

**ACADEMY FOR
MATH, ENGINEERING, AND SCIENCE**

SCHOOL IMPROVEMENT PLAN

2021-2024

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INTRODUCTION

The purpose of this session and the resulting document is to identify key areas of focus for the school, consider major issues facing the school, and to provide a framework for future action by the staff and board.

The mission and vision of AMES has been maintained from the day the school opened and that is a credit to the Board of Trustee's and the school. It is also important to note that the challenge to maintain the mission is more difficult each day. Changing demographics and Granite/Salt Lake School District policy has impacted AMES. The focus on setting high expectations for students while providing scaffolding (teachers in their classrooms at lunch, before or after-school, tutoring after-school, tutoring in-class, tutoring in counseling center, teacher meetings with students and parents, counselor meetings with students) for the students makes everyone work harder. Open access to rigor is not understood in the educational community as it is at AMES (i.e., open access to AP classes and not concern over regarding test passed rates). As costs of services increase per student, support becomes harder to sustain and it becomes harder for our University partner to sustain. We have gone through an educational change the last few years where the STEM focus has been important by statute and has been a "jump on the bandwagon" trend. We have always had a strong STEM focus and the challenge to frame ourselves as an early college high school first and a STEM school second has not been clear to some of our stakeholders.

We want to build opportunities for advancement and acceleration and provide high order thinking in each class, each day while also addressing the differentiation needs of ALL students. We make an effort to think differently about students and issues related to students. We say we program for the exception, but know that is more work and requires that we follow-through as a staff on the culture pieces that are in place. We believe adult culture drives student culture and we try to show that by maintaining the original three R's: Rigor, Relationship, and Relevance. Rigor for students and staff/teachers, relationships between staff, staff/teachers and administration, staff and teachers, student to student, administration to student. We advertise that we want curious, invested students not necessarily high performing students but the reality is we function better when we have both. We benefit from the school-within-a-school concept as students and parents are invested in the school by being different, by having to travel to school and by having to work hard to succeed. We also benefit because they are part of Cottonwood High School and see that many of the students do not approach their education in the same way AMES students view their education. They view their teachers not as adversaries but as facilitators/coaches who are helping them get through high school and to college. We do provide a HOME COURT that allows students to succeed. The QL Key of Failure Leads to Success is ingrained, present, and part of our daily conversations with students.

The staff and administration believe in the mission statement and the school behavior shows that. Administratively we focused our funding to students to ensure we meet the mission statement.

Goals identified in the 2019 accreditation review:

- Continue to operate as a school-within-a-school

- ▣ Provide incentives for staff to remain at AMES
- ▣ Continue to be fiscally responsible and relevant
- ▣ Maintain small school size and small class sizes
- ▣ Address achievement gaps in demographic areas
- ▣ Maintain high growth scores

Action items for AMES that were identified by the accreditation review team:

- a. Formalize the professional learning committee process. Include data in this process.
- b. Classroom observations should reveal differentiation in classroom instruction
- c. Classroom observations should reveal technology in student hands.

Data gathering needs as identified during accreditation in 2019 and part of improvement process (5-year trend data)

- ELL student growth and proficiency
- ACT Readiness scores/ ACT Composite scores.
- Number of students taking AP classes/taking the test/passing the test
- Fee Waivers/Free & reduced lunch rate
- Demographic data: free/reduced lunch, ethnicity rates
- Attendance rate, tardy rate
- Average daily membership
- MESA scholarship winners
- Safe School incidents
- Cottonwood classes taken
- Cottonwood extra-curricular participation
- Graduation rate
- SpEd student growth
- Number of scholarships given AMES
- Freshman House attendance (track student success for those who do and do not attend)
- School accountability reports from USBE
- Track students taking SLCC classes
- Increase recruiting effort for minority students

VALUES, VISION AND MISSION

The Academy for Math, Engineering and Science (AMES) was established to provide a choice for students who have a particular interest in math, science and engineering. Our specific mission is to prepare a diverse student body for success in college or other post-secondary education.

Rigor:

- High expectation for all students
- An essential, focused, standards-based curriculum
- Engaged community & higher educational partners
- Current technologies in support of student achievement
- Provide differentiation

Relevance:

- Problem-focused instruction and project-based learning
- Community connected learning opportunities for all students
- Creative choice for all students

Relationships:

- A culture conducive to involvement by all stakeholders
- A diverse student body where mutual respect and tolerance are celebrated
- A staff who cultivates and encourages self-directed learning, self-assessment, and self-esteem

Quantum Learning:

We have used Quantum Learning (QL) as our school-wide vocabulary and culture platform since 2006. Several professional development trainings have focused on QL and it is the focus of our Freshman House. In the 2019 accreditation review, QL was identified as the main school-wide culture tool used to increase student buy-in and accountability.

In summer of 2019 and 2021, AMES brought QL facilitators to train staff and to facilitate Freshman House in an effort to continue to improve the school-wide culture.

TITLE I ISSUES AND CONCERNS

PARENT ENGAGEMENT

On our last accreditation and audit, this came up as an issue and concern that needs to be improved. Concerns that came up were the followings:

- How do we encourage parents to be involve in school or class activity?
- What kind of opportunities do parents have to be involved?
- Are parents being informed of oppotunities with enough time to make arrangements to participate?
- Are parents being encouraged to be involve in the development and improvement of the teacher parent compact and the parent engagement policy?

