



LEAD Magnet Academy

Leadership-Entrepreneurship-Action-Design

Streamwood High School



Curriculum Proposals:

Academy Integrated Math 2

Academy Integrated Math 3

LEAD Discover: Contemporary World Issues

Business for Entrepreneurs

Appreneurship

Presenters: Mitchell Briesemeister, Director of Educational Pathways

Tracy Stewart, Assistant Principal of Innovation SHS/LEAD Academy

Meagen Balzer, LEAD Academy Teacher

Ryan Sims, LEAD Academy Teacher

Melanie Tomal, LEAD Academy Teacher

Robert Weihofen, LEAD Academy Teacher





Leadership



Entrepreneurship



Action

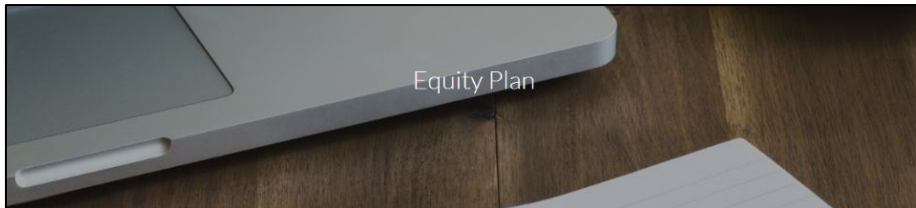


Design



Purpose

- Approve courses for Streamwood High School LEAD Magnet Academy
- Demonstrate alignment to U-46 priorities
- Implement approved LEAD courses in 2023-2024



Equity Plan

School District U-46 is committed to the success of every student in every school. A primary objective of the District is that by graduation, all students will meet or exceed college and career ready standards and be fully prepared to become contributing members of society. It is our belief that it is the responsibility of this school District to give each student the opportunity and support to meet his or her highest potential.

In 2018, the District formed an Equity Committee to ensure these commitments are being met. The Committee aligned its work to the District Strategic Plan and created four sub-teams with the following goals:

- Student Achievement: Close opportunity gaps for all subgroups to ensure they have equitable access to all academic systems and programs
- Effective and Engaged Staff: Value, develop, recruit and retain a forward-thinking, highly qualified, and diverse workforce
- Community Engagement: Ensure welcoming, safe, inclusive and equitable school environments for all
- Excellence, Efficiency, and Accountability: Communicate allocation of funds to ensure equitable access for all students throughout all structures and systems in U-46



U46 STRATEGIC PLAN AUG 2022

Student Success
It is our responsibility to ensure all students are engaged in rigorous learning, receive quality core instruction, and can develop the skills they need for better life chances and opportunities. By helping students develop self and peer agency, they will develop a growth mindset as they learn to expand their perspectives.

Effective & Engaged Staff
We will value, develop, recruit, and retain a forward-thinking, highly qualified, and diverse workforce. We will establish a robust process for measuring employee engagement to identify and proactively address employee engagement issues.

Culture, Climate & Community
We will engage in meaningful and effective relationships with our students, families and the greater community and will ensure that our schools are welcoming and inviting places for all of our U-46 students and families. We will become a choice district that inspires families to join us.

Excellence, Efficiency & Accountability
We will advocate for and utilize systems and resources that promote fiscal equity, operational excellence, efficiency and accountability. It is our moral imperative to change until all our systems measurably work for all students.

Magnet Schools of America

[MSA Pillars and Standards](#)



The Process

Committee: September 2022

Amy Ingente
(Math Coordinator)

Carmen Arocho Rivera
(DL Math)

Doreen Roberts
(TL Ed Pathways)

Meagen Balzer (ELA/CTE)

Melanie Tomal (Math)

Melissa Damewood (CTE Coordinator)

Lisa Baran-Janco (AP of Humanities)

Morgan Steele (SSS)



Nick Vassolo
(Social Studies)

Nicole Fernstrom (ELA)

Robert Weihofen (CTE)

Ryan Sims (Social Studies)

Thomas Burau (MS Tech)

