

# **UNIT 4 – HOW ARE STEM CONCEPTS CHANGING THE WORLD?**

## **OVERVIEW**

There is a growing body of research that shows that video games are making us smarter and more cognitively flexible. Research also shows that while playing games, people are more optimistic and more likely to want to connect with one another. How can we take advantage of this kind of research and apply it to life? Gamification means the application of video game concepts to other activities in daily life. It's not entirely new, but concepts we are learning from the success of videogames are having a big impact across many different fields of study.

## **KEY VOCABULARY**

- [Visit Link for List.](#)

## **ADDITIONAL RESOURCES**

- [Visit Link for List.](#)

## **LESSON PLANS**

Lesson 29: Gamification

Lesson 30: Deaf CAN! How can YOU change the STEM field and educate hearing people on how Deaf people can be involved in STEM?

# LESSON PLAN 29: GAMIFICATION

## LESSON OBJECTIVES

- Help students understand the concept of gamification.
- Help students learn how to apply video games to other activities in daily life.

## ACTIVITY TIME

- One to two 50 minute class periods.

## TARGET GRADE

- Adaptable for 6<sup>th</sup> through 12<sup>th</sup> grade.

## MATERIAL LIST

- Computers with Internet access.
- Paper and Pencils.

## KEY VOCABULARY

- [Visit Link for List.](#)

## ONLINE RESOURCES

- [Visit Link for List.](#)

## CORE STANDARDS

- [Visit Link for List.](#)

## ACTIVITY

Watch the videos and answer the following questions:

Watch:

- [Gaming can make the world a better world](#)
- [Gamification to improve our world](#)
- [Speed Camera Lottery – example of Gamification](#)
- [The Future of Creativity and Innovation is Gamification](#)

Consider the following and provide research and real life examples:

- a) Give a comprehensive definition of Gamification and then argue in favor or against it.
- b) Gamification really starts with an understanding of core drives:
  - 1) epic meaning and calling
  - 2) Development and accomplishment
  - 3) Empowerment of creativity and feedback
  - 4) Ownership and possession
  - 5) Social influence and relatedness
  - 6) Scarcity and impatience
  - 7) unpredictability and curiosity
  - 8) loss and avoidance

How do you define these core drives? Do you agree with these core drives? Why or why not?

c) Research how video games make us smarter. Do you agree? Why or why not? Watch:

- [Your Brain on Video Games](#)
- [4 Reasons Games Make you Smarter](#)

# LESSON PLAN 30: DEAF CAN: HOW CAN YOU CHANGE THE FIELD AND EDUCATE PEOPLE ON HOW DEAF PEOPLE CAN BE INVOLVED IN STEM?

## LESSON OBJECTIVES

- Help students recognize that Deaf and Hard of Hearing people can make a strong contribution to STEM fields.
- Help students recognize how to advocate for themselves in a positive way to people who may not be familiar with the Deaf community.

## ACTIVITY TIME

- One 50 minute class period.

## TARGET GRADE

- Adaptable for 6<sup>th</sup> through 12<sup>th</sup> grade.

## MATERIAL LIST

- Computers with Internet access.
- Paper and Pencils.

## KEY VOCABULARY

- [Visit Link for List.](#)

## ONLINE RESOURCES

- [Visit Link for List.](#)

## CORE STANDARDS

- [Visit Link for List.](#)

## ACTIVITY

Students will create a video log, or youtube video on one of the following topics:

1. Why more Deaf people should work in the STEM field.
2. That Deaf people are capable of working in STEM or any other field they choose.