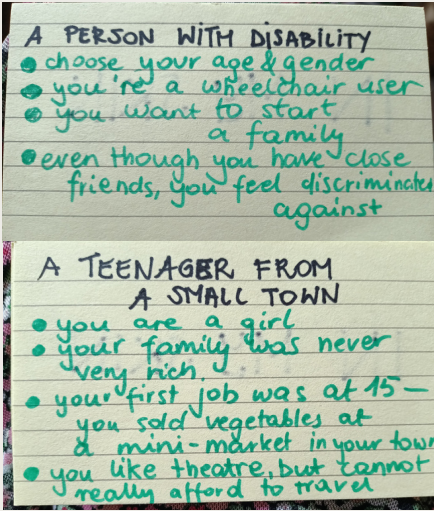
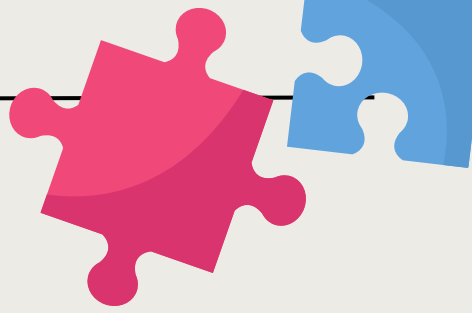
Unlike the other games we made, this game is not competitive, but is co-operative. This is intentional, as this promotes the idea that people should be open about their health with others in their lives.



▲ Playtesting Consolmate



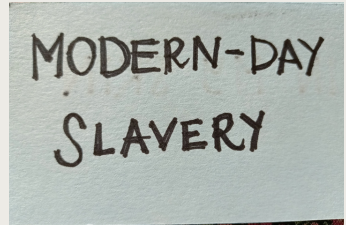
In My Skin



▲ Character cards that outline the role that participants assume

This game explores SDG 8 - Decent Work and Economic Growth through a roleplaying, guessing game.

In this game, each player gets a character card and assumes that role.



▲ Topic cards participants place on their foreheads

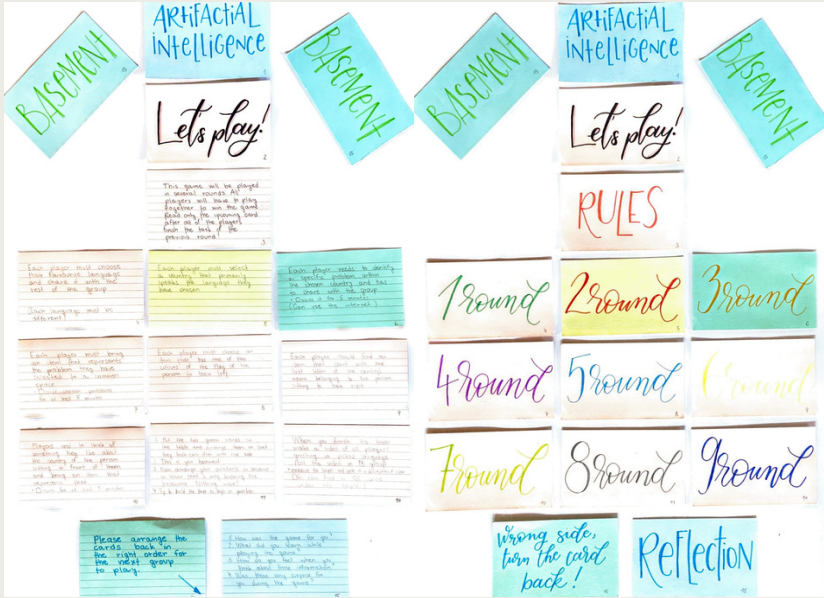
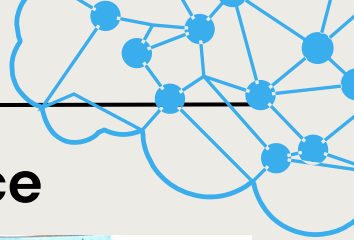
Each round a player has a card concerning a topic that they do not know, and places it on their forehead.

Every player has to discuss the topic without saying what the topic is, while assuming the character they are assigned.



▲ Participants playtesting *In My Skin*

Artificial Intelligence



▲ Artificial Intelligence game materials and question cards.

In this game, players discuss problems in various countries. This game integrates elements of game design, such as exploration, creation, and creative ownership.

This game is able to facilitate learning and discussions about societal problems in a variety of national settings in a hands-on, physical way.

This game also integrated a technological aspect, through a private Facebook page, accessed through this QR Code. This immerses players into the game in a unique way.

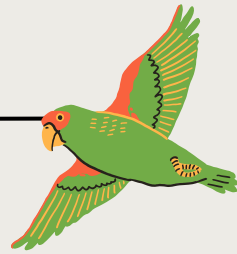
▼ Facebook page QR code



▲ Participants playtesting Artificial Intelligence



Let's Swing



This board game aims to educate participants about SDG 15 – Life on Land. It focuses on the human destruction of rainforests during the production of palm oil for our products, a devastating practise that leads to habitat loss for many animals and plants including orangutans.



◀ Let's Swing game board on a table.

▶ Let's Swing game card examples.



Oh no!
A bulldozer is in your way.



Oh no!
A helicopter with pesticides.



Oh no!
A fire is in your way.



Oh no!
An illegal hunter.



Yeah!
A bunch of bananas for you all.



Yeah!
You reached a national park. Go two steps without doing a challenge.



Papa orang-utan



Granny orang-utan



Baby orang-utan

◀ Let's Swing character cards



No Hunger Games



This is a board game that explores issues around SDG 2 – Zero Hunger. It covers topics like food production, food waste, CO₂-emissions and hunger. This game is split into three phases; Intro, Play, and Debrief.

