**YEARS 3 & 4 – PROGRAMMING & MULTI-USER SIMULATION:**

Students will create **digital portfolio & iSTEM Lab legacy projects,** incorporate various program languages & utilize **2D or 3D game engines** in their work &teach other peers. Next, they’ll explore the world of **Virtual Reality** with **Oculus/Meta Quest** equipment.

Students will **build and test** **single and multiplayer games** for various platforms and learn backend server technology integration. **Unity Certifications include:** Unity Artist, Programmer & VR. Students will compete & present at the PCS District Showcase, iSTEM Lab Advisory Board meetings & more!

Students also may learn **ARRL Ham Radio Communication** & Coding technician skills & pursue that **FCC license** later in class or as part of the Cougars Who Code & Girls Who Code Clubs.

**YEAR 2 – GAME DESIGN:** Get ready to advance in detailed knowledge of game design from the 2D process and be introduced to **3D art and animation** tools. Students will learn **Unity Essentials** for game design and begin portfolio development & Unity certification prep. They will **master C#** and be introduced to **Blender** software & the **Unity Asset Store**. Students will work collaboratively on projects to showcase, share & compete.

**YEAR 1 – FOUNDATIONS:** Students gain a working knowledge of the game design process, vocational opportunities, **2D art and animation**, and use 2D **block-based game engines**. Students collaborate in teams & work independently on projects. Semester 2 involves learning **Python** and creating games with Procedural Programming & obtaining the **Info Technology Specialist (ITS) Python certification**.

A logo with purple letters

Description automatically generatedA logo with blue and black text

Description automatically generatedA logo with text and a yellow and blue circle

Description automatically generatedA black letter on a white background

AI-generated content may be incorrect.A logo with a colorful head with a virtual reality headset

Description automatically generated

A logo for a computer science company

Description automatically generated

**COURSE OVERVIEW**

**Step into a world of creativity and virtual reality** **as you learn how to program and make games & simulations of a professional nature.** Use a variety of software & gaming environments with proficiency, enabling you to gain essential programming, design & debugging skills.

**What are the benefits?**

* You **master your craft** in game design as you develop a **portfolio**
* **Make games** with maximum design efficacy and user interface satisfaction by gamers
* **Showcase your games to potential employers, investors, Boards & in Districtwide competitions**

This program offers sequential courses of rigorous content aligned with challenging academic standards and relevant technical knowledge/skills needed to **prepare students for IT careers such as:** Game & Simulation Designer, Programmer, Software Developer, or other Information Technology careers. This sets you above the rest as you obtain **ITS &** **Unity Artist, Programmer & Virtual Reality industry certifications.**

**GAME &**

**SIMULATION**