
MATTER Innovation Hub

Collaborative & Creative Experience Anywhere



MATTER. NGO, Jamf, and Modular Life Solution

MATTER Innovation Hub

The MATTER Innovation HUB (MIH) is a 21st century classroom designed within a shipping container, retrofitted with solar power and ready to be deployed anywhere. The MIH provides a sustainable learning environment to gradually shift the model of teaching and learning to a student-centered approach, creating enriching, engaging, and personalized learning opportunities for any student, regardless of conditions.

Three fundamental concepts of the MIH:

Environment that promotes critical thinking, creativity, and leadership development. The MIH is an environment where student centered learning opportunities foster personal growth for tomorrow's leaders.

Pedagogical practices that creates a safe, welcoming, and student-centered conditions for learners of any age.

Sustainably designed for ease of use, ease of implementation, gradual progress of changes, and ease of maintenance for all equipment and systems to include a three-year supported commitment.

Goals

Create a student focused learning environment where learners are allowed to try, fail, and succeed at their own pace and with the encouragement of the teachers who are dedicated to providing equitable, safe, and challenging experiences. The MIH is grounded in the intent to provide an amazing experience regardless of gender, race, social-economic status, or geography.

Success in 21st Century Trends

Geographic Economic Shift – work from anywhere

Knowledge Economy – learn from anywhere

Mastery and Certifications – beyond exam scores

Program Management

MATTER will lead a process of selecting program applicants and provide continued monitoring and evaluation following the process below:

1st: MIH Application / Discovery: MATTER will seek to learn about the applicant organization and school from multiple facets including student body data, educational services provided, technical expertise, school history, and future growth perspective.

Along with the application, MATTER will evaluate photos of the school grounds, interior classrooms, as well as exterior campus including the proposed site of where the MIH will be placed. In this discovery process, MATTER will look to uncover how an MIH will complement the applicant's current focus and vision for future educational impact. Please persuade and inspire us with your vision!

2nd: Site Visit: MATTER staff will travel to do a site assessment to see the facility first hand, meet the student body, the school staff, and determine project scope and timeline. MATTER will spend time with the proposed school staff member who will be the future contact point for MATTER concerning teaching and operations of the MIH.

3rd: Set up + Logistics: MATTER will custom build the Innovation Hub, purchase the APPLE equipment, and set up the applicant's school as a registered educational APPLE technology institution. MATTER will handle the shipping and logistics to the schools, However, in-country customs duties are unpredictable and any tax exemptions or customs charges must be covered by the school.

4th: Installation/ Training: Includes initial placement and professional development. MATTER will send a team to oversee installation of the Innovation Hub. This process takes approximately 2-3 days for which the team will need food and lodging provided. During this time, there will be intensive training with the predetermined MIH expert (who was selected from the previous site visit) who will be trained on the technical equipment and teaching methodology.

5th: Ongoing Services: Initial professional development and continual training will focus on supporting an instructional coach savvy in the integration of technology. Facilitators of MIH should be educators first and technical resources second. MATTER will work closely with the approved MIH trained expert over the next three years to ensure students are progressing, data metrics are recorded, and answer questions the school requires.

Three-Year Program Service:

MATTER will support this program for three years at a cost of **\$185,000**

All services will be funded for three years. MATTER, in partnership with Jamf, will provide a managed service provider (MSP) model supporting the integration of Jamf Pro, eSpark Learning, Securly, and Unbiquitis Network. This program service includes:

- Innovation Hub Unit
- Application evaluation & logistics
- Implementation program & professional development
- Managed service provider for all systems
- Hardware
- Internet access

At the end of the three-year period the programs will be evaluated for continued and further funding.

Inventory

Hardware (adjusted to meet specific need)

App	Purpose
iPad	28, 128mb
Logitech Rugged Combo	28, Case and keyboard
Logitech Crayon	28
Macbook Air (1)	6
Parrot Mambo Drones	6 (with spare parts)
Apple TV	6
Tables	“Murphy Bed” style to fold up to wall (5; 3 at 29” & 2 at 35”)
Stools	27: 15 at 19”, 10 at 26”, & 2 at 36
Sphero SPRK+	12, robotic balls with storage and charging case
Belkin iPad Presentation Stand and cables	1
Belkin iPad cabinets	2
Unifi network system	Router, access point, POE switch, remote access tool, video cameras, video storage, Cradle Point
LG monitors	7 (2 55”, 5 32”)
Whiteboard	4”x6”

Software (iOS apps) (adjusted to meet specific need)

App	Purpose
Apple Classroom	Classroom Management
Sphero Education	STEM, Coding, Robotics
eSpark Learning	Math and English with assessment and personalized instruction
Swift Playground	Coding, critical thinking
OSMO Learning	Suite of apps targeting primary age learners
Pages	Word processing, creation, desktop publishing
Keynote	Presentation
Numbers	Spreadsheets, graphs, and charts
iMovie	Movie creation
Garageband	Music creation

Additional apps will be utilized depending on the interest and level of students

MATTER Innovation Hub Curriculum

The primary curriculum is centered on learning coding with the goals of promoting creativity, problem solving, and critical thinking. Additional curriculum focuses on early English language, mathematics, basic computer creative, and productivity tools. Professional development targets use of Apple’s creative and productivity suites. Additional professional development focuses on the applied innovation of technology across of an organization’s existing curriculum.

