Justice Page Middle School Science, Technology, Engineering, Arts, and Math (STEAM)
Where Have We Been?

- 2011
  - Minneapolis Public Schools opens Ramsey Middle School as a new south Minneapolis middle school program.
  - As part of the new Ramsey Middle School, a STEM focus is established, and a STEM elective is created to expose all students to STEM. This elective continues to be offered through the 2016-2017.

- 2015
  - Ramsey Middle School enters the Future City Competition. We are the only Minneapolis Public School to participate. At the Minnesota Regional competition, on our first try, we bring home 4 trophies, and one of our teams wins first place, only to lose the title due to a paperwork error on the part of the instructor. However, an impression is made.
Where Have We Been?

- 2016
  - Via a grant opportunity with the University of Minnesota, a small group of 6th grade educators works to revision the Ramsey Middle School STEM program. As part of this initiative, the Ramsey Middle School Parent/Teacher Association raises $6,000+ dollars to build a Maker's Space, the first of its kind in Minneapolis Public Schools. Ramsey Middle School sets aside a space, and the raised funds are spent on tools and consumables.
  - The aforementioned 6th grade teachers, again in partnership with the University of Minnesota, establish the first Ramsey Middle School STEM Night for 6th grade students.
Where Have We Been?

- **2017**
  - Ramsey Middle School becomes Justice Page Middle School, and a new STEAM Vision takes shape.
  - The original Ramsey Middle School STEM vision proves unsustainable as the student population grows from its original 200 6th graders to near 900 6th-8th graders. A new model of STEAM Integration across grades and disciplines vs. a stand-alone STEM class is implemented, and the position of STEAM Integration Specialist is created.
  - After the dissolution of the the STEM Elective, the former STEM classroom becomes the new Maker's Space. The original space was a good proof of concept, but the space was inadequate for program needs. Dubbed Maker's Space 2.0, the new space begins to be used by teachers throughout Justice Page Middle School.
Where Have We Been?

- 2017 (cont.)
  - JPMS establishes the first STEAM Team to include representatives for Math, Reading, and Science as these subjects areas are tested via the Minnesota Comprehensive Exam (MCA). The team also includes a JPMS Administrator.
  - Justice Page Middle School hosts its first STEAM Night for students in grades 6-8. The night features hand-on STEAM activities and fundraiser dinner. The night is a success with 200-300 in attendance.
  - Justice Page Middle School begins a partnership, via a grant opportunity, with the Science Museum of Minnesota to grow and improve the JPMS STEAM program as well as assist in fundraising to upgrade the Maker’s Space.
Where Have We Been?

- 2018
  - Justice Page Middle School implements STEAM Lab via pairing 6th and 8th grade Advisories in the Maker’s Space to collaboratively complete an engineering task.
  - Justice Page Middle School, again and still the only Minneapolis Public School at competition, wins the Minnesota Regionals by placing 1st out of 59 teams and represents the State of Minnesota at the Future City National Competition.
  - Justice Page Middle School STEAM, in partnership with the Science Museum of Minnesota and the Justice Page Middle School PTA, raises nearly $7,000 via GoFundMe to outfit the Maker’s Space with 3D printers, Arduinos, and Makey Makey's, as well as lumber and other consumables.
Where Are Now?

- 2018

  - The Pratt Family Farm Foundation Justice Page Middle School Maker’s Space (Maker’s Space 3.0) is opened and becomes a workshop for not only building, but Computer Assisted Design (CAD), computer programming and coding, 3D printing, and using technology to solve problems.

  - The Engineering the Future elective class is established as a year-long course focused on Advanced Learners. The course encompasses the Future City class for the first semester as well as a coding/programming/CAD designing class for the second semester. Students are exposed to guest lectures from engineers, land surveyors, government officials, computer programmers, artists, and consulting firms around STEAM opportunities in the "real world."
Where Are Now?

