COVER SHEET

Organization Information:

Organization name: TAF (Technology Access Foundation) TAF

Organization address: 4436 Rainier Ave, Ste B, Seattle WA 98118

Describe your legal status and, if applicable, state of incorporation (for example, Washington State non-profit corporation, Washington State partnership, sole proprietorship:

TAF is a Washington State 501(c)3 nonprofit organization.

Application Components and Checklist (submit in this order)

- ☒ Cover Sheet
- ☒ Key People
- ☒ Previous Experience
- ☒ Tracking to Success
- ☒ Women and Minority Inclusion; Non-discrimination

Contact Information:

Contact person: Sherry Williams
(please print clearly)

Title: Deputy Director

Mailing address: TAF, 4436 Rainier Ave S, Ste B, Seattle WA 98118

Day/Work phone: 206.725.9095 x14 Email address: sherryw@techaccess.org

Signature: Date: 2/13/12

Additional information is provided in Attachment 3.

TAF (Technology Access Foundation)
Application to City of Seattle Levy – Elementary, Middle and High School Expanded Learning Opportunities - 2012

Cover Sheet, Legal Status and Format

1. Yes.

2. Yes.

Key People

1. TAF's deputy director, Sherry Williams, manages TechStart and TechStart School Day's (TSD) community partnerships, including our relationships with schools. Sherry started with TAF in 1997 and worked as the administrative assistant and a program manager before being promoted to deputy director. Sarah Wilkes, TechStart/TSD's coordinator and college-readiness manager, manages TechStart's day-to-day and the college-readiness component of the program. A proud graduate of Seattle Public Schools, Sarah also has an M.A. in U.S. History. Both Sherry and Sarah have extensive experience implementing programs that help students meet grade-level standards on state tests (including making annual typical growth on the math MAP) through their work with TechStart and other TAF programs. Our programs are taught by highly-effective instructors with experience in science and math education (especially of youth).

2. Program manager Toyia Taylor holds a B.S. in Political Science and African American Studies from the UW. She has developed and managed high-quality cradle-to-college pipelines for underserved scholars in three major cities. Toyia helps create and implement the TechStart/TSD annual plan, and hires and supports TechStart and TSD teachers.

Previous Experience

1. TAF (founded as Technology Access Foundation) is a Seattle-based non-profit, founded in 1996, whose mission is to equip students of color for success in college and life through the power of a STEM (science, technology, engineering and math) education. We serve more than 600 underprivileged youth per year through innovative programs that use interdisciplinary, project-based lessons to connect STEM learning to real life. Our target population is youth of color in grades 1-12, many of whom are from low-income families, and we have worked with this population in Seattle for more than 15 years.

TAF offers its programs in diverse neighborhoods of mostly low-income families in order to reach students disadvantaged by poverty and by their enrollment at underperforming public schools. 78% of our participants are youth of color; 64% are from low-income families. Our participants range in age from 6 to 18.

2. TAF has three major initiatives that have seen results over the past two years. This levy opportunity pertains to our TechStart and TechStart School Day programs.

TechStart is our after-school program for children in elementary and middle school. Students are grouped by grade level and meet twice weekly, after school, for 90-minute classes focused on STEM, at TAF's headquarters and at partnering schools. They do projects requiring them to build robots, use an architecture program to design a neighborhood-improvement project, and more; curriculum is aligned with common core standards in reading, science and math. Through activities that combine subjects in a way that simulates real-world experience, students become effective, engaged problem-solvers.

TechStart students continue to demonstrate advanced competency in programming- and engineering-related tasks, and exceed their peers' performance on standardized tests. This year, we introduced our 1st and 2nd graders to engineering concepts by having them design and program robots. We have done robotics with our older students before, and were thrilled to see how much the youngest TechStarters could do. Our older students also performed beyond their years using Alice, an object-oriented programming tool designed for use by college students.

