

# Maine School of Science and Mathematics

*Maine's nationally ranked STEM School*

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# MSSM School Profile

- One of 15 state sponsored residential STEM academies
- Ranked #2 of all public high schools by USN&WR in 2019
- Celebrated its 25<sup>th</sup> Anniversary in 2020
- 140 residential student maximum capacity
- Camps for over 500 STEM middle schoolers each summer
- Graduated over 3,000 of Maine's highest achieving students

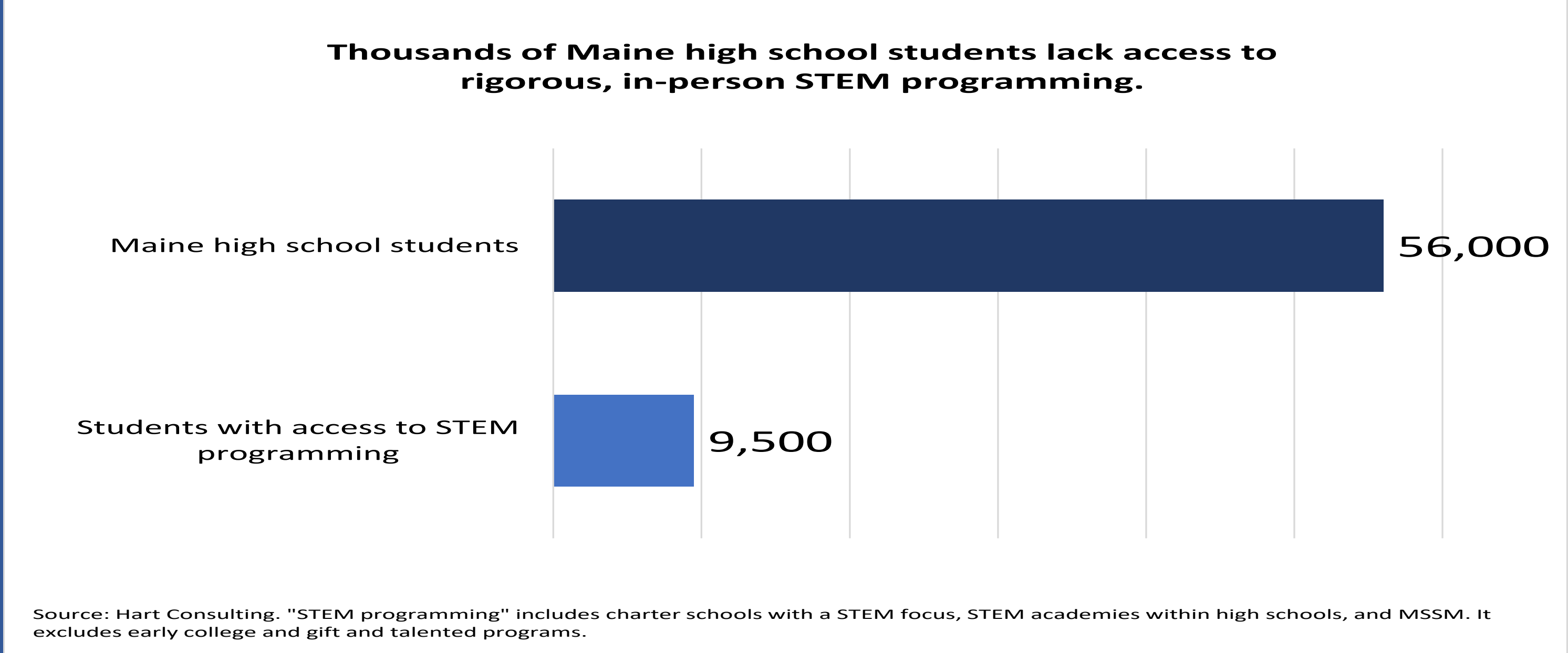
# MSSM Challenges

- Operating challenges identified by the Board of Trustees
  - 2018/2019 - Strategic Planning Committee
    - Aging, shared facilities that MSSM does not control
    - Need for State to fund room & board fees
  - 2019 – Established Student Welfare Committee
    - Need more significant investment in Social and Emotional Learning (“SEL”)
- Financial challenges
  - Flat funding has left legislative mandates unaddressed (e.g. outreach programs)
  - \$830K (14%) reduction in 2020/21 budget following loss of intl. students
  - Concerns over state budget cuts in the next biennium

# Vision for MSSM

A residential high school providing a nationally recognized academic experience in a safe and supportive environment for many of Maine's highest achieving students, which actively shares its expertise and resources with other schools around the State of Maine.

