



## **SciTech Academy**

### **Annual Report 2021**

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Submitted to:

Minnesota Guild of Public Charter Schools

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SciTech Academy, Minnesota Charter School District #4261, is located in Richfield, Minnesota, just south of Minneapolis. SciTech Academy has completed its third year of operations and is pleased to present this annual report, to our Authorizer, stakeholders and the general public!

**Mission:** SciTech Academy will deliver all-inclusive Science, Technology, Engineering, and Mathematics (STEM) curriculum to engage, empower and educate inner city students including immigrant children to better prepare future American generations. SciTech Academy will prepare students for competitive global economy through STEM, so Students can achieve successful academic goals. SciTech Academy will provide all students with the opportunity to attain successful careers and fulfilling lives by preparing them for high school, college and careers in an ever changing, highly competitive, global community and by developing their sense of social responsibility to support and serve others.

**Vision:** SciTech Academy's vision is to equip all students with knowledge, character and skills they will need to meet the demands of a competitive global economy as well as career and College readiness. Our vision for SciTech Academy is to create a school environment in which students are engaged, supported, and challenged to achieve their full potential in Science, Technology, Engineering, and Math.

We envision a school environment in which students, parents, teachers, and school leadership work collaboratively to meet students' academic, social and emotional needs, strengthen students' knowledge and skills, and reduce and resolve peer conflicts.

We nourish this collaborative relationship through the use of innovative instructional strategies that, in contrast with traditional 'one-size fits all' instructional models, requires personalized student learning outcomes, the use of culturally relevant pedagogy, and ensuring effective communication among all concerned parties.

This report addresses the Annual Report elements required by statute:

Minnesota Statutes, section 124E.16, Subdivision 2: "A charter school must publish an annual report approved by the board of directors. The annual report must at least include information on:

1. School enrollment,
2. Student attrition,
3. Governance and management (includes Board training),
4. Staffing,
5. Finances,
6. Academic performance,
7. Innovative practices and implementation, and
8. Future plans."

This report also addresses the World's Best Workforce.

## **Contents**

<b>Introduction</b>	<b>4</b>
<b>School Governance and Management</b>	<b>7</b>
<b>Faculty</b>	<b>9</b>
<b>Student Information, Enrollment and Attrition</b>	<b>11</b>
<b>School Goals &amp; Academic Performance</b>	<b>12</b>
SciTech Program and Instructional Model	12
Performance and Assessment Goals	13
<b>Finances</b>	<b>16</b>
<b>Innovative Practices</b>	<b>16</b>
<b>Future Plans</b>	<b>19</b>

## Introduction

SciTech Academy is committed to empower and educate students to achieve academic success through Science, Technology, Engineering, and Mathematics so they can compete effectively in a global economy. SciTech Academy will provide all students with the opportunity to attain successful careers and fulfilling lives by preparing them for high school, college and careers.

SciTech Academy meets the primary purpose of Minnesota charter schools, to improve all pupil learning, by implementing a rigorous curriculum that is a systemic, progressive program with mastery of specific knowledge and skills at each grade level. The program is designed to be challenging, but not too difficult for average students. In addition to the primary purpose of improving all pupil learning and all student achievement, SciTech Academy is meeting three further statutory purposes of Minnesota charter schools, 1) to increase learning opportunities for all pupils; 2) measure learning outcomes and create different and innovative forms of measuring outcomes; and 3) create new professional opportunities for teachers.

- 1) SciTech Academy is increasing learning opportunities by providing a complete STEM-oriented curriculum which meets all aspects of the Minnesota state science standards. The STEM program is supplemented with a STEM literacy series. The learning program incorporates units of study designed to support early career and college readiness, in the elementary and middle school grades. Students' needs for social and emotional learning are addressed through the Caring School Community program, provided at the beginning of the school day for all students. SciTech Academy believes that learners acquire genuine self-esteem primarily through the challenge of academic accomplishment. The school has the expectation that all its students will obtain the knowledge and skills they need for success in their further education and careers.
- 2) Our model of education measures learning outcomes and holds students and teachers accountable by gauging learning on an ongoing basis through FastBridge assessments and through ongoing assessment of learning, such as through science-learning rubrics in STEMscopes. Learning outcomes are also measured and progress gauged through measures specified in the school's contract with our authorizer, discussed in the Performance and Assessment Goals section below.
- 3) SciTech Academy creates new professional opportunities for teachers by supporting their involvement in our innovative, STEM-based program. Teachers offer students: 1) Use of collaborative instruction; 2) Inquiry based approaches to learning and STEM focused instruction; and 3) Use of STEM approaches to help students identify connections between academic learning and the "real world":