TechStart School Day (TSD) helps ill-funded elementary schools engage students in using technology authentically, even when they lack resources for technology teachers or class periods. Most public-school teachers are ill-prepared to teach STEM or to use technology in teaching. So, we create project-based lessons in which students use technology to meet academic goals and common core standards. Our co-teacher works with teachers and students in their classrooms at least 3 times per week, per classroom to implement this curriculum. Students use laptops, software and robotics kits provided by TAF. In 2011-12, participants are 5th graders at Highlands Elementary in Renton and Mt View Elementary in White Center; we are expanding to additional grades and schools in 2012-13.

Last year's students in TSD had better fall-to-spring progress on Highline District's standardized reading and math tests than did the 5th-grade class without TSD. And, five of the students in TSD classes scored at or above the 90th percentile in math; none in the control group got higher than the 86th.

TAF Academy (TAFA) is a 6th- through 12th-grade STEM-focused public school, co-managed through a partnership between TAF and school districts. The first TAFA is in Federal Way. The second will open in Renton in 2012. Unlike charter schools, TAFA leverages resources that are already in place and builds on them for maximum impact. We rely on foundation and corporate grants and donations to fund any technology, staff and programs beyond what is standard for the district.

TAF is a pioneer in education. We make systemic change through creative partnerships, by combining the best of public and private education. We have proven

that we can make a difference within the public-school system as it is today—cost-effectively and ingeniously building on our community's existing investments in public-school facilities and resources to help more students of color succeed in college and STEM-based careers.

3. Mount View Elementary
Principal: Felecia Wells, Felecia.Wells@highlineschools.org
Phone: 206.631.4500

Hilltop Elementary
Principal: Rick Wisen, wisenrj@hsd401.org
Phone: 206.631.4000

Southern Heights Elementary
Principal: Deborah Holcombe, Deborah.Holcomb@highlineschools.org
Phone: 206.631.5000

Beverly Park Elementary
Principal: Kathy Emerick, Katherine.Emerick@highlineschools.org
Phone: 206.631.3400

White Center Heights Elementary [no longer at this location]
Principal: David Darling, David.Darling@highlineschools.org
Phone: (206) 631-5201

Highlands Elementary
Principal: Janet Fawcett, Janet.Fawcett@rentonschools.us
Phone: (425) 204-4600

4. Engaging students of color in STEM can be a challenge in itself because most do not see themselves in STEM, and even their parents can have a hard time envisioning them as successful in STEM—they are not used to seeing people of color in STEM fields. Through our programs, we work to reverse this. Our staff is primarily comprised of people of color, many of whom have been professionals in STEM. We recruit participants through word of mouth and by making presentations in diverse, community-oriented sites like churches and schools. We also have a number of STEM professionals of color who volunteer with our children, helping teach classes and acting as role models for students. TAF has more than 15 years' experience successfully reaching and educating this demographic.

Tracking to Success

1. TAF collects certain student data in order to evaluate the quality and efficacy of TechStart/TSD, and to measure student progress. Presently, we collect the following data:

- Student assessments:
    - MSP scores (1x year)
    - MAP test scores (3x year)
    - Learning.com's 21st Century Skills Assessment (2x year)
    - Customized assessments built into curriculum (2-3x year)
    - Teacher surveys (1x year)
- School site leadership surveys (1x year)
- Student surveys (2x year)

2. Surveys are used to gauge interest and effectiveness of learning software used in TechStart/TSD. Thanks to survey data, we adjusted the curriculum this year, based on last year's feedback that one program, Alice, was frustrating to use and did not have the intended impact on learning. New programs, Audacity and Bootstrap, were used this year and have been positively received by students and teachers.

Student testing data is collected continuously, and to date has not been used to make adjustments to the program, due to the statistically limited amount of data we were able to collect the first year (i.e., we did not get testing data for many of our students, due to parental permissions restrictions). However, we have set goals for student testing outcomes, which, if not met, will impact future curriculum adjustments.

3. Student attendance is tracked daily, with home calls made for absentees. Experience suggests this helps with student retention in the program. Daily teacher reports to the program manager help address student behavior and performance issues, helping address students' learning needs more quickly. With daily communication between teachers and program staff, technical and other problems get resolved quickly, making students and parents more aware that TAF is dedicated to their STEM education. Parent attendance to Open House nights was higher this year, in part due to improved daily and weekly communications with TechStart teachers.