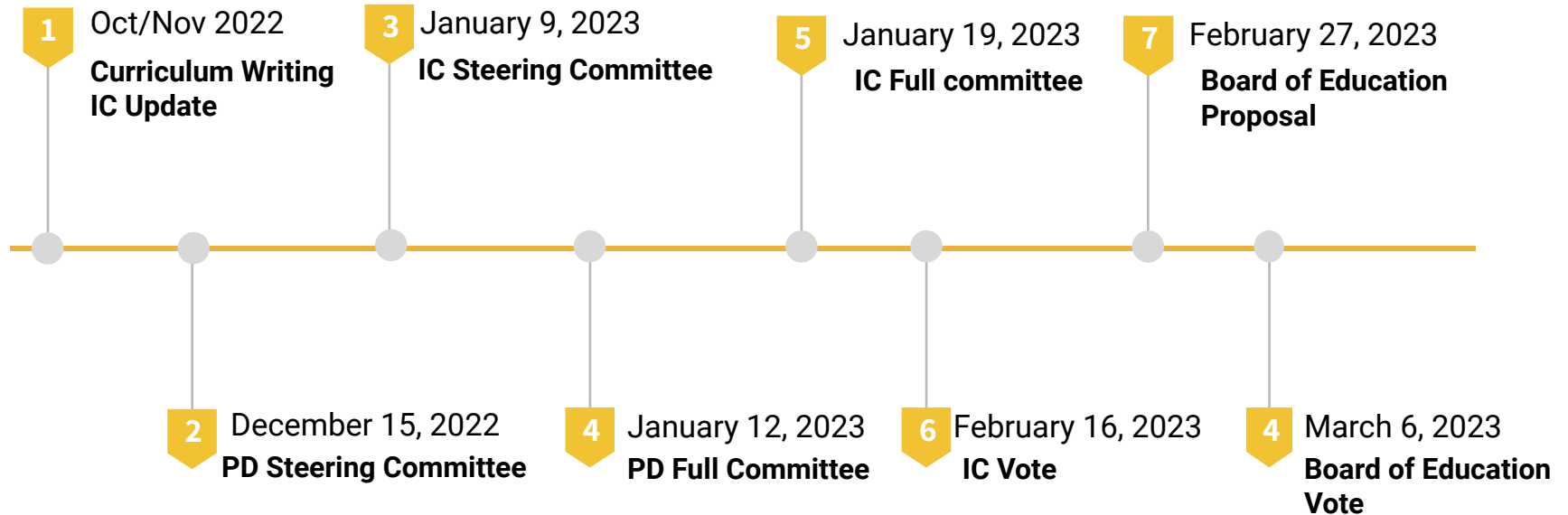
Tracy Stewart
(AP of Innovation)

Trena Smith (Math)

Jacob Vandemoortel
(SS/WL Coordinator)



TIMELINE





Rationale

Rationale

	Freshman	Sophomore	Junior	Senior
Business/CTE	Business for Innovators (2022)	Business for Entrepreneurs/ Appreneurship	INCubatoredu™ (2021)	Acceleratoredu™ (2022)
Math	Academy Integrated Math 1 (2022)	Academy Integrated Math 2	Academy Integrated Math 3	
Magnet Elective	LEAD Launch (2022)	LEAD Discover		

Continue implementation of LEAD Magnet Academy program to ensure:

- Student success through self and peer agency, growth mindset, and expanded perspectives.
- Staff are highly qualified and forward thinking.
- Meaningful relationships with students, staff, families, and community members.
- Continued evaluation and improvement to measurably work for all students.



Example Student Schedules



Example SHS Magnet Academy 2023-2024

Magnet
Academy
Courses

Pair with
Magnet
Elective

Future
Proposals

Content	Grade 9	Grade 10	Grade 11	Grade 12
Math	AIM 1	AIM 2	AIM 3	AP Math/DC Math/ 4th yr. Math
Business/CTE	Business for Innovators	Business for Entrepreneurs/ Appreneurship (1 semester each)	INCubator	ACCElerator/ <i>Senior Experience</i>
Magnet Elective	LEAD Launch	LEAD Discover (Social Studies)	<i>Business Ethics/Elective (1 semester each)</i>	<i>Business Law/Elective (1 semester each)</i>
Language Arts	ELA 1	ELA 2	ELA 3 or AP Lang./Comp.	AP ELA/DC ELA/ 4th yr. ELA
Science	Biology	Chemistry or IPS	3rd yr Science or Elective	4th yr Science or Elective
Physical Education	PE	PE/Health (1 semester each)	<i>PE or Independent PE</i>	PE or Independent PE (<i>B or higher, can be a choice</i>)
World Language/Social Studies/Electives	Choice	Choice	US History (AP) (2 semesters) Economics (AP) (1 semester)	Civics (AP) (1 semester) Elective
Lunch	Lunch	Lunch	Lunch	Lunch