# Limited Student Access to STEM



Only 17% of Maine High School Students have access to rigorous in-person STEM programming.

# Access Limited by Geography

Access to STEM education is concentrated in more urban and wealthier communities along the I-95 corridor.

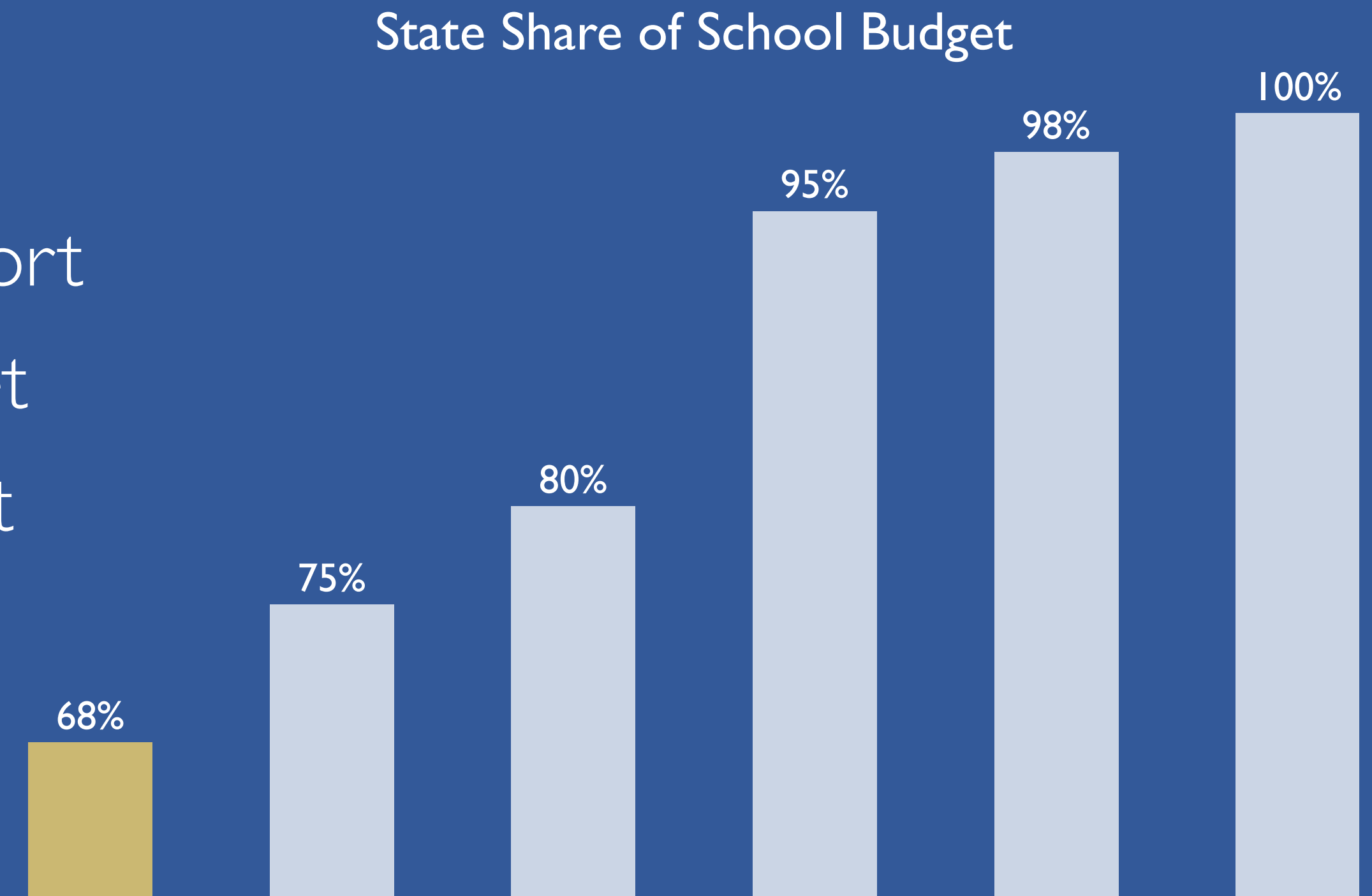
Source: MMSA STEM High School landscape analysis