Recent post-session testing demonstrated gains in student learning over the course of a 10-week session.

4. A TechStart/TSD sample data report is attached.

<u>Women and Minority Inclusion; Non-discrimination</u>

1. Depending on the number of TechStart/TSD classes we offer, we might hire additional instructors for TechStart and/or TSD. TAF's employment policies related to nondiscrimination are as follows:

Equal Employment Opportunity
TAF is an Equal Opportunity Employer within the meaning of the Civil Rights Act of 1964 and applicable state legislation. TAF will provide equal opportunities for all employees and job applicants without regard to sex, age, race, color, religion, national

origin, citizenship status, physical or mental disability, or past, present or future service in the armed forces of the United States.

Nondiscrimination

TAF does not permit, condone or tolerate discrimination in any form including but not limited to:

- Sex or gender
- Sexual orientation
- Racial, ethnic or national origin
- Skin color
- Age
- Marital Status
- Religious affiliations or belief
- Physical or mental disability or functional limitation
- Military service or lack of military service
- Citizenship status

This non-discrimination policy applies to all of TAF's activities and functions, including but not limited to:

- Recruitment and employment
- Advancement and Promotion
- Salary and wage consideration
- Bonuses
- Layoff and Termination
- Employee benefits

TechStart Student Testing Report Summary for 2010-2011 School Year

2010-2011 MSP

TechStart @ Highline student achievement compared to Highline School District (% passing)

Grade Level	TechStart Reading	Highline Reading	TechStart Math	Highline Math	TechStart Writing	Highline Writing	TechStart Science	Highline Science
4th	68.8%	49.9%	56.3%	45.8%	59.4%	44.6%	-	-
5th	56.7%	52.1%	64.4%	52.2%	-	-	30%	35.5%
6th	75%	59.9%	68.75%	55.8%	-	-	-	-

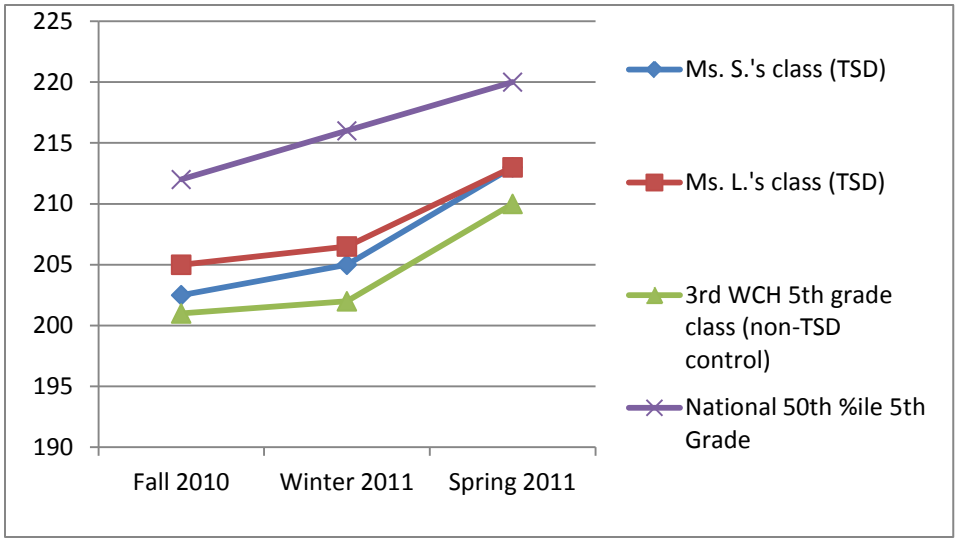
TechStart @ Highline 4th grade n=32; 5th grade n=90; 6th grade n=16

TechStart School Day @ White Center Heights MSP Comparison:
TSD students=58 students in 2 classes at White Center Heights (total 5th grade enrollment at WCH: 80). From the 46 TSD students' data that were obtainable:

5th grade	TSD only	WCH—all 5th grade	Highline	WA State
Reading	39.1%	35.9%	52.1%	67.6%
Math	47.8%	39.7%	52.2%	61.2%
Science	21.7%	17.9%	35.5%	55.6%

MAP Assessment

Score comparisons for TechStart School Day @ White Center Heights, 2010-2011



The Measures of Academic Progress (MAP) assessments, given to students in the Highline School District, are administered by the Northwest Evaluation Association (NWEA, www.nwea.org) three times throughout the school year. The MAPs are computerized adaptive tests that help to quantify students' progress in reading and math learning.

While both TSD classes' scores remained below the national 50th percentile, as provided by the NWEA, shown next to their school peers (non-TSD White Center Heights 5th grade class), the two TSD classes showed remarkable progress through the year,

ending with a higher average Fall-to-Spring rate of progress (10 points in Ms. S.'s class, 13 points in Ms. L.'s class) than in the control group (9.4 points).

Also by year's end, five of the students in the TSD classes scored at or above the 90th percentile for 5th grade in Math; none of the control group got higher than the 86th percentile.

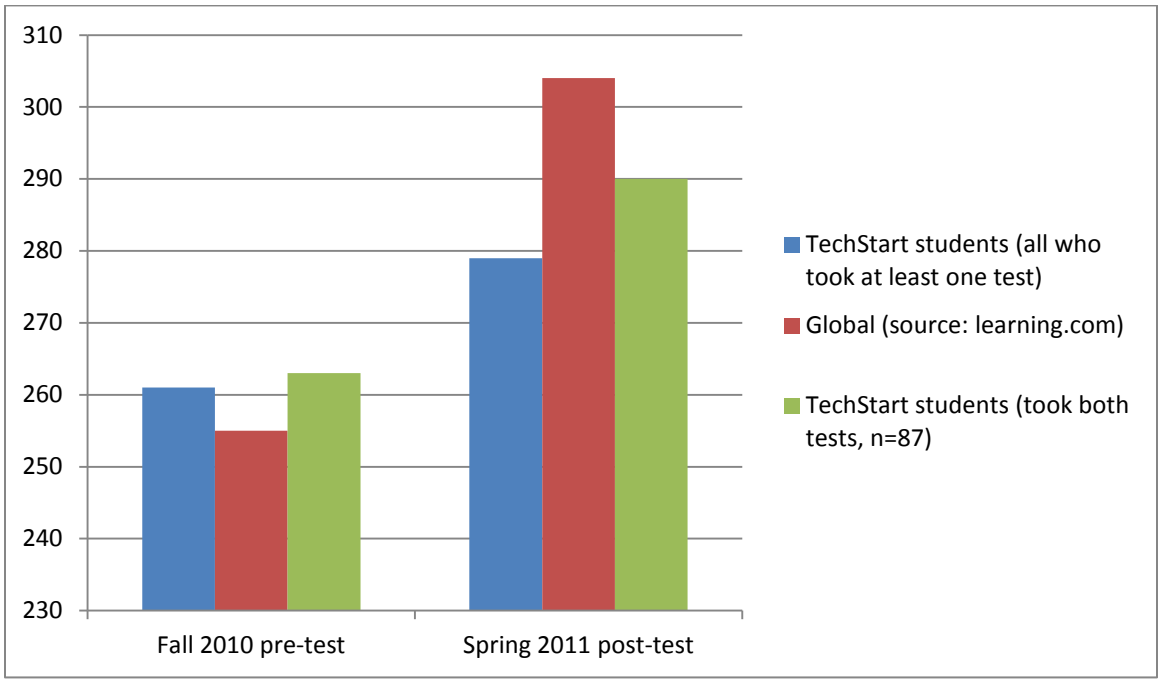
21st Century Skills Assessment (Learning.com)

Exam Overview for 2010-2011

Out of 279 students enrolled in TechStart, 87 took both the pre- and post-tests.