Example DL SHS Magnet Academy 2023-2024

Magnet
Academy
Courses

Pair with
Magnet
Elective

Dual
Language-
Classes
taught in
Spanish

Future
Proposals

Content	Grade 9	Grade 10	Grade 11	Grade 12
Math	AIM 1	AIM 2	AIM 3	AP Math/DC Math/ 4th yr Math
Business/CTE	Business for Innovators	Business for Entrepreneurs/ Apprepreneurship (1 semester each)	INCubator	ACCELerator
Magnet Elective	LEAD Launch	LEAD Discover (Social Studies)	Business Ethics/Elective (1 semester each)	Business Law/Elective (1 semester each)
Language Arts	ELA 1	ELA 2	ELA 3 or AP Lang/Comp	AP ELA/DC ELA/ 4th yr ELA
Science	Biology	Chemistry or IPS	3rd yr Science or Elective	4th yr Science or Elective
Physical Education	PE	PE/Health (1 semester each)	Independent PE and AP Spanish Lang or DC Spanish	PE or Independent PE (<i>B or higher, can be a choice</i>)
World Language/Social Studies/Electives	ALE 1	ALE 2	US History (AP) (2 semesters) Economics (AP) (1 semester)	Civics (AP) (1 semester) AP Spanish Lit or Latino/x/a or DC Spanish
Lunch	Lunch	Lunch	Lunch	Lunch

Course Alignment and Connections (Business/CTE)



Business for Innovators Grade 9	Business for Entrepreneurs Grade 10 (1 semester)	Appreneurship Grade 10 (1 semester)	INCubatoredu™ Grade 11	ACCElляторedu™ Grade 12
<p>Finance and Accounting</p> <ul style="list-style-type: none"> • Foundations of accounting • Record keeping <p>Marketing and Communication</p> <ul style="list-style-type: none"> • Foundations of marketing • Effective personal communication <p>Entrepreneurship</p> <ul style="list-style-type: none"> • Interpretation and ideation • Begin the design process <p>Leadership and Management</p> <ul style="list-style-type: none"> • Self assessment • Teamwork/collaboration 	<p>Finance and Accounting</p> <ul style="list-style-type: none"> • Application of accounting functions • P/L reports <p>Marketing and Communication</p> <ul style="list-style-type: none"> • Marketing plans • Branding/customer focused communication <p>Entrepreneurship</p> <ul style="list-style-type: none"> • Design thinking • Experimentation and evolution <p>Leadership and Management</p> <ul style="list-style-type: none"> • Application of leadership styles • Leading teams towards common goals 	<p>SEL/Marketing Review</p> <ul style="list-style-type: none"> • Marketing strategies • Collaborative environment <p>Basics of App Development</p> <ul style="list-style-type: none"> • Develop Apps • Design Apps <p>App Exploration</p> <ul style="list-style-type: none"> • Markets, advertising • Authentic environments <p>Design & Development</p> <ul style="list-style-type: none"> • Communication in the design process • Team projects <p>Design & Development</p> <ul style="list-style-type: none"> • Design process for app development 	<p>Finance and Accounting</p> <ul style="list-style-type: none"> • Use data for market evaluation • Create projections <p>Marketing and Communication</p> <ul style="list-style-type: none"> • Individualized marketing plans/consumer analytics • Intercommunication <p>Entrepreneurship</p> <ul style="list-style-type: none"> • Business model canvas • Organizing a business <p>Leadership and Management</p> <ul style="list-style-type: none"> • Business management • Team collaboration from ideation to product 	<p>Finance and Accounting</p> <ul style="list-style-type: none"> • Act using data • Execute successful business venture <p>Marketing and Communication</p> <ul style="list-style-type: none"> • Authentic digital marketing • Authentic professional communication <p>Entrepreneurship</p> <ul style="list-style-type: none"> • Resource management • Entrepreneurial trends <p>Leadership and Management</p> <ul style="list-style-type: none"> • Managing teams to lead business ventures

Business for Entrepreneurs (1 semester)

- Students will engage in authentic learning gaining first-hand experience that allows for practical applications.
- Experiential learning lab focuses on the wide range of factors that influence the flow of goods and services from the producer to the consumer.
- Topics include: market research, purchasing process, distribution systems, inventory control, salesmanship, sales promotions, theft control, business management, and entrepreneurship.

Business for Entrepreneurs

- Students will take a leadership role in all aspects of an 'in house' store at Streamwood High School.
- Students will be immersed in a lab setting where all business aspects will come to life as they learn about the front and back of the house, determine purchasing, apply accounting strategies, and consult with one another on marketing.
- Students will learn about the various aspects and roles of business/entrepreneurs and then engage in those roles through the operation of the school store. Students will rotate through the various roles as both "managers and employees".

Course Alignment and Connections (Business/CTE)



Business for Innovators Grade 9

Finance and Accounting

- Foundations of accounting
- Record keeping

Marketing and Communication

- Foundations of marketing
- Effective personal communication

Entrepreneurship

- Interpretation and ideation
- Begin the design process

Leadership and Management

- Self assessment
- Teamwork/collaboration

Business for Entrepreneurs Grade 10 (1 semester)

Finance and Accounting

- Application of accounting functions
- P/L reports

Marketing and Communication

- Marketing plans
- Branding/customer focused communication

Entrepreneurship

- Design thinking
- Experimentation and evolution

Leadership and Management

- Application of leadership styles
- Leading teams towards common goals

Appreneurship Grade 10 (1 semester)

SEL/Marketing Review

- Marketing strategies
- Collaborative environment

Basics of App Development

- Develop Apps
- Design Apps

App Exploration

- Markets, advertising
- Authentic environments

Design & Development

- Communication in the design process
- Team projects

Design & Development

- Design process for app development

INCubatoredu™ Grade 11

Finance and Accounting

- Use data for market evaluation
- Create projections

Marketing and Communication

- Individualized marketing plans/consumer analytics
- Intercommunication

Entrepreneurship

- Business model canvas
- Organizing a business

Leadership and Management

- Business management
- Team collaboration from ideation to product

ACCEleratoredu™ Grade 12

Finance and Accounting

- Act using data
- Execute successful business venture

Marketing and Communication

- Authentic digital marketing
- Authentic professional communication

Entrepreneurship

- Resource management
- Entrepreneurial trends

Leadership and Management

- Managing teams to lead business ventures

Appreneurship (1 semester)

- Students leverage technology to take an active role in choosing, achieving, and demonstrating marketing techniques.
- Create applications for mobile devices using commercial and open source software and promote social media marketing.
- This course will address the creation of, installation, and modifications of these applications, as well as product marketing and customer service skills to handle user issues.

Appreneurship

- Students will learn how to apply marketing principles in the world of social media marketing.
- Students will learn how to code computer applications that align with targeted marketing objectives.
- Use of a variety of digital platforms will allow students to determine which computer applications have the greatest impact on their consumer groups.
- This alignment of social media, computer coding, marketing, and application development is at the forefront of today's business world.

Course Alignment and Connections (Math)



Academy Integrated Math 1 Grade 9	Academy Integrated Math 2 Grade 10	Academy Integrated Math 3 Grade 11	4th yr Math Grade 12
Relationships between Quantities Linear and Exponential Relationships Descriptive Statistics Transformations and Congruence Connecting Algebra and Geometry	Quadratic Functions Modeling Functions Similarities and Volume Extending the Number System Geometric Relationships and Modeling	Geometric Proofs Polynomials and Rationals Exponentials and Logarithms Probability and Statistics Trigonometry	Precalculus Dual Credit College Algebra AP Statistics Transition Math

★ In Grade 9, students will enroll in the math course that is in alignment with their their math trajectory.