# State Funding Support

## State Funding Models

- Four schools get 95% or more of budget support
- Schools at 100% are in higher education budget
- MSSM is only school in the PK- 12 state budget
- Most schools are either in the Governor's budget or in the higher education budget



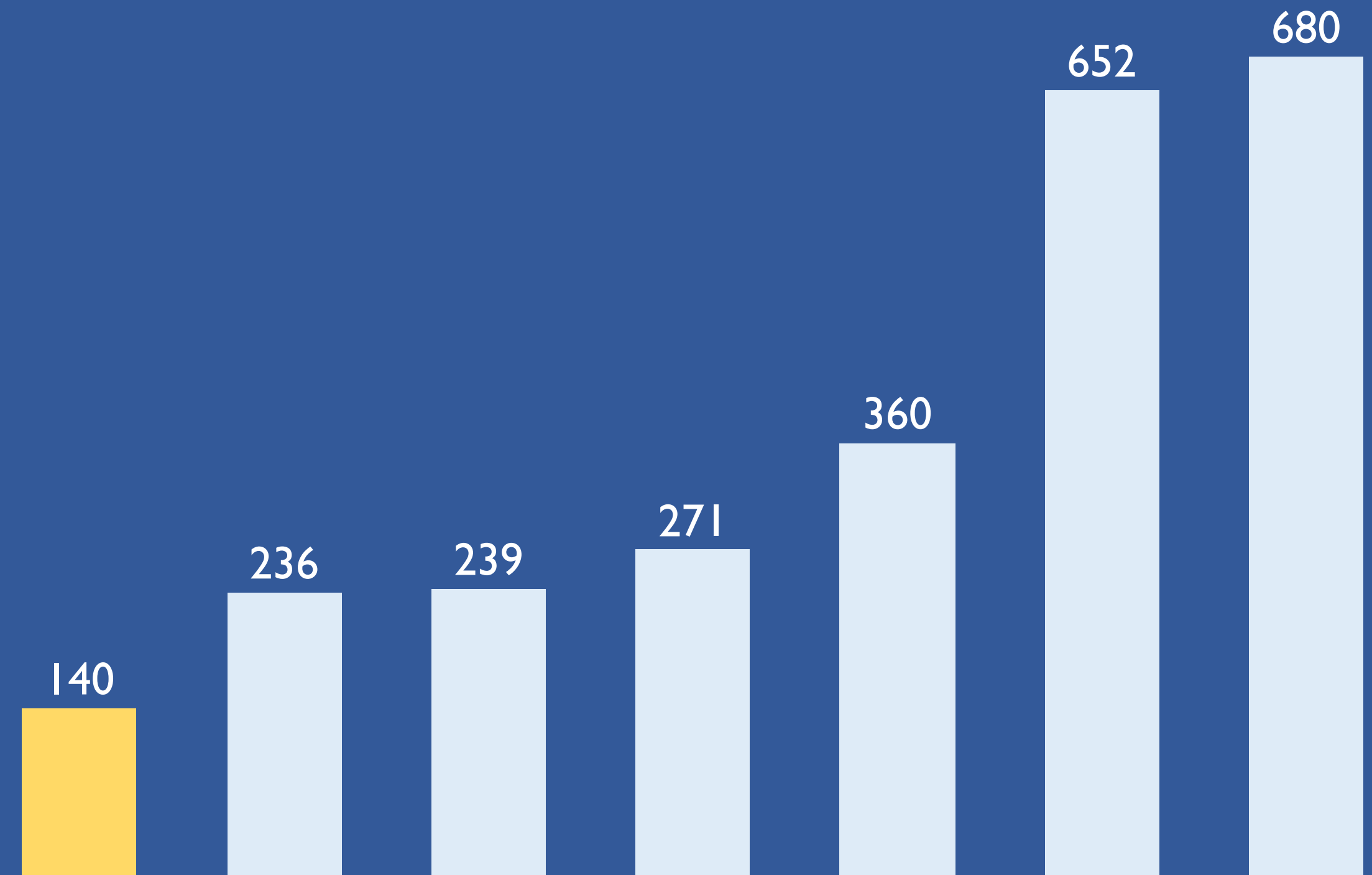
Peer Schools get more State Funding Support