Three free Apple programs with curriculum and certifications are the primary anchors for the MATTER Innovation HUB programming, supplemented with complementary material.

Everyone Can Code Everyone Can Create Apple Teacher Program

- **Apple’s Swift Playgrounds: Learn to Code series**
<https://www.apple.com/swift/playgrounds/>

Apple created a comprehensive “*Everyone Can Code*” curriculum to help teach coding to students from kindergarten to college. With teacher guides and lessons, student can be introduced the basics on iPad, then advance to building real apps on Mac. So, whether the students are first-time coders or aspiring app developers, they will have all the tools need to learn coding.

Each course is accompanied by an Apple iBook:

- Learn to Code 1 on iPad
- Learn to Code 2 on iPad
- Learn to Code 3 on iPad
- Learn to Code 4 on Mac
- Learn to Code 5 on Mac

- Apple’s “*Everyone Can Create*”

Featuring content, activities, and training materials on iPad and Mac for:

- iMovie – movie creation and editing
- GarageBand – music creation and editing
- Clips – movie creation
- Notes – writing and drawing with Apple Pencil
- Pages – desktop publishing
- Keynote – presentation creation

- **Parrot Drone** <https://edu.parrot.com>
Swift Playgrounds Guide Lessons

Fly, code, and learn with Parrot Mini-drones and Swift Playgrounds! Students will learn how to program and pilot a Parrot drone using the power of Swift code. Students will code their drone to takeoff, land, move in all directions, make aerobatic figures, and even control accessories. Students start with the basic commands, solve some puzzle and challenges, master advanced commands and learn how to program accessories.

- **Sphero SPRK+** <https://www.sphero.com/sprk-plus>
Swift Playgrounds Arcade - Guided lessons

In this arcade-style playground, students can recreate classic games with a Sphero SPRK+ robot while learning the basics of game design. Students build their very own robotic renditions of some famous games like Pong, Bop It, and Pac-Man. Each game uses Sphero in a different way such as rolling on the floor, detecting gestures, or using Sphero as a joystick.

Sphero SPRK+ Activities

Sphero Golf — drive, draw, and code robotic ball on course designed by students

Sphero Paint — drive, draw, and code robotic ball to create art work with water colors

Sphero Boat — drive, draw, and code robotic ball in student created boats

- **Duolingo** <https://www.duolingo.com>

For learning English language in game-based activities.

- **eSpark Learning** (personalized path with iOS app content targeted on standards)

<https://www.esparklearning.com/espark/>

Math preK to year 6. - iOS apps matched to students' level and progress at their pace

Early English language - iOS apps matched to students' readiness level and progress at their

pace

Apps are automatically deployed to students iPads and removed once they have progressed to other activities.

- **OSMO Learning (physical manipulative paired with digital activities)**

<https://www.playosmo.com/en/>

Osmo is an award-winning game system that will change the way children interact with the iPad by opening them up to hands-on play integrated with digital environments.

Number

Add, count and multiply the tiles to match the numbers on the bubbles. Popping enough bubbles will free the fish and unleash a storm of lightning and thunder! Big or small, even or odd, will you become the Numbers Master?

Words

Guess and spell the on-screen image. Team up or compete in-person with friends or family to see who will get their letter in first! Download free content like trivia, geography or upload your own like family names. The possibilities are endless!

Code Awbie

Coding Awbie teaches logic skills and problem solving, and it helps students succeed in an increasingly digital world. Coding Awbie is the easiest way to introduce coding to young students

Tangrams

Arrange wooden puzzle pieces to match on-screen shapes. Animals, objects, humans and more. Play with a friend or challenge yourself to increasingly more difficult levels as your handiwork lights up with each victory.

Newton

Newton works with any object or drawing — Mom's keys, hand-drawn basket, even toys you already own. Simply place the object/drawing in front of the screen and manipulate it to guide the falling balls into the target zones.

Masterpiece

Unleash your inner artist! Pick an image from the camera, web or curated gallery and Masterpiece will transform it into easy-to-follow lines, helping you create beautiful drawings.

Professional Development

- Apple Teacher Program - training and certificates in using Apple suite of applications with students
<https://www.apple.com/education/apple-teacher/> Each section within Apple Teacher has is paired with an Apple iBook.
- LoTi/H.E.A.T. - educational technology implementation evaluation
<https://www.loticonnection.com/heat-framework> This will be introduced during the onsite professional development.