Old Bridge Public Schools: STEAM Locations K-12

Progress towards goals

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Transform antiquated library spaces in each building to technologically advanced 21st century locations for students and staff

Physical locations that are sustainable and provide equitable access for all students to STEAM-based educational opportunities

Spaces that allow for growth in curriculum opportunities through most subject areas to align with current and future career paths for students

Library Transformations

Elementary Makerspaces

- Initiative started in 2019 and built on each year

  Funded by Title IV and donations from Dupont

  - *Schools with completed makerspaces:*

  - *Cooper, Madison Park, Miller, Shepard*

  - *Schools with makerspaces in progress:*

  - *Southwood, Schirra*

  - *Schools with makerspace plans for completion this summer:*

  - *Carpenter, Grissom, McDivitt, Memorial, Voorhees*

Resources and Materials

Green Screens

White Board tables

Little Bits Steam Sets
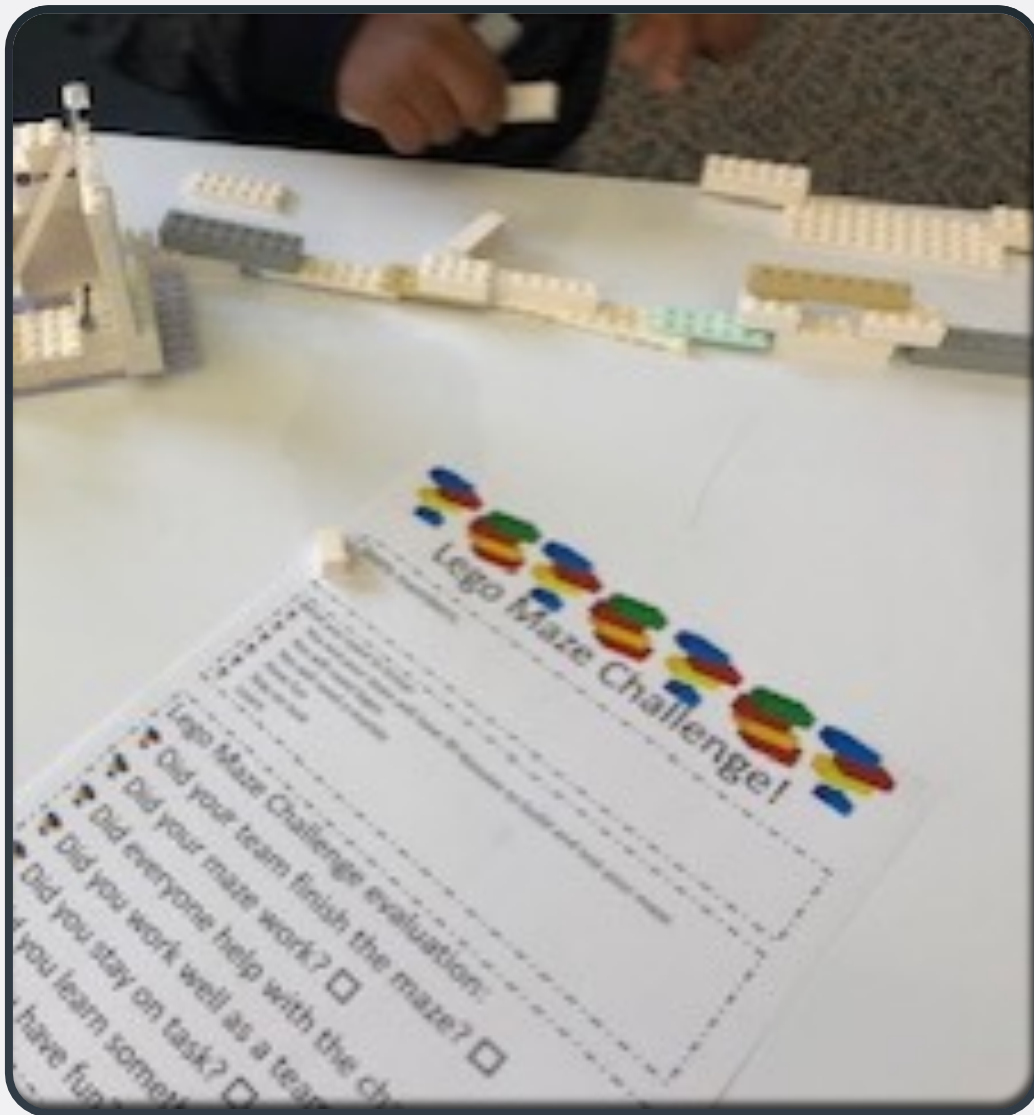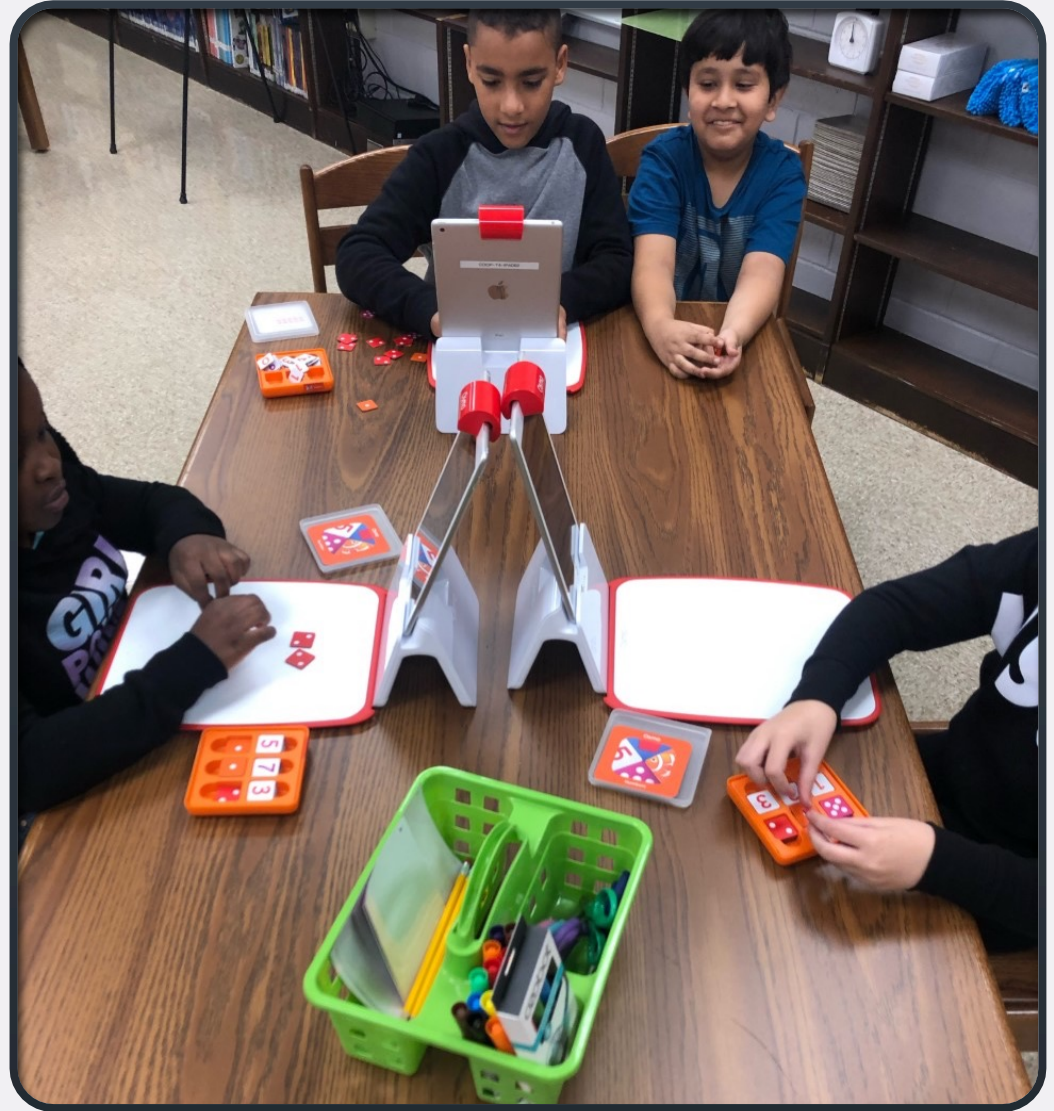
iPads and Kindles

