Designing a Learning Environment

Dr. Patrick Michel

PTECH - Reading/Math Data

- Students with Disabilities (SWD) were below grade level when they entered PTECH:

  - Reading: 60% of students in Cohorts 1 & 2 were at least one grade level behind.

  - Math: 65% of students in Cohorts 1 & 2 were at least one grade level behind.

- Students were below grade level when they entered PTECH:

  - Reading: 61% of students in Cohorts 1 & 2 were at least one grade level behind.

  - Math: 41% of students in Cohorts 1 & 2 were at least one grade level behind.

Regents Exams SWDs: PTECH vs. State and Region

- Algebra I (2015)
  - PTECH Cohort 1 = 100%
  - PTECH Cohort 2 (2016) = 75%
  - Region = 48%
  - State = 60%

- ELA (2016)
  - PTECH Cohort 1 = 80%
  - PTECH Cohort 2 (2017) = 82%
  - Region = 67%
  - State = 76%

- Living Environment (2016)
  - PTECH Cohort 1 = 100%
  - PTECH Cohort 2 (2017) = 100%
  - Region = 61%
  - State = 73%

- Global History & Geography (2016)
  - PTECH Cohort 1 = 86%%
  - PTECH Cohort 2 (2017) = 90%
  - Region = 42%
  - State = 58%

SWD Graduation Rate: PTECH vs. State

New York State

- Average graduation rate for SWDs in NYS over the last four years: 50.5%

- Average graduation rate for ALL STUDENTS (including SWDs) in NYS over the last four years: 77.25%

HFM BOCES Region

- Average graduation rate for SWDs in HFM Region over the last two years: 46%

- Average graduation rate for ALL STUDENTS (including SWDs) in HFM Region over the last two years: 75%

PTECH

- Cohort 1 Projected Graduation Rate for SWDs: 88%

- Cohort 1: Projected Graduation Rate for ALL students: 89%

94% college course pass rate for SWDs in Cohorts 1 and 2

What is P-Tech?

- www.ptech.org/model

- Pathways to Technology

- 9-14

- Middle jobs

- The main focus is an associate's degree in a Career Pathway (Completion School).

- The total replacement of our 19th Century Traditional Education System based on the Henry Ford assembly line with a 21st Century Google/Apple environment.

In the 21st century economy and workplace, knowledge acquisition is a basic skill. It is knowledge manipulation and creation that are valuable.

What needs were we trying to address?

- Disconnect between the Traditional Public Education System and our business community, college community and parent community