- Collaborative instruction: SciTech Academy ensures all students receive personalized learning, and seeks to nurture collaboration among our professional educators. Teachers employ a constructivist approach in designing learning processes to ensure that students are experiencing learning and attaining deep understanding. This teaching approach is tailored to address each student’s unique learning needs, with student work samples that focus on and document the development of students’ skills in core academic subject areas.
- Inquiry Based Projects: Students participate in problem solving tasks, hands-on experiments, and other student-led service-learning projects. Teachers design projects based on students’ skill levels, to be challenging but not too difficult to complete. In particular, SciTech Academy’s science curriculum, STEMscopes, includes hands-on projects.
- In choosing the curricula it will utilize in the various academic areas, SciTech Academy has sought curricular options that support integration of STEM approaches. Thus, teachers are able to integrate approaches such as hands on and project based learning across the curriculum to help students identify the connections between academic learning and its application to the “real world.”

Teachers participate in professional development and planning during two weeks before the beginning of the school year, covering training topics specific to the school’s programming and student population. Teachers are also supported in their professional learning through participation in Professional Learning Communities and through PD and early release days throughout the year.

SciTech Academy opened with grades K-6 in 2018-19, served K-7 during 2019-20, and added grade 8 in 2020-21. Research has shown that every dollar invested in Kindergarten will have a seven dollar return on investment back to society. SciTech invests heavily in STEM, plus College Readiness programs. This will create a successful story for the next generation. The SciTech Academy educational philosophy is to build a framework for global study through literacy, high level vocabulary, and nonfiction texts with culminating projects in math and science that can be differentiated by grade and ability levels. SciTech Academy is seeking STEM partners, to help the school provide opportunities for students to deepen their STEM knowledge and practice 21st Century skills by working in collaborative teams on real-world problems.

With a focus on mastery of core knowledge and skills, teaching methods provide appropriate support and challenge for all students. SciTech Academy teachers utilize a standard curriculum with supplemental materials addressing STEM topics incorporated into instruction. Homework complements and supplements classwork. Assessment is integrated into teaching to confirm student progress and identify the need for intervention or further improvement. Timely and

complete communication with parents establishes a partnership that promotes an environment most likely to achieve success for all students.

In order to provide students with a dependable, least restrictive learning experience, students with special learning needs remain in the classroom with their peers to the greatest extent practicable.

SciTech Academy, like all public schools in Minnesota, was required to shift its educational program to a distance-learning mode in March 2020, in response to the COVID-19 pandemic. SciTech Academy staff established a Distance Learning Plan which addressed the need for students to learn at home, care for students of emergency workers, and food programming for families. For the last two months of the 2019-20 school year, SciTech Academy students learned at home, utilizing weekly instructional packets and digital curricula (primarily MobyMax and IXL). Online sessions were provided by teachers daily, and teachers were otherwise available for communication with students from 9am – 4pm. Students were expected to work on their assignments from 9am – 3pm.

For fall 2020, SciTech Academy initially resumed serving K-3 students mainly on-site – at the school Monday through Thursday – while a hybrid learning model was established for grades 4-8. The younger students were at the school four days a week with recommended safety measures in place, with grades four and up on-site every-other day and with alternative “A / B” schedule Monday through Thursday. All students were off-site on Fridays. However, in November 2020, due to concerns over rising COVID-19 rates in Hennepin County, SciTech Academy made the decision to move to a distance-learning-only model. This was announced to the SciTech community November 9, and the whole school went back to online mode Nov. 18. This remained in effect for over two months, but in January 2021 it was determined safe for students to begin returning to in-person schooling. This started with grades K-1 on January 25, grades 2-3 two weeks later, then grades 4-5 in two more weeks and finally grades 6-8. The Distance Learning option remained available for parents who chose it, but this turned out to be a small minority – less than 20 students remained in Distance Learning by the end of the school year.

Information of the school’s distance learning plan is available on the school website, at <https://scitechacademymn.org/learning-plan/>.

The purpose of this report is to summarize the progress and achievements of SciTech Academy during the 2020-21 school year, the school’s third year of operations. This annual report serves to meet the requirements of the Minnesota Department of Education as they pertain to charter

schools, as well as those of SciTech Academy’s contract with its authorizer, the Minnesota Guild of Public Charter Schools.

