

Esports Playbook

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What Is Esports?

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 foot-ball 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

Generation Z (born in the mid-1990s to the early 2000s) are the true Internet generation. 73% of Generation Z has a video game console. Engaging in online activities and games is as natural to them as tossing a baseball in the backyard. They spend hours honing their skills as they play games that are leagues beyond the likes of *Frogger* and *Pac-Man*.

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 125 varsity collegiate esports teams around the country. Most programs are intercollegiate, but 24% are intramural-only.

The most common way to engage with the esports community is through various local, national and global esports leagues. Players get the opportunity to challenge other schools to see who has improved the most over the semester.

Each school year has 2 seasons. A season is divided into a two-week long pre-season and a seven-week long regular season, followed by the playoffs. A champion is crowned at the end of each season. Teams are put into leagues for each game. Regular season matches are played weekly.

Competitors from different leagues/teams face off in competitive games such as Counter Strike, Call of Duty, FIFA20, Fortnight, Hearthstone, League of Legends, Madden 20, Minecraft, Modern Warfare, NBA 2K20, Overwatch, Rainbow 6, Rocket League, Smite, and Super Smash Brothers. These games range from the more traditional—a virtual soccer match—to multiplayer online battle arenas with fantasy elements. An Esports match can last about two hours, although this may vary depending on the game.

During competitions, as many as eight players face off in the same game. Fans can watch the gamers live or via streaming services. The leading streaming service is Twitch, a social video service and community in which tens of millions of viewers interact around live and on-demand gaming content.





Esports in Schools – 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.



have seen academic improvement after implementing



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



increase in average GPA



improvement in school attendance



Opportunities for student body and community participation

- 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 integrated into the planning of every school, whether higher education or primary/secondary.

Partner Opportunity



70% of schools looking to introduce esports in 2020



Schools more reliant on tech partners for help with this new concept



Windows-based non-Chrome opportunity



System refresh rate 18-24 months



Opportunity beyond the gaming system

Take advantage of this opportunity to become a trusted technology advisor for schools' esports programs, equipping them with the technology necessary to deliver the best possible esports gaming experience.

The Extreme-eCampus News Esports Survey found that less than 10% of school esport programs are being managed by their IT department causing schools to look to partners for help with mapping out the technology infrastructure that's right for the venue, level of competition, and hardware and networking considerations.

Furthermore, approximately 24% of schools are planning to implement an esports competition facility, while 38% of schools already have an esports competition facility, with a network that has either recently been upgraded (76%) or will be upgraded within a year (24%). Other schools are requiring the students to play from home because they don't have the right equipment, or they require students to bring their own equipment.

Equipping schools for esports offers partners lucrative opportunities beyond simply outfitting gaming labs. As their technology partner, you can offer services at a range of levels, from initial consultation and assessments to implementation and ongoing managed services.







Helping Schools Launch an Esports Program

As more and more schools start to produce genuine results from implementing competitive gaming, it will be only a matter of time before it becomes standard practice.

High schools are responsible for ensuring their students have the proper equipment and technology. At a minimum, esports requires a coach, players, game stations (owned or borrowed), and a connection to the Internet. The other end of the spectrum is open-ended (involving a gaming arena, recruiting and training staff, training rooms, travel budget, and scholarship funding).

Key elements for high schools to successfully develop and launch a successful esports program.

- Partner with trusted technology advisor
- Funding/budget
- Infrastructure enhancements (including network upgrades and additional bandwidth)
- Identify/determine which game(s) team will be competing in
- Gaming equipment (including PCs, accessories, and monitors)
- Multipurpose room (competition, practice and events)
- Sufficient electrical, networking, and HVAC to support the gaming spaces
- Team member lockers (to store peripherals and equipment)
- Coach (a teacher, faculty member or administrator who is willing to be a champion and/or coach for the program)
- Recruitment of students



Planning Process

Offer your expertise in technology to help, schools dive into the pre-planning process to ensure that their investments and venue design support both their immediate needs and long-term goals.

Identify Needs and Goals:

• Where does the school currently see themselves at in the process?

What are their expectations in comparison

- where they are now?
- where they need/want to go?
- what they need/want to accomplish?
- What has prompted the school to start an esports program?

Is it due to...

- student driven interest?
- district initiative?
- What games do they wish to compete in?

Are there specific games they want to start with due to...

- minimum technology requirements?
- experienced players?

Where will the esports program and planning be housed?

Has the school appointed program overseers?

- Coach?
- Subject Matter Expert (SME)?
- Department Faculty Member?

In what department will the program reside?

- Club?
- Athletic Department?
- Academic Department?

What area(s) of the school campus will be designated for esports?

- Practice?
- Competition?
- Events?
- How does the school plan to handle associated costs?

Has the school...

- set aside/acquired funding?
- explored funding opportunities?

Responses to the previous questions will equip you with the information needed to establish an appropriate starting point.

