Your Guide to Esports for K12 Schools

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Your Guide to Esports in Your K12 School

Given the overwhelming popularity of video gaming, the rise of esports isn't surprising, and many schools are now embracing structured esports programs as an alternative or in addition to traditional sports.

School administrators recognize that students can learn the same types of lessons from competitive video gaming as they would learn in traditional sports. Esports programs can help build a sense of belonging, promote collaboration and communication skills, and foster good sportsmanship and improved social behavior, while also creating a pipeline for future STEM careers and furthering students' strategic thinking and problem solving abilities.

In the following pages, we share a wealth of information to help your school administrators understand the esports benefits and trends, and delve into what you'll need to integrate a successful esports program into your schools curricula or after-school programming.

We partner with all of the key technology manufacturers so that we can support every aspect of your needs from infrastructure to hardware to software, and everything in between. Contact us today to talk about next steps and get you started on powering up your school's esports team! We look forward to hearing from you.

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Contents

Esports Overview

Esports, or "electronic sports", takes video gaming to another level with organized competitive gameplay between two teams, governed by its own strict set of rules and guidelines.

Contrary to common perception, esports is not simply a phenomenon occurring in the basements of unemployed twenty-somethings. Esports has become a booming industry globally, investable and growing exponentially, with over 400 million fans and regularly selling out arenas all around the world.

Esports vs Traditional Sports

Esports are similar to traditional sports, but with one major difference: the games are video games. Just as with a football or volleyball team, esports programs require tryouts, daily practice sessions, team captains, and solid academic standing.

Esports has transformed online gaming into a spectator sport where skilled gamers compete in the same manner as traditional sports (i.e.: baseball, basketball, and football). With millions of fans from all over the world, spectators can watch online or in-person. The experience is similar to a professional sporting event except that video gamers compete against each other in a virtual environment.

Just as viewers of traditional sports are dedicated to their favorite players and teams, the fan base for esports is highly engaged. When kids aren't playing games themselves, they are spectators, gleaning new skills and thrilling in the excitement as they watch elite global players compete in high-stakes tournaments.

Esports Facts

Varsity collegiate esports began in 2014 when Robert Morris University in Illinois announced a scholarship-sponsored League of Legends team. According to ESPN, there are now up to 180+ schools offering Varsity Collegiate teams around the country. Scholarships are available in the following games:

- Multiplayer online battle arena (MOBA): League of Legends (LoL), Defense of the Ancients (DOTA) 2, Heroes of the Storm, Smite

- First person shooter: Overwatch, Fortnite, Counter-Strike: Global Offensive (CS:GO), Player Unknown's Battlegrounds (PUBG), Paladins

- Collectible card game: Hearthstone

- Real-time strategy: StarCraft II

- Sports games: Rocket League, FIFA, Madden

Esports in Your School - Your Opportunity

K12 institutions are starting to see the potential of adding esports to the curriculum as it's becoming an important aspect of supporting student recruitment into higher education. Currently, there are more than 200 colleges and universities offering nearly $15 million in scholarships to high school students.

The Extreme-eCampus News Worldwide Esports Survey found that 21% of schools already have an esports program and that over 70% of K12 schools are now considering introducing competitive gaming to its curriculum in some shape or form.

56%
have seen academic improvement after implementing

41%
found increased student participation and recruitment

20%
top esports athletes attract scholarships to national colleges

The high school esports education is usually available as an add-on to either the athletics or technology-based curriculum. These optional courses are sometimes added as extra-curricular activities, and students must meet specific educational requirements to stay on the team.

Benefits of Esports in Education

Esports in schools is at the confluence of some of the most important drivers in education. A well-implemented esports program can promote student engagement, college recruitment, and retention by blending online and offline campus experiences–which ultimately prepares students for future careers.

- **Participation:** More than 80% of esports teams are made up of students who had never participated in extra-curricular activities prior to esports, giving the untraditional student-athlete the opportunity to experience leadership, sportsmanship, teamwork, social skills, and pride through athletic competition.

- **Attendance:** Esports student-athletes attendance significantly improves as they feel more connected and look forward to going to school.

- **Academic Performance:** Esports participation has the capability to change a student's entire academic trajectory, helping to increase their GPA by an average of 1.7 points.

- **Teamwork:** Through deepened levels of interaction, cooperative learning and working in groups, participants learn to communicate and work more effectively with others.

- **Sense of Community:** The inclusiveness and accessibility of esports allows students to come together over a common passion while providing access to positive adult mentors.

- **Coursework Alignment:** Game Design, Graphic and Multimedia Design, Technological Communication, and Cybersecurity programs align with an esports curriculum.

- **Real-World Experience:** Students spend hours analyzing data, game statistics, and strategies, providing real-world experience and application for in-demand job skills—the same attributes colleges and employers are looking for in high school graduates.