The annual report will be posted on the school’s website once approved by the board of directors. A copy of the report will be shared with the Minnesota Guild once approved and will also be made available to staff and to parents of students enrolled at the school.

## School Governance and Management

SciTech Academy is governed by a five-person board of directors. The Board of directors guides the school’s mission, vision and philosophy. The board sets policies regarding finances, enrollment, program evaluation, and other operational aspects. The board’s policies have two purposes: to provide direction to the school staff in implementing the school’s goals, and to ensure the school meets legal requirements and obligations of the charter contract.

The board generally meets the third Friday of the month. Board information is available to school stakeholders and the public from the Board page on the school’s website, <https://scitechacademymn.org/about-us/board-of-directors/>. The table below lists all members who served on the SciTech Academy board during 2020-21.

A board election was planned for the spring of 2021, but due to disruptions relating to the pandemic, and the director’s absence due to health reasons in the spring, the board made the decision at its April 2021 meeting to postpone elections to the beginning of the new school year.

<b>SciTech Academy Board, 2020-21</b>				
<b>Member Name</b>	<b>Role</b>	<b>Start Date</b>	<b>Current Term Exp.</b>	<b>Email Address</b>
Abdirashid Abdi	Community; Treasurer	July 2018	June 2021	abdirashid.abdi@ scitechacademymn.org
Suad Abdirahman	Parent; Secretary	July 2020	June 2023	suad.abdirahman@ scitechacademymn.org
Mohamed Mohamoud	Community	July 2018	June 2021	mohamed.mohamoud@ scitechacademymn.org
Dr. Abdirizak Warfa	Community; Chair	July 2018	June 2021	abdirizak.warfa@ scitechacademymn.org
Omar Warfa	Community; Treasurer	July 2020	June 2023	omar.warfa @scitechacademymn.org

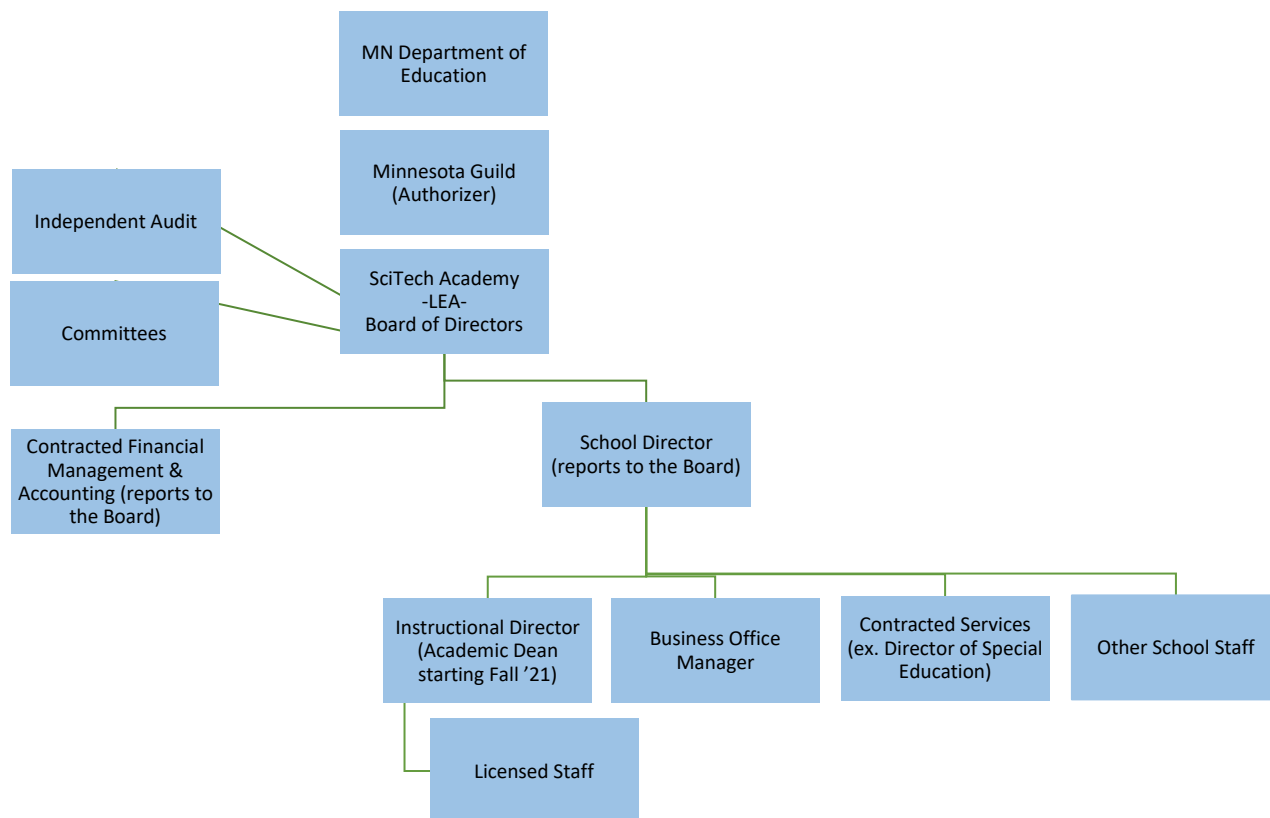
Elections were completed at the beginning of the new school year; the election resulted in two of the members from 2020-21 leaving the board, while the other three remained and were joined by three new members. The board roster as of October 2021 was as shown below:

