

# CREATING EDUCATIONAL GAMES

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## ChatGPT Teacher Tips Part 6 – Creating Educational Games

-  Tom Driscoll



*[INTRO: A recent national report by the Watson Foundation found that teachers are using ChatGPT more than students and are using it to create new lesson ideas. To help out all of our teacher friends, we are offering a series of posts focused on practical ways that you can use ChatGPT to assist with your own lesson design! (Check out our first tip here!) Each post will focus on a practical strategy for using ChatGPT and will include ideas for both elementary and secondary school teachers. Here is the sixth part of our series:]*

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## Why use ChatGPT for creating educational games?

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Games can be an engaging and motivating way for students to stay focused on curriculum content and participate eagerly in the learning process. Educational games often require students to make decisions, solve problems, and apply concepts in real-time, promoting active learning. Many educational games can also be tailored to different learning styles, skill levels, and age groups.

ChatGPT can quickly generate game ideas, content, and questions, saving teachers time in the process. ChatGPT can be also tailored to the specific needs and interests of a class, helping teachers create games that are relevant and engaging for their students.

## How to use ChatGPT for creating educational games

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As always, crafting an effective prompt is important for generating helpful responses. ChatGPT can generate a wide range of game ideas, formats, and styles, so think about the types of games you might like to create. And think about the learning principles you would like the games to integrate, such as customization, inclusivity and differentiation.

Include useful context with your prompt, such as the concept, process, or phenomena students are trying to learn. Include any course-specific or student-level information that could be useful in constructing an effective prompt. Be prepared to refine your prompts if the responses you receive are too general or tangential. By providing information about the target age group, subject, and learning objectives, teachers can generate games that align with their curriculum and goals.

## Examples of ChatGPT used to create education games

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Below are several examples of ChatGPT used to create educational games for primary and secondary students. A few of the examples include a sample prompt:

### PRIMARY SCHOOL

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#### Biome Explorers

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Students work in teams to explore different biomes (e.g., rainforests, deserts, oceans) by completing challenges and answering questions. Teachers can use ChatGPT to generate age-appropriate questions and challenges that integrate science, geography, and language arts. This game encourages students to make connections between different subjects and fosters an appreciation for the natural world.

**Objective:** Increase students' understanding of different biomes and their characteristics, including flora, fauna, climate, and geographical features.

**Prompt:** Provide examples of educational games for students aged 9 to 11 that involve learning about the environment. Provide examples that integrate one or more of the following pedagogical principles: creativity, inclusion, customization differentiation. Provide a step-by-step process for each game you provide.

**Process:**

1. Divide students into teams of 3-4 members.
2. Assign each team a specific biome (e.g., rainforest, desert, ocean, tundra).

3. Use ChatGPT to generate age-appropriate questions and challenges related to each biome, integrating elements from science, geography, and language arts. For example, describing the adaptations of a specific animal, locating the biome on a map, or writing a short poem about the biome.
4. Create station-based activities or digital challenges that cover various aspects of each biome.
5. Have each team rotate through the stations, completing the challenges and answering questions related to their assigned biome.
6. Encourage students to share their findings and insights with the class, promoting discussions and collaboration.
7. Assess students' understanding of the biomes through quizzes, discussions, or presentations.

## Fraction Pictionary (Mathematics, Creativity, Inclusivity)

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**Objective:** Reinforce students' understanding of fractions in a fun and engaging way.

**Process:**

1. Divide students into teams of 3-4 members.
2. Prepare a set of cards with different fractions and images representing those fractions (e.g.,  $1/2$  of a pizza,  $3/4$  of a circle).
3. One student from each team selects a card and attempts to draw the fraction on the board, while their teammates try to guess the fraction.
4. If the team correctly guesses the fraction, they earn a point. If not, the other team(s) have a chance to guess and earn the point.
5. Teams take turns drawing and guessing until all cards have been used.
6. The team with the most points at the end of the game wins.

## SECONDARY SCHOOL

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### Chemical Compound Charades

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Students act out chemical compounds or reactions, and their classmates must guess what they are representing. Teachers can use ChatGPT to generate a list of age-appropriate chemical compounds or reactions and descriptions for students to act out.

**Objective:** Reinforce students' understanding of chemical compounds and reactions in a fun and engaging way.

**Prompt:** Create an educational game about chemical compounds for students aged 14-15 that is both competitive and active.

**Process:**

1. Divide the class into two or more teams.
2. Use ChatGPT to generate a list of age-appropriate chemical compounds or reactions, along with brief descriptions or hints that students can use to act out.
3. Provide each team with a set of cards containing the chemical compounds or reactions and their descriptions.
4. One student from a team selects a card and acts out the chemical compound or reaction without speaking. Their team members attempt to guess the correct compound or reaction within a given time limit.
5. If the team correctly guesses the compound or reaction, they earn a point. If not, the other team(s) have the opportunity to guess and earn the point.
6. Teams take turns acting and guessing until all cards have been used.
7. The team with the most points at the end of the game wins.

**Interactive History Timeline (History, Creativity, Continuous improvement, Customization)**

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**Objective:** Develop students' understanding of historical events, periods, and themes by creating an interactive digital timeline.

**Process:**

1. Divide students into pairs or small groups.
2. Assign each pair or group a specific historical period or theme, such as the Renaissance, World War II, or the Civil Rights Movement.
3. Use ChatGPT to generate a list of key events, figures, and concepts related to each assigned period or theme.
4. Instruct students to use their Chromebooks to research their assigned topic, gathering information, images, videos, and primary sources.
5. Have students create an interactive timeline using digital timeline creation tools, such as Tiki-Toki or Sutori, incorporating their research findings.
6. Encourage students to explore and comment on the timelines created by their classmates, fostering discussion and collaboration.
7. As a class, review the timelines and discuss the connections and patterns observed across different historical periods and themes.
8. Continuously update and expand the timelines as new topics are covered in the curriculum or as students discover new information.

ChatGPT is also able to suggest narratives and introduce historical and scientific figures into educational games. So, you can create role-playing scenarios for students as part of your games.

Remember, ChatGPT may not always respond exactly as you expect. And it can make errors. However, with a bit of creativity and effective prompts, ChatGPT can be a useful tool for generating ideas for curriculum topics?

***–by Tom Daccord, with help from ChatGPT***

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