Must Haves

- Games: The basis for determining the technology needed and the specifications of such according to the games' minimum system requirements.
- Network: No matter what, the network is the differentiator as it will ultimately hinder or enable the success of the player/team.

Giving Schools a Competitive Edge

Keeping technology on point is an important part of staying competitive, and laying the right technological foundation can be the key to building an esports program's momentum. Provide the right components to optimize the gaming experience or outfitting an esports facility.

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

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. InformationWeek reported, "In other words, gaming faces transformation comparable to enterprises migrating from on premise to the cloud—with a vocal audience that despises lag." On-premises solutions help esports venues keep tight controls of security to prevent cheating, interference with gameplay, and hacks that can affect thousands of users.

Gaming Devices

When building an esports arena or the personal setup for a competitive gamer, the cornerstone is the gaming console or computer that runs the operation. Gaming laptops provide portability needed for gamers on the go, while desktops offer enhanced capacity during competitions. The leagues that high school esports teams competes in will have guiding technology specs.

Before making initial investments, schools should get the basic specs provided by the leagues 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 schools to invest in technology that will meet their needs over time. Often, these include guidelines on processing power,







memory, hard drives, and graphics cards.

Ongoing support and services offer a host of complementary services to keep the 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 the 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 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. Avoid gaming headsets that consist of low-quality materials or have thin cables.
- **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 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 gamers will be sitting for long durations.

Networking Capabilities

The network is the differentiator that will ultimately hinder or enable the success of the player/team. 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, litter, 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.

According to the PCMag Gaming Quality index, anything over 1 or 2MBps download speed is going to be sufficient for most online gaming. 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 (defined as the average time it takes a network packet to travel from you, to a server, and back) 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.



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.

Develop custom solutions for educational institutions dedicated to esports game play and audience participation:

• Create Flexible, Multi-Purpose Spaces

For educational institutions just starting out, focus on developing flexible, multi-purpose areas. 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. Likewise, "arena" areas equipped with large screens for fans to cheer on esports teams can also serve as a conference or meeting room between games.



Modular, Mobile and Multifunction Furniture Solutions

Needs change over time and so 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, and the furniture is easily disassembled and transported to install at 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**

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

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. Explore built-in lockable storage and other security measures to make sure their 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. Explore options to avoid hotspots that can damage equipment and make users uncomfortable.

Noise Management

Controlling unwanted noise in open areas is an increasingly important design consideration. Implement solutions that help to control ambient noise.

Built-to-Last Furniture

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





Successful Esports Arena

Technology plays a critical role in both delivering the experience to fans and enabling players; from the ergonomic setups that prevent injuries and enable gamers to perform at their best, to the streaming platforms that distribute broadcasts.

A dedicated esports arena becomes its own mini entertainment district. General admission passes replace assigned seating, allowing fans to come and go as they please and roam the various spaces during events.

Unlike traditional concerts or sporting events, multiple spaces are leveraged to host various competitions at the same time. For example, the main event would be held in the primary arena area with both standing and seating areas, while the smaller social spaces work in concert together allowing fans to freely migrate to different gaming zones throughout the venue.

Concourse areas act as the connection point between fans' seats and food and drink options, becoming a crucial link to the gaming action and a hub where fans and friends can meet and socialize.





Resources to Help Schools Kick-Off **Their 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**
- Fund My Team
- Scholarships for Women
- Frey Scientific
- After School STEM
- HSEL go-to Grant Writer

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.

D&H Partnership with HSEL

With thousands of school districts across the nation seeking to be educated on how to embrace the esports opportunity, D&H has partnered with the High School Esports League (HSEL) to assist VARS in helping K12 schools get started.

- Provides the necessary content, education, programming, and gaming platform
- Makes it easier for schools to offer esports as a legitimate varsity level sport
- Gives educators access to a Gaming Concepts curriculum and STEM.org accredited programs
- Helps schools gain access to grant and funding opportunities to cover the cost of getting started
- Offers a fertile recruiting ground for esports scholarship opportunities in higher education

High School Esports League (HSEL)

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 League of Legends, 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 register for an account
- How to set up game connections
- **Enrolling in tournaments**
- Free Agent Teams
- Technical Help
- STEM.org Accredited Experiences
- Gaming Concepts School Curriculum
- Grant and Funding opportunities for HSEL Schools





National Association of Collegiate Esports (NACE)

NACE is a nonprofit organization, founded in July 2018. Their goals are straightforward. It aims to benefit its member institutions by "developing the structure and tools needed to advance collegiate esports in the varsity space." NACE is working with members to form standards for eligibility, graduation pathways, competitions, and scholarships. NACE is currently the only association of varsity esports programs at colleges and universities across the U.S.



Get the latest NACE news delivered right to your inbox by signing up for their newsletter

North America Scholastic Esports Federation (NASEF)

The NASEF is a league focused on esports at the high-school level (making it a recruiting source for up-and-coming college players). NASEF offers an SEL/STEM curriculum, mentorship for school coaches, and toolkits to create esports clubs, streaming workshops, and more—all at no cost for those who join.