OSMO Bots
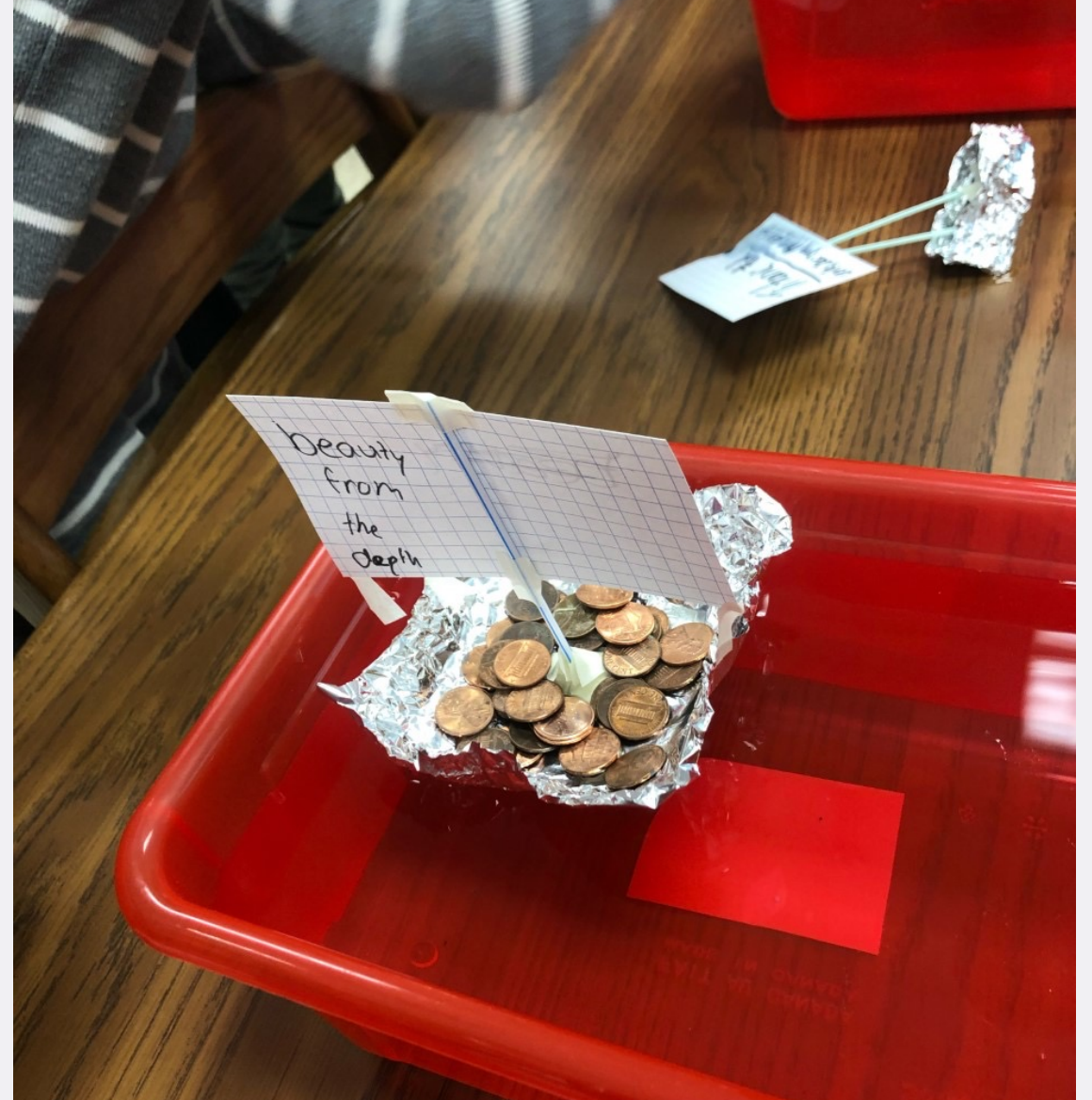
KEVA Planks

LEGO WeDo
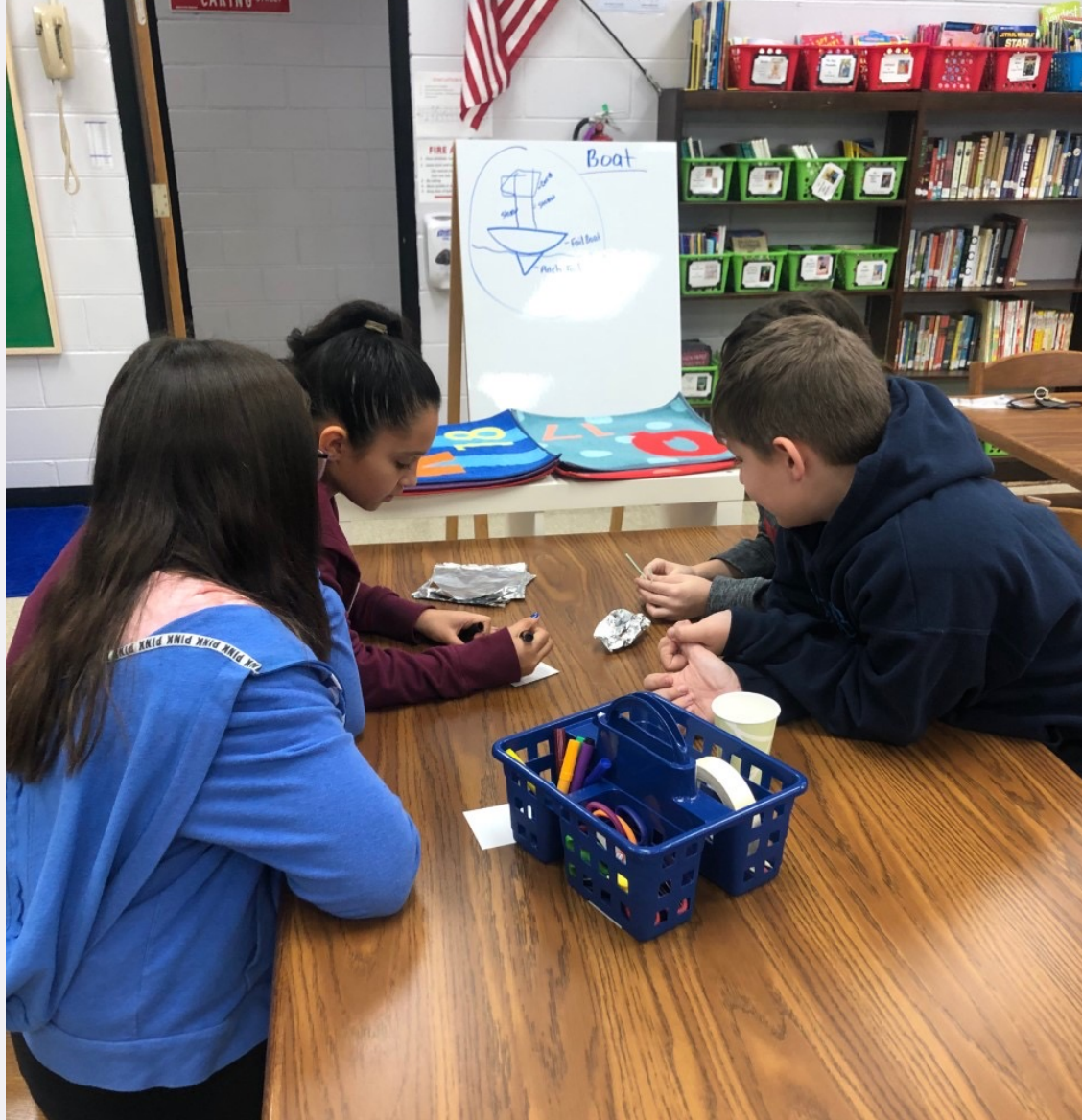
Maintenance of Books

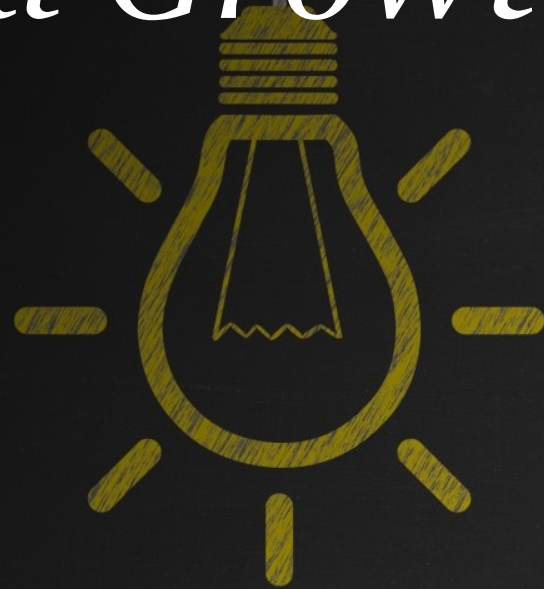Staffing- rebranding computer/technology teachers

Secondary Spaces: Student and Staff Personal Growth Labs

Locations and Spaces

- **Jonas Salk Middle School**
- **Carl Sandburg Middle School**
- **Old Bridge High School (GNC and Main)**

- **SEL/Collaboration/Professional Growth and Student Learning Space**
- **STEM/Coding**
- **E-Sports**
- **Virtual Reality**

01
Utilize the ESSER III funds for a sustainable initiative that meets the grant requirements.

02
Build upon the makerspace STEAM initiative from the elementary level to ensure continuity for students as they progress through grade levels.

03
Enhance the initiative at the secondary level to include curriculum changes that open students to additional college and career pathways.

04
Allow for multi-use spaces to enhance staff professional development, student leadership experiences and building on the school-community partnerships through parent university.

District goals

Budget: ESSER III Grant

Grant Requirements

Staff professional learning and development

Community engagement

Equitable access to opportunities for students

*Well-rounded educational opportunities
Prepare students for life beyond graduation.*

Engage ALL students with diverse needs and interests.

Student leadership development.

Item Detail Summary (estimated)

- 30 computer upgrades for lab space

- Flexible seating

- Interactive Promethean boards

- E-sports

- VR Technology

ESSER III Grants

ARP-ESSER III

Accelerated Learning Coaching and Educator Support Grant

Evidence-Based Summer Learning and Enrichment

Evidence-Based Comprehensive Beyond the School Day Activities Grant

NJTSS Mental Health Support Staffing Grant

What types of supports do educators need to engage in **culturally responsive teaching practices**?

How can community resources be leveraged as supports that promote a **well-rounded education?**

In what ways have **student pathways to graduation been reimagined to best prepare all students for life beyond high school**?

What processes have been put in place to review the curriculum thoroughly to ensure it is standards-based, vertically aligned K–12 , **and engaging for students with diverse needs and interests?**

What type of **professional learning experiences** are needed for instructors to increase the depth of learning for all students?

What opportunities are there for **cross-content level conversations to develop interdisciplinary learning experiences?**

What scaffolds and varying degrees of support are needed to ensure all students can benefit from **deep learning experiences that lead to mastery?**

What **opportunities are there for educators to engage in collaborative conversations** regarding effective formative practices, assessment and data literacy, scaffolding and small group instruction?

