**Lesson Cycle (Gradual Release of Responsibility) Lesson Title/Topic:** Being a video game programmer

**Standards:** 127.3(c)(1)(B) - Explore the 16 career clusters

|  |  |
| --- | --- |
| **Lesson Objectives:** Students will research and identify the job of video game programmer by completing the written activity with 80% accuracy. | **Assessment:** Authentic assessment and written activity. |

**Materials:** Trifold presentation board, objects and code blocks sheets, display and console sheets, your story of the game sheet, index cards

|  |  |
| --- | --- |
| **The teacher will:** | **The student will:** |
| **Focus:*** Play the video as students walk in to introduce the topic of video game programmer. <https://www.kxan.com/news/local/austin/love-playing-video-games-you-can-now-major-in-game-design-at-ut/1812374293>
* A presentation board will be set up before the students arrive. The tri-fold board will list the following questions:
	1. What do video game programmers do?
	2. Do you need to go to college to be a video game programmer?
	3. What are some specific courses that video game programmers study?
	4. What is the average salary of a programmer?
	5. Would a computer science degree be helpful for a career making video games?
 | * Come in and watch the video.
* Explore the presentation board.
 |
| **Teacher Input (I Do):*** Explore the tri–fold board with the students.

*1. What do video game programmers do?** *Video game programmers develop gaming programs and networks for third-party use, design games, and create game mechanics that coordinate with a story.*

*2. Do you need to go to college to be a video game* *programmer?** *Yes –Becoming a video game programmer begins with earning a bachelor's degree in computer science, software engineering, or a related field.*

*3. What are some specific courses that video game programmers study?** *Most students will complete core courses in mathematics, computer science, and data analysis. Moreover, programs might mandate that students take lab courses in which they develop their own software or game.*

*Students also typically learn several computer languages, such as C, C++, and Java.* *4. What is the average salary of a video game programmer?** *The average pay for a video game programmer is $64,541 per year.*

*5. Would a computer science degree be helpful for a career making video games?** *When you get a computer science degree, you’ll learn how to do computer programming, and knowing how to program will help you as a game programmer. Video game programmers are often required to use different programming languages to create the game’s levels, missions, and other player interactions.*
* Play short introductory video.
	+ “A Video Game That Teaches You How To Code” <https://www.youtube.com/watch?v=OxYW0bqtiTo>
 | * Students will review and discuss the display with the teacher and provide opinions and feedback when prompted.
* Watch video.
 |

|  |  |
| --- | --- |
| **Guided Practice (We Do):*** Inform students that they will complete two activities involving how to become a video game programmer. (Game story and writing code spell to start their games)
* Explain the steps that a video programmer starts to build a game.

(game story – write algorithm – build the game)* Tell students why video games always have their own game story.
* Station/Activity 1: Draw your game avatar and write your own game story.
* Tell students what code spell and algorithm is. Explain how to do activity 2.
* Provide full instructions on the table before handing out supplies for the activities.
* Station/ Activity 2: Make your own game by using the correct coding language.
* Ask students to share their game story and display board with color partner.
 | * Discuss with shoulder partner which steps do they think is the most important step to make a game.
* Station/Activity 1: Using the materials provided, follow the written instructions to draw their own avatar and write their game story.
* Station/Activity 2: Based on their game story, using different code spell to create their game.
* Share their game story with color partner.

  |
| **Independent Practice (You Do):*** Pass out a written activity about:
	1. The roles of a video game programmer.
	2. Create the code to save teacher’s avatar.
 | * Students will complete a written activity.
 |
| **Closure:*** Pass out blank index cards and have students write down:
	+ Do you want to be a video game programmer? Why/ why not?
	+ What would happen if video game programmer did not exist?
	+ Their favorite part of the lesson today
* Have students pair-and-share and read/discuss what they wrote down.
 | * Summarize the description of being a video game programmer on an index card.
* Complete the questions on the board by writing the answer on index cards.
* Find a partner and share note cards with each other.
 |

|  |  |
| --- | --- |
| ***Bloom’s Level(s):***Synthesis:*“Finding teacher’s avatar”*Analysis: *“What would happen if…”*  | ***Technology Integration**** YoutTube/ News videos:

<https://www.kxan.com/news/local/austin/love-playing-video-games-you-can-now-major-in-game-design-at-ut/1812374293>“A Video Game That Teaches You How To Code” <https://www.youtube.com/watch?v=OxYW0bqtiTo> |

|  |  |
| --- | --- |
| ***Extension:***Students will create a click game through “*Scratch- Offline*” During the time students will complete at least 5 steps on making a click game. | ***Reteach:***Focus more on authentic assessment. Go over each step slowly, in detail. As class, analysis the steps and algorithm which make the game works. Repeat the steps of making the game until students are grasping how to do.  |

|  |  |
| --- | --- |
| **Accommodations / Modifications:****ESL**–Students will be provided with a handout with career information about video game programmer. The handout will include a career summary, images and key vocabulary words with definitions. **Difficulty reading written material –**The teacher will allow extra time for the student to complete the worksheet. Moreover, the teacher will help the student visualize what he/she reads.**IDEA Disability: Hearing Impairments –**Teacher will combine traditional communication, lip reading, sign language and assistive technology for the student to make listening to lectures and participating in class discussions easily. **Difficulty focusing on the class-** The teacher will provide cognitive behavioral feedback: positive feedback for paying attention to the task (frequency based on what student can currently do) |  **References:** *“Coding with Paper: FREE Printable Space Race Game for Students”* <https://www.fractuslearning.com/coding-with-paper-printable-game/> |