<b>SciTech Academy Board, 2021-22</b>				
<b>Member Name</b>	<b>Role</b>	<b>Start Date</b>	<b>Current Term Exp.</b>	<b>Email Address</b>
Suad Abdirahman	Parent; Secretary	Sept. 2021	2024	suad.abdirahman@scitechacademymn.org
Zaynab Gelle	Teacher	Sept. 2021	2024	zaynab.gelle@scitechacademymn.org
Ahmedfowzi Ismail	Community	Sept. 2021	2024	ahmedfowzi.ismail@scitechacademymn.org
Ibrahim Mohamed	Teacher	Sept. 2021	2024	ibrahim.mohamed@scitechacademymn.org
Mohamed Mohamoud	Community; Treasurer	Sept. 2021	2024	mohamed.mohamoud@scitechacademymn.org
Dr. Abdirizak Warfa	Community; Chair	Sept. 2021	2024	abdirizak.warfa@scitechacademymn.org

The SciTech Academy board received training from Keillen Curtis of the Minneapolis-based law firm Curtis Law, LLC, on February 24, 2021. Training on school finance was provided by Joe Aliperto, the school’s contract business manager with Deici School Finance.

SciTech Academy is led by its Director and Principal, Abdisallam Abdulle. The administrative team also includes Educational Coach and Instructional Leader Laura Ferguson and Business Office Manager Ayan Ibrahim. The administrative team meets weekly and as needed to manage the day-to-day operations of the school. See the below Organization Chart.





## Faculty

The following staff were employed at SciTech Academy during 2020-21.

Name	File Folder Number	Assignment	Not returning 2021-22
Abdisallam Abdulle	494734	Director / Principal	
Hani Abdi		District Support	
Suad Abdirahman		Enrollment Coordinator	
Sakariye Abdullahi		Student Support	
Ruweda Abu		Student Support	NR
Ahmed M. Ahmed	1002496	Arabic teacher	
Nimaan Ahmed	1002537	Somali teacher	
Reem Alemam	1006159	Teacher, Special Education (returned but resigned Sept. 2021)	
Dol Ali		Support Staff	
Omar Ali	515059	Teacher, ESL	NR
Keith Balke	509822	Teacher, Middle School Math	
Kayla Berg	517502	Teacher, 4 <sup>th</sup> Grade	
Karen Bovy	303472	Literacy teacher / Interventionist	