- Poverty and the Brain Drain

- Equity of Access

- Special Education

- Over 600 Middle Skills Jobs not being filled and more on the way

- Business community giving up on public school system

- Community college 3-year graduation rate of 24%

- 6-year 4-year college graduation rate of 54%

Complete Redesign of High School

- Change in the educational delivery system
- Team-based project-based learning
- Standards-based grading
- Integration of the business community into the everyday work of the schools
- Integration of the college community into the everyday work of the schools
- Re-engage the parent community into the schools
- Designed with Special Education children in mind
- Focus on at-risk and children in the middle
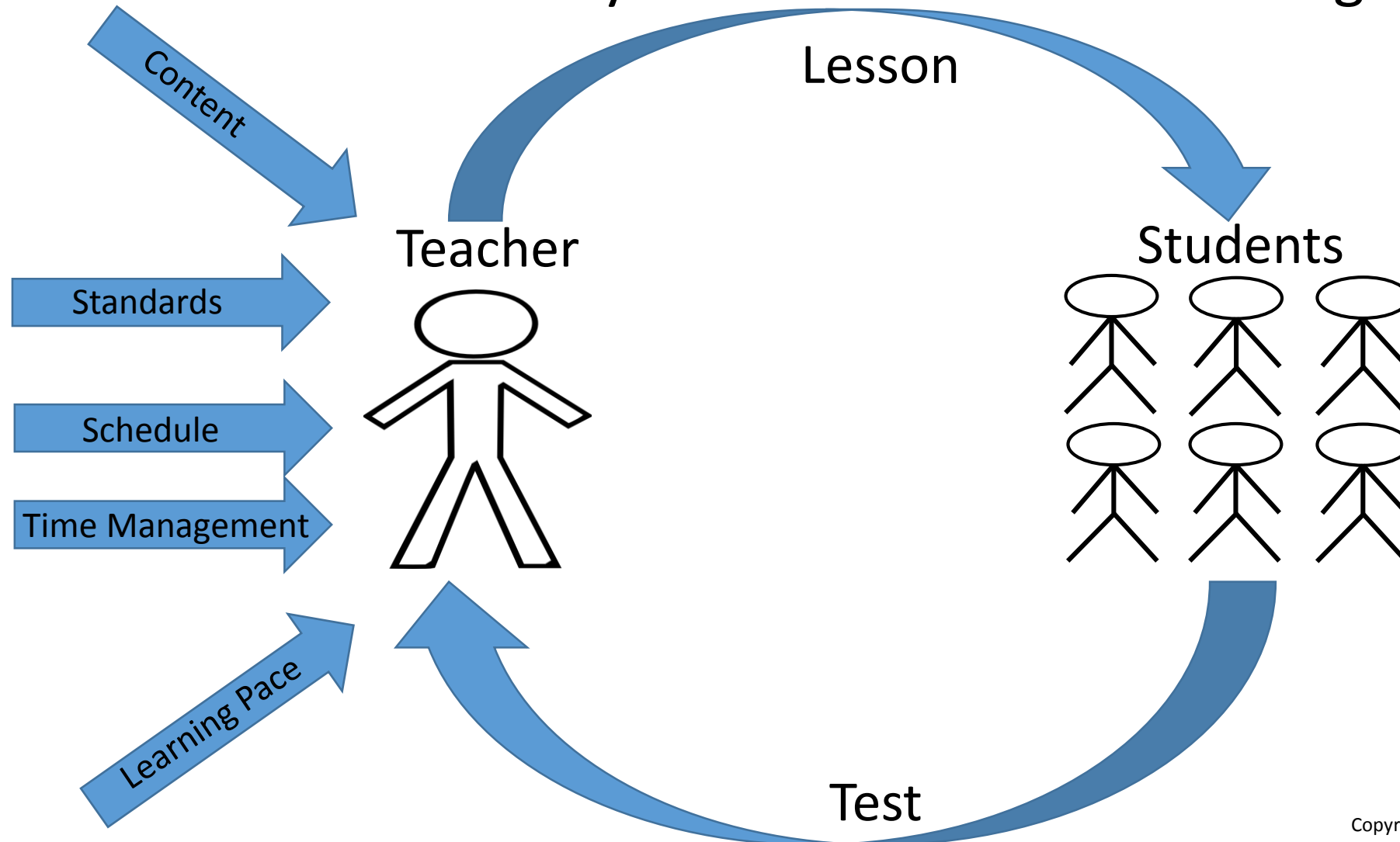- Truly integrated career pathways

