

# A New Model Real World Learning Lee's Summit High School



*We prepare each student for success in life.*



LEE'S SUMMIT  
R-7 SCHOOLS  
*Learning for Life*

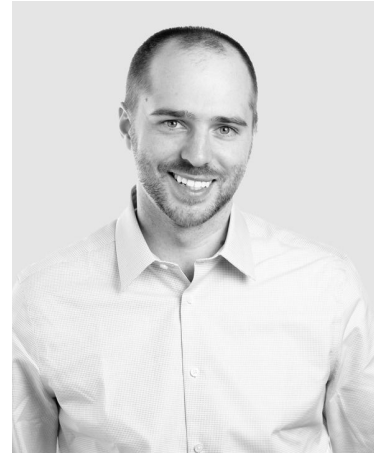
# Introduction



**Marianne Remboldt, AIA**  
**Gould Evans**



**Shannan Booth**  
**LSR7**



**Michael Ralph**  
**Gould Evans**

# Mission and Vision: Real World Learning

What is **Real World Learning**  
and why does it matter?



 Real World  
Learning



# Design Teams: Diploma Plus Ensures Talent Pipeline



work experiences



industry-recognized  
credentials



college credit

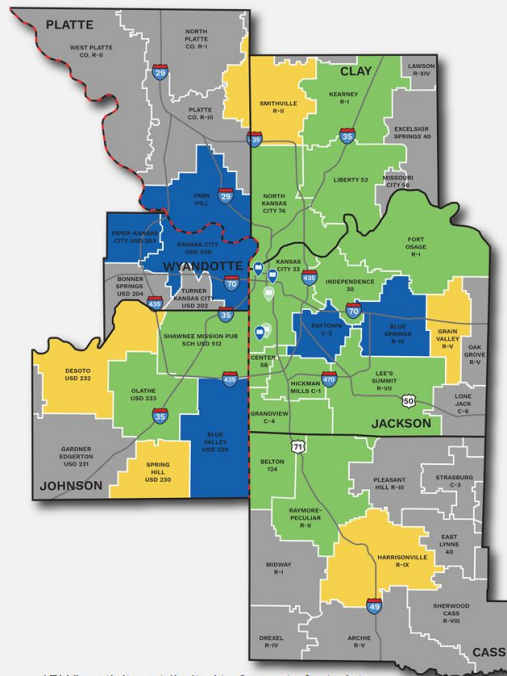


entrepreneurial  
experiences

# Mission and Vision: Real World Learning

## Participating School Districts

- Belton (1)
- Blue Springs (2)
- Blue Valley (2)
- Center (1)
- Crossroads (2)
- DeLaSalle (1)
- De Soto (3)
- Fort Osage (1)
- Grain Valley (3)
- Grandview (1)
- Guadalupe Centers (2)
- Harrisonville (3)
- Hickman Mills (1)
- Hogan (1)
- Independence (1)
- Kansas City MO (1)
- Kansas City KS (2)
- Kearney (1)
- Lee's Summit (1)
- Liberty (1)
- North Kansas City (1)
- Olathe (1)
- Park Hill (2)
- Piper (2)
- Raymore-Peculiar (1)
- Raytown (2)
- Shawnee Mission (1)
- Smithville (3)
- Spring Hill (3)
- University Academy (2)



\*RWL activity not limited to 6 county footprint



# Who is Participating



# LSR7 DiplomaPlus



# Mission and Vision: Portrait of a Graduate

## MISSION

We prepare each student for success in life.

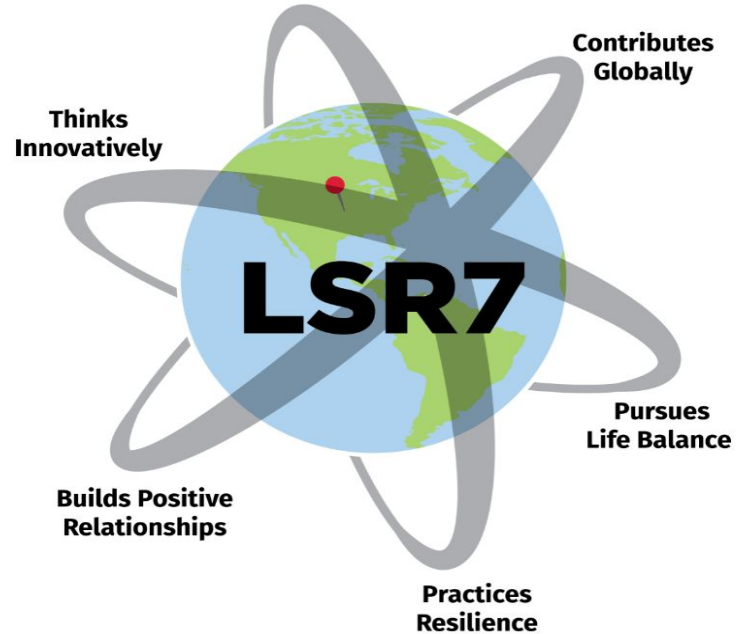
## VISION

Lee's Summit R-7 is an exemplary school district, graduating students who are **college and career ready** with the competitive advantage necessary to be successful.

Lee's Summit R-7 reflects a culture of respect and acceptance. **Collaboration is an expectation** that fosters mutual understanding and a focus on student achievement and staff development.

Lee's Summit R-7 encourages **innovation and creativity**, recognizing student learning as our fundamental purpose.