Name	File Folder Number	Assignment	Not returning 2021-22
Shelby Christianson	507073	Teacher, Kindergarten	NR
Nicole Cvetich	1000569	Teacher, 3 <sup>rd</sup> Grade	NR
Sara Lynn Dorn	505570	Teacher, 2 <sup>nd</sup> Grade	NR
Fadumo Farah		Support Staff	NR
Laura L. Ferguson	383050	Instructional Coach	NR
Kalley Fraser	1004067	Teacher, 4 <sup>th</sup> Grade	
Saynab Gelle	1007786	Teacher, 1 <sup>st</sup> Grade	
Nasrin Haji		Health Manager / COVID Coordinator	
Zamzam Hashi	1007564	Teacher, Kindergarten	NR
Leila Hassan	509445	Middle School Science & Instr. Leader (Academic Dean, Fall 2021)	
Sherehan Hassan	512033	Teacher, Special Education; Academic Coordinator	
Ayan Ibrahim		Operations Manager	
Hamza Ismail		Support Staff	NR
Zamzam Jama		Support Staff	NR
Matthew Kortz	503611	Teacher, Middle School Social Studies	
Cassie McLain	1004996	Teacher, ESL (Middle School)	
Abdulaziz Mohamed		Support Staff	NR
Ibrahim Mohamed	514925	School Counselor	
Nimo Mohamed		Student Support	
Fadumo Mohamed		School Secretary (returned but resigned, Sept. 2021)	
Deeqo Rooble	1008071	Teacher, 1 <sup>st</sup> Grade	
Tyekeela Xiong	497411	Teacher, 5 <sup>th</sup> Grade	
Bashir Yusuf		Dean of Students	
Shukri Yusuf		Support Staff	

For the 2021-22 school year positions remain the same with the exception of the Instructional Coach, which has been shifted to Academic Dean, held by Leila Hassan who was formerly a Middle School Science teacher and Instructional Leader. SciTech Academy is also seeking a math interventionist, as of October 2021 (Karen Bovy was formerly an interventionist for both reading and math but the position was revised to focus only on literacy).

SciTech Academy provided a full week plus three more days of professional development and planning for teachers in August, before school started, plus two additional three days for new teachers. Trainers included outside professionals for several of the topics, as well as school staff such as the Principal and Educational Coach. Topics addressed during this school year kick-off session included:

- Mandated Reporting
- Diversity Training
- Special Education Overview and Child Find
- STEMscopes
- Curriculum / Planning Overview
- ELL Teaching Style
- Somali Culture
- Benefits Overview, Onsite Health
- Classroom Management / First Days / Discipline Plan / Teach Like a Champion
- Bridges Math
- Literacy Curriculum Training
- Crisis Prevention and Intervention training

In addition to the training days in August, the school’s operational calendar includes a number of Professional Development days and early-release days, to ensure that the staff has the proper training to implement our selected curricular resources, utilize best instructional practices as defined above, and to interpret student data in order to refine instructional pedagogy. Two Professional Learning Communities (PLC’s) are in place at SciTech Academy, one for the lower and one for the upper grades, which meet every-other-week.

## Student Information, Enrollment and Attrition

SciTech Academy served grades K-8 during 2020-21, enrolling 305 students as of October 1. This number remained stable and increased somewhat as the year continued. The school ended the year with an Average Daily Membership of 294.58, a significant increase over the previous year when final ADM was 237.34. The school expanded as planned to serve grades K-8 in the fall of 2020, and increased enrollment by approximately 80 students as shown in the table below.

Enrollment and Attrition Trends					
School Year	Day 1 Child Count	October 1 Child Count	End of Year Child Count	Attrition from Oct 1 - EoY	Percentage from Oct 1 – EoY
2018-19	144	147	170	+23	+16%
2019-20	190	227	239	+12	+5%
2020-21	298	305	297	-8	-3%

One hundred per-cent of our students were ethnically categorized as Black or African American. Over 90% were eligible for Free or Reduced Price school meals, and over 90% were identified as English Learners. Seven percent received special education services.

Data based on Day 1, October 1 and End of Year enrollment as reported to Minnesota Department of Education.

Grade Level Enrollment (Oct. 1)										
School Year	K	1	2	3	4	5	6	7	8	Total
2018-19	45	21	24	16	19	10	12	-	0	147
2019-20	36	41	32	31	25	24	15	23	0	227
2020-21	40	46	38	42	45	28	21	25	20	305

## School Goals & Academic Performance

### SciTech Program and Instructional Model

SciTech Academy’s program and instructional model are a research-based curriculum incorporating a STEM emphasis and with elements of project-based learning for all students. The instructional approach and school environment are designed to enhance students' skills and prepare them to pursue college and careers in STEM fields. Educators at SciTech Academy implement best practices instruction, employing a variety of methods to support high academic expectations and ensure students attain indicators for high academic performance. SciTech Academy implements a STEM based curriculum that integrates the four disciplines through thematic and inquiry-based learning where students gain foundational knowledge and 21st century skills including critical thinking, problem solving and creativity.