School Environment

- Half-time Project-Based Learning coach
- Learning Commons instead of a library
- Innovation Spaces instead of classrooms
- Morning Meeting
- Robotics lab
- Google/Apple Work Environment
- College campus
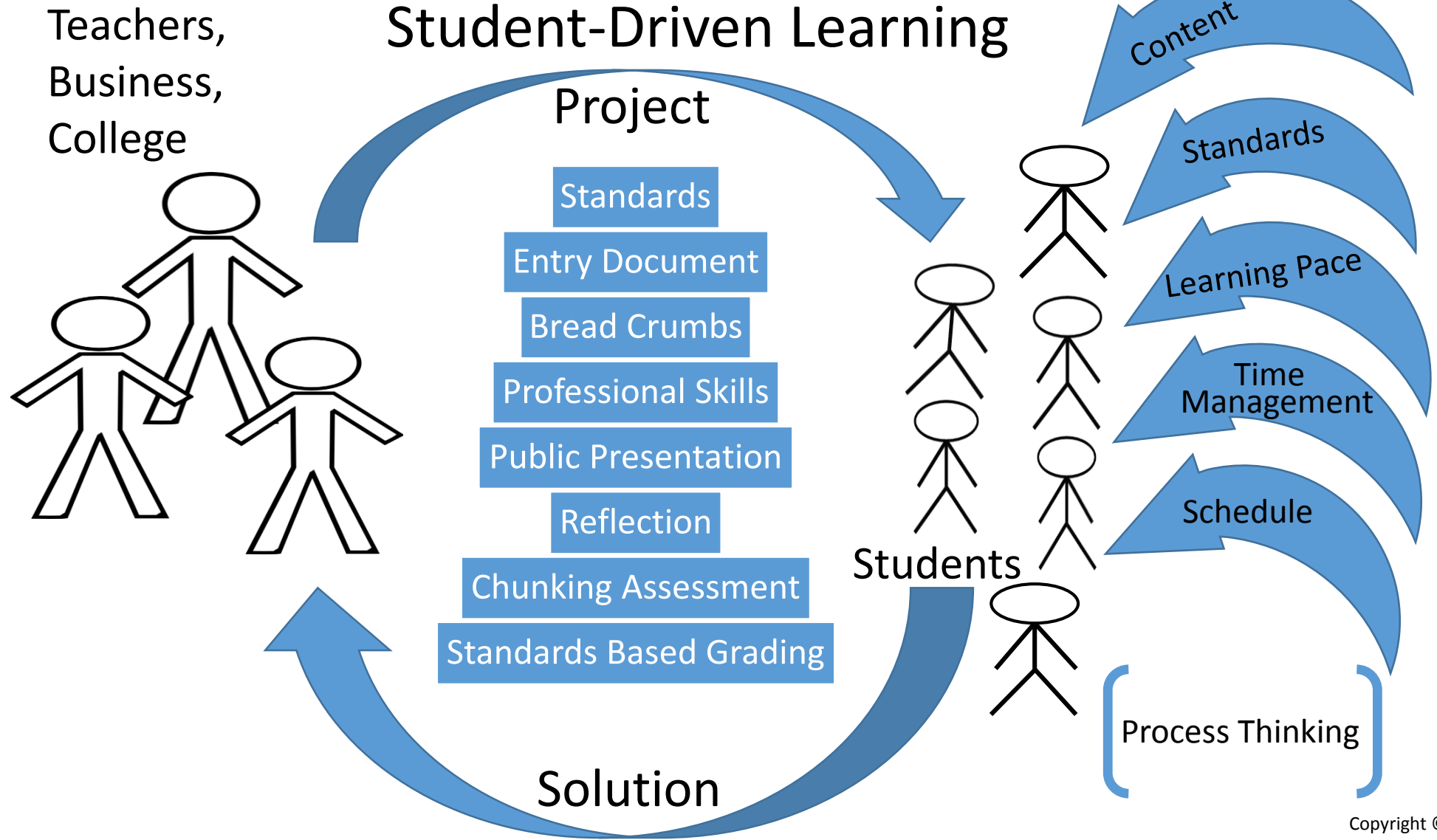- Prototype lab
- No desks, rows, bells
- One-to-one device