# Peer School Size

Student Enrollment

## School Sizes & Profiles

- MSSM is only school with 9<sup>th</sup> grade
- 4 schools support 11<sup>th</sup> and 12<sup>th</sup> grades only
- 2 schools support 10<sup>th</sup>, 11<sup>th</sup> & 12<sup>th</sup> grades
- Too many single points of failure at a school size below 240

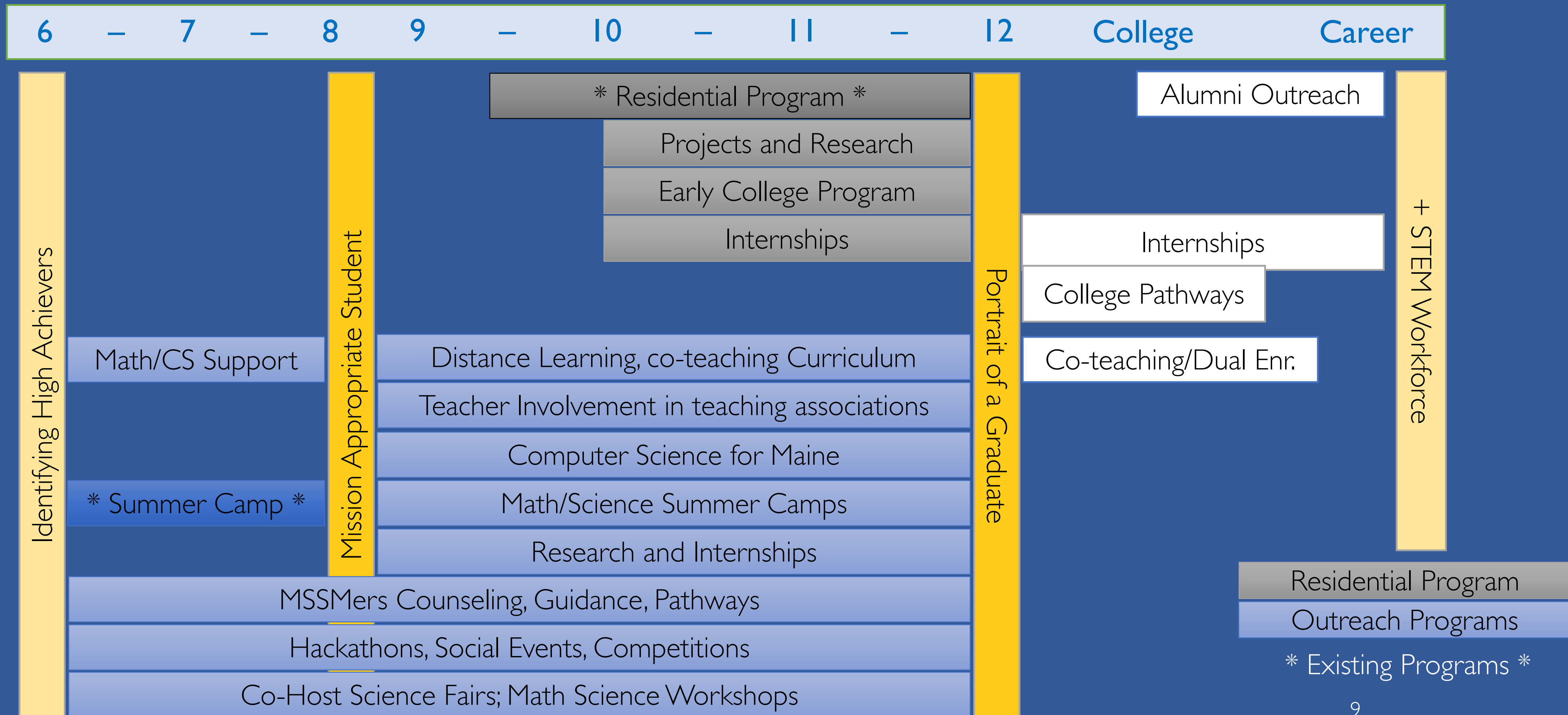


\* 11<sup>th</sup> & 12<sup>th</sup> grades only

Minimum sustainable school size is around 240 students.

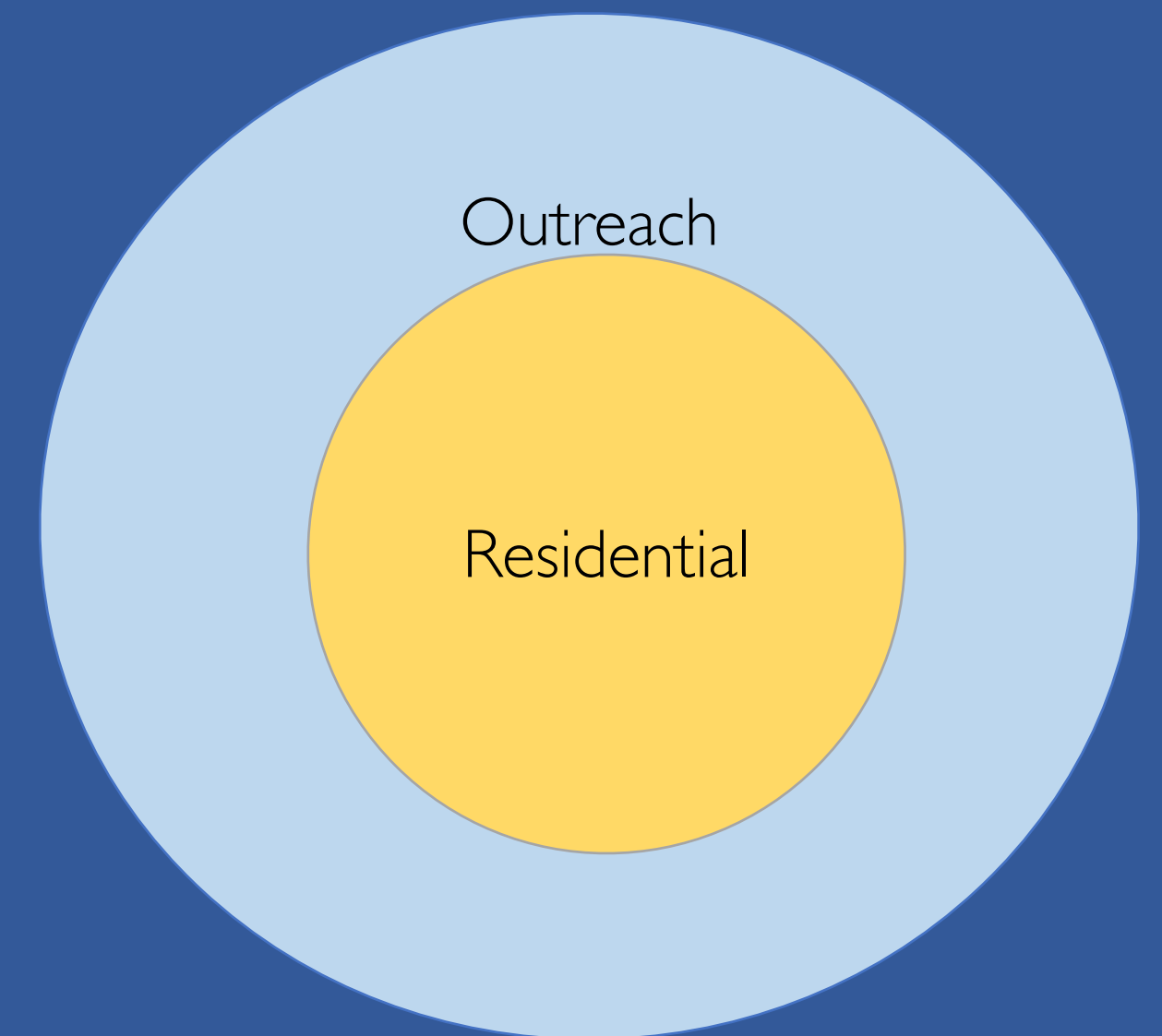


# Vision - Opportunities



# Residential Feeds Outreach

MSSM's Residential Program is a Community of like-minded, high-achieving students who come together to create a dynamic culture for learning, camaraderie and personal growth. It is the Core strength of MSSM, providing the experience and resources to support an informed Outreach Program.