## Portrait of a Graduate





# District Alignment: Strategic Plan



## 2021-2024 Comprehensive School Improvement Plan

*We prepare each student for success in life.*



PEAK PRIORITIES

**CAREER** *Career, College & Life Preparedness*

**LEADERSHIP** *Organizational Effectiveness & Data-Based Decision Making*

**INSTRUCTION** *Innovative Instruction & Academic Excellence*

**MENTAL WELLBEING** *Social-Emotional Learning & Well-Being*

**BELONGING** *Diversity, Inclusion, & Equity*

# District Alignment: K-12 Vision

EXPLORE

IGNITE

EXPERIENCE

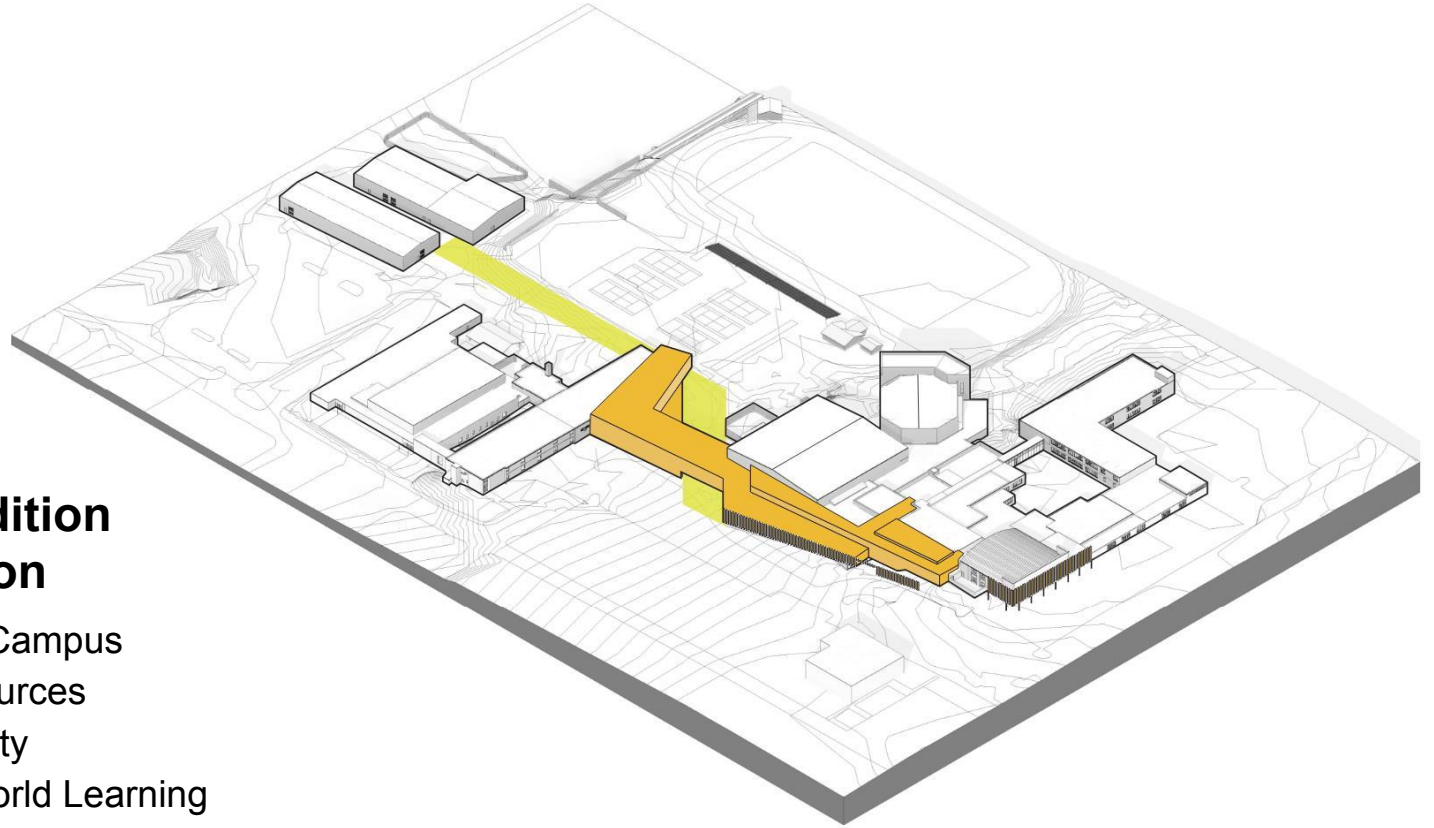
# Innovative Practices and Spaces

- Geometry in Construction (GIC) and Algebra 1 in Manufacturing Processes, Entrepreneurship and Design (AMPED)
  - Written as an alternative to traditional math courses.
  - Dual enrollment in both the Math (Algebra 1 or Geometry) and the appropriate paired CTE course.
  - Same amount of class (seat) time as a student enrolled in both a traditional Math course and a traditional CTE course.
  - Team taught with both the Math and the CTE teacher in the Math classroom and in the CTE classroom. This may necessitate classroom numbers of 40 – 50 students for 2 teachers.

# Lee's Summit High School



# Lee's Summit High School

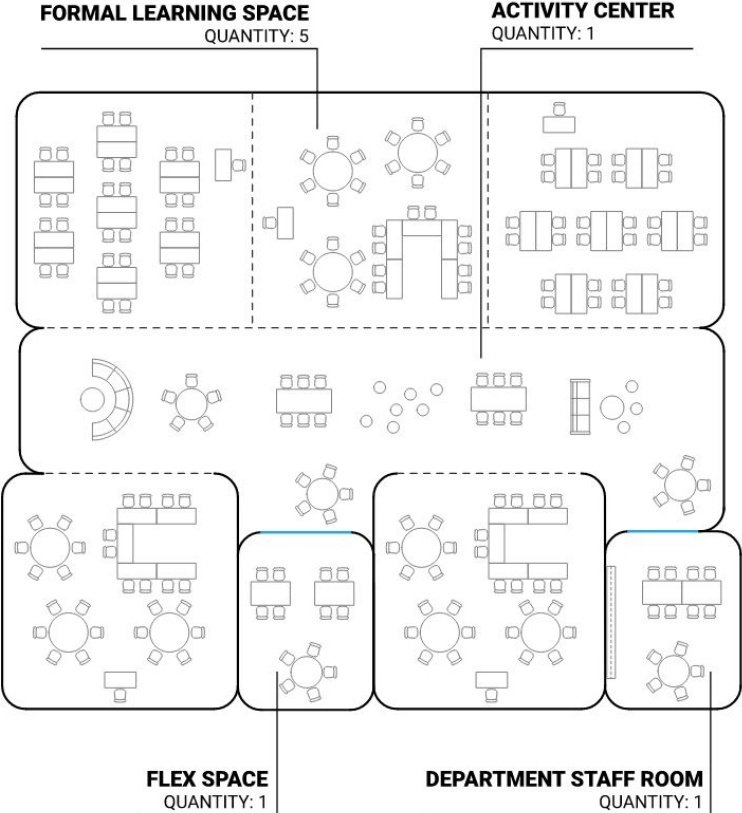


## 80 Million Addition and Renovation

- Well-Connected Campus
- Centralized Resources
- Increased Capacity
- Supports Real World Learning