SciTech Academy’s elementary grades program is built around the core classes of Language Arts, Math, Science and Social Studies and includes Somali and Arabic as world languages. The math program utilizes the Bridges curriculum (<https://www.mathlearningcenter.org/bridges>) and the literacy program teaches reading and writing through the Units of Study program (<http://www.unitsofstudy.com>, used in all grades). Technology supports include Series 6000I SMART Boards, iPads for grades K-2 and Chromebooks for grades 3 and up.

SciTech Academy’s middle school program aims to foster an environment where all middle-level students excel academically, socially, and emotionally through the collaborative efforts of

the community, school personnel, and students. The middle school team works together to help every student realize their full potential to become model citizens and lifelong learners.

SciTech Academy's contract with our authorizer provides that:

*The School shall evaluate students' work based on the assessment strategies identified in its Application.*

*The Guild will monitor student academic performance and the academic culture, which provides the basis for high academic performance. The Guild will monitor academic achievement by reviewing student testing and achievement. School students will take the Minnesota Comprehensive Assessment tests and any other testing required by Applicable Law.*

SciTech Academy's Application (Goals and Student Performance section) specified the following:

*SciTech Academy will comply with the Minnesota education and student assessments/testing programs, as well as Federal education accountability. SciTech Academy will use a school improvement program that combines successful, standards-based instructional practices with school created assessments, MAP assessments and State Mandated Assessments. The assessment tools are used to analyze student performance on state and district assessments and to create school-based interim reports that are aligned to benchmarks within the Standard Course of Study. The result is a balanced approach to assessment that combines the benefits of state, district and school-wide assessments with the instructional value of day-to-day classroom assessments and assignments.*

*SciTech Academy will implement a continuous model to measure academic progress and to measure instructional effectiveness and teacher capacity. The data-driven assessment, analysis, and action, which is indispensable for increasing student achievement, is deeply embedded in the school's culture and will be a top priority for school-wide improvement.*

## Performance and Assessment Goals

The Performance and Assessment section of SciTech Academy's contract with the authorizer specifies seven goals. The goals are stated below, along with a summary of progress to date. The first four goals refer to the Minnesota Comprehensive Assessments (MCA's). State testing was suspended for spring 2020 due to the COVID-19 pandemic and shift to distance learning that spring; while state tests were resumed in in 2021, the Department of Education determined that results from spring 2021 tests should not be used for accountability purposes.

Nonetheless, SciTech Academy's spring 2021 MCA results are reported below to the extent possible, in order to address Goals 1-4.

The fifth goal relates to student attendance, and the last two call for measuring levels of satisfaction and confidence of teachers and of parents.

### **Goal No. 1: Academic Growth**

The School will show positive student growth measured by state accountability measures; the School will show a Growth Z Score of '0' at the end of the first year and post a positive Z Score in all subsequent years during the contract period.

Not applicable: MDE is no longer calculating or reporting z-scores. NOTE: SciTech Academy's contract with the Minnesota Guild runs through the 2022-23 school year; rather than revising goals for the final years of the contract, this goal will be allowed to stand, to be revisited with the contract is renewed in the spring of 2023.

### **Goal No. 2: Academic Achievement - Reading Proficiency**

Students who are continuously enrolled (1 October) will exceed MCA Reading proficiency rates in reference to comparable schools. Year 1: same%; Year 2: 3%; Year 3: 5%; Year 4: 7%; Year 5: 9%.

SciTech: Unlike many Minnesota public schools, SciTech Academy was successful in testing almost all its students on the Reading MCA in the spring of 2021, with over 90% participation (and similarly high proportions in Mathematics and Science). However, most students scored poorly, with only 11 of 174 or 6% testing at the Meets or Exceeds standards levels. Effects of the pandemic severely disrupted learning for our students during 2020-21. This was perhaps the case for most schools, but the shift to remote and hybrid learning environments was particularly hard for our student population, of primarily English Learners and students from low income backgrounds often having few supports for learning at home. Beginning September 2021 SciTech Academy has returned to in person learning, with hopes that this can continue through the spring without interruptions. Given the ability to continue in person learning every day, school leadership is confident that academic achievement gains will be readily apparent by the spring of 2022.

### **Goal No. 3: Academic Achievement - Mathematics Proficiency**

Students who are continuously enrolled (1 October) will exceed MCA Mathematics proficiency rates in reference to comparable schools. Year 1: same%; Year 2: 3%; Year 3: 5%; Year 4: 7%; Year 5: 9%.