- 2018 (cont.)
  - Due to staffing changes and the overall growth of the program, the second STEAM Team includes representatives from all content areas as well an administrator.
  - Justice Page Middle School establishes a long-term partnership with the Minnesota Department of Transportation around the I-94/I-35W reconstruction project. This partnership will expand to be building-wide, across all grades and disciplines, over the life "The Project."
  - STEAM Lab expands to include pairing only 8th grade Crews Semester 1, then continuing to pair 6th and 8th grade Crews during Semester 2. The focus continues to be around engineering tasks.
Where Are Now?

- 2018 (cont.)
  - Due to the success of the first STEAM Night, JPMS adds a second STEAM Night, with the first to occur in the fall, and the second in the spring.
  - The Justice Page Middle School PTA, via Give To The Max, raises $4,500+ to purchase new computers to run all the tech purchased for the Pratt Family Farm Justice Page Middle School Maker's Space.

- 2019
  - For the second year in a row, Justice Page Middle School, again and still the only Minneapolis Public School at competition, wins the Minnesota Regionals by placing 1st out of 48 teams and represents the State of Minnesota at the Future City National Competition.
Where Are Now?

- 2019 (cont.)
  - JPMS STEAM is chosen to take part in a nation-wide program via Underwriters Laboratories (UL) to pilot their Xplorlabs modules and curriculum.
  - JPMS STEAM is awarded a grant from the American Institute for Aeronautics and Astronautics to purchase supplies to launch a 3D printed Rhino into Earth’s stratosphere. The purchased equipment will not only launch the Rhino, but also track its journey via GPS, record its journey from start to finish, and ensure a safe return of the payload.
  - JPMS adds a year-long Coding elective to its list of class offerings.
  - Destination Imagination is offered as an after-school class offering.
Where Are Going?

- Continued participation in the Future City Competition.
- Establishment of Student STEAM Team.
- Continue long-term partnership with the Minnesota Department of Transportation RE: STEAM Integration opportunities across grade levels and content areas.
- Continue STEAM Lab with 6th and 8th grade students.
- Continue towards training ALL JPMS staff in the use of the 3D printers, Computer Aided Design (CAD software), Makey Makeys, as well as the tools and resources of the Pratt Family Farm Justice Page Middle School Maker’s Space.
- Continued partnership with Science Museum of Minnesota.
- Participation in Technovations coding competition.
- Pursuing other initiatives as they arise.
What Is Our Visible Commitment to STEAM?

- Two STEAM Nights per year
- STEAM website via Justice Page Middle School website.
- Social media accounts promoting JPMS STEAM.
- Pratt Family Farm Justice Page Middle School Maker’s Space
- JPMS STEAM presence at JPMS orientations, conferences, and Open House events.
- STEAM Lab throughout the year.
- STEAM Integrationist position
- Continued building-wide support for Future City at JPMS
- Engineering the Future Elective
- Partnerships with Science Museum of Minnesota, Minnesota Department of Transportation, University of Minnesota
What Is Our Visible Commitment to STEAM?

- Acknowledgements from Minneapolis Mayor’s Office, School Board Members, City Council Members, and Minneapolis Public Schools Office of the Superintendent.
- Media coverage via Southwest Journal on two separate occasions.
- Media coverage in the StarTribune newspaper.
What Is Our Current Buy-In?

- Nearly $25,000 raised in donations to Justice Page Middle School STEAM from the Justice Page Middle School community since 2016.
- Strong response to JPMS STEAM via social media.
- Strong attendance at JPMS STEAM Night events.
- Student engagement in JPMS STEAM Lab and the Pratt Family Farm Justice Page Middle Schools Maker’s Space related classes and activities remains high.
- JPMS Staff are taking advantage of the Pratt Family Farm Justice Page Middle School Maker’s Space via STEAM focused or STEAM enhanced lessons.
- JPMS STEAM Team is committed to expanding JPMS STEAM across disciplines and grade levels.
- JPMS Administration continues to support JPMS STEAM initiatives.