Change the Instructional Delivery System

- Created a system that models a 21st century business

- Integrated team PBL 24/7

- Teachers and students are learning teams

- Paperless but paper can be used

- Teachers empowered to run their school

- Students empowered to run their school

- 21st century professional skills
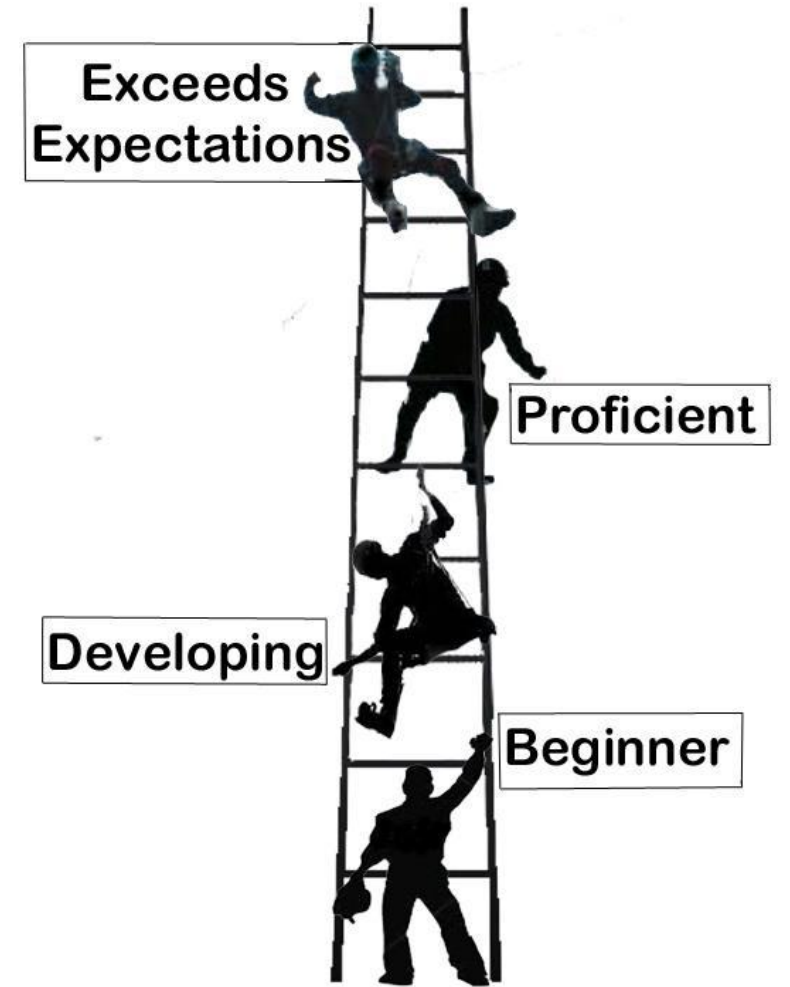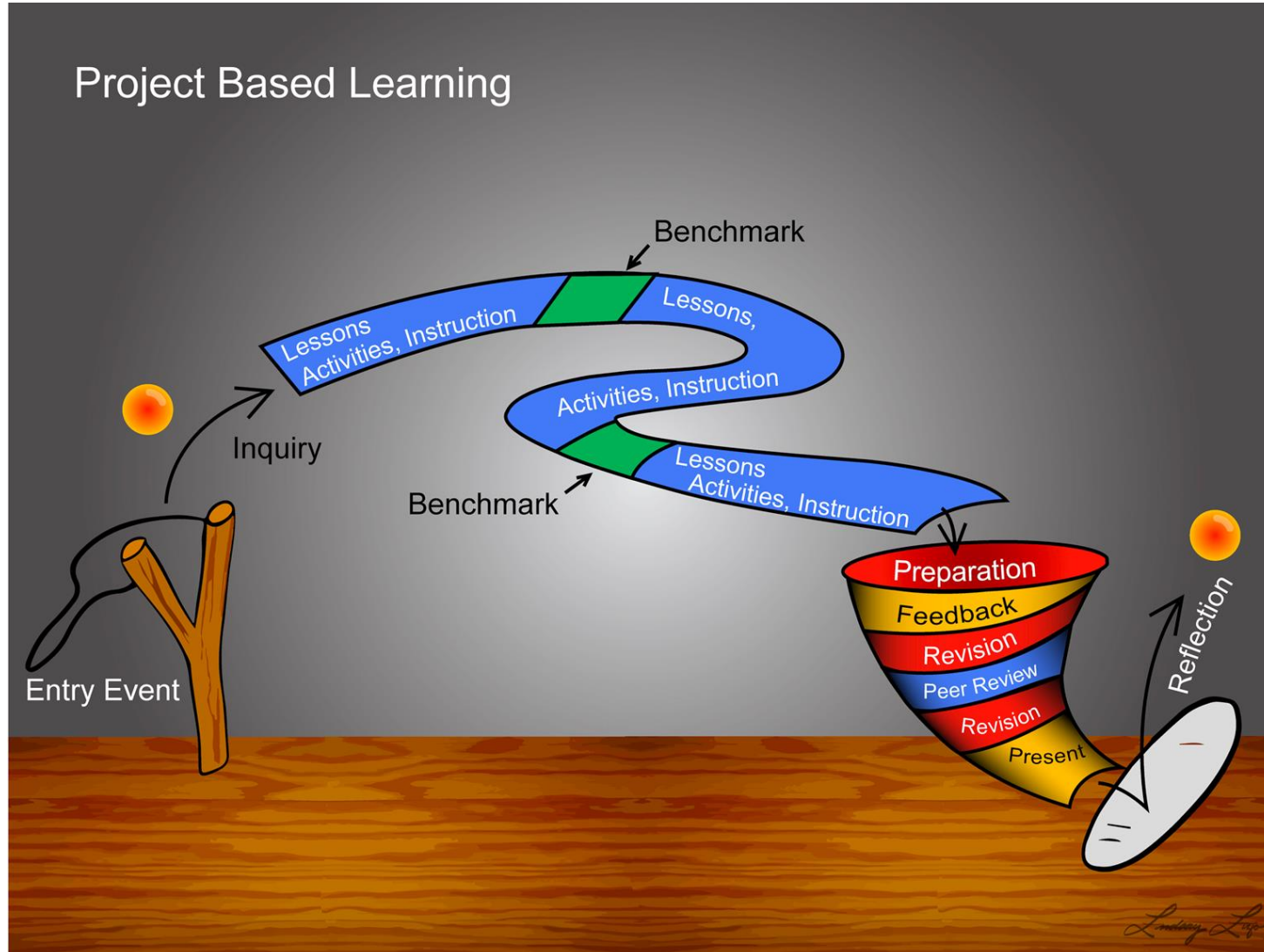
- Ramping up

- Nimble high school

Traditional Style: Teacher-Driven Learning

Needs of Business Community

Needs of Education Community

Needs of Community

Teachers, Business, College

Student-Driven Learning

Project

Standards

Entry Document

Bread Crumbs

Professional Skills

Public Presentation

Reflection

Chunking Assessment

Standards Based Grading

Solution

Students

Content

Standards

Learning Pace

Time Management

Schedule

Process Thinking

Year 1

- ELA 9
- ELA 10
- Living Environment
- Individual Learning Time
- Algebra I
- Robotics I
- ART 150 - *2D Design*
- PE
- Health
- Career Exploration
- CIS 105 – *Computer Applications*

Year 2

- ELA 11
- Earth Science
- Global Studies
- Individual Learning Time
- MAT 120 - *Inter. College Alg.*
- BUS 101 - *Principles of Business*
- Elective
  - Robotics II, Intro to Coding, Entrepreneurship, Anatomy & Physiology
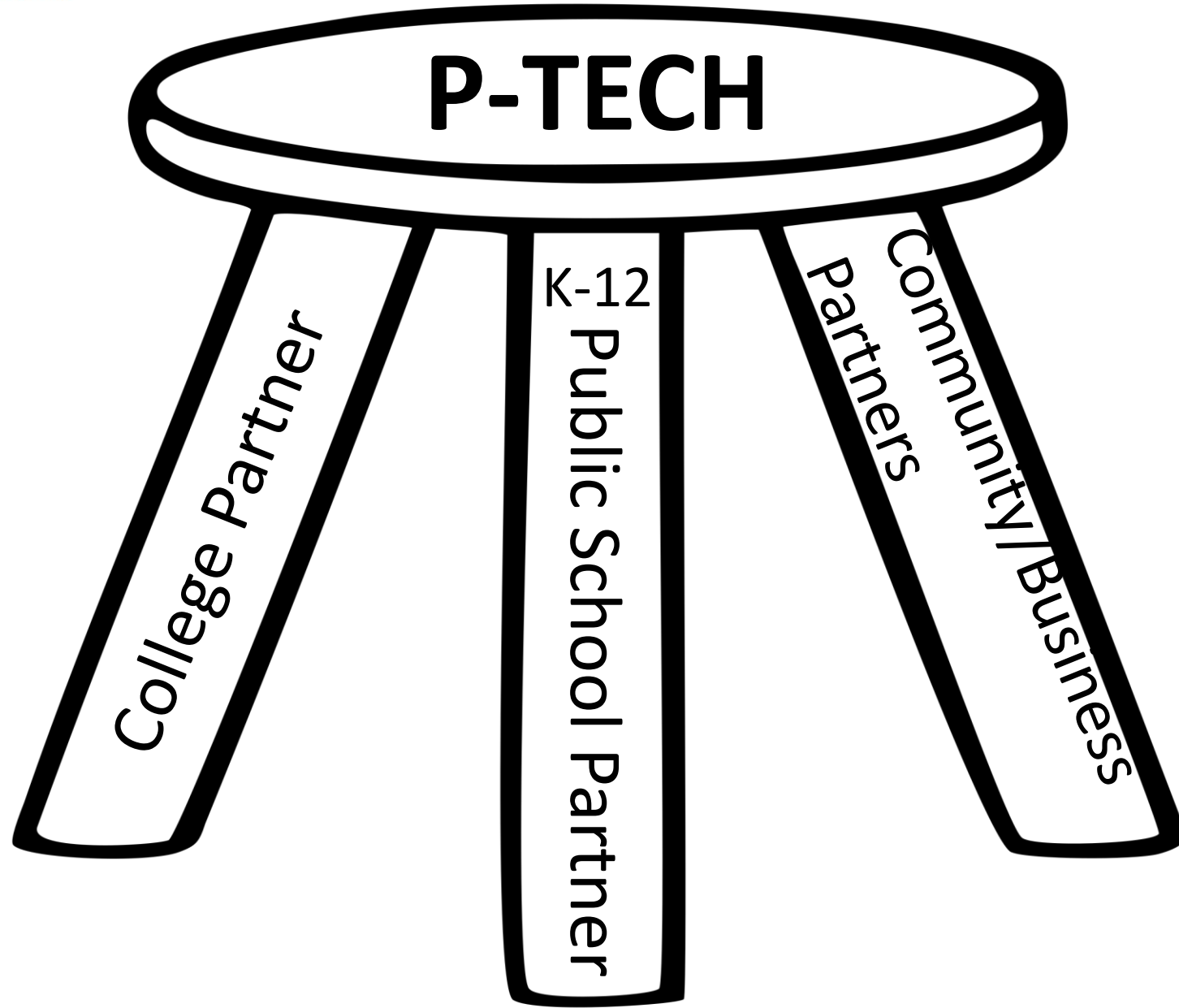- PE
- Health
- Career Exploration II

Year 3-6 HS

- ENG 103
- ENG 104
- U.S. History
- Individual Learning Time

College Courses

- Individual Pathway Specific Degree Completion Coursework
- *See transcript handout*

The P-Tech design empowers all students, including Special Education students. We have learned that SWDs do not need the level of support required by the traditional system.

"Our data show that when P-Tech students arrive on our campus as high school juniors, they are better prepared for college-level work than the high school graduates we accept."

- Dr. Dustin Swanger
President, FMCC

Questions?