80%
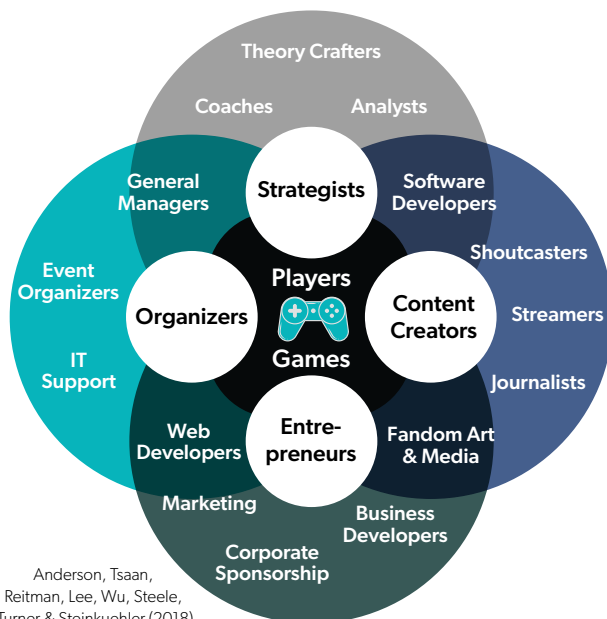of esports student-athletes are first time participants in extracurricular activity

GPA

+1.7
increase in average GPA

10%
improvement in school attendance

- **Tomorrow's Workforce:** Prepares students for jobs in the business of esports including but limited to: sports sales, sports marketing, public relations and social media, event and tournament management, account management, broadcasting, coaching, and video editing.

- **Continued Education:** Esports programs and scholarships create a new viable path to college for those who may never have considered and/or could not afford higher education.

Because of these important benefits, esports now has a rapidly-growing presence in education and should be in-tegrated into the planning of your school, whether higher education or primary/secondary.

Theory Crafters
Coaches
Analysts
General Managers
Strategists
Software Developers
Shoutcasters
Event Organizers
Players
Organizers
Content Creators
Streamers
IT Support
Games
Journalists
Web Developers
Entre-preneurs
Fandom Art & Media
Marketing
Business Developers
Corporate Sponsorship

Anderson, Tsaan, Reitman, Lee, Wu, Steele, Turner & Steinkuehler (2018)

Opportunities for student body and community participation

Launching an Esports Program in Your School

Find a teacher to mentor your club

Consider asking a Teacher, Counselor, Coach or some other school official that may have a personal interest in gaming or experience helping with other school clubs.

1

Recruit your team

Find interested students to join the team by leveraging your school's newspaper, broadcast system, posters and flyers etc.

2

Enroll in the tournament platform (your IT provider can assist)

Have your teacher sponsor/advisor reach out to your IT provider to complete your school's HSEL application to make it official.

3

Plan out the details

Determine the number of gaming workstations, various accessories and networking technologies needed, and secure a designated meeting space and time.

4

Communication is key

Streamline communication by creating email lists, group texts, and/or Facebook groups that share the details with team members and interested students.

5

Host meetings

Once your esports club is formed you should start to meet regularly. Reach out to the team with finalized meeting location, days and times.

6

Giving Your School a Competitive Edge

Keeping technology on point is an important part of staying com-petitive, and laying the right technological foundation can be the key to building your esports program's momentum. We'll provide the right components to optimize your students' gaming experience and help with outfitting your esports facility.

The cornerstone of your setup is the infrastructure that runs the games and connects students to gameplay: security, data center, connectivity, cloud computing, digital signage and cabling solutions.

We can help you with every step of the process. Below are some of the key factors for a successful setup.

Your Technology Checklist:

- **Network**

  Network speed, agility, and bandwidth are critical. One of the biggest issues that has affected the esports space is latency. Primarily, tournaments are broadcast via streaming platforms such as Twitch and Steam, with large groups of highly skilled players making moves that need to be played back in milliseconds on high definition systems with detailed graphics.

- **On-Premises Solutions for Security**

  From fan engagement to real-time cheating and fraud detection, since officiating happens online, on-premises technology is preferred for esports. On-premises solutions help schools keep tight controls on security to prevent cheating, interference with gameplay, and hacks that can affect all users.

- **Gaming Devices**

  When building an esports lab or even a single user setup for a competitive gaming, the cornerstone is the gaming console or computer that runs the operation. Gaming laptops provide the portability needed for gamers on the go, while desktops offer enhanced capacity during competitions. The leagues that your esports teams compete in will have guiding technology specs.

  Before making initial investments, get the basic specs provided by the leagues you want to participate in for each of the games the team will be competing in. Many offer a preview of how those tech needs will evolve in the coming year, which can help you to invest in technology that will meet their needs over time. Often, these include guidelines on processing power, memory, hard drives, and graphics cards.

We can help you decipher those needs and provide you with the proper hardware for success as well as provide you with ongoing support and services to keep your school's fleet of gaming devices current and supported. Lifecycle management helps with upgrades, repairs, and services. Asset tagging keeps track of devices and manage setup. Laser etching identifies property to deter theft while advertising your school.

- **Monitors and Digital Signage**

   Monitors and digital signage bring the visual experience of gaming to life and are critical to delivering the visual interface that enables strong gameplay. A state-of-the-art gaming monitor has the graphics, size, and refresh capacities to offer a visual experience that pairs with a computer to process gameplay at lighting speed.

   One of the biggest considerations is whether to go with curved monitors or flat monitors. Curved monitors offer a more immersive field of view, while flat displays offer a wider range of choices in brands, size, and cost.

   Another factor to consider is digital signage and large-screen video displays for onsite fans who will often sit for hours, watching the gameplay unfold. Whether streaming gameplay or displaying stats for a competition in progress, adding large screens pulls everything together to create a "big experience" feel.

- **Essentials for Student Gamers**

   - **Headsets:** Headsets allow players to hear the gameplay and participate in team discussions via microphones. It's important to consider noise-canceling gaming headset models that are comfortable for long-term gameplay and offer sound quality that supports what players need. We typically avoid gaming headsets that consist of low-quality materials or have thin cables as students need durability that will get them through the year.
   - **Keyboards:** For PC-based gamers, the keyboard is an important part of streamlining gaming and offering an ergonomic experience. The biggest feature to consider is whether to choose a standard membrane keyboard or go for a higher-quality mechanical keyboard. There are also specialized gaming keyboards—sometimes called MMO keyboards—with extra buttons that can be used to optimize gameplay.
   - **Mouse:** When it comes to gaming mice, there are different options that align to game types. A shooter mouse works well with first-person shooter games, while a MOBA- or MMO-style mouse offers expanded button access. A good gaming mouse should have more buttons than a traditional mouse as well as a sturdy grip.
   - **Cameras:** Video production, equipment and positioning are critical to truly experience the thrill of esports. Investing in broadcast quality cameras geared toward the high-performance needs of the gaming industry is not only a requirement in many leagues but also a necessity that provides audience engagement.
   - **Gaming Chair:** It is necessary to invest in a high-quality gaming chair that has good ergonomics since students will be sitting for long durations.

Our team is available to consult with you on every item in this checklist to ensure that your school is set up with the right technology to fit your student and league needs, as well as your school's budget.

Networking Capabilities

The network is the differentiator that will ultimately hinder or enable the success of your players and teams. Whether supporting an on-campus or off-campus esports program, schools must address critical technology issues to make sure their technology meets program requirements.

- Network Latency, Jitter, Delays, and Bandwidth Bottlenecks
- Continuous Availability
- Network Management and Security
- Constant Visibility into Network Applications and Responsiveness
- Broadband Connection to the Internet
- Technical Services and Support

Network Latency, Jitter, Delays, and Bandwidth Bottlenecks

Quick and decisive player reactions only translate to advantage if they are passed through the network with minimal delay. To achieve the maximum advantage, the wired and/or wireless network must be capable of adequate bandwidth and introduce the minimum possible latency. While total bandwidth requirements for esports are not high, the network must be capable of allocating the bandwidth where it is most needed. The network must have adequate backhaul capability to handle the wired and wireless edge data throughput from competitors, visitors, and video input devices.

The hard work of making a game look good and run smoothly is, after all, handled by the hard drives and graphics cards of your consoles or gaming PCs.

What matters most for online gamers is low latency. Latency is that lag you can sometimes see online, be it in a web page download stuttering or game struggling to keep up. An ISP needs to provide a consistent and stable connection to the Internet servers used for online game play. We'll be able to set you up with the necessary network infrastructure to support your team, whether if you need to build from scratch or allocate from your current school network.

On-Premise Solutions

Equipping a Successful Esports Lab

The meteoric rise in popularity of esports has led to schools around the country to constructing designated gaming facilities to house their developing esports programs. Having the right technology setup is crucial to a successful esports experience, and we are here to help you with that.

We can develop specific solutions customized for your school, dedicated to esports gameplay and audience participation:

- **Create Flexible, Multi-Purpose Spaces**

    For educational institutions just starting out, we'll want to focus on developing flexible, multi-purpose areas for students. For example, a room outfitted with advanced computers for game play tournaments can double as a lab for advanced computer aided design (CAD) and programming classes.

- **Modular, Mobile and Multifunction Furniture Solutions**

    Your needs will likely change over time as does technology. Modular furniture can be reconfigured with ordinary hand tools to create new floorplan layouts. It's easy to add new modules to expand the footprint or allow for social distancing, and the furniture is easily disassembled and transported to set up in new locations with zero waste. Custom mobile solutions add the ability to make it easy to move furniture to where it's needed. And multifunction furniture can be used in different ways: for example, tilt-up tables can convert to presentation stands against the wall.

- **Safe, Healthy Ergonomic Desks, Tables and Chairs**

    Students need to be comfortable, especially when they are sitting in front of a computer for hours on end. For optimal experience, we recommend chairs with ergonomic qualities and dimensions to ensure they accommodate the size of high school students and prevent back pain. Desks or tables with sit-to-stand capabilities built-in also allow students to change positions as needed.