◀ No Hunger Games game board.

The Intro Phase involves storytelling and background information to set the scene

Story (told by the narrator/ master)

Imagine: You're really sick of people and civilization in general. What are you really sick of?

So, it sounds like we're actually approaching the apocalypse. Luckily, we have the perfect solution for you! But obviously none of you can survive on their own. So you'll have to work together and support each other as a team.

You and your now new friends have the chance to continue your life on a private and perfect island! (present the board) There's only one more obstacle: the island is empty. We only built a cute little house here for you. What else do you need? → food.

And you're lucky again: I have all the seeds you need to grow everything you need in life. And since it's an empty island, you have a lot of time to farm.

▶ No Hunger Games game narration from the game instructions

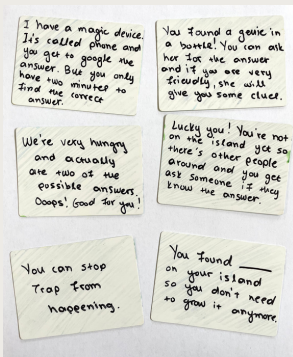
1. How much of the world's total area of arable land is used for growing cereals?
- a. 30 %
 - b. 70 %
 - c. 10 %
 - d. 50 %

The Play Phase involves quizzes and rewards

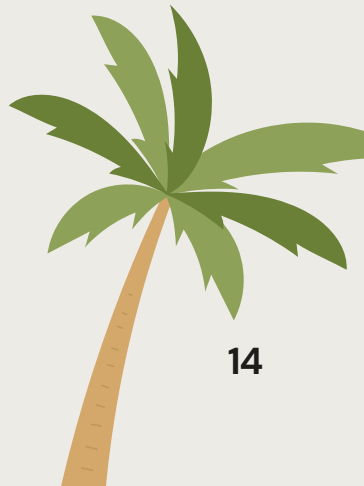
◀ Example of a quiz.

The Debrief Phase involves reflecting on the game just played. Questions include:

- Which information or topic was new for you?
- Which SDGs are connected to the questions?
- What can you do to tackle the issues around SDG 2 as a citizen?
- What should we do as a society?



This game also involves event and trap cards to spice up the game,





The Sustainable Journey

This game aims to help participants learn more about the SDGs. It aims to create and increase awareness of the problems that exist in the world today, while showing participants their role in the future of the planet as individuals, team players and, most importantly, as responsible and active citizens.

<p>Which affirmation is correct? a) More people have a mobile phone than a toilet b) Most people have toilets but can't afford a phone c) Everyone has both a mobile phone and a toilet</p>	<p>Global warming occurs mainly due to the increase of a certain gas in the atmosphere. What gas is this? a) Oxygen b) Carbon dioxide c) Iponite</p>
<p>Which country has the LOWEST gender inequality index according to the United Nations Development Programme (UNDP)? d) Philippines b) Jordan c) Yemen</p>	<p>Are there fewer people living in poverty now than 25 years ago? a) No, 1 billion people now live in poverty b) Yes, 1 billion people were lifted out of poverty</p>
<p>Which disease is a leading cause of disability worldwide? a) Malaria b) Tuberculosis c) HIV/AIDS d) Depression</p>	<p>How many children and youth worldwide are out of school according to recent estimates? a) Approximately 30 million b) Approximately 62 million c) Approximately 120 million d) Approximately 250 million</p>

This is a board game, which intergrates the SDGs through gaming principles.

If a player ends up on a "?" field, then they have to answer a question from a coloured card.

◀ The Sustainable Journey question cards.

If a player gets the answer wrong, then they go back, and if they get it right, they advance. This integration of game mechanics (competition, accomplishment) into an exploration of the SDGs helps this game to fulfil its stated goals.

▶ The Sustainable Journey game board.



Resources Available

These are a list of resources related to gamification and games-based learning. Although not being exhaustive, this list provides a good base and is a good starting point for the practice of game-based learning and gamification in GCE and youth work.

Games 4 The Goals Google Drive

Resources from the 2023 Games4TheGoals training course are available through this QR code or [at this link](#). This gives access to resources from the course, as well as the games we created.



Development Perspectives #SDGChallenge Info Packs

The #SDGchallenge is a global citizenship education project which aims to equip individuals with the knowledge, skills and motivation to take informed action to contribute towards the achievement of the Sustainable Development Goals (SDGs).

[Sign up for the monthly infopack here.](#)

[All infopacks are available here.](#)

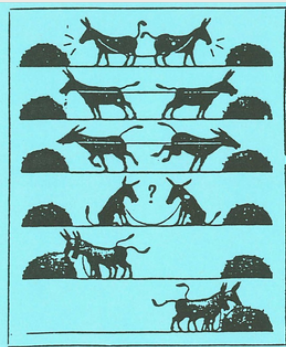
Guides to explore Gamification & Game-based learning:

[Gamification & Behavioural Design \(Octalysis\)](#) by Yu-kai Chou

[Gamification – A Short guide by Kai Evans](#) – This explores the relevance of gamification to youth workers and GCE more generally

[Using Games in Youth Work for Development Education: a Toolkit](#) – created by the National Youth Council of Ireland, with ideas, guidance, templates, tips, and resources

Examples of games to be used in GCE



[10 games to include in your GCE practice](#)

[The Trade Game: Simulation game demonstrating the injustice of world trade](#)

[The Exploitation Game: Examine the issues of oil exploration in Kenya](#)

Majorians & Minorians: a role playing game to explore SDG 1 & SDG 17