# LSR7 Masterplan

## Future Ready Learning Environments

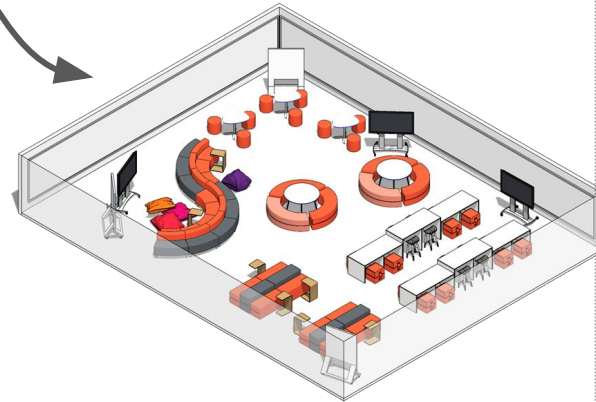
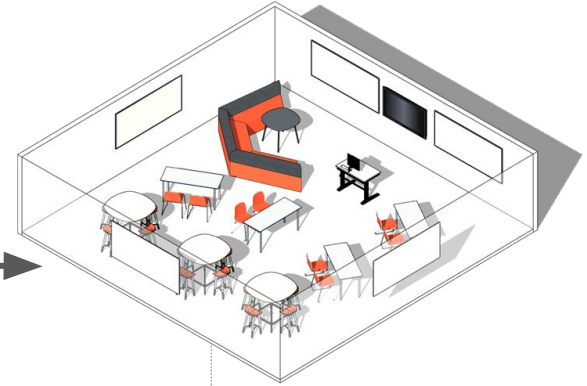
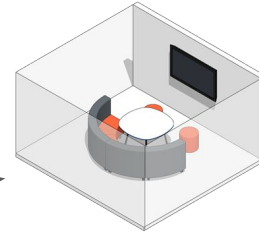


# Creation of the Vision

What activity types align with the **learning experiences** you will use in your lessons?

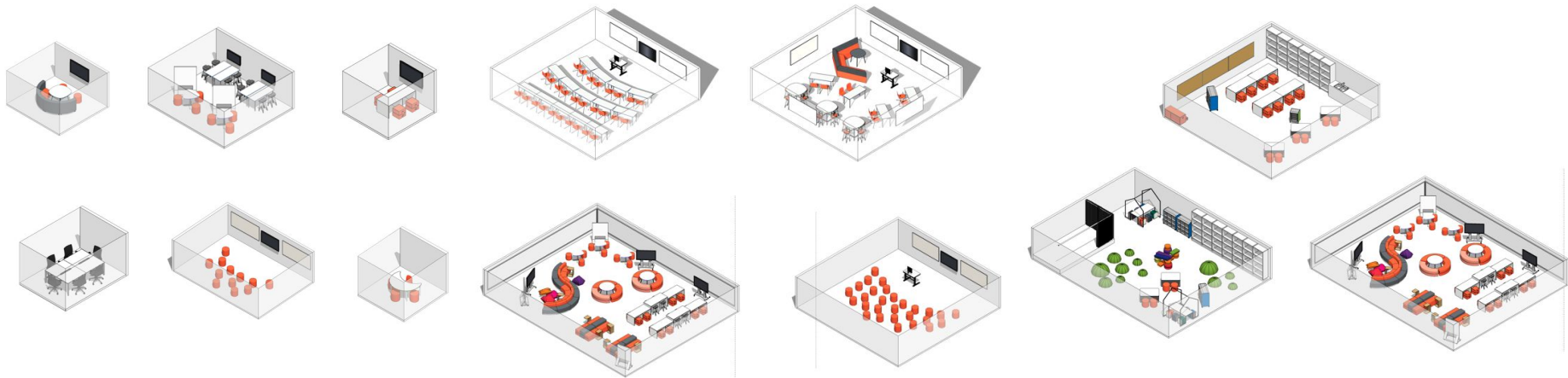


# Creation of the Vision





# Creation of the Vision



**Scale**  
**Formality**  
**Technology**

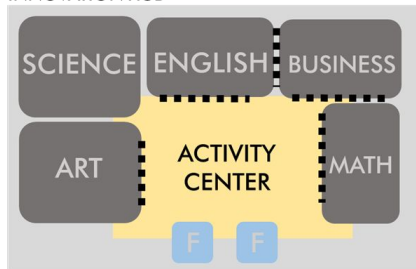
**Furniture**  
**Storage**  
**Acoustics**