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MSSM's Secret Sauce - *"I have found my people"*

# Residential Vision\*

- Enhance Student Safety and Welfare
  - Increase investment in Social & Emotional Learning (“SEL”) programs and activities
  - Mission Appropriate Facilities - Residential, Academic, Social & Recreational
- Improve Maine’s Return on Investment
  - Increase average annual number of graduates by 150% from 32 to 80
  - Lower annual cost per student from \$39,000 to \$34,000
- Strengthen Partnerships
  - Expand College and University partnerships to enhance learning opportunities
  - Build partnerships with Research and Industry to stimulate career considerations
- Cultural Commitment to Constant Improvement
  - Maintain a mind-set and programs that emphasize best practices nationally
  - Consistently measure and manage effectiveness of academic and welfare programs

# Outreach Vision\*

- Engagement with more of Maine's high-achieving students
  - Summer camps for grades 6 thru high school
  - Counseling, especially for first generation college students and their families
- Support Maine's rural students and schools
  - Teacher training in STEM instruction
  - Remote instruction in math, computer science, etc. to supplement local instruction
- Build a state-wide community of MSSMers
  - Create opportunities for residential and non-residential STEM students to gather
  - Summer camps, online events with the opportunity to reach thousands of Maine STEM students
- Become a resource on best practices for STEM instruction
  - Share programs, tools and experiences for enhanced STEM instruction
  - Share health & welfare program experience and advice for high achieving students

# Office of Outreach

- Sister Schools outreach investment is significant
  - Outreach budgets range from \$140k to \$4.9 million
  - Fundraising and sponsorships are a large contributor to Outreach Programs
- Outreach benefits to Residential Program
  - Enhances student recruitment, internships, partnerships, etc.
  - Connects residential students to their peers throughout the state
- Financial model for MSSM Outreach Program
  - Staffing: Program Director, Partnership Coordinator, Program Organizer
  - Incremental annual investment of \$420k includes salaries, travel, promotion and administration

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High Return on Investment for all Maine STEM Students.

## Costs for MSSM Vision At Current School Enrollment

- Reduce Parent Costs
  - State paid room and board at current enrollment- \$1.28 Million
  - In 2021, State is paying Breakfast and Lunch for ALL Maine Students in Public School (but not MSSM students)
- Student Welfare - Increased appropriations by \$250,000 to support initiatives in this area
- Annual Budget - needs regular increases to at least keep up with inflation

## Costs for MSSM Vision At Current School Enrollment

- Increase connections with Higher Education
  - Need for a funded administrator to co-ordinate this \$100,000 increased funding
- Recognition that MSSM is the only access for high quality STEM for a significant portion of Maine students.
  - Need for targeted admissions work to highlight the opportunities MSSM provides. Increased admissions staff \$100,000.

## Costs for MSSM Vision For any Size School

- Increase State Impact of MSSM
  - Outreach program as outlined in the Business Plan.  
Increased annual funding by \$420,000 to support this.
- Annual budget increase to support the full vision outlined above at current enrollment, without increasing State support for Room & Board - \$870,000



# Costs for MSSM Vision At a School Size of 240 Students

- Increase Enrollment from 140 to 240 students
  - Annual budget would need to increase \$2.5 Million from \$3.4 to \$5.9 million dollars
  - At 240 students annual cost for Room and Board is \$2.2 Million
  - Total annual budget for 240 students - \$8.16 Million
- Upgrade Facilities
  - Dorm Bond to expand dorm - proposed \$10 Million actual costs \$15-20 Million
  - Education Facility needs at least \$10 Million for new science labs and equipment