Academy Integrated Math Process

- Resequenced the existing standards and rubrics to align with the Common Core Integrated Pathway
- Made context adjustments to the District Common Assessments to align with the magnet theme

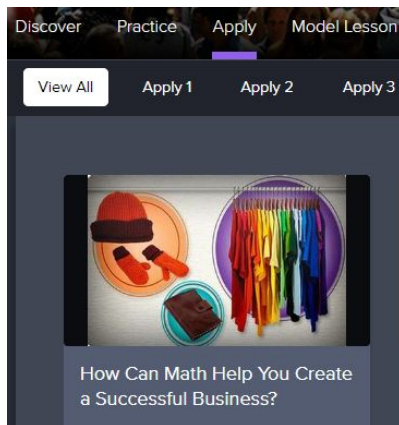
Traditional Math Pathway				Integrated Math Pathway			
Course	Algebra 1	Geometry	Algebra 2	Course	Math I	Math II	Math III
Conceptual Category	Number and Quantity		Number and Quantity	Conceptual Category	Number and Quantity	Number and Quantity	Number and Quantity
	Algebra		Algebra		Algebra	Algebra	Algebra
	Functions		Functions		Functions	Functions	Functions
		Geometry			Geometry	Geometry	Geometry
	Statistics and Probability		Statistics and Probability		Statistics and Probability	Statistics and Probability	Statistics and Probability

Academy Integrated Math

Common Math
Assessments
adjusted to include
a business context

Identified aligned
activities and
resources that
include a business
context

7. Your manufacturing company has started a new line of “Natural” Toys for toddlers. Your first toy is an all wood building blocks set. The function $p(x) = -x^2 + 80x - 1000$ models the monthly profit, $p(x)$, where x is the price of the building blocks set. What is the price of the building blocks if the monthly profit in July was \$600?





Course Alignment and Connections (Magnet)

LEAD Launch Grade 9	LEAD Discover: Contemporary World Issues	Business Ethics Grade 11 (1 semester)	Business Law Grade 12 (1 semester)
Leadership <ul style="list-style-type: none">• Communication, collaboration, management skills• Teamwork to common goals Design <ul style="list-style-type: none">• Empathy in problem solving• Implement the Design Cycle Action <ul style="list-style-type: none">• Investigate issues• Collaborate to create action plans Entrepreneurship <ul style="list-style-type: none">• Adapt to situations• Develop entrepreneurial mindset	Constructing Essential Questions Constructing Supporting Questions Determining Resources Gathering and Evaluating Sources Developing Claims and Using Evidence Communicating Conclusions Critiquing Conclusions Taking Informed Action	Employee/Employer Conduct Ethical and Moral Issues in a Professional Environments <ul style="list-style-type: none">• Honest• Privacy• Diversity/Discrimination• Harassment• Free speech• Whistle-blowing• Intellectual property• Finance/Marketing• Social responsibility• Globalization• International business	Business Ownership/LLC Legal Ethics Court Procedures Contracts Consumer/Property Law Environmental Law International Law Decision Making

LEAD Discover: Contemporary World Issues

- Study political, economic, and social issues facing the world.
- Focus on current issues, examine selected issues throughout the 20th century, and look at historical causes or possible solutions.
- Build upon the tenants of the LEAD Academy through the development of entrepreneurial mindsets, the application of design thinking, and analyzing how our actions impact the environment and world around us.

LEAD Discover: Contemporary World Issues



**SUSTAINABLE
DEVELOPMENT GOALS**





Professional Development

Business for Entrepreneurs



Professional Development

- Teachers will need professional development in the use of the Clover system and software.
- Spring 2023- teachers will have formal training with vendor professionals who will record sessions as a reference for all staff.
- August 2023- teachers will have optional vendor training offered.
- 2023-2024 academic year- continued “as needed” vendor support where staff can connect with online support.

Appreneurship

Professional Development

- Teachers will need training on using MAD Learn and MIT App Inventor software.
- Spring 2023- teachers will have formal training with vendor professionals who will record sessions as a reference for all staff.
- August 2023- teachers will have optional vendor training offered
- 2023-2024 academic year- continued “as needed” vendor support where staff can connect with online support.

Academy Integrated Math Professional Development

- The course was written in collaboration with the staff that will be teaching the course next year.
- Resource Training (DiscoveryEducation Math Techbook) will be available as needed.
- Should new staff be onboarded, professional development will be provided through site-based professional learning.



Resources

Business for Entrepreneurs

Resources:

Purchase of Clover, Point of sale system (currently use this system at SWEP diner)

Small Business Bundle (includes register, scanner) \$898.68 per year

Register Software - \$539.40 year

Total per year - \$1,438.08

Transaction fees:

Visa/MC/Discover Credit Rate & Transaction Fee: 1.89% + \$0.15

American Express is 0.55% + \$0.10 + cost-usually comes out to about 2.5% per purchase.

Can be added to cost of purchased item.

Shelving/cabinets for store - approx. \$5,000

3D printer - Ultimaker S5 - \$6,500

Color Printer - HP LaserJet \$1,800

Laser Engraver - OMTech 40 W Laser Engraver \$600

Total non-renewable items \$13,900

LEAD Discover: Contemporary World Issues

Professional Development

- The course was written in collaboration with the staff that anticipate teaching the course next year.
- Resource Training will be available as needed.
- Should new staff be onboarded, professional development will be provided through site-based professional learning.

Appreneurship



Resources

- MAD Learn site access
 - Unlimited access for one year: \$4,992.00
 - Virtual PD session for staff: three a year - \$147.00
 - Total yearly cost: \$5,139.00
- Six Tablets - total cost \$3,000

Academy Integrated Math Resources

Continue the use of Discovery Math Techbook, using the Integrated Courses already available within the resource

No cost implications

Available in both English and Spanish

Algebra I

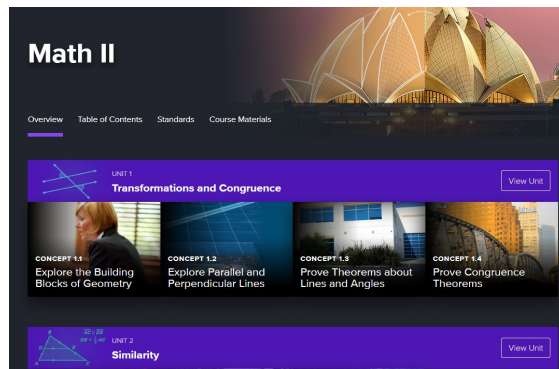
Algebra II

Geometry

Math I

Math II

Math III



LEAD Discover: Contemporary World Issues

Instructional Materials and Resources

Choices Program by Brown University, Digital Editions



A digital subscription to a database of inquiry based, data driven issues from the current and historical world that strives to give students the opportunity to explore issues with data and purpose.

Cost Implication: \$7,888.00 for 2 teachers for 5 years.
\$3,944 for any additional teacher/class licenses

[UN Sustainable Development Goals](#)



The United Nations Sustainable Development Goals are 17 categories of human, economic, and environmental development for growing peace and prosperity for people and the planet. The 17 UNSDG's serve as the content frames for student driven inquiry throughout the first semester and as the area of focus for student inquiry projects in the second semester.

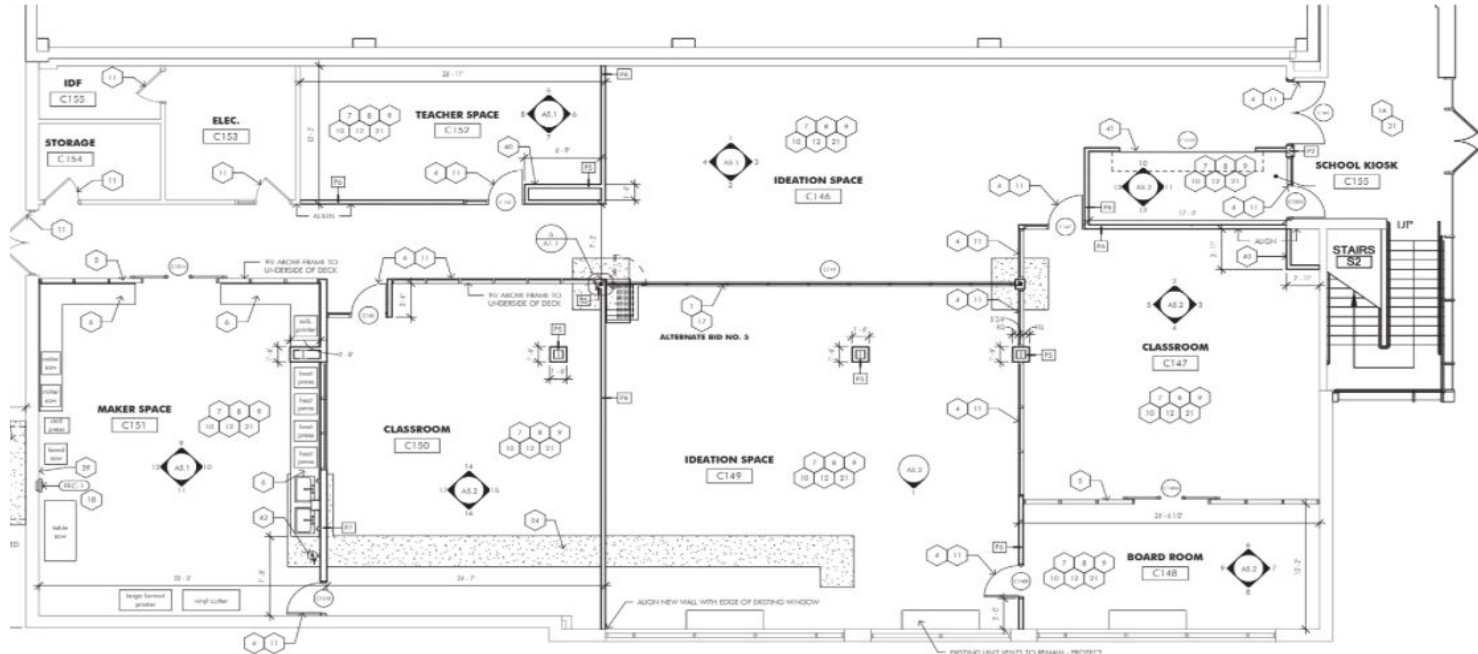
Cost Implication: \$0.00

Cost Summary

LEAD Discover: Contemporary World Issues		Total
Choices Program: Brown University	\$1,577.60/year	\$9,465.60
Business for Entrepreneurs		
Point of Sale System	\$1438.08/year	\$8,628.48
Store shelving and cabinets	\$5000/one-time purchase	\$5,000.00
3D Printer Ultimaker S5	\$6500/one-time purchase	\$6,500.00
Color Printer- HP LaserJet \$1800	\$1,800/one-time purchase	\$1,800.00
Laser Engraver-OMTech 40 W Laser Engraver \$600	\$600/one-time purchase	\$600.00
Appreneurship		
MAD Learn	\$5,139/year	\$30,834.00
Tablets (6)	\$3,000/one-time purchase	\$3,000.00
Total Cost for Six Years		\$65,828.08
Cost Per Student for Six Years	Y1: 59, Y2: 75, Y3: 90, Y4: 90, Y5: 90, Y6: 90	\$133.26

Facilities and Space

The facility renovation for the LEAD Academy space completed in 2022 will fully support these courses.



Course Evaluation

Implementation and Curriculum Assessment

From Curriculum Cycle

- Monitor Curriculum Implementation
 - Review Data with LEAD Team and Course Instructors
- Monitor Common Assessments
 - Collaboration/Analyzation of Data
 - Revisions
- Feedback to Inform Implementation/Revision
 - Staff
 - Students
 - Community
- Continued Professional Development
- Report Assessment of Program, as requested



Proposal/Recommendation

The Streamwood High School LEAD Curriculum Team, the Educational Pathways Department, and the Curriculum and Instruction Department recommend the approval of the following courses for implementation in the 2023-2024 school year in the LEAD Magnet Academy:

- Academy Integrated Math 2
- Academy Integrated Math 3
- LEAD Discover
- Business for Entrepreneurs
- Appreneurship

Questions/Preguntas