SciTech: Seven of 173 students tested at the Meets or Exceeds Standards levels, or 4%.

**Goal No. 4: Academic Achievement- Proficiency, Science**

Students who are continuously enrolled (1 October) will exceed MCA Science proficiency rates in reference to comparable schools. Year 1: same%; Year 2: 2%; Year 3: 4%; Year 4: 6%; Year 5: 8%.

SciTech: One of 44 students tested at the Meets Standards level, or 2%.

**Goal No. 5: Attendance**

Students attending SciTech will have a consistent Average Daily Attendance rate of 90% or higher.

**Progress to date:** SciTech Academy exceeded this target again in 2020-21: the school's end-of-year attendance data shows Average Daily Attendance of 94.3%. This is a slight decline from 2019-20 when ADA was 98.3%, but still quite good considering continuing pandemic conditions throughout the school year.

**Goal No. 6: Teacher Satisfaction and Confidence**

Annually, 90% of teachers will indicate that they are "satisfied" or "highly satisfied" (using a Likert scale survey model) with their involvement in the design, selection, delivery, and relevancy of professional development. Surveys will be conducted bi-annually in November and June.

**Progress to date:** Teachers were not surveyed during 2020-21; will be done fall/winter 2021.

**Goal No. 7: Parent/Guardian Satisfaction and Confidence**

Annually, 90% of parents will consider SciTech to be safe and secure environments for their student. Annually, 90% of parents will indicate 'strong communication' between SciTech and home regarding the student's achievement and well being. Surveys are to be conducted bi-annually in November and June.

**Progress to date:** Parents were not surveyed in 2020-21; as with the teacher survey, this is an aspect that will be resumed fall/winter 2021.

## Finances

For questions regarding school finances and for complete financials for 2020-21 and/or an organizational budget for 2021-22, contact:

Joe Aliperto  
Dieci School Finance  
2151 Hamline Ave N, Suite 212; Roseville, MN 55113  
651-285-7676 / joe@diecisf.com

Information presented below is derived from final audit figures. The full financial audit will be completed and presented to Minnesota Department of Education and the Minnesota Guild no later than December 31, 2021.

FY 21 Finances			
	General Fund	Food Svc. Fund	Totals
<b>Total Revenues</b>	\$4,260,444	\$279,899	\$4,540,343
<b>Total Expenditures</b>	\$3,779,847	\$363,222	\$4,143,069
<b>Net Income</b>	\$480,597	-\$83,323	\$397,274
<b>Total Fund Balance</b>			\$662,840

### Overview

SciTech Academy's budget for Fiscal 2021, its third year of operation, totaled just over \$4.5 million, more than \$800,000 more than in Fiscal 2020. The school ended Fiscal Year 2021 with a total fund balance of \$662,840, which is 16.0% of expenditures.

## Innovative Practices

SciTech Academy aims to prepare students to be problem-solvers, border crossers, self-reliant, and logical thinkers. This calls for an instructional approach that, unlike conventional methods, requires student engagement, hands-on experiences, and an educationally challenging environment.

To this end, innovative practices in place at SciTech Academy include three approaches for improving pupil learning and student achievement: 1) Use of collaborative instruction; 2) Inquiry based approach to learning and STEM focused instruction; and 3) Use of STEM approaches to help students identify connections between academic learning and the "real world." Though the SciTech program ends with 8<sup>th</sup> grade, these approaches will put students on track for career and college readiness.



To meet the challenge of closing achievement gaps, SciTech Academy strives to identify and use curriculum materials that address required state standards but are tailored to the needs and the abilities of our students. Strategies for ensuring alignment of the program with MN state standards are described below. Elementary standard curriculum at SciTech Academy includes:

- Wonders – mainstream literacy program and used to support ELL programming: <https://www.mheducation.com/prek-12/program/microsites/MKTSP-BGA07M0/wonders.html>
- Bridges in Mathematics: <https://www.mathlearningcenter.org/bridges>
- STEMscopes for Science (K-8): <https://www.stemscopes.com/>

Middle School standard curriculum includes:

- Open-Up Resources for math: <https://openupresources.org/math-curriculum/>
- myPerspectives for English Language Arts: <https://www.savvas.com/index.cfm?locator=PS2rBh>
- Northern Lights - Social Studies, grade 6: [nl.mnhs.org](http://nl.mnhs.org)
- Cengage – Social Studies, grades 7-8: