

8 Computer Science Unit 04: Gaming

Content Area: **Technology**
Course(s):
Time Period: **December**
Length: **3 Weeks**
Status: **Published**

Unit Overview

- Computer Programming
- Design Process
- Team Building

Standards

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| CS.6-8.8.1.8.AP.1 | Design and illustrate algorithms that solve complex problems using flowcharts and/or pseudocode. |
| CS.6-8.8.1.8.AP.2 | Create clearly named variables that represent different data types and perform operations on their values. |
| CS.6-8.8.1.8.AP.3 | Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals. |
| CS.6-8.8.1.8.AP.4 | Decompose problems and sub-problems into parts to facilitate the design, implementation, and review of programs. |
| CS.6-8.8.1.8.AP.6 | Refine a solution that meets users' needs by incorporating feedback from team members and users. |
| CS.6-8.8.1.8.AP.8 | Systematically test and refine programs using a range of test cases and users. |
| CS.6-8.8.1.8.AP.9 | Document programs in order to make them easier to follow, test, and debug. |
| CS.6-8.8.1.8.CS.1 | Recommend improvements to computing devices in order to improve the ways users interact with the devices. |
| CS.6-8.8.1.8.CS.2 | Design a system that combines hardware and software components to process data. |
| CS.6-8.8.1.8.CS.3 | Justify design decisions and explain potential system trade-offs. |
| CS.6-8.8.1.8.CS.4 | Systematically apply troubleshooting strategies to identify and resolve hardware and software problems in computing systems. |
| CS.6-8.8.1.8.DA.1 | Organize and transform data collected using computational tools to make it usable for a specific purpose. |
| CS.6-8.8.1.8.DA.5 | Test, analyze, and refine computational models. |
| CS.6-8.8.1.8.IC.1 | Compare the trade-offs associated with computing technologies that affect individual's everyday activities and career options. |
| CS.6-8.8.1.8.IC.2 | Describe issues of bias and accessibility in the design of existing technologies. |
| CS.6-8.8.2.8.ITH.1 | Explain how the development and use of technology influences economic, political, social, and cultural issues. |
| CS.6-8.8.2.8.ITH.2 | Compare how technologies have influenced society over time. |
| CS.6-8.8.2.8.ITH.3 | Evaluate the impact of sustainability on the development of a designed product or system. |

Materials

- Chromebook
- Brainpop
- Scratch
- CS First-Game Design Module

Assessment

Formative Assessment

- Teacher Observation
- Checks for Understanding
- Exit Tickets

Summative Assessment

- Performance Tasks & Projects

Accommodations & Modifications

Special Education

- Follow IEP Plan which may contain some of the following examples...
- In class/pull out support with special ed teacher or assistant
- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

504

- In class/pull out support with special ed teacher or assistant
- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

ELL

- Translation device/dictionary

- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

At-risk of Failure

- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

Gifted & Talented

- Independent projects
- Online games
- Extension activities

Interdisciplinary Connections

21st Century Life Literacies & Key Skills

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|------------------|--|
| TECH.9.4.8.GCA.1 | Model how to navigate cultural differences with sensitivity and respect (e.g., 1.5.8.C1a). |
| TECH.9.4.8.GCA.2 | Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal. |