



# THE GREEN MACHINE

EDINA ROBOTICS *FIRST* TEAM

# 1816



Large Scale  
Advocacy at the  
Local Level

# *FIRST*Team 1816

- Mission: 1816 transforms culture to celebrate and have a lifelong passion for STEM - by building students into leaders, inspiring generations through *FIRST*® , and by opening doors to STEM opportunities



# Bringing Advocacy Home

- After attending *FIRST* National Advocacy Conference, we wanted to share what we learned with as many *FIRST* teams as possible



- 1816 founded the Minnesota Advocacy Conference (MAC), September 24, 2016
- Goal: Teach how to approach elected officials with specific STEM asks
- 13+ teams, 100 attendees



# At the MAC: Setting Context and Content

- State Senator Melisa Franzen (DFL-49th District)
  - Keynote Speaker
  - Champion for STEM
  - Established relationship via Town Hall meetings, robot demonstrations, LEGO demonstrations.
  - Impressed with how STEM in Edina driven by HS robotics team
  - Developed lasting relationship
- STEM Education Specialist, MN Department of Education
  - Spoke about STEM Education policy and the importance of STEM education
  - Reached out to him via email and Twitter



# At the MAC: Setting Context and Content

- Erik Anderson: AP Government Teacher
  - Since 2013-14, 1816 has given annual talks to classes about STEM Advocacy, and the impact students make by approaching officials
  - Government 101: How it *REALLY* works
  - How to Advocate at the State Level
    - Many similarities to national advocacy, but more local interaction and events



# At the MAC

- Afternoon: Student-led breakout sessions
  - Attendees learned to approach elected officials, to plan out what they were going to say; and to create “an ask.”
  - Student leaders from Minnesota FRC Teams who had attended NAC
  - Small groups presented to the large group with potential asks



# District 49 Day

- Sen. Franzen turned to 1816 as STEM experts
- Requested our help to identify and bring additional *FIRST* teams to showcase robots at the Minnesota State Capitol.
- 2502, 2239, and an Edina *FIRST* LEGO team joined us!
- Opportunity to bring *FIRST* to other elected officials
- Showcased during Town Hall Meeting hosted by Sen. Franzen and Rep. Anselmo (R-49A)
- Reached about 100 attendees and visitors



# STEM Advocacy Day

- Combined MAC and District 49 Day at State Capitol
  - Overlapped with Minnesota legislative sessions so attendees could go door-knocking
- 11 teams - *FIRST* Robotics Competition, *FIRST* Tech Challenge
- State Capitol officials, Senators and Representatives all spoke about the importance of STEM advocacy
- Robot demonstrations - raise visibility and awareness of *FIRST* and STEM
- Showcased robots and *FIRST* to 300 representatives, robot enthusiasts, and team members



# STEM Bill

- 1816 helped write bill defining STEM Education for Minnesota students
- Defining STEM in Minnesota → future funding
- Bill introduced by STEM Champions in both Minnesota House and Senate
  - **Section 1.** Minnesota Statutes 2016, section 120A.05, is amended by adding a subdivision to read:

Subd. 18.STEM education.

"STEM education" means integrated education that is authentic, intentionally designed, and includes linked-learning experiences for students to develop or apply science, technology, engineering, and mathematics concepts and processes.



# Connecting with our Federal Senators

- Senator Tina Smith's Women in the Workplace roundtable discussion
  - Representatives from fields where women are traditionally underrepresented
  - Spoke about impact of *FIRST* Robotics on participants and on 1816 members
  - 1816 picked because of high visibility as STEM Leaders
- Inspired Minnesota senator to insert authorization for funding for after-school, mentor-based STEM engagement activities in the Every Student Succeeds Act (ESSA)
  - Funding now available to help underwrite after-school STEM activities across the U.S.



# Local Advocacy

- Annual “State of STEM” report to City Council cablecast to over 40,000 households
- Long-term relationships with City Council, Mayor, principal, and School Board Edina Public Schools Referendum (\$125 mil)
  - Key in inclusion of new STEM makerspaces, Fabrication Lab, along with expanded engineering classrooms and collaboration spaces



# Next Steps

- Provide MAC attendees opportunities to advocate for impactful STEM legislation
  - Legislation/directives, request their support with asks
- Expand advocacy outreach to connect with City/Town Councils, Local School Boards, (superintendent, faculty, staff) on Title IV, Part A funding for after-school, mentored STEM engagement programs
- Identify, work with additional “champions” in state legislature - make a case for directives and STEM definitions
- Ongoing outreach with Federal Senators
- Advocacy is not “one and done.” FRC Team support is vital for ongoing STEM educational efforts and requests to fully-fund ESSA Title IV, Part A.