ESSER III: Learning Acceleration Guiding Questions

SEL/Collaboration/Presenter Area

Student, Parent and Staff Activities

- Social connectedness with peers and staff
- Project-based learning
- SEL/Wellness meeting places
- Students have choice in their learning environment
- Encourages community and communication
- Provides comfort
- Staff PD site with ideal seating, sound and visuals
- Parent University Site

Photos Sample: OB EMGNC

Photos Sample: OB EMGNC

Photos Sample: Marlboro

Photos Sample: Marlboro

Why Esports? Research and Benefits

E-Sports as an extracurricular activity offers a positive impact on students overall:

- Increases in GPA

- Increases in attendance

- Less engagement in negative behaviors

- STEM opportunities: coding, technology proficiency, application of data and strategic problem-solving and scientific process

- Aspirations for higher education and college pathways (many colleges report that student who participate in e-sports often major in STEM options)

- Offers opportunities for SEL: managing emotions, communication and collaboration

- Student motivation and commitment to school increases

(eSports in K-12 and Post-Secondary Schools, G. Rothwell & M. Schaffer, 2019; The Rise of High School Esports: A Landscape Analysis of US Programs. JG Reitman, A Cho, C Steinkuehler. Academic Press, 2018.)

Growth of Esports in Schools

High School Leagues in US

- HESL partner high schools by year:

    -2019: 1500

    -2021: 2100

- E-Sports has become a multi-billion dollar industry and is expected to grow

- NJ/Middlesex county growth

- GSES: non-profit league (167 NJ districts)

    -Support from NJ Dept. of Education and the New Jersey School Boards Association

    -Has doubled in size every 6 months since inception

In 2021, the League of Legends world championship finals drew 178 million viewers in comparison 2022 Super Bowl drew 101 million viewers

(eSports in K-12 and Post-Secondary Schools, G. Rothwell & M. Schaffer, 2019; The Rise of High School Esports: A Landscape Analysis of US Programs.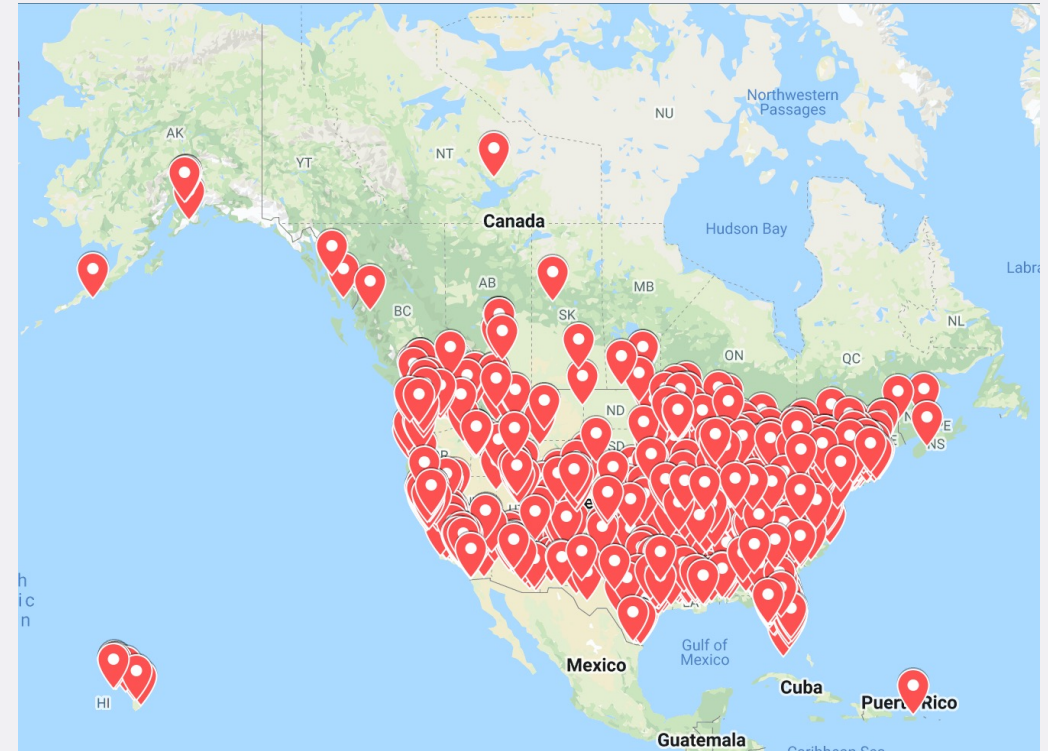 JG Reitman, A Cho, C Steinkuehler. Academic Press, 2018.) https://connectedlearning.uci.edu/wp-content/uploads/2020/02/A-Landscape-Analysis-of-High-School-Esports-in-the-United-States.pdf

