The willingness to deeply connect with students and disrupt the current formulaic and inequitable school models.
THE OPPORTUNITY

Partner with SPS
- Create a **culture** of high expectations and support to meet them
- Implement a **pedagogy** designed towards student voice, choice and leadership
- Curate **content** that is culturally and communally relevant
- Enlist **community** to support learning and provide resources

To Improve Opportunities for Underserved WMS Students
- Create academic environment that eliminate race-based disparity in academic achievement
- Promote the highest level of student learning and teacher development

Produce Students Who Are
- Socially conscious and self-aware
- Armed with the 21st century skills needed to succeed
- Positioned to create the world they envision, personally, communally, nationally and globally
THE MODEL
THE FOUR PEDAGOGICAL PILLARS of TAF

STEM INTEGRATION
Cultivating opportunities for students and teachers to engage with STEM professionals and activities, both on and off campus

INTERDISCIPLINARY PBL
Project-based learning allows students to respond to a "real-world" question purposefully and integrating multiple subject areas to learn key academic content in a more holistic way

EDUCATIONAL TECHNOLOGY
Developing the capacity for students to use various software and technologies to be successful and competitive

COLLEGE & CAREER READINESS
Awareness that college is a viable option; Eligibility for college admissions; and college-level preparedness without remediation

EQUITY AS A BASELINE FOR CHANGE
TAF creates safe environments of learning, inclusive of all people and cultures to build communities of high expectations where students are empowered to use their voice, take risks, and grow as learners and active citizens.
STEM literacy is the ability to understand and apply concepts and content from science, technology, engineering, mathematics, humanities and arts to identify and solve challenges or problems that cannot be resolved by any one disciplinary approach.

Enables students to apply 21st century skills such as collaboration, knowledge construction, self-regulation, problem solving, innovation, information technology and communication to improve the social, economic, and environmental conditions of their local and global community.
Students receive direct instruction and PBL

Core subject teachers collaborate to create interdisciplinary projects based on state and district mandated curriculum, student interest and state standards. Teachers adjust elements of project to ensure rigor for all students.

Students have 3-4 projects per year
- One centered on Humanities
- One centered on Science
- One centered on Math or elective
- STEM Expo

Teachers use some of the elements of PBL during direct instruction as well.
PROJECT BASED LEARNING

DESIGN ELEMENTS OF P.B.L.

- Challenging Problem or Question
- Sustained Inquiry
- Authenticity
- Public Product
- Critique and Revision
- Reflection
- Student Voice and Choice
6TH GRADE PROJECT: STEM EXPO 2019

How can we improve and create natural spaces in urban environments so that they benefit people and the organisms that live in them?

Design a way to improve Saghalie Park that positively impacts biodiversity in our community.

Science: Conservation issues in WA, solution to apply to Saghalie park, collect data, provide evidence, design and model

Math: Ratios and scaling

Humanities: Research articles, identify a valid source, cite resources, write persuasive essay to propose solution

Took students outside to park, used app (Seek by iNaturalist) to identify species in the community, measuring areas to replace to increase biodiversity, based model design by specific areas they wanted to improve biodiversity

Choose their conservation issue, choose their solution, grouped based on interests, and design their model

Students reflect on their learning and the challenges of the project

Students give and receive critical feedback on their work using a critical friends model

Students share their project with their families and the public

Students designed a full-scale model of their solution

Give full presentation
IMPLEMENTATION
▪ Students in “Houses” containing 80-90 students*
▪ Houses have three core subject teachers: science, math and humanities
▪ Loop 6\textsuperscript{th} and 7\textsuperscript{th} grade to support student readiness for 8\textsuperscript{th} grade
▪ Provide at least one high school certified math teacher to support advanced learners
▪ Humanities teachers must be certified in both ELA and Social Studies.

*Houses are randomly chosen groups of students that take all core courses together. Teachers in a House collaborate to define projects, support students and evaluate data.
<table>
<thead>
<tr>
<th>Course</th>
<th>Grades</th>
<th>Notes</th>
</tr>
</thead>
</table>
| Math                   | All grades      | ▪ The minimum threshold is for all 8<sup>th</sup> graders take algebra, and there will need to be an effort to ensure incoming students are on track to meet it.  
▪ All students will be supported in achieving at their highest potential.  
▪ High school credit available. |
<p>| Humanities             | All grades      | Teacher must be certified in ELA and Social Studies                  |
| Science                | All grades      |                                                                      |
| World Language         | 6-8&lt;sup&gt;th&lt;/sup&gt; | ▪ 6&lt;sup&gt;th&lt;/sup&gt; &amp; 7&lt;sup&gt;th&lt;/sup&gt; grade samples options             |
|                        |                 | ▪ 8&lt;sup&gt;th&lt;/sup&gt; graders may take for high school credit             |
| Health                 | All grades      | 8&lt;sup&gt;th&lt;/sup&gt; graders may get high school credit                   |
| Physical Education     | All grades      |                                                                      |
| Engineering            | Available to 7&lt;sup&gt;th&lt;/sup&gt; and 8&lt;sup&gt;th&lt;/sup&gt; grade only | Elective                                                           |
| Computer Science       | Available to 7&lt;sup&gt;th&lt;/sup&gt; and 8&lt;sup&gt;th&lt;/sup&gt; grade only | Elective                                                           |
| Art and Design         | All grades      | Elective                                                           |
| Music                  | All grades      | Elective                                                           |
| Robotics               | 6&lt;sup&gt;th&lt;/sup&gt; grade entry to engineering and computer science.   | Elective                                                           |
| Current WMS Electives  | Grades determined by class | Elective                                                           |</p>
<table>
<thead>
<tr>
<th>Position</th>
<th>Role</th>
<th>Interfaces With</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>Manages the TAF staff on campus, is a partner with the principal in the planning and rollout of the academic program and supports the principal in selecting staff.</td>
<td>Principal</td>
</tr>
<tr>
<td>Instructional Coach</td>
<td>Provides teachers instructional support in the STEMbyTAF Model and helps them reach the practitioner level in project-based teaching. Brings STEM professionals to the campus to support learning.</td>
<td>Assistant Principal, WMS Instructional Coach, Teachers</td>
</tr>
<tr>
<td>Program Manager – College and Career Readiness</td>
<td>Provides college and career readiness services for all students, including college and career fair, college visits, college preparation coaching for parents and students, and career exploration</td>
<td>WMS Counselor, Teachers</td>
</tr>
<tr>
<td>Program Coordinator, Student Support and Enrichment</td>
<td>Manages all out of school time extended learning opportunities and the Student Ambassador program.</td>
<td>Assistant Principal</td>
</tr>
<tr>
<td>Student Support Specialists</td>
<td>Works side by side with classroom math teachers to provide additional support to students. There is one Student Support Specialist per math teacher</td>
<td>Math Teachers, Instructional Coaches</td>
</tr>
<tr>
<td>Tech Support Specialist</td>
<td>Keeps all technology (classroom and student laptops) operating. This position will not be on campus if the district already has effective tech support allocation.</td>
<td>District IT, Teachers, Students</td>
</tr>
</tbody>
</table>
STUDENT OPPORTUNITIES

- Summer Jump Start for incoming 6th graders
- More time to learn
- Ability to demonstrate multiple way of meeting standards
- Field trips relevant to projects
- College and Career Fair, college visits
- STEM Expo
- Out of school time extended learning
- Robotics Team
- Engineering Lab
- Learn from industry professionals
- Get introduced to new technologies
WMS STAFFING

- Principal Hunt will remain the Principal
- No teacher changes unless they choose to leave
- Teachers will get extensive training in STEMbyTAF Model
- All other staff remain the same unless they’ve chosen to leave
Website: http://www.techaccess.org
Twitter: @STEMbyTAF
Facebook: facebook.com/stembytaf
Email: development@techaccess.org