**Whiteboards**  
**Displays**  
**Flexibility**

# Creation of the Vision

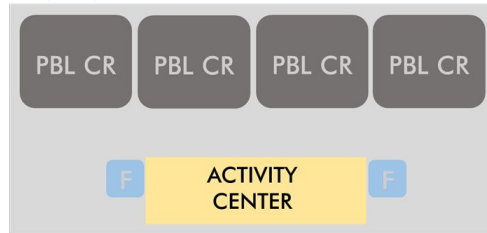
## CROSSDEPARTMENTAL HUB

INNOVATION HUB



## PROJECT-BASED LEARNING HUB

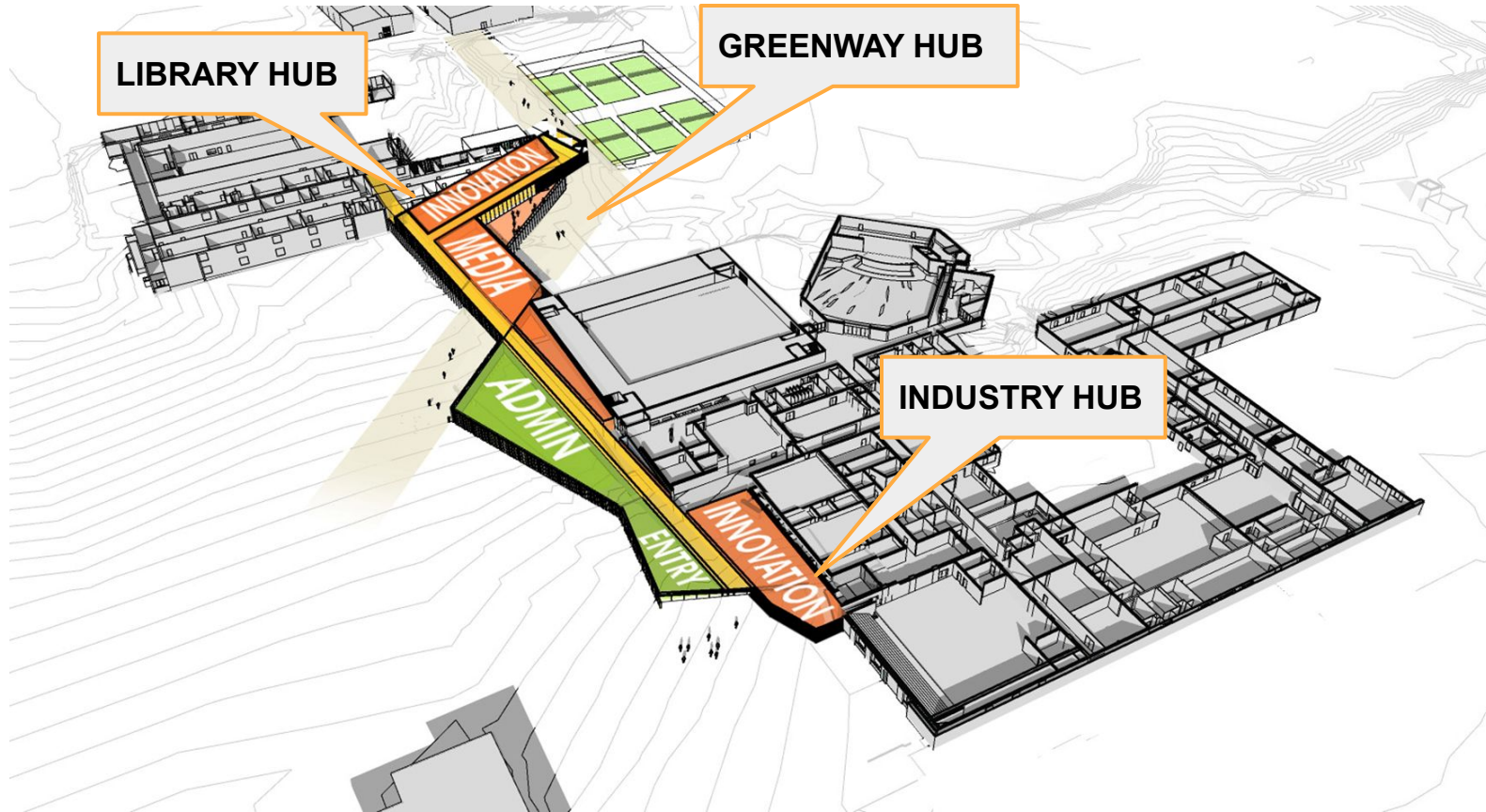
INNOVATION HUB



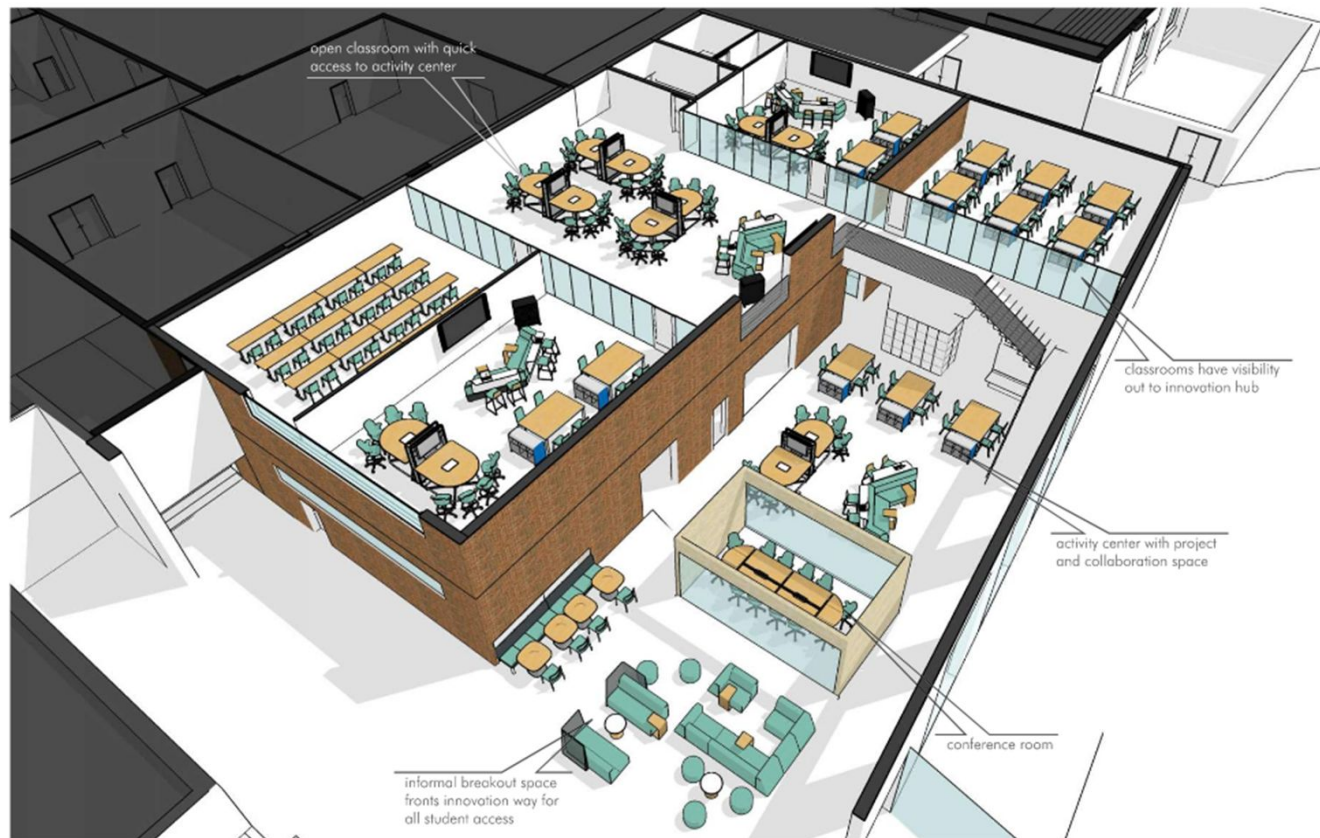
## ROTATING CLASS MODEL



# Creation of the Vision



# Industry Hub



# Lee's Summit **TIGERS**

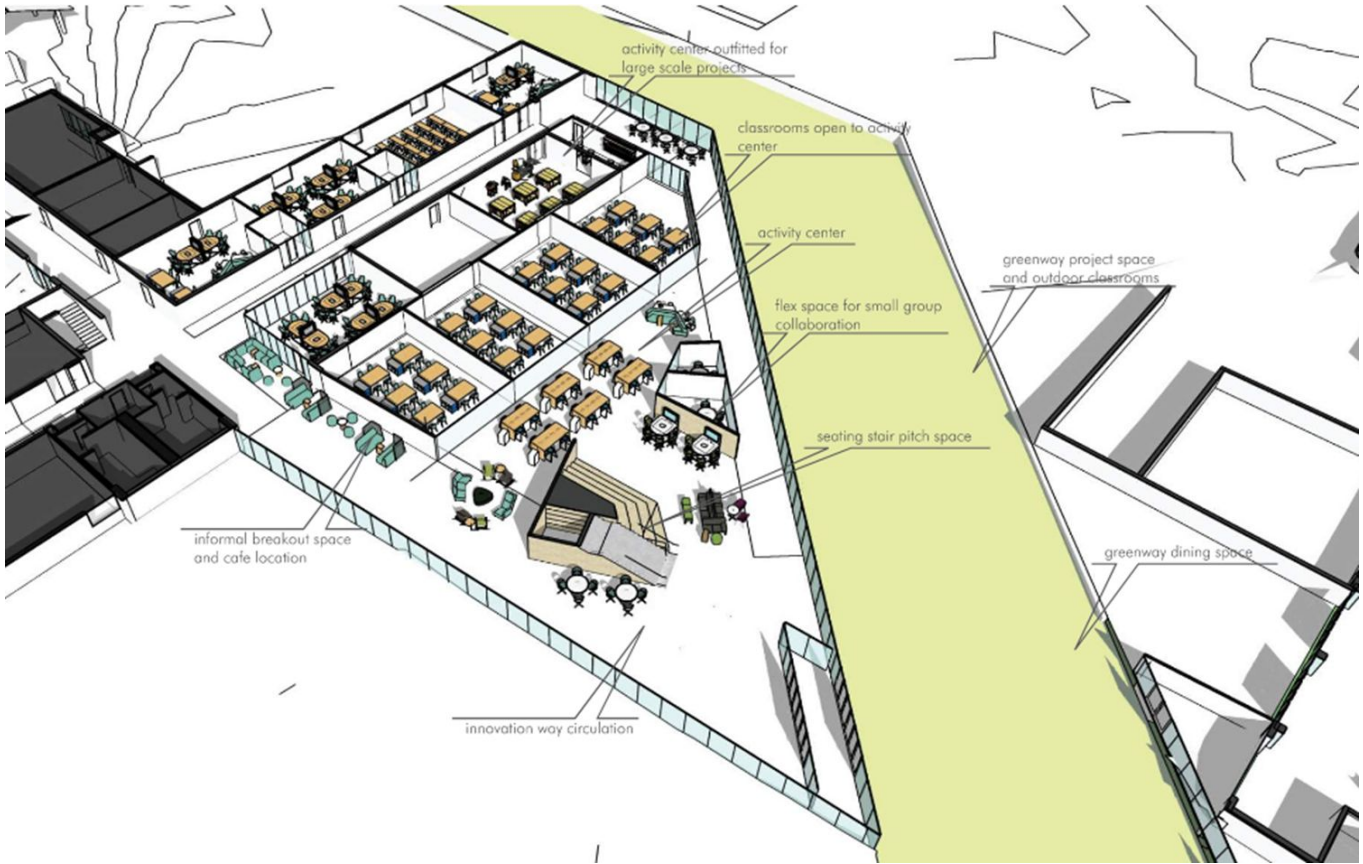


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# Greenway Hub





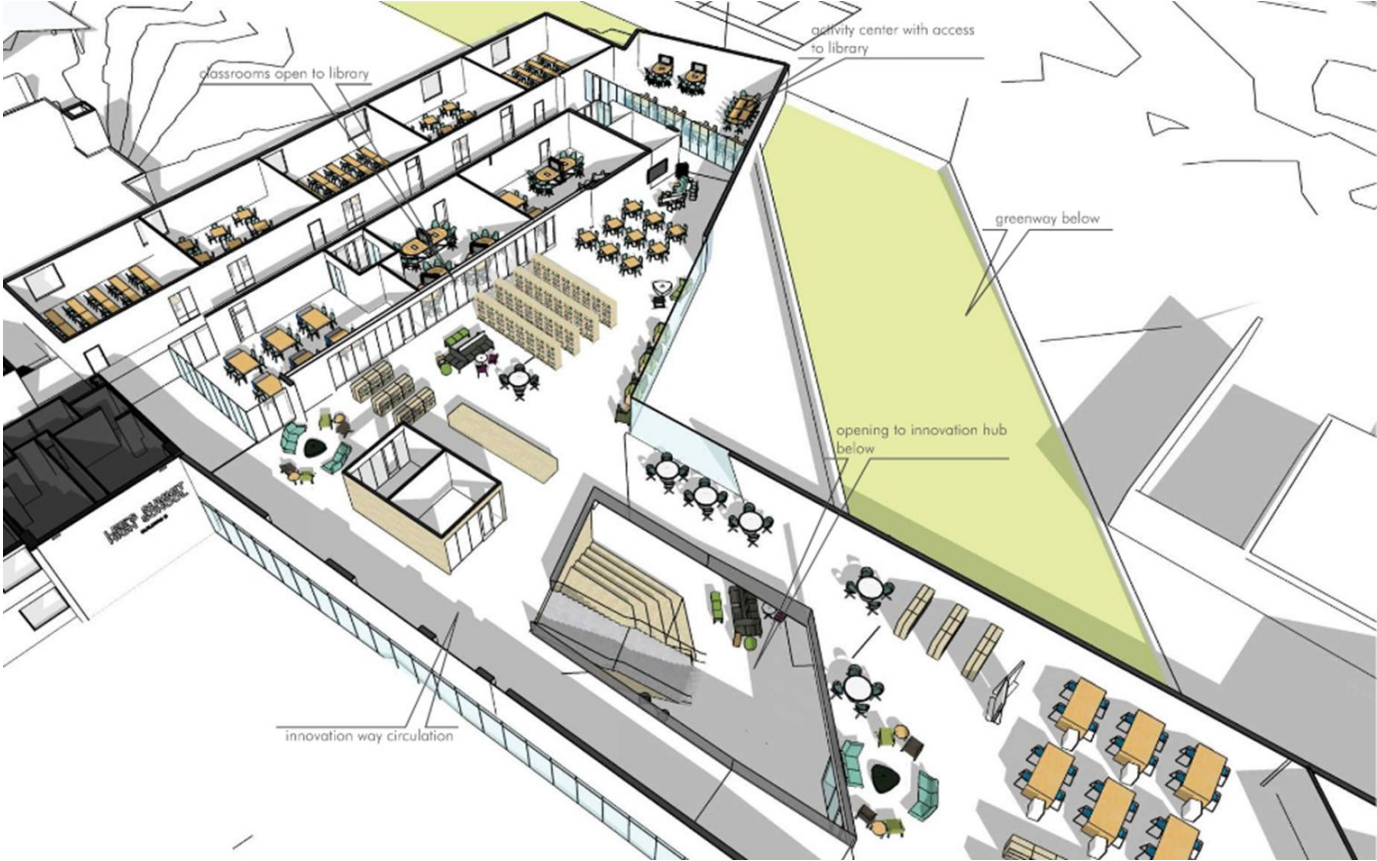
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# Library Hub