NASEF Resources:

- Parents Guide to Esports
- Esports are for Everyone
- Resources for Parents and Guardians
- Benefits of joining NASEF

NASEF Club Resources:

- AnyKey For diversity, inclusion, and fairness in competitive gaming.
- CyberSmile An organization that works to stop cyberbullying.
- OnlineSOS Online SOS is a safe place where people can find tools, information and, above all, empowerment, in the face of online harassment.
- · Women of Esports Women of Esports (WoE) empowers women in the esports industry through our global community and mentorship program.
- Reddit /r/GirlGamers This is a community space for ladies to hang out, talk about gaming, and game together. Topics include women in geek culture and debrief about experiences that occur as a result of gender.
- ComboQueens Online community for women who play fighting games.



Get the latest NASEF news delivered right to your inbox by signing up for their newsletter.



TeSPA

TeSPA is a North American collegiate esports organization headquartered in Irvine, California. TeSPA is the world's largest operator of collegiate esports leagues, forging partnerships with ESPN, Twitch, and other platforms to create incredible broadcast and in-game experiences for students and audiences everywhere. TeSPA student leaders have established hundreds of TeSPA chapters across the United States and Canada, each serving as an open and inclusive hub for all types of gamers and games with a network of students, competitors, and club leaders making up 270+ chapters across North America and 120,000+ members and alumni.



Go to tespa.org to stay tuned to TeSPA Discord and Twitter channels for information on all Tespa membership, chapter, and competitive programs

College League of Legends (CLoL)

CLoL is a student-led network of League of Legends players on college campuses across the U.S. and Canada, dedicated to game play at the college and university level, sponsored by the game developer.





Connect with CLoL to learn how/why to play the game and other League news and events

Next College Student Athlete (NCSA)



NCSA is one of the largest college recruiting networks, helping with recruitment of high school Esport athletes. As the official recruiting services partner of NACE, athletes can build a free online profile to increase exposure across their vast network of college coaches.



Connect with NCSA to learn more about how students get recruited for college sports

National Association of Intercollegiate Athletics (NAIA)



NAIA is a governing body of small athletics programs that are dedicated to character-driven intercollegiate athletics. Since 1937, the NAIA has administered programs dedicated to championships in balance with the overall college educational experience. Each year more than 65,000 NAIA student-athletes have the opportunity to play college sports, earn over \$600 million in scholarships, and compete for a chance to participate in 26+ national championships.



Register for EsportsNext 2020 Conference, a B2B conference for the esports industry

Learn more about NAIA's Return on Athletics (ROA) approach to management of collegiate athletics

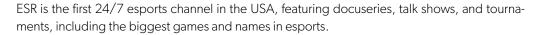


GPAC is a college athletic conference affiliated with the National Association of Intercollegiate Athletics (NAIA). Member institutions are located in Iowa, Nebraska, North Dakota, and South Dakota. The conference was founded in 1969 as the Nebraska Intercollegiate Athletic Conference (NIAC), later becoming the Nebraska-Iowa Athletic Conference (1992) before being renamed the Great Plains Athletic Conference (2000).



Sign up to get your own personalized timeline!

Esports Revolution (ESR)

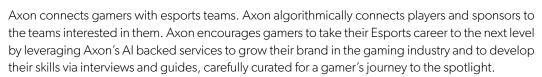






Discover what's new in the ESR world

Axon Gaming







Check out AXON Gaming's recent Blog posts

Additional Esports related resources:

System Requirements Lab

Since 2005, System Requirement Labs has tracked over 6,000 PC game requirements providing the answer to the most important question of "can I run a PC game" millions of times every month. System Requirements Labs offers "Instant Expert Analysis", a free-to-use feature that analyzes a user's computer to find out if it can run any popular PC Game.

• System Requirements

Evaluates PC hardware and system to determine if it meets game's minimum or recommended requirements, and makes update or upgrade recommendations for each component that does not meet the game's listed requirements.

Number of Games

Tests PC to see list of games it is able to run, based on both the games' minimum and recommended requirements.

- Comparison
- How does PC compare against the average user?
- **FAQs**



Find out now if your customers' computer can run popular PC games

Game System Requirements

Hungarian site Gepigeny.hu started at the end of 2007. In the beginning it functioned as a database of PC games' system requirements. However, owing to the hundreds of thousands of visitors, members, and active users, the site grew into a community site. Gamesystemrequirements.com, the English version of the Hungarian site, started in 2009. Later they set up a lite version, which now is available in 12 languages, and it can be found at systemanforderungen.com and systemregs.com. At present Gepigeny.hu and its localized versions have more than 200k members.



Join Game System Requirements social networks for News, Reviews, Forum and useful information from their Gamer Community

ProSettings.net

A resource for people who are interested in finding the best settings and gaming gear for competitive games. They research the monitors, mice, and other gaming peripherals of professional Esports players and analyze them.