Of these 87, 53 showed improvement in 21st c. skills over the year. That's 61% of the students taking the test demonstrating improvement, or 18% of all enrolled, demonstrating improvement in 21st c. skills.

Overall, our students (162 total) averaged a pre-test score of 261 (as compared to learning.com's worldwide average of 255), and a post-test (126 total) score of 279 (as compared to worldwide average of 304). Of the 87 who took both tests, their pre-test average was 263, and post-test average was 290; a little better than the general population.



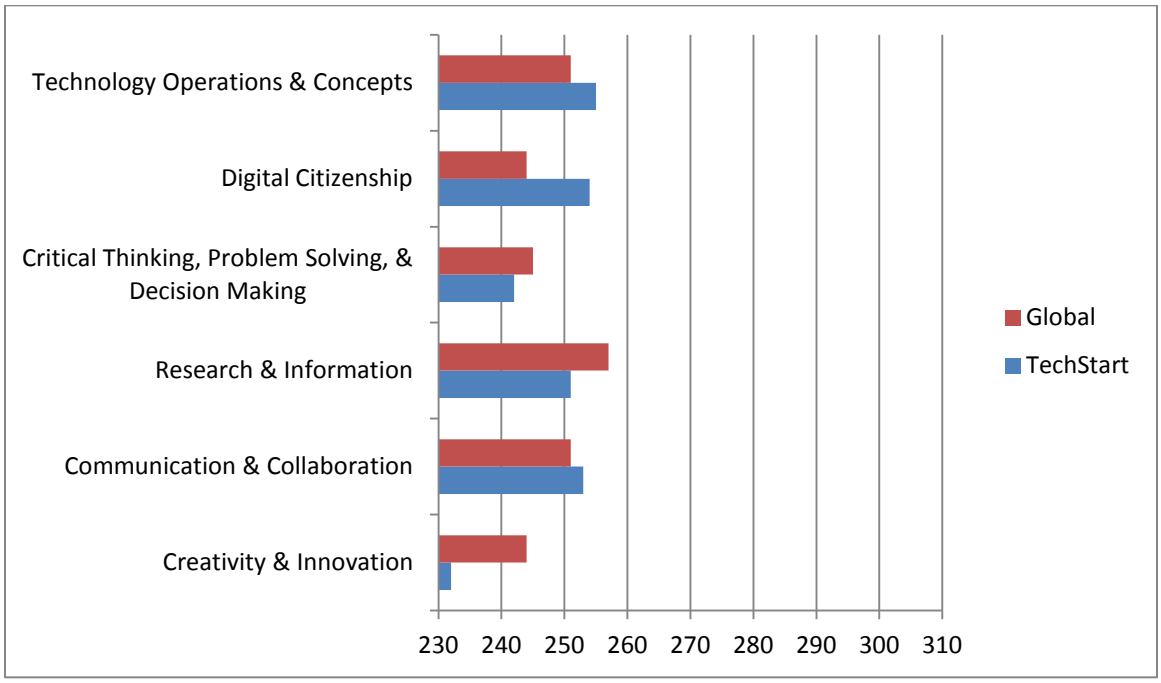
TechStart students did show improvement in 21st century skills (7% overall, 10% for students who took both pre-and post-), but not at the global average rate (19%).

Exam Skill Modules

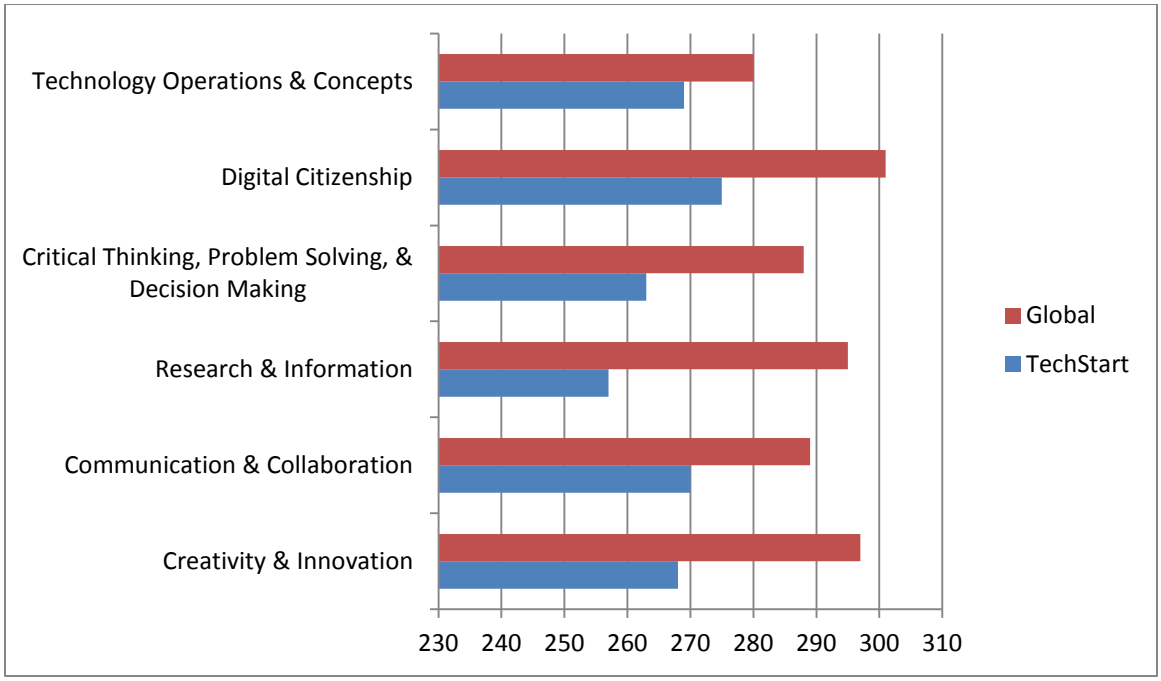
The 21st Century Skills Test measures six different skill modules that contribute to Information and Communications Technology (ICT) fluency (info in PDF here: http://platform.learning.com/help/pdf/21st-CSA-ISTE-NETS-Alignment-090407.pdf):

- Creativity and Innovation
- Communication and Collaboration
- Research and Information Fluency
- Critical Thinking, Problem Solving and Decision Making
- Digital Citizenship
- Technology Operations and Concepts

The Fall 2010 21st C. Skills Test (Pre) given to TechStart students in October 2010 resulted in the following average scores for these six strands:



The Spring 2011 21st C. Skills Test (Post) given to TechStart students in June 2011 resulted in the following average scores for these six strands:



In each of the six strands or modules, the *gap* between TechStart student achievement and global achievement *widened* over the course of the school year, even as TechStart students demonstrated improvement in all six strands between Fall 2010 and Spring 2011. Areas of particular concern are Research and Information Fluency, Creativity and Innovation, and Digital Citizenship. The gaps that were the narrowest were Technology Operations and Concepts, and Communication and Collaboration.

Interpretations and Caveats

As noted above, only 87 students, out of the 279 who experienced TechStart for at least one 10-week session (Fall, Winter, Spring), took both the pre- and the post-program 21st C. Skills Test. Hindrances to students taking both tests included technical difficulties (test program crashing) on both test dates; student absences, particularly for the post- (held the last week of school); and enrollment changes (40 students dropped between October and June; 49 enrolled after October testing).

That only 31% of the total enrollment took both tests makes measuring program-wide achievement from a baseline (i.e., pre-program test) difficult. However, looking closely at the 87 students who took both tests, for whom we can measure individual achievement over the year from a baseline score, we see promising results: 53 of the 87 showed increases in individual scores from pre- to post-, or 61%. Of the 32 whose scores declined, the average drop in scores was 24.8 points. Of the 53 whose scores improved, the average jump in scores was 59.2 points. (Two students' scores were the same for both tests, showing no change.) Eight students showed an improvement of more than 100 points. These are as compared to the global average increase of 49 points.