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# Onboarding

PowerPoint Slide Show - LSR7 RWL Intern Video - PowerPoint

**EDCO**  
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World Economic Forum: Future Jobs Report  
Deloitte Study  
IDEO International  
PEW Research Report  
Burning Glass Technologies Study  
Kin's 7 Impact Skills  
Jeff Selig's National Recruiter Study  
Angela Duckworth Research  
Enterprise Rental Car Recruiting Standards  
Econaulity Study  
KC Rising Common Sector Competencies  
National Association of Colleges and Employers Survey  
Ewing Marion Kauffman Foundation Portrait of a Graduate  
Project Lead the Way (PLTW)

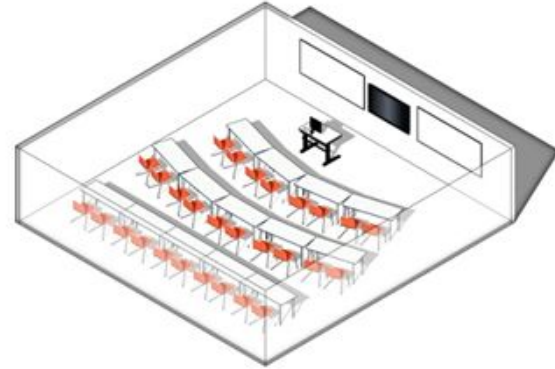
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Slide 1 of 2

# WHY?

- Shared commitment to ***relevance***
- ***Value of flexibility*** from market value assets (MVAs)
- Connections to ***district vision***
  - Access for every student
  - Diploma Plus
  - Community relationships

# Space Connections



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# Role of Space

Classroom environments speak back to us about what they expect.

- Are students moving around?
- Do we regularly host visitors?
- Do we work in groups? Use tools? Share work?