Many of the parents interviewed during accreditation in 2019 were not sure how to answer these questions. Parents of English learners expressed that getting time off work is often a reason why they missed the opportunity to be involve in school activities. Others also expressed that even though, they understand and can speak English; they feel like they do not possess all the skills necessary to be efficient in the task needed when an opportunity comes up.

Knowing weeks in advance about opportunities to help/ about events will help with this issue. Also letting parents know how they can communicate with teachers and staff helps them feel welcome and to know that it's okay to get in contact if they have any issues and concerns. Being able to develop a relationship with teachers and staff will make them more comfortable around the school and to ask questions when they do not know what to do instead of not participating at all.

COMMUNICATION

- Live website
- Social media ++
- Better in-house communication
- Media coordinator-recruitment!
- Stay relevant! Continue to improve our game
- Know our audience
- Send emails
- One call
- Calendar

- Home visits
- PTC – how we promote - what else can we do with that? - take advantage of the potential

CURRICULUM

- Vertical alignment in core courses
- Common grading (department-based? standards-based?)
- ASPIRE with Canvas
- Common academic instructional framework, common language
- Grade-level coordinated curriculum
- Tying pedagogy to research and the data we have
- Evidence of teacher collaboration, being in each other’s classrooms
- Keys of Excellence
- Clear communication
- College preparation level
- In-depth, critical thinking, problem solving
- Scaffolding
- Pre-assessment to inform
- Curriculum mapping, reference (integrated cross)
- How much homework we give?
- Less about an education more about credits (college)
- Identify project – based growth in curriculum
- In class discussions on being an AMESian, including addressing hate and intolerance
- Core/Strands/Standards
- Teaching method
- School offerings, electives
- Enhancements: PD, conferences, online classes
- Cross-curricular, plan/projects
- PLC-compare similar strands

SCHOOL CULTURE

- Evidence of teachers incorporating QL
- Proof that parents are involved
- Live up to the “diverse student body” part of our mission statement (get back to that 39%)
- College Forum pilot program – continuous feedback driving college readiness 2021-2022

- High academic expectations and high teacher involvement
- Growth mindset
- Teamwork
- Embrace diversity
- Improvement (teachers wanting to improve) Provide mentorship within AMES
- Successful pathway
- Talk to a teacher nights
- FH/CF Attendance
- Club & CF involvement
- Repping AMES learning
- Behavior data
- U of U and SLCC partnership
- Common lang./grading
- POD segregation, promote mixing, more diversity in group decisions!
- Teachers eight key checklist, try to hit each key once per ____ in each class
- Use pod space more intentionally
- Take a risk
- Recreational mixing in Skunkworks
- Climate Survey? What would kids think/say about the clique issue?
- “facilitate” cultural spirit contributions to AMES, dances, tickets
- Spirit T-shirts worn
- More swag
- Easily quantifiable, students leaving to athletics in other schools
- Lunch- groups, class bi-monthly in skunkworks
- Fieldtrips
- Freshman house data
- When I come here what makes this a place where I belong?
- Can we facilitate experiences where students can take risks?
- Traditions
- School support for the Robotics team
- Engineering day, Language day
- Integration & inclusiveness among different groups and grade levels.
- Student spot light
- Back to school night (get to know AMES)
- Teacher bonding

- Build bridges: ex. PD w/Cottonwood departments
- More assemblies, ex. The Astronaut from last year
- Engineering Week/Showcase : give challenges, show projects, capstone of year
- Track: attendance, grades, participation/ connected U classes
- CF / co-curricular: attendance, attempt to participate “higher”, U of U classes
- Seniors that attend FAFSA and college app days? College visits
- Classes: Rigor match to class and students
- Excuses vs. Attempts
- QL

SUSTAINABILITY

- Evidence of being responsive to school needs/areas of concern
- Rotations for Freshman House – rotation of responsibilities
- Longitudinal data
- Alumni tracking
- Teacher retention
- Competitive w/districts
- SPACE
- Proactivity vs. reactivity
- Broaden stakeholders
- Target “right” populations
- Student mentoring U-classman to L-classman
- (culture) clubs
- Outreach
- Recruiting
- PR presence
- Turnover attrition, Why?
- More AMES reunions

DATA

- If not SAGE then what?
- Our ASPIRE/ACT data and what it says-How do we interpret and react to what the data says?
- Formative Teacher Data
- PSAT: We don’t use the data from the test so why test?
- Credit recovery numbers (percent of students needing credit recovery)
- Truancy/Absenteeism/Tardiness

- Analysis, to guide decision making to improve culture & curriculum
- Standardized (state testing)
- Low achievement
- Attendance
- AMES: measure - goal setting, follow through, grit, challenging courses, and life skills
- Taking the next step forward.....what does that look like? How do I show that data relative to another school?

LONG-TERM GOALS

Potential Goals/Objectives:

- Address achievement gaps
- Increase the number of free/reduced lunch/fee waiver students in the building
- Plan/prepare for long-term teacher sustainability
- Increase parent involvement and parent communication
- Canvas used by all students and staff
- Decrease the percentage of credit recovery needed

Prioritized Long-Term Goals:

2021-2022 OBJECTIVES