- **Moveable Monitor Arms**

    Robust monitor arm solutions securely hold the heaviest computer display monitors, yet make it easy for users to adjust the position to fit their needs.

- **Enhanced Security for Expensive Equipment**

    Esports equipment relies on advanced computer equipment. We'll help you explore built-in lockable storage and other security measures to make sure your investment remains secure, even in a public environment.

- **Organization with Overhead Utility Systems**

    Wires and cables can pose a trip hazard. Unique, overhead carrier systems keep things neat and tidy, by running all the electric and networking cables in custom-made overhead trays.

- **Cooling System Considerations**

    As with most tech labs, cooling requirements are a concern when a large number of computers and servers are packed together in a confined space. We can provide options to avoid hotspots that can damage equipment and make students uncomfortable.

- **Noise Management**

    Controlling unwanted noise in open areas is an increasingly important design consideration. We suggest implementing solutions that help to control ambient noise, particularly if your esports team practices during the school day.

- **Built-to-Last Furniture**

    Durable furniture built from solid steel and other heavy-duty materials are designed to withstand heavy use in educational institutions.

Resources to Help Your School Kick-Off a Successful Esports Program

The easiest part of starting an esports program is recruiting students. When schools announce their esports program students will come running, challenging schools to meet the demand of finding enough staff to serve as coaches, creating dedicated gaming areas big enough to compete and outfitting with advanced gaming tools and the latest technology; but the investment doesn't have to be huge.

There is also the cost of licenses for each game; for example, Rocket League costs approximately $20 per student. Experts suggest starting out with just one game, allowing the team to focus and build mastery.

Leverage Esports Program Resources

Funding

Esports may be less costly and easier to get off the ground than schools realize. There are numerous ways for schools to fund curriculum and equipment for their esports program. They can raise money through funding platforms, STEM grants, scholarships and by leveraging their clubs and CTE programs.

Here are a few funding and grant opportunity resources.

- Video Game Grants and Scholarships
- STEM Grants
- ITEST
- Esports Course
- Scholarships for Women
- Frey Scientific
- After School STEM

Governing Bodies

Governing bodies can help with launching esports programs in schools. Among the most popular are the National Association of Collegiate Esports (NACE), North America Scholastic Esports Federation (NASEF), Esport Gaming Association Australia (EGAA), High School Esports League (HSEL), GPAC, and TESPA.

Partnership with HSEL

With thousands of school districts across the nation seeking to be educated on how to embrace the esports opportunity, we work with the High School Esports League (HSEL) to help your K12 school get started. Our goals are to:

- Provide you with education and programming as well as a gaming platform
- Make it easier for you to offer esports as a legitimate varsity level sport
- Give educators access to a Gaming Concepts curriculum and STEM.org accredited programs
- Help your school gain access to grant and funding opportunities to help cover the cost of getting started
- Offer a fertile recruiting ground for esports scholarship opportunities in higher education

High School Esports League (HSEL) and Middle School Esports League (MSEL)

We can get you set up with the subscriptions needed to participate in High School Esports League and Middle School Esports League tournaments.

HSEL is the largest and longest-operating competitive gaming organization in North America serving 2,000+ partnered schools and over 50,000 students across the US & Canada. HSEL fulfills a very important role in bringing order to the rapidly increasing esports academic landscape across the nation. HSEL's mission is to "make esports available to every student as a legitimate varsity level sport in high schools across the nation," HSEL has 1,700 schools and 45,000 students in its community. They offer a paid partnership deal with high schools, to let students engage in a variety of esports programs. This partnership includes perks like premium tournaments with a chance to win esports scholarships. Other prices include sponsored LAN parties and streaming opportunities through the Twitch Student program. The High School Esports League operate tournaments within the esports titles Hearthstone, Rocket League, CS:GO, Overwatch, Smite, CoD, Injustice 2, Rainbow 6 Siege and Paladins.

HSEL resources:

- High School Partnership Starter Packet
- Getting Started Guide:
- How to start a school club
- Sign up sheet and flyers
- How to set up game connections
- Free Agent Teams
- Gaming Concepts School Curriculum
- Grant and Funding opportunities for HSEL Schools

Top Esports Games to Consider:

Computing Requirements by Game

Game
- Overview
- Details

PC Specifications
- OS
- Processor
- Memory
- Graphics
- DirectX
- Storage

Software
- Install Game
- Peripheral drivers
- Game updates and patching policies
- Communications client (Discord, Teamspeak, Twitch, etc.)

Peripherals
- Mouse
- Keyboard
- Headset with microphone

Network
- Network connection
- Bandwidth per player
- White list game specific public IP and ports in Internet filter/firewall
- School's public IP addresses for onboarding process (Used by game developers to tag/allow high volume esports specific traffic from high schools.)

Game
- HSEL
- Game System Requirements
- System Requirements Lab/Can You RUN it
- ProSettings.net
- Battle Net
- Steam Powered
- Game Special

League of Legends (LoL)

Can You Run It?

Required PC Specifications

	Minimum	Recommended
WINDOWS	• OS: Windows 10 • CPU: 3GHz processor (supporting SSE2 instruction set or higher) • RAM: 2GB • VIDEO CARD: Shader version 2.0 capable video card • PIXEL SHADER: 2.0 • VERTEX SHADER: 2.0 • FREE DISK SPACE: 8GB	• OS: Windows 10 with the latest service pack installed • CPU: 3GHz Dual-Core processor • RAM: 4GB • VIDEO CARD: Nvidia GeForce 8800/AMD Radeon HD 5670 or equivalent video card (Dedicated GPU with 512MB or higher Video Memory(VRAM)) • PIXEL SHADER: 4.0 • VERTEX SHADER: 4.0 • FREE DISK SPACE: 12GB • DEDICATED VIDEO RAM: 512MB

League of Legends game details

League of Legends is the reigning MOBA king, with more colorful champions than you could hope to become an expert with in a single lifetime. League of Legends is far from being a new player in the scene and has continued to be one of the most played games since its inception way back in 2009. The staying power of League of Legends as being one of the top games streamed on popular broadcasting sites like Twitch speaks volumes about the fans of this industry-defining MOBA. It shares these commonalities with its biggest competitor, DOTA 2, but each game has their own playstyle and fans of each will argue that their game is the best! On top of being free to download, the system requirements for League of Legends are extremely accessible. Combine these two things with fun and addictive gameplay, and you have a recipe for a game that can stand the test of time.

League of Legends' minimum system requirements are extremely low, and it will even run on a wide range of laptops. In fact, the minimum CPU requirement is so low that Riot Games only states that a 2GHz CPU is needed (even if dual-core). This means that most modern CPU will be well above what's needed to get League of Legends up and running.

Once you crank the settings up to High, League of Legends has a very pleasing aesthetic to its art style that you may miss out on by playing on low resolution/graphics. In order to safely max out the graphics, you'll need to be above the recommended requirements, which are still on the low side compared to most popular games.

Rocket League

HSEL Supported Platform

- PC
- XB1
- PS4
- Nintendo Switch

Can You Run It?

Required PC Specifications

	Minimum	Recommended
WINDOWS	• OS: Windows 10 • Processor: 2.4GHz Dual core • Memory: 2GB RAM • Graphics: NVIDIA GTX 260 or ATI 4850 • DirectX: Version 9.0c • Network: Broadband Internet connection • Storage: 7GB available space	• OS: Windows 10 • Processor: 2.5+GHz Quad core • Memory: 4GB RAM • Graphics: NVIDIA GTX 660 or better, ATI 7950 or better • DirectX: Version 9.0c • Network: Broadband Internet connection • Storage: 7GB available space • Additional Notes: Gamepad or Controller Recommended
MAC	• OS: MacOS X 10.8.5 • Processor: Intel Core i5 2.4GHz • Memory: 8GB RAM • Graphics: OpenGL 4.1 - ATI Radeon HD 5670, NVIDIA GeForce GT 640M, Intel HD Graphics 4000 or Iris Pro Graphics • Network: Broadband Internet connection • Storage: 7GB available space	• OS: MacOS X 10.8.5 or Newer • Processor: Intel Core i7 2.4GHz+ • Memory: 8GB RAM • Graphics: OpenGL 4.1 - ATI Radeon HD 5670, NVIDIA GeForce GT 640M • Network: Broadband Internet connection • Storage: 7GB available space
STEAMOS + LINUX	• Processor: 2.4+GHz Quad core • Memory: 2GB RAM • Graphics: NVIDIA GTX 260 or ATI 4850 • Network: Broadband Internet connection • Storage: 7GB available space	• Processor: 2.5+GHz Quad core • Memory: 4GB RAM • Graphics: NVIDIA GTX 660 or better, ATI 7950 or better • Network: Broadband Internet connection • Storage: 7GB available space • Additional Notes: Gamepad or Controller Recommended

HSEL Game Summary

SMITE

Can You Run It

Required PC Specifications

Minimum	Recommended
WINDOWS • OS: Windows 10 • Processor: Core 2 Duo 2.4GHz or Athlon X2 2.7GHz • Memory: 4GB RAM • Graphics: Nvidia GeForce 8800 GT • Storage: 30GB available space • Sound Card: DirectX compatible sound card	• OS: Windows 10 64-bit (latest Service Pack) • Processor: Intel Core i5 or AMD Phenom II X3, 2.8GHz • Memory: 6GB RAM • Graphics: Nvidia GeForce GTX 660 or ATI Radeon HD 7950 • Network: Broadband Internet connection • Storage: 30GB available space • Sound Card: DirectX compatible sound card

Game Overview

Counter-Strike: Global Offensive (CS:GO)

HSEL Supported Platforms

- PC

Can You Run It?

Required PC Specifications

WINDOWS	• OS: Windows 10 • Processor: Intel® Core™ 2 Duo E6600 or AMD Phenom™ X3 8750 processor or better • Memory: 2GB RAM • Graphics: Video card must be 256MB or more and should be a DirectX 9-compatible with support for Pixel Shader 3.0 • DirectX: Version 9.0c • Storage: 15GB available space
MAC	• OS: MacOS X 10.11 (El Capitan) or later • Processor: Intel Core Duo Processor (2GHz or better) • Memory: 2GB RAM • Graphics: ATI Radeon HD 2400 or better / NVidia 8600M or better • Storage: 15GB available space
STEAMOS + LINUX	• OS: Ubuntu 12.04 • Processor: 64-bit Dual core from Intel or AMD at 2.8GHz • Memory: 4GB RAM • Graphics: nVidia GeForce 8600/9600GT, ATI/AMD Radeon HD2600/3600 (Graphic Drivers: nVidia 310, AMD 12.11), OpenGL 2.1 • Storage: 15GB available space • Sound Card: OpenAL Compatible Sound Card

HSEL Game Summary

Counter-Strike: Global Offensive game details

A multiplayer staple, Counter-Strike: Global Offensive pits teams against each other as they attempt to dominate elaborate maps with more guns than you could fit into an armory.

Overwatch

HSEL Supported Platforms

- PC

Can You Run It

Required PC Specifications

Minimum	Recommended
 WINDOWS • OS: Windows 10 64-bit (latest Service Pack) • Processor: Intel® Core™ i3 or AMD Phenom™ X3 8650 • Video: NVIDIA® GeForce® GTX 460, ATI Radeon™ HD 4850, or Intel® HD Graphics 4400 • Memory: 4GB RAM • Storage: 30GB available hard drive space • Internet: Broadband connection • Resolution: 1024 x 768 minimum display resolution	• OS: Windows 10 64-bit (latest Service Pack) • Processor: Intel® Core™ i5 or AMD Phenom™ II X3 or better • Video: NVIDIA® GeForce® GTX 660 or AMD Radeon™ HD 7950 or better • Memory: 6GB RAM • Storage: 30GB available hard drive space • Internet: Broadband connection • Resolution: 1024 x 768 minimum display resolution

HSEL Game Overview

Passing the minimum system requirements for Overwatch is important to being able to run with passable frames on Low settings. If you want to crank the graphics all the way up while you're zoomed in with Widow preparing for that headshot, your computer needs to pass the recommended system requirements test. The recommended system requirements for Overwatch are only a little bit higher than the aforementioned minimum specs.

Super Smash Brother Ultimate

HSEL Supported Platforms

- Nintendo Switch

Super Smash Bros. Ultimate is a game that's exclusive to the Nintendo Switch and therefore not available on PS4, Xbox One, or PC. The Super Smash Bros. series of games groups together various characters from throughout Nintendo's history and current lineup of games.

HSEL Game Overview

GameSpecial.com Game System Requirements

Tom Clancy's Rainbow Six: Siege

HSEL Supported Platforms

- PC
- PS4
- XB1

Can You Run It

Required PC Specifications

	Minimum	Recommended
WINDOWS	- OS: Windows 10 64-bit (latest Service Pack) - Processor: Intel Core i3 560 @ 3.3GHz or AMD Phenom II X4 945 @ 3.0GHz - Memory: 6GB RAM - Graphics: NVIDIA GeForce GTX 460 or AMD Radeon HD 5870 (DirectX-11 compliant with 1GB of VRAM) - Network: Broadband Internet connection - Storage: 61GB available space - Sound Card: DirectX® 9.0c compatible sound card with latest drivers	- OS: Windows 10 64-bit (latest Service Pack) - Processor: Intel Core i5-2500K @ 3.3GHz or better or AMD FX-8120 @ 3.1GHz or better - Memory: 8GB RAM - Graphics: NVIDIA GeForce GTX 670 (or GTX 760 / GTX 960) or AMD Radeon HD 7970 (or R9 280x [2GB VRAM] / R9 380 / Fury X) - Network: Broadband Internet connection - Storage: 61GB available space - Sound Card: DirectX® 9.0c compatible sound card 5.1 with latest drivers

HSEL Game Overview

STEAM Game Information

Fortnite

HSEL Supported Platforms

- PC
- XB1
- PS4
- Nintendo Switch
- Mobile

Can You Run It

Required PC Specifications

	Minimum	Recommended
WINDOWS	• OS: Windows 10 64-bit • Processor: Intel Core i3 2.4GHz • Memory: 4GB RAM • Graphics: Intel HD 4000 • Pixel Shader: 3.0 • Vertex Shader: 3.0	• OS: Windows 10 64-bit (latest Service Pack) • Processor: Intel Core i5 2.8GHz • Memory: 8GB RAM • Graphics: Nvidia GTX 660 or AMD Radeon HD 7870 equivalent DX11 GPU with 2GB VRAM • Pixel Shader: 3.0 • Vertex Shader: 3.0 • Dedicated Video RAM: 2048MB

HSEL Game Overview

HSEL Game Help

Hearthstone

HSEL Supported Platforms

- PC
- Mobile (Hearthstone App)

Can You Run It

Required PC Specifications

	Minimum	Recommended
WINDOWS	• Operating System: Windows 10 64-bit (latest service packs) • Processor: Intel® Pentium® D or AMD® Athlon™ 64 X2 • Memory: 3GB RAM • Storage: 3GB available HD space • Video: NVIDIA® GeForce® 6800 (256MB) or ATI™ Radeon™ X1600 Pro (256MB) or better • Pixel Shader: 4.0 • Vertex Shader: 4.0 • Sound Card: Yes • Dedicated Video RAM: 256MB • Internet: Broadband Internet connection • Resolution: 1024 x 768 minimum display resolution	• Operating System: Windows 10 64-bit (latest service packs) • Processor: Intel® Core™ 2 Duo (2.2GHz) or AMD® Athlon™ 64 X2 (2.6GHz) or better • Memory: 4GB RAM • Storage: 3GB available HD space • Video: NVIDIA GeForce 8800 GT (512MB) or ATI Radeon HD 4850 (512MB) or better • Pixel Shader: 4.1 • Vertex Shader: 4.1 • Sound Card: Yes • Dedicated Video RAM: 512MB • Internet: Broadband Internet connection • Resolution: 1024 x 768 minimum display resolution

HSEL Game Overview

NBA 2K20

HSEL Supported Platforms

- PS4
- XB1

Can You Run It

Required PC Specifications

	Minimum	Recommended
WINDOWS	• Operating System: Windows 10 64-bit (latest service packs) • Processor: Intel® Core™ i3-530 @ 2.93GHz / AMD FX-4100 @ 3.60GHz or better • Memory: 4GB RAM • Storage: 80GB available space • Video: NVIDIA® GeForce® 6800 (256MB) or AMD Radeon™ X1600 Pro (256MB) or better • Pixel Shader: 5.0 • Vertex Shader: 5.0 • DX: Version 11 • Sound Card: DirectX 9.0x compatible • Dedicated Video RAM: 1024MB • Internet: Broadband Internet connection • Resolution: 1024 x 768 minimum display resolution	• Operating System: Windows 10 64-bit (latest service packs) • Processor: Intel® Core™ i5-4430 @ 3GHz / AMD FX-8370 @ 3.4GHz or better • Memory: 8GB RAM • Storage: 80GB available space • Video: NVIDIA GeForce 8800 GT (512MB) or AMD Radeon HD 4850 (512MB) or better • Pixel Shader: 5.0 • Vertex Shader: 5.0 • DX: Version 11 • Sound Card: DirectX 9.0c compatible • Dedicated Video RAM: 2048MB • Internet: Broadband Internet connection • Resolution: 1024 x 768 minimum display resolution

HSEL Game Overview

Madden 20

HSEL Supported Platforms

- PS4
- XB1

Can You Run It

Required PC Specifications

	Minimum	Recommended
WINDOWS	• Operating System: Windows 10 64-bit • Processor: AMD FX-4320 or Equivalent / Intel i3-4350 or Equivalent • Memory: 8GB RAM • Storage: 48.5GB available space • Video: AMD Radeon RX 460 or Equivalent / Nvidia GeForce GTX 660 or Equivalent • Pixel Shader: 5.0 • Vertex Shader: 5.0 • DX: 11 Compatible video card or equivalent • Sound Card: DirectX 9.0x compatible • Dedicated Video RAM: 1024MB • Network: 512 KBPS or faster Internet connection • Resolution: 1024 x 768 minimum display resolution	• Operating System: Windows 10 64-bit • Processor: AMD FX-4320 or Equivalent / Intel i3-4350 or Equivalent • Memory: 8GB RAM • Storage: 48.5GB available space • Video: AMD Radeon R9 270x or Equivalent / Nvidia GeForce GTX 670 or Equivalent • Pixel Shader: 5.0 • Vertex Shader: 5.0 • DX: 11 Compatible video card or equivalent • Sound Card: DirectX 9.0c compatible • Dedicated Video RAM: 2048MB • Network: Broadband Internet connection • Resolution: 1024 x 768 minimum display resolution

HSEL Game Overview

FIFA 20

HSEL Supported Platforms

- PS4
- XB1

Can You Run It

Required PC Specifications

	Minimum	Recommended
WINDOWS	• Operating System: Windows 10 64-bit • Processor: AMD Phenom II X4 965 or Equivalent / Intel i3-2100 or Equivalent • Memory: 8GB RAM • Storage: 50GB available space • Video: Radeon HD 7850 / GeForce GTX 660 or better • Pixel Shader: 5.0 • Vertex Shader: 5.0 • Dedicated Video RAM: 1024MB • Network: 512 KBPS or faster Internet connection	• Operating System: Windows 10 64-bit • Processor: AMD FX 8150 or Equivalent / Intel i5-3550 or Equivalent • Memory: 8GB RAM • Storage: 50GB available space • Video: Radeon R9 270X / GeForce GTX 670 or better • Pixel Shader: 5.0 • Vertex Shader: 5.0 • Dedicated Video RAM: 2048MB • Network: Broadband Internet connection

HSEL Game Overview

Minecraft: Survival Games

HSEL Supported Platforms

- PC (Java version)

Can You Run It?

Required PC Specifications

	Minimum	Recommended
WINDOWS	• OS: Windows 10 • Processor: Intel Core i3-3210 / AMD A8-7600 APU or equivalent • Memory: 4GB (2GB free) • Graphics: Integrated: Intel HD Graphics 4000 (Ivy Bridge) or AMD Radeon R5 series (Kaveri line) with OpenGL 4.41 Discrete: Nvidia GeForce 400 Series or AMD Radeon HD 7000 series with OpenGL 4.4 • Storage: At least 1GB for Game Core and Other Files • Pixel Shader: 5.0 • Vertex Shader: 5.0 • Network: Internet access is required for multiplayer, unless the server is on the LAN.	• OS: Windows 10 • Processor: Intel Core i5-4690 / AMD A10-7800 or equivalent • Memory: 8GB (4GB free) • Graphics: GeForce 700 Series or AMD Radeon Rx 200 Series (excluding integrated chipsets) with OpenGL 4.5 • Storage: 4GB • Pixel Shader: 5.0 • Vertex Shader: 5.0 • Dedicated Video RAM: 256MB • Network: Broadband Internet connection
MAC	• OS: OS X 10.9 Maverick	• OS: OS X 10.12 Sierra
LINUX	• Any distribution from 2014 or later	• Any distribution from 2014 or later

HSEL Game Summary

Call of Duty (CoD) Modern Warfare: Gunfight

HSEL Supported Platforms

- PC
- PS4
- XB1

Can You Run It

Required PC Specifications

Minimum	Recommended
WINDOWS • Operating System: Windows 10 64-bit • Processor: Intel Core i3-4340 or AMD FX-6300 • Memory: 8GB RAM • Storage: 175GB hard drive space available • Video: NVIDIA® GeForce® GTX 670 / NVIDIA® GeForce® GTX 1650 or AMD Radeon™ HD 7950 • DX: Version 11 • Sound Card: DirectX 11 Compatible • Pixel Shader: 5.0 • Vertex Shader: 5.0 • Dedicated Video RAM: 2048MB • Resolution: 1080p 30fps • Network: Broadband Internet connection	• Operating System: Windows 10 64-bit (latest update) • Processor: Intel Core i5-2500K or AMD Ryzen R5 1600X processor • Memory: 12GB RAM • Storage: 175GB hard drive space available • Video: NVIDIA® GeForce® GTX 970 / NVIDIA® GeForce® GTX 1660 or AMD Radeon™ R9 390 / AMD Radeon™ RX 580 • DX: Version 12 • Sound Card: DirectX-compatible • Pixel Shader: 5.1 • Vertex Shader: 5.1 • Dedicated Video RAM: 4096MB • Resolution: 1080p 60fps • Network: Broadband Internet connection

HSEL Game Summary

Take the Next Step

We hope the information shared here has been educational and valuable in helping you make the decision to add esports to your school's curricula or after school programming.

Evidence shows that a well-planned esports program can support STEM learning in so many ways, further supporting your students on their learning and career paths. Our mission is to help bring esports to all schools and elevate the program to the level of traditional varsity sports. We'll partner with you every step of the way to ensure that you have the right tools to engage, entertain, and educate your students through the fun of esports.

Contact us today to get you started on the path to esports dominance!

Backed by key partnerships with:

Citations:

- The Extreme-eCampus News Worldwide Esports Survey
- ESPN - List of varsity esports programs spans North America
- Anatomy of an Esports Arena
- https://www.pcmag.com/news/365904/the-best-gaming-isps-of-2019
- https://www.pcmag.com/article/350064/the-best-gaming-isps-of-2017
- https://www.imperva.com/learn/performance/what-is-cdn-how-it-works/
- https://www.viewsonic.com/library/entertainment/is-esports-sport/
- https://community.connection.com/an-introductory-guide-to-esports-technology/
- http://www.sportspromedia.com/analysis/esports-week-rise-purpose-built-esports-arena
- https://formaspace.com/articles/education/design-esports-labs/
- https://durangoherald.com/articles/304741-new-esports-facility-is-first-of-its-kind-in-region
- https://www.wired.com/story/high-schools-need-to-embrace-esports/
- https://www.esportsbeam.com/esports/computer/console/gaming/equipment
- https://www.esportsbeam.com/
- https://www.esportsbeam.com/esports-teams-players
- https://gamerden.com/esports-equipment-every-serious-gamer-should-have/
- https://gamerden.com/follow-understand-wacky-world-esports/
- https://prosettings.net/