<b>Math Workshop Launching Unit - Optional</b> Estimated Time to Complete: 3-5 days	<b>Unit 1: Place Value and Decimal Fractions</b> Estimated Time to Complete: 4 Weeks Targets should be recorded in Q1 (Targets 5.M.3, 5.M.4D, and 5.M.4E will not be recorded until Q2)	<b>Unit 2: Multi-Digit Whole Number and Decimal Fractions Operations</b> Estimated Time to Complete: 7 Weeks Targets should be recorded in Q2	<b>Unit 3: Addition and Subtraction of Fractions</b> Estimated Time to Complete: 5 Weeks Targets should be recorded in Q3
<p><b>Overview of Launching Unit:</b> For students, a successful experience with math begins with the basic: how to think like an active mathematician; how to speak mathematically, and how to record and share their thinking. As you prepare to implement Math Workshop keep in mind that it will be necessary to be flexible. Clear statements and clear demonstrations of roles and procedures need to be established. All points and aspects need to be repeated, charts or anchors of support are to be posted and referred to again and again.</p> <p><b>Goals of Math Workshop:</b></p> <ul style="list-style-type: none"> <li>Help students think of themselves as mathematicians who enjoy and actively participate in math.</li> <li>Establish consistent classroom roles, routines, and procedures that support teaching and learning.</li> <li>Increase rigor by having students explore, express, and better understand mathematical content.</li> </ul> <p><b>Optional lessons for launching Math Workshop are available in Schoology.</b> If you choose to use these lessons, they can be taught as is, or the lesson ideas can be incorporated into your Unit 1 learning activities.</p>	<p><b>Essential Standard</b></p> <p>5_M_1: Students will demonstrate an understanding of the base-ten number system.</p> <p>5_M_2: Students will demonstrate an understanding of fractions and decimals.</p> <p>5_M_3: Students will understand and apply concepts of measurement.</p> <p>5_M_4: Students will develop, understand, and apply numerical and algebraic concepts.</p> <p><b>Learning Targets</b></p> <ul style="list-style-type: none"> <li>5_M_1_A: Understand that in a multi-digit number, a digit represents 1/10 times what it would represent in the place to its left. (continues in unit 2). (MS-5.NBT.A.1)</li> <li>5_M_1_B: Evaluate the value of powers of 10 and understand the relationship to the place value system. (continues in unit 2). (MS-5.NBT.A.2)</li> <li>5_M_1_C: Convert measurements of capacity, length and weight within a given measurement system. (continues in unit 2 and unit 4). (MS-5.MD.A.1)</li> <li>5_M_1_D: Read, write, and identify numbers from billions to thousands using number names, base ten numerals and expanded form. (MS-5.NBT.A.3)</li> <li>5_M_1_E: Compare two numbers from billions to thousands using the symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math> and justify the solution. (MS-5.NBT.A.4)</li> <li>5_M_2_A: Understand that the parts of a whole can be expressed as decimals. (MS-5.NBT.B.1)</li> <li>5_M_2_B: Compare and order decimals to the thousandths place using the symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the solution. (MS-5.NBT.B.2)</li> <li>5_M_1_F: Round numbers from billions to thousandths place. (MS-5.NBT.A.5)</li> <li>5_M_1_G: Add and subtract multi-digit whole numbers and decimals to the thousandths place, and justify the solution. (MS-5.NBT.B.3)</li> <li>5_M_1_H: Estimate results of sums and differences of decimals to the thousandths. (MS-5.NBT.B.4)</li> <li>5_M_1_I: Solve and justify multi-step problems involving whole numbers, variables, and decimals. (continues in unit 2 and unit 4). (MS-5.NBT.A.6)</li> <li>5_M_1_J: Multiply multi-digit whole numbers and decimals to the hundredths place, and justify the solution. (continues in unit 2 and unit 4). (MS-5.NBT.A.7)</li> <li>5_M_1_K: Divide multi-digit whole numbers and decimals to the hundredths place using up to two-digit divisors and four-digit dividends, and justify the solution. (continues in unit 2 and unit 4). (MS-5.NBT.A.8)</li> </ul>	<p><b>Essential Standard</b></p> <p>5_M_1: Students will demonstrate an understanding of the base-ten number system.</p> <p>5_M_3: Students will understand and apply concepts of measurement.</p> <p>5_M_4: Students will develop, understand, and apply numerical and algebraic concepts.</p> <p><b>Learning Targets</b></p> <ul style="list-style-type: none"> <li>5_M_1_B: Evaluate the value of powers of 10 and understand the relationship to the place value system. (MS-5.NBT.A.2)</li> <li>5_M_1_C: Solve and justify multi-step problems involving whole numbers, variables, and decimals. (continues in unit 4). (MS-5.NBT.A.6)</li> <li>5_M_1_D: Multiply multi-digit whole numbers and decimals to the hundredths place, and justify the solution. (continues in unit 4). (MS-5.NBT.A.7)</li> <li>5_M_1_E: Write, evaluate and interpret numerical expressions using the order of operations. (continues in unit 4). (MS-5.NF.A.1)</li> <li>5_M_1_F: Translate written expressions into algebraic expressions. (continues in unit 4). (MS-5.NF.A.2)</li> <li>5_M_1_H: Estimate results of products with decimals to the thousandths. (MS-5.NBT.B.4)</li> <li>5_M_1_I: Convert measurements of capacity, length and weight within a given measurement system. (continues in unit 4). (MS-5.MD.A.1)</li> <li>5_M_1_J: Solve multi-step problems that require measurement conversions. (continues in unit 4). (MS-5.MD.A.3)</li> <li>5_M_1_A: Understand that in a multi-digit number, a digit represents 1/10 times what it would represent in the place to its left. (MS-5.NBT.A.1)</li> <li>5_M_1_E: Divide multi-digit whole numbers and decimals to the hundredths place using up to two-digit divisors and four-digit dividends, and justify the solution. (continues in unit 4). (MS-5.NBT.A.8)</li> </ul>	<p><b>Essential Standard</b></p> <p>5_M_2: Students will demonstrate an understanding of fractions and decimals.</p> <p><b>Learning Targets</b></p> <ul style="list-style-type: none"> <li>4_M_3_C: Explain and/or illustrate why two fractions are equivalent. (review from 4th grade). (MS-5.NF.A.1)</li> <li>4_M_3_D: Recognize and generate equivalent fractions. (review from 4th grade). (MS-5.NF.A.1)</li> <li>5_M_2_C: Understand that the parts of a whole can be expressed as fractions. (MS-5.NF.A.3)</li> <li>5_M_2_D: Estimate results of sums and differences with fractions. (MS-5.NF.A.5)</li> <li>5_M_2_E: Solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators, and justify the solution. (MS-5.NF.A.6)</li> <li>5_M_2_I: Solve and justify multi-step problems involving variables, whole numbers, and fractions. (continues in unit 4). (MS-5.NF.A.8)</li> <li>5_M_2_F: Compare and order fractions using the symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the solution. (MS-5.NF.B.2)</li> </ul>

INQUIRY
DIPLOMA PLUS
SOCIAL EMOTIONAL LEARNING



# Curriculum Integration



*University of Arizona - McClelland Hall Professional Development Center Addition*

PHASE 1 – ENGAGEMENT

PHASE 2 – SPACE STUDY

PHASE 3 - DESIGN

PHASE 4 - PRESENTATION

# Role of Space

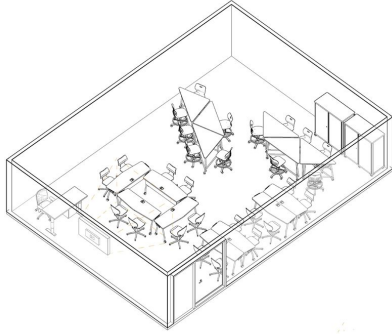
## *Critical Skill Development*

- Self-directed learning
- Adaptive problem solving
- Project management
- Documenting the process
- Communicate and collaborate
- Create value for others
- Seek and use feedback