Check out ProSettings.net

Blizzard Entertainment

Blizzard Entertainment® is a premier developer and publisher of entertainment software. After establishing the Blizzard Entertainment label in 1994, the company quickly became one of the most popular and well-respected makers of computer games. By focusing on creating well-designed, highly enjoyable entertainment experiences, Blizzard Entertainment has maintained an unparalleled reputation for quality since its inception.

Blizzard Entertainment is building excitement and awareness around esports competitions and events with their esports and broadcasting initiatives such as the Overwatch League and Major League Gaming, of which continue to expand, evolve, and reach new audiences.



Check out Blizzard Entertainment's Esports Resources to learn more about careers in Esports and for organizer, participants, and viewer guides

Valve

Valve makes games, Steam, and hardware. Valve's debut title, Half-Life, was released in 1998 and won more than 50 game of the year awards. Today, millions of people play Valve's games every day. Valve's platform connects players with the world's greatest entertainment. Valve created Steam in 2003 to serve as a digital content distribution channel, before app stores existed. Since then it's grown and evolved into a platform for thousands of creators and publishers to deliver content and establish direct relationships with their customers. The Steam Community enables millions of players to do likewise, sharing entertainment and ideas, and making friends. Valve also makes consumer electronic devices that improve gaming on the PC (things like the Steam Controller and the Steam Link). Valve invented the VR technologies that power the Vive, an interactive VR system brought to market in partnership with HTC. Just as in software development, Valve conducts playtests and share prototypes their partners and players, following the results of their work all the way through the manufacturing process to create products people are sure to enjoy.



Learn more about Valve's games, Steam and hardware

See what Steamworks has to offer Steam Partners looking to get the most out of distributing on Steam

Steam

Access to nearly 30,000 games from AAA to Indie and everything in-between. Being multilingual and with support and easy purchases, Steam brings new updates features, such as: Steam Chat, Game Hubs, Steam Broadcast, Steam Workshop, mobile access, and early access to games. The Steam community enables gamers to meet new people, join groups, form clans, chat in-game and more. Steam is also Steamworks, the set of tools and services that help game developers and publishers get the most out of distributing games on Steam.



Browse what's being played, upcoming, top selling, and new and trending PC games on STEAM

Adventory Resources & Articles

- High School Esports Guide Guide to navigating high school esports.
- Esports Jobs Due to the explosive growth of the business, esports jobs and a career in gaming is no longer just a dream job.
- Esports Arena Guide on how to find the best local esports arena for Players and their friends.
- Esports Bar As the industry grows, the modern esports bar is on track to become as popular as the traditional sports bar.
- League of Legends Coaching Guide Guide to coaching ambitious LoL players on how to improve their skills.
- League of Legends Meta Guide Keeping track of the LoL tier list is essential to master the LoL meta.
- · Twitch Overlap A well-crafted Twitch overlay is a huge part of marketing your professional brand and communicating current information with your audience.
- Twitch Alerts Twitch Alerts is one of the essential ways to improve your streaming broadcast. Streaming is now the most profitable channel for many content producers. With this booming market comes great competition and every advantage is crucial to break through the crowd.
- · Esports Jersey The ultimate guide to why teams need an esports jersey to get exposure and how to find the best brands.



Discover the world of esports through these Adventory Guides, resources and articles.

Edtech Resources & Articles

- Esports Can Increase STEM Equity in Higher Education
- 3 Factors to Consider in Developing Your College Esports Program
- Esports Programs Don't Need to Break the Budget to Thrive
- Here's What Happens Behind the Scenes at Esports Competitions
- New Partnership with ELEAGUE Is a Win for Esports
- What Do You Want Your Esports Program to Achieve?
- EDUCAUSE 2019: Diverse Campus Initiatives Depend on Advanced Wi-Fi Solutions
- Esports Coaches Share Lessons Learned on the Path to Building a New Program
- Lines Blur Between K-12 and College: What It Means for IT Leaders



Discover Edtech's robust selection of guides, resources and articles focused on K12 trends, opportunities, and other esports content.

Viewsonic Resources & Articles

- Is Esports a Sport
- Why Esports in Schools Is a Good Thing
- How to Start a High School Esports Team & Benefit Your School
- Glossary of Terms and Acronyms -
- ESPN list of varsity Esports programs in North America
- Connected Learning Alliance Enhance social skills, scholarships and more
- Boostcafe: Character Building with Esports
- DOT Esports: Ladies of League: How an all-female high school esports team is preparing for a historic season
- **Encouraging STEM Identities and Learning through Transformative Play**



Check out Viewsonic's information library to learn more about the exciting developments of esports in high schools

ASUS | Republic of Gamers Resources & Articles

With 13+ years of history of understanding the needs of gamers, the Republic of Gamers (ROG) engineered products offer the best hardware and fastest performance to players at any level.



Find out more, and view recommended bundles specifically chosen to empower gamers with gaming hardware.

Netgear Resources & Articles

Esports facilities are perfect for AV over IP systems with low latency, high resolution, and the ability to scale as needed. NETGEAR's switches are engineered for AV over IP and are being used to help grow the esports community.



Take a look at Netgear's Industry-leading efficient switch portfolio

Real World Success

Case Studies

Acer Predator: The Esports Edge

When esports gaming became popular worldwide, different levels of educational institutions started to promote inschool activities. As education is investing more and more on funding the esports club, promoting technology learning, encouraging girls participation, and building the pathway to college, Acer provides the solutions to help build the enviornment.



Learn more in Acer's "Snapshot Report" about how schools are converting video gaming online into learning

Lenovo Legion is the Exclusive PC and Monitor of the Apex Legends Global Series

More than 200 Lenovo Legion Gaming Devices to Power the Apex Legends Global Series Majors as Players Compete for more than US \$3 Million in Prize Money



Find out more about Lenovo Legion and the Apex Legends Global Series

How NETGEAR is Helping Harrisburg University's Winning Streak

The world of esports is growing exponentially with teams from around the world competing for surprisingly large prizes. Along with the growth in game play is the increase in the number of esports arenas providing a venue to bring gamers and their fans together to watch this explosive new sport live. These facilities are perfect for AV over IP systems with low latency, high resolution, and the ability to scale as needed. NETGEAR's M4300 and M4500 switches are engineered for AV over IP and are being used to help grow the esports community through New Era Technology's recent work on a dedicated esports facility for Harrisburg University.



Check out the case study detailing how NETGEAR was able to help New Era Technology with a tight deadline and provide the right AV over IP Switching solution for esports at the right price.

State Grants

High School Esports Program Awarded \$500,000 Grant from PA Department of Education

https://www.esportsfed.org/news/press-room/pa-smart-grant/

Feb 13, 2019 9:00 AM

PAsmart Advancing Computer Science & STEM Education Grant awarded to the Emerald Foundation will connect video gameplay and meaningful learning for PA students

LANCASTER, PA. (FEBRUARY 13, 2019) - Pennsylvania Secretary of Education Pedro Rivera announced today that the Emerald Foundation has been awarded nearly \$500,000 in a PAsmart Advancing Computer Science & STEM Grant for its "Supporting Diversity, Equity and Inclusion in Esports" program.

"Supporting Diversity, Equity and Inclusion in esports" will infuse STEM learning into a passion students currently embrace: video gameplay. The North America Scholastic Esports Federation (NASEF), founded by the Samueli Foundation and managed on the East Coast by the Emerald Foundation, was created to provide opportunities for ALL students to use esports as a platform to acquire critical communication, collaboration, and problem-solving skills needed to thrive in work and in life. This new program in Pennsylvania will bridge the gaps between the highest and lowest performing students through highly engaging instruction, ongoing opportunities for team collaboration, creative problem-solving, and competitive fair play.

This esports initiative, launched as a scholastic club, will target a minimum of 300 high school students in fifteen after-school programs in Lancaster and Lebanon counties. All clubs will have the opportunity to compete virtually with others across North America, as well as gain free access to educational toolkits, webinars, virtual coaches, and other support. The grant also provides funding for a traveling esports arena enabling schools to host regional competitions.

Supporting the esports game player is an ecosystem of positions critical to the success of the club, including theory crafters, analysts, event organizers, IT support, web developers, streamers, fandom art, shoutcasters and more. The Emerald Foundation is partnering with organizations like the Lancaster Chamber of Commerce and Industry to connect students through the continuum that extends from STEM / computer science interest to workforce development.

As the next phase in Governor Tom Wolf's PAsmart initiative, more than \$30 million in grants was secured to invest in education and workforce development. By expanding classroom instruction and professional development in the fast-growing fields of STEM and computer science, this funding will also provide opportunities for training with in-demand careers, emerging industries, and underserved populations.

"The Emerald Foundation is thrilled to be a recipient of this award," said Joseph E. Besecker, Founder and Chairman of the Emerald Foundation. "In partnership with the Samueli Foundation, we believe that the NASEF esports program is one of the most important initiatives of our time as it helps our students in a way that hasn't been done before. Video games are wildly popular with our youth, and this program gives them learning opportunities through their play while introducing them to relevant career options. Merging learning and socialization provides an important new bridge between students, parents and teachers."



Judd Pittman is Special Consultant to the Secretary of Education on STEM at Pennsylvania Department of Education. He said, "Esports are enticing to today's youth, and structured participation has great benefits. The NASEF program helps teens feel more connected to their school, drives better classroom performance, and teaches important skills for work and life. We are thrilled to support this work which leverages student interests for quality learning and job preparedness."

About the Emerald Foundation

Founded in 1991, Emerald Asset Management subsidiaries provide equity-focused portfolio management services to institutional investors and to individual investors via separate account management and the Emerald Mutual Funds. The Emerald Foundation is an independent 501(c)(3) non-profit organization established in 2010 by Emerald Asset Management CEO & Founder Joseph Besecker and Martha Besecker. The Emerald Foundation has historically contributed funding to worthy charitable, non-profit organizations that focus on education, youth, and healthcare research. Learn more at https://emeralde.org/.

About the North America Scholastic Esports Federation

The North America Scholastic Esports Federation is working to ensure that ALL students possess the knowledge and skills needed to be society's game changers: educated, productive, and empathetic individuals. NASEF is on a mission to provide opportunities for ALL students to use esports as a platform to acquire critical communication, collaboration, and problem-solving skills needed to thrive in work and in life. The Federation's core values are intertwined through all aspects of education and play: learning, opportunity, community, diversity, and respect.

Under the Samueli Foundation's leadership, the Federation is led by partners from the Orange County Department of Education, OC STEM Initiative, Connected Camps, Connected Learning Lab, UCI Esports, UCI Henry Samueli School of Engineering, and the UCI Bren School of Information & Computer Science.

Learn more at http://www.Esportsfed.org. Members of the press can find videos, infographics, and leadership profiles in the online press room. Join online conversations on Twitter @NASEFedu, on Facebook and Instagram, and see matches streamed live on our Twitch channel.

Learn the Lingo

ESRB Rating Guide



Early childhood, intended for young children



Everyone, for all ages



Everyone 10+, for ages 10 and up



Mature, for ages 17 and up



Adults Only, for ages 18 and up



Rating Pending, not yet assigned a final rating



Teen, for ages 13 and up

Genres

3PS / TPS / OTS	Third-Person Shooter / Over the Shoulder. These games include titles like Gears of War, The Division, Mass Effect, and more.
4X	"eXplore, eXpand, eXploit, and eXterminate" games are a very popular subgenre of strategy games. Think the Civilization series.
CCG	Collectible Card Game. Most popular one out there right now? Hearthstone.
FPS	First Person Shooter. With such a large audience, you should know what these are by now: Battlefield, Call of Duty, Halo, CounterStrike, etc.
ммо	Massively Multiplayer Online. This is more of a general term regarding online games intended for a large player base. It can cover a variety of genres, such as FPS, RPG, and more. The most well-known, World of Warcraft, is an MMORPG (see below).
МОВА	Multiplayer Online Battle Arena. A recent genre that has gained serious momentum and involves controlling a single hero/champion in a team-based game that looks a bit like an RTS. Top contenders (with large esports prize pools, too!) include League of Legends and Dota 2.
RPG	Role-Playing Game. Put on your robe and wizard hat and go on an adventure. Or don your armor and sharpen your swords. Skyrim, The Witcher 3, Fallout 4, etc. (You know, those games that take way too long to finish.)
RTS	Real-Time Strategy. A strategy game that plays out without pausing, usually tasking you to build structures and armies to take out opponents before they can do the same.
SIM	Simulation. Includes everything from Farming Simulator and Flight Simulator to Job Simulator in VR.

In-Game Terms

1-Up	Everyone should know this. Ever since Mario, the 1-Up stands for an extra life.	
Adds	"Additional Monsters." When fighting a boss monster, it will sometimes summon additional things for you to fight.	
Aggro	"Aggravated" or "Aggravation." When you have aggro, that means the monster is focused only on hitting you and no other players.	
AoE	"Area of Effect." Refers to spells and abilities that work within a certain area rather than just against a single foe. Usually these are shown as green circles (while casting) and red circles when they inflict damage. Long story short: if you're standing in a red circle and your health is going down, you're doing it wrong.	
ВоА	"Bind on Account." Usually found in MMOs, BoA items are things that once are picked up, cannot be transferred to another player; however, they can be moved or used on another character from the same account.	
ВоЕ	"Bind on Equip." Whereas BoA allows items to be shared among characters, BoE means the item is bound to one specific character once it's been equipped and cannot be transferred.	
Buff / Debuff	Beneficial / harmful effect on target. These are caused by spells, potions, and the like. Buffs and Debuffs can last for seconds, minutes, or even indefinitely, depending on the game and effect.	
Camp	To stay in one spot. Commonly used in FPS when players hide around a corner or hallway to get the surprise drop on others.	
CB / OB	"Closed / Open Beta." Terms used to refer to games that are still under development and are running tests before its final release. Closed means private or invite-only, and open means available to the public.	
CD	"Cooldown." Some abilities and items have cooldowns. After using it, you'll have to wait a set time before you can use it again.	
DPS	"Damage Per Second." A measurement of damage done by a weapon or spell. "DPS" is also used—not as an acronym—to refer to certain, damage-focused classes in MMOs, such as rogues, mages, and hunters.	
Dungeon	A separate, closed-off area with its own bosses and monsters. Dungeons often have their own name, such as World of Warcraft's "Ragefire Chasm."	
EXP / XP	"Experience Points." The more points you have, the closer you are to reaching your next level. These can be used to measure character levels, faction reputations levels, skill levels, and more.	
FoV	"Field of View." The area of the world around you that is being displayed at once. A higher FoV means you'll have more peripheral vision, but can result in distortion effects when set too high.	
Grind	To do something repetitively. You can grind quests, monsters, and even crafting. (e.g. leveling up leatherworking is going to take a lot of grinding.)	
НР	"Health / Hit Points." The measurement of how much damage you can take. Lose too much and you'll end up dying.	
HUD / UI	"Heads-Up Display" / "User Interface." These are the things on the screen that display your character's status: health, mana, equipped items, position in a race, and so on.	
KDR / KR	"Kill-to-Death Ratio." On average, how many enemies you take out before being taken out yourself. A lot of players are obsessed with their KDR, as if it portrays how good they are. It may be relevant, but they can focus on this to the detriment of a team by forgetting about the game's objective.	

Lag	A technical problem that delays the game's reaction to your input. If you pressed left-click to shoot and your character does it two seconds later, take a break from gaming until the problem has been fixed. Sticking with it will only lead to frustration.	
Loot	Items and drops. Loot can be found in defeated monsters, chests, and boss monsters. Usually harder monsters and bosses drop better loot.	
Mod	Modification. Some games, such as Skyrim, support mods. Mods can range from a variety of content from bug fixes to new items to entirely new quest lines and game types.	
MP	MP "Mana / Magic Points." MP measures how much resource or casting ability you have. Spells will cost a certa amount per cast, and once you run out, you'll have to replenish your meter before you can cast again.	
NPC	"Non-Player Character." Characters that aren't controlled by another living person. They can be quest givers, shop keepers, or just a random person sitting in town. They don't always have to serve a narrative function.	
Ping	Time in milliseconds for information to travel to the server and back. Lower ping is better. When people have high ping, commands and overall gameplay can be delayed, causing lag and leading to an unpleasant experience.	
PvE	"Player vs Environment." A game type that focuses on fighting monsters or other non-player enemies. Games are usually either PvE-focused, PvP-focused (see below), or a mix of both.	
PvP	"Player vs Player." Fighting against other live players, whether it's done in arenas, battlegrounds, or even in the open world. Online FPS are usually PvP in nature.	
QTE	"Quick-Time Event." Simon Says in video game form. To give the appearance of interaction, games will occasionally require a certain series of button presses to make a cool or important onscreen thing happen (e.g. make a character avoid falling boulders or stop them from tumbling down a cliff).	
Raid	A large-scale dungeon with multiple players. Whereas dungeons can be done solo or with a small group, raids usually consist of more than ten players fighting through a dungeon to get loot. Some old World of Warcraft raids took as many as 40 players working together to complete.	
Roll	Randomly generated number from within set bounds defining a certain value or attribute, such as damage or power.	
Skin	An aesthetic change to an item or player. Generally, this doesn't serve any other function other than to make your character look better (or worse). Games like CounterStrike offer skins in loot boxes, which can be sold for IRL (in-real-life) money.	
Tag	A player's online handle, or the act of aggro-ing a mob. Players tag multiple monsters and use AoE abilities on them to save time.	

Chat Terms

Cheese	An underhanded strategy. Can also be used as a verb.	He's cheesing his way to victory.
DC	"Disconnect." Often, players will disconnect and reconnect. Sometimes, it's not their fault.	Sorry about that, I dced.
EZ	"Easy." A term that's used derogatorily, denoting that a player had an easy time this match because their opposition was barely any competition.	GG ez.
Feeder / Feeding / Fed	Someone who dies to the other team repeatedly, either intentionally or not. A player who benefitted from the feeder is referred to as "fed."	- That Lucian is so fed. - Why is our Vayne such a feeder?
FF	"Friendly Fire" or "Forfeit." If your teammate shoots you and you take damage, that's Friendly Fire. When it gets bad, your teammates may drop the FF (forfeit), so they can end the game.	- Hey! Watch the FF. - Guys there's no way we can win. Let's ff.
FTW	"For the Win." Normally used at the end of a comment after something happens such as killing an opponent before they kill you.	Lol deagle FTW.
Griefer	A person who harasses or provokes other players on purpose to ruin their fun. (Don't be a griefer.)	Can you ban this griefer? He keeps setting my house on fire.
GG / BG	"Good Game" / "Bad Game." Usually written at the end of a game. People who show good sportsmanship usually write GG. Salty players will blame others and write BG.	GG all.
GG no re	"Good Game, no remake / replay." When you have a good game and you're not going to play another round with the same people again.	GG no re.
Hacks / Hackz / Hax	Cheating. If someone's landing headshots left and right, he's either very good or hacking. This can also refer to cheating software itself.	That guy killed me through a wall. Hax!
HF	"Have Fun." Friendly term usually written at the start of a match.	GI hf everyone.
IGN	"In-Game Name." The part of self-identification that's equally hard as designing your character's appearances and is frequently taken, so you need to add numbers to the end of it, making it look dumb.	Let's play WoW. What's your ign?
INC	"Incoming." Used as a warning for incoming monsters or players like "heads-up!"	Hey, adds inc.
LEET / 1337	Short for "elite" and is also an alternative alphabet using symbols (leetspeak). Can be used as an adjective.	This gun is leet.
LFG / LFM / LFP	"Looking for Group / More / Party." Commonly found in online multiplayer games when players are trying to run a dungeon or raid. Sometimes LFM includes a number denoting how many players are needed.	- LFG Deadmines. - LF3M Scarlet Monastery.
Noob / n00b / newb	A player who is new at a game. Sometimes used to describe players who are performing poorly, regardless of their experience level.	Stop being such a noob and get out of the fire.