Promotes Inclusivity

- To redefine athletic culture, esports allows children of all races and genders to compete in a space where those aspects of their identity are not as prominent or important to their overall performance.
- Students with disabilities (learning or physical), students who are not athletic in the traditional way, are able to participate and excel

  Electronic Gaming Federation (national governing body) partnership with Special Olympics NJ: EGFH Unified
- E-Sports offer students who often feel marginalized an activity to be included
- A 2017 survey, found that 70 percent of kids in the U.S. <u>stop playing traditional sports</u> by the age of 13, e-sports offers another competitive option.
- Diversified opportunities for participation (much more than other team sports and applicable to careers)
- *Gaming Concepts* (an HSEL turn-key curriculum) found that 82% of students who participated in *Gaming Concepts* as an after-school activity stated it was the first time they had participated in any extracurricular activity

(eSports in K-12 and Post-Secondary Schools, G. Rothwell & M. Schaffer, 2019; The Rise of High School Esports: A Landscape Analysis of US Programs. JG Reitman, A Cho, C Steinkuehler. Academic Press, 2018.)

College Pipeline and Opportunities

Colleges Offering Scholarships:

- Nearly 200 US colleges collectively offer around <u>$15 million a year</u> in esports scholarships.

- In 2023, there will be an estimated $100 million in scholarship money available related to esports.

- Varsity Letters

Opportunities for Students
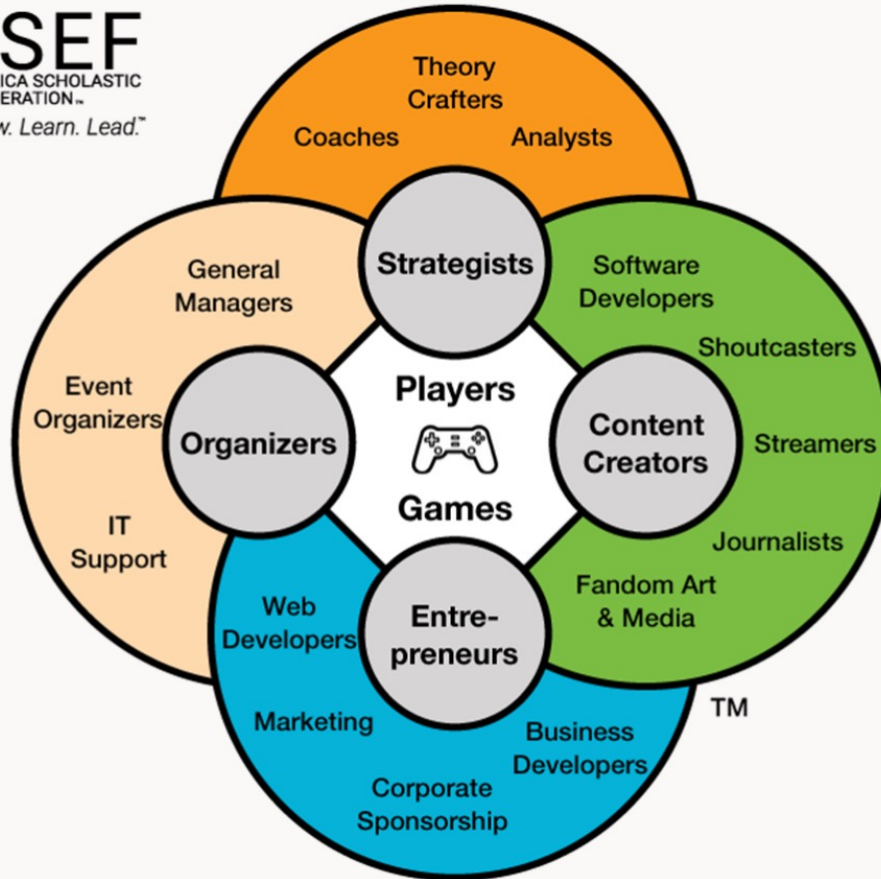
Diagram Citation: Anderson, Tsaasan, Reitman, Lee, Wu, Steele, Turner & Steinkuehler (2018)

Other roles that students can play in e-sports:

- *Leadership and "behind the scenes" roles*

- *Event organizers*

- *Graphic artists*

- *IT specialists*

- *Social media managers*

- *Statisticians*

- *Webmasters*

- *Technical managers who maintain equipment and set it up and break it down*

- *Podcasters*

- *Media producers*

- *Writers (to write up recaps of games)*

ESPORTS RELATED PROFESSIONS

PERFORMANCE OPTIMISATION
- PERFORMANCE MANAGEMENT
  - Head of Esports
  - Executive Officer
  - Media Trainer
  - Head of Scouting
  - Data & API Collector
  - (Team) Manager
  - (Video) Analyst
  - Head Coach
  - Career Manager
- HEALTH MANAGEMENT
  - Physical Trainer
  - Physical Therapist
  - Sport Medicine Physician
  - Sports Director
  - Performance Psychologist
  - Wellness and Mental Coach
  - Nutritionist or Dietitian

ENTERTAINMENT
- Desk Analyst
- Video Maker
- Host on Stage
- Streamer
- Caster
- High Level Player

EDUCATION
- Teacher
- Researcher
- Instructor
- Association Manager

MEDIA
- Journalist
- Photographer
- Editorial Manager
- Editorial Assistant

EVENTS ORGANISATION
- BROADCAST
- Event Project Leader
- Executive Producer
- Observer
- Event Director
- Administrator or Referee
- Runner
- Translator

BROADCAST
- Broadcast Distribution
- TV Manager
- TV/Live Producer
- Broadcast Manager
- Content Analyst
- Stage Manager
- Security Engineer
- Replay Operator
- Video Producer
- Set Assistant
- Stream Director
- Live GFX
- Stream/VOD Monitoring
- Cameraman

INFORMATION & TECHNOLOGY
- Network Architect
- Network Technician
- Technical Producer
- Network Engineer
- Light Engineer
- Sound Engineer
- Director
- Software Architect
- Balancing Manager
- Software Engineer
- Data Engineer
- GAME SUPPORT & DEVELOPMENT

COMMUNICATION
- Press Officer
- PR Officer
- Internal Communication
- External Communication
- Communication Corporate
- Content Editor

ADMINISTRATION
- LEGAL
  - Legal Manager
  - Lawyer Attorney
  - Legal Counsel
- FINANCIAL
  - Financial Manager
  - Budgeting Manager
  - Financial Analyst
  - Accountant Treasurer
- HUMAN RESOURCES
  - HR Manager
  - Recruitment Officer
  - Training Manager
  - Mobility Manager
- COMMERCIAL
  - Business Developer
  - Head of Reception Areas
  - Rights Purchaser
  - Rights Reseller

SERVICES
- Apparel Provider
- Facilities Provider
- Hardware Supplier
- Software Supplier
- Insurance Provider

BUSINESS

SALES MARKETING
- Head of Product
- Head of Advertising
- Trade Marketing
- Trade Merchandising
- Head of Licensing
- Head of Sponsoring
- Head of Sales Marketing
- Head of Partnership
- Head of Localisation
- Brand Manager

DIGITAL
- Social Media Optimiser
- Community Manager
- Traffic Manager
- Web Marketer
- Web Designer
- Web Developer
- Mobile Developer
- Artistic Director
- 3D Graphic Designer
- Graphic Designer
- Creative Strategist
- Post Editor
- Video Editor

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Curriculum and Clubs: HS and MS

High School Options	Middle School
- Video Production - Multi-Media Production - Esports - Coding - Broadcasting - Journalism - Marketing - Game processing - Creative design - GSES: The Career Oriented Disciplines in Esports Curriculum (CODEC). What makes this curriculum unique is that students will perform the jobs on their scholastic esports team in the same capacity that a professional working for an esports team would.	- Coding/computer science - Broadcasting - Journalism - Marketing - Game processing - GSES: The Esports Personal and Performance Improvement Curriculum (EPPIC) is designed to enhance the social and emotional development of esports athletes through the incorporation of Social Emotional Learning (SEL) best practices, sports psychology, and wellness into their esports practice regimen.

E-Sports Gaming/Club Sport

- Potential E-Sports Games

    High School

    Chess

    Overwatch

    Valorant

    Mario Cart

    Middle School

    Chess

    Rocket League

    League of Legends

    Fortnite

    All games are rated for age ranges

Rocket League: Middle School

Rocket League is a vehicular soccer game developed by **Psyonix**, which was later acquired by **Epic Games**. It combines two popular video game genres, sports, and driving. Players control vehicles that look like RC cars and try to shoot the ball into their opponent's goals by running into it and jumping. **Rocket League** offers a very fun and casual experience for gamers looking for quick and fast-paced sessions. The vehicles you control in the game are fully customizable and **Rocket League** also features many collaboration items with other intellectual properties. These cosmetics are obtained by leveling up, opening crates, participating in events, and buying the **Battle Pass** for a season. Keep in mind that the in- game purchases and items in **Rocket League** only affect appearance and do not give you a gameplay advantage over other players.

SPORTS CONTENT HITTING ROCKET LE

Sample Code of Conduct and Ethical Rules

- **Expectations for players:**

  Maintain specific attendance requirements to participate in esports.

  Maintain specific grade requirements to participate in esports.

  Acceptance of all, encourage others, show empathy and respect others.

  Expectations for self-care- adequate sleep, proper nutrition

- **Esports competitors should not**: Express ourselves in an offensive manner about other players or their actions in the game, regardless of whether they are opponents or team-mates. Use language, nicknames or other expressions that insult another player's gender, gender identity, origin, physical ability, sexual orientation, religion or age. Use language or actions that refer to sexual violence or other violence. Act in a threatening or violent manner. Cheat.

- **Consequences when a player has broken the rules**: A warning (after two warnings, the next penalty on the scale is imposed) Immediate forfeit of the round / map Immediate forfeit of the game, Expulsion from the tournament and possible suspension from other esport events. Suspension from esport events.