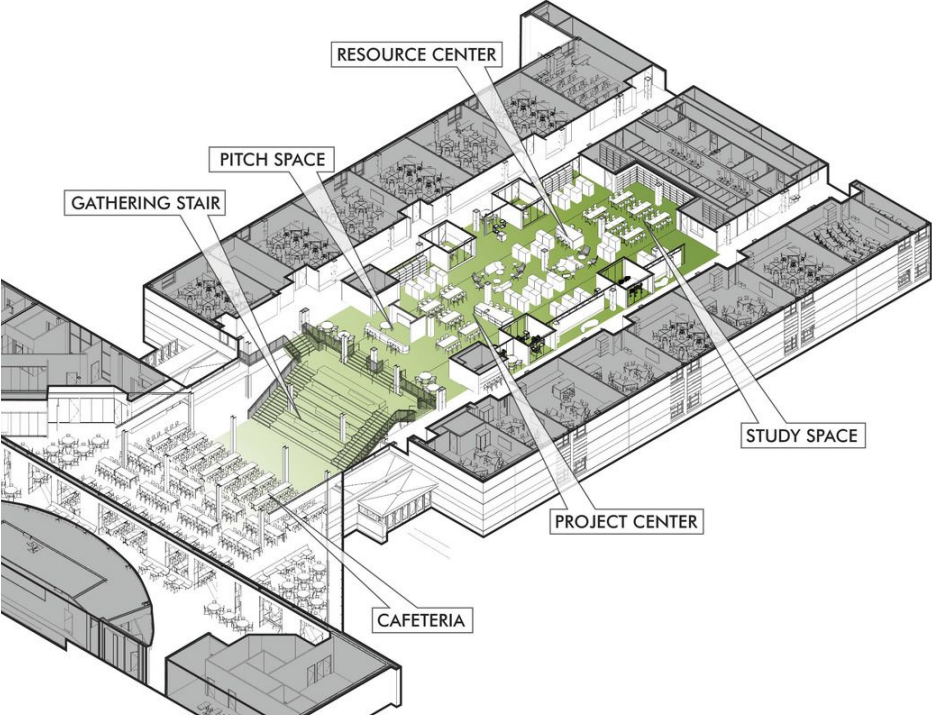
# Class Partnerships



# Classroom + Corridor Reimagination



# Library Reimagination



# Application Opportunities

## *Disciplinary Integration*

These project elements can be applied within any subject area in school and can be imagined specifically through the lens of the teacher's curricular goals.

# Application Opportunities

## *Disciplinary Integration*

**Science** – Space evaluation emphasizes physical space measurements using environmental probes, environmental impacts, or material science of build or furniture materials.

**Math** – Space evaluation emphasizes scaling, geometry, or survey statistics

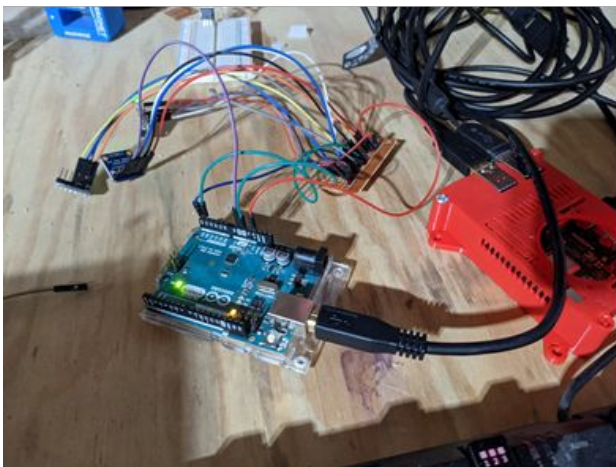
**Social Studies** – Space evaluation emphasizes policy implications of building code; the history of who designs, runs, teaches in, and learns in US schools; or comparisons of different schools and school systems around the world

**English/Literature** – Space evaluation emphasizes a chosen literature setting, the needs/motivations of literature characters, or the design application of a given approach to imagery/emotion from a poem, set of poems, or author

# Application Opportunities

*Examples:*

Computer Science



```
 Gould_Evans_POE_Sensor_Code_v4 | Arduino 1.8.13
 File Edit Sketch Tools Help

 Gould_Evans_POE_Sensor_Code_v4

 void loop() {

  float t = sht31.readTemperature();
  float h = sht31.readHumidity();

  if(!isnan(t)) {
    if(!isnan(h)) {
      // Serial.print("CO2: ");
      send += oca.getCO2();
      send += ",";
      // Serial.print("Temp, TVOC: ");
      send += oca.getTVOC();
      send += ",";
    }
  }

  if (!isnan(t)) { // check if 'is not a number'
    // Serial.print("Temp °C = ");
    send += t;
    send += ",";
    // Serial.print("UV%");
  } else {
    Serial.println("Failed to read temperature");
  }

  if (!isnan(h)) { // check if 'is not a number'
    // Serial.print("Hum. % = ");
    send += h;
    send += ",";
  }

  uint32_t lum = tsl.getFullLuminosity();
  uint16_t ir, full;

 Arduino Uno on COM5

 Arduino_Data_Logging_Processing | Processing 3.5.4
 File Edit Sketch Debug Tools Help

 Arduino_Data_Logging_Processing

 void draw()

 44   if ( myPort.available() > 0)
 45   { val = myPort.readStringUntil('\n'); } //The newline separator separates each Arduino loop.
 46   if (val != null) { //We have a reading! Record it.
 47     val = trim(val); //gets rid of any whitespace or Unicode nonbreakable space
 48     println(val); //Optional, useful for debugging. If you see this, you know data is being sent.
 49     float sensorVals[] = float(split(val, ',')); //parses the packet from Arduino and places the values into the sensor
 50     // println(sensorVals);
 51     TableRow newRow = table.addRow(); //add a row for this new reading
 52     newRow.setInt("id", table.lastRowIndex()); //record a unique identifier (the row's index)
 53
 54     //record time stamp
 55     newRow.setInt("year", year());
 56     newRow.setInt("month", month());
 57     newRow.setInt("day", day());
 58     newRow.setInt("hour", hour());
 59     newRow.setInt("minute", minute());
 60     newRow.setInt("second", second());
 61
 62     //record sensor information. Customize the names so they match your sensor column names.
 63     if (val != null) {
 64       newRow.setFloat("CO2", sensorVals[0]);
 65       newRow.setFloat("TVOC", sensorVals[1]);
 66       newRow.setFloat("Temp", sensorVals[2]);
 67       newRow.setFloat("Hum", sensorVals[3]);
 68       newRow.setFloat("IR", sensorVals[4]);
 69     }
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