ОНКО	"One-Hit Knock-Out." A term often used in fighting games, which refers to a single attack that entirely depletes an opponent's health.	If you can perfect it, Jigglypuff's pound is OP. OHKO city.
OOM / OOR	"Out of Mana / Resource." When your mana or primary resource is depleted so you can't cast abilities. Much faster to type during intense boss fights.	Wait up, I'm oom.
OP / Imba	"Over Powered" / "Imbalanced." Used to refer to items or characters that are too strong compared to other things in the game.	Miss Fortune is OP atm.
OTW	"On the Way." Save some time typing with these three letters.	OTW, wait for me.
PK	"Player Kill." To kill another character controlled by a player. Used as a verb.	Let's go PK some noobs.
PUG	"Pick-Up Group." A group composed of random strangers looking to complete the same objective, such as a dungeon.	PUGs are so frustrating. No one knows how to play!
QQ	How you type the crying emoji without emojis. The circular part of the Q resembles eyes and the dash, tears.	Stop QQing and git gud (get good).
Rekt / Owned / Pwned	"Wrecked." Players usually drop this one after a one-sided match. It can also be used when you outplay another player.	Ya'll just got rekt.
Rez	"Resurrect." Request a rez if the healer doesn't realize that someone has died.	Hey rez plz?
Salty	"Upset" or "bitter." Dying too much or having someone complain the whole game can make you salty. Don't let your saltiness evolve into toxic behavior.	You salty bruh?
Smurf	An experienced player who makes a new character or account to play against lower-leveled players.	Why're you smurfing in Bronze?
Toxic	Used to describe a person's attitude and behavior. When a player starts complaining and cursing at others, he or she is being toxic.	Keep being toxic and you'll get banned.
WTB / WTT / WTS	"Wants to Buy / Trade / Sell." In trade chat, users will use these to denote their intentions followed by an item or service.	[WTB] 10 x Gold Ingots. [WTT] Potato for Tomato.
Xpac	"Expansion Pack." A substantial package of new content for a game that wasn't part of the initial release and usually costs money. As of 2017, World of Warcraft has released seven expansion packs.	Are you picking up the new xpac?

Miscellaneous Terms

Triple-A (AAA)	Games that have a big budget, a lot of backing, and generally get a lot of praise from fans and critics. Your CoDs Battlefields, and such.	
Bug	Coding error with unintended results. Can be good or bad. Some bugs let you duplicate items, while others can break the game.	
DLC	"Downloadable Content." Ranges from small updates like a few new weapons to a full-blown campaign. Sometimes sold in groups as "Season Passes," which are purchased in expectation of future content rather than after all of it is available.	
DRM	"Digital Rights Management." When a game has some form of DRM, that means there is software built into it that is intended to protect it from pirates.	
Easter Egg	Hidden feature within the game left by a developer that usually takes effort to find. (E.g. <i>Diablo II</i> 's Secret Cow Level.)	
F2P	"Free to Play." Refers to games that are free to play and make money off ads, micro-transactions, or other means.	
LAN	"Local Area Network." Your home network. Some games will have the option for LAN play, so you can play with whoever's connected to your home network.	
P2P	"Pay to Play." Games that you need to purchase to play. Can also include micro-transactions.	
P2W	"Pay to Win." Games with micro-transactions that give buyers an upper hand over regular players. (e.g. the ability to buy stronger weapons, additional stat points, etc.)	
VolP	"Voice over IP." A program that lets you chat with others online. Some games have VOIP built-in. Players may also opt to use alternatives, like Discord, Ventrillo, Mumble, TeamSpeak, etc.	



Top Esports Games:

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



- 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

- 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

- 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

- 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

WINDOWS

Can You Run It

Required PC Specifications



<u>Minimum</u>

- 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

Recommended

- 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

WINDOWS

Mobile (Hearthstone App)

Can You Run It

Required PC Specifications



Minimum

- 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

Recommended

- 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

NBA 2K20

HSEL Supported Platforms

- PS4
- XB1

Can You Run It

Required PC Specifications



Minimum

- 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

Recommended

- 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

Madden 20

HSEL Supported Platforms

- PS4
- XB1

WINDOWS

Can You Run It

Required PC Specifications



Minimum

- 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

Recommended

- 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

FIFA 20

HSEL Supported Platforms

- PS4
- XB1

Can You Run It

Required PC Specifications



Minimum

- 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

Recommended

- 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

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
TINOX	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

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- ESPN List of varsity esports programs spans North America
- Anatomy of an Esports Arena
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