Student Testimonials from surrounding districts:

- **What has being part of the esports program meant to you?**

  - *To me it means being apart of something important around friends. I love how everyone is so kind to each other this community it's amazing and that's what the esports program means to me*

  - *Video games have always been my favorite thing. <u>Being able to join a school team is amazing.</u> I've learned so many amazing tricks and tips that helped me improve in gaming. Everyone is so nice and talented. Also, my team and me won a championship which is an amazing experience. <u>This has given me more confidence to join more teams.</u>*

  - *I love esports, and joining this club was the best thing I ever did. Being one of the 3 girls on the team, I encourage other girls to join because it's fun to do, and once you get used to it, the boys are ok.*

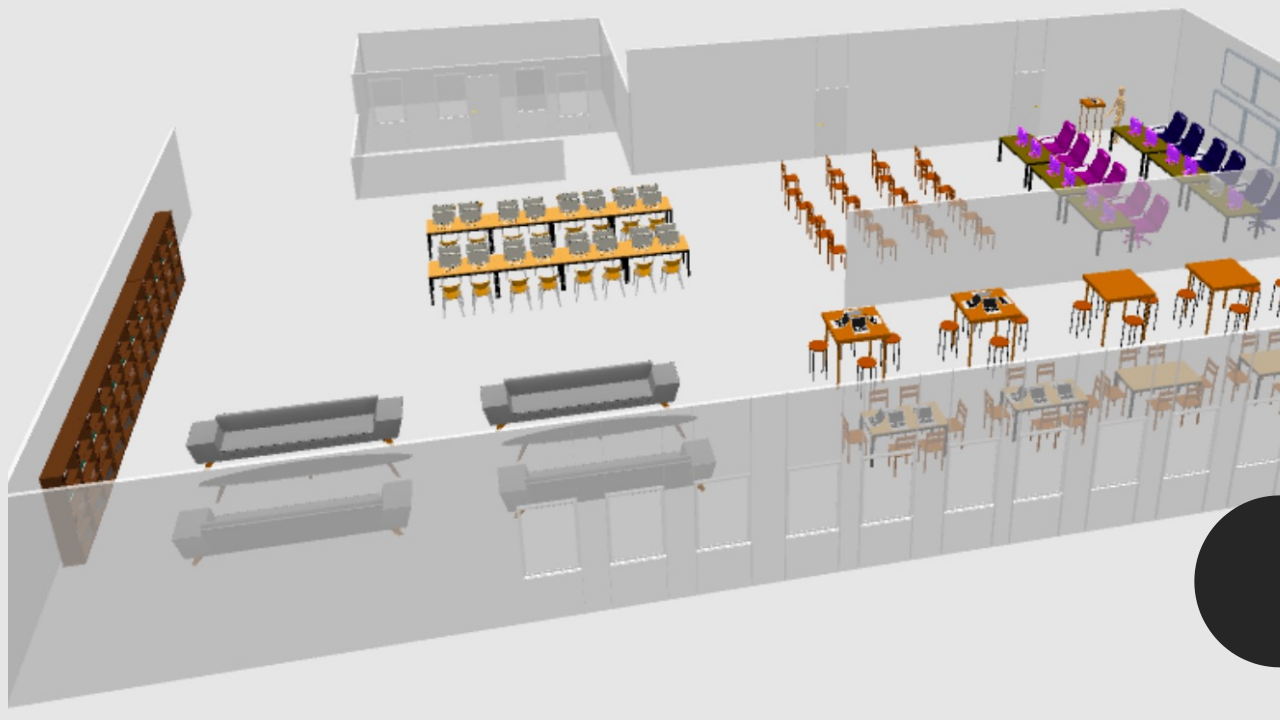*Sample Photos: Long Branch*

Photo Sample: Monmouth Beach

Photos Sample: Union

Space Options/Plans OBHS

Space Options/Plans: Salk & Sandburg

Other considerations:

Yearly subscriptions

ADA compliant

- Accessibility

- Noise and social sensitivities to be considered

Virtual Reality

Examples: Student and Staff Activities

Distant Learning:

Career exploration (vocational); professional experiences (trainings, attending business meetings)

- Language Emersion: Conversations
- Students with Disabilities: VR has been shown to increase motivation, facilitate social interaction, develop cognitive skills, improve short-term memory, and make lessons more enjoyable.

SEL:

Building empathy by experiencing situations (WWI, visiting another country)

- Experience learning:

Space exploration, medical science, natural disasters, visit historical events, school trips to famous sites around the world

Public Speaking Practice:

Virtual Audience

3-Year Plan

2022:

- Physical building of spaces.

2022-2023:

- Implementation of clubs for students including esports.
- Access to spaces during the school day for STEAM educational opportunities.
- Access to spaces for staff PD and parent university.

2023-2024:

- Implementation of HS courses
- Entering e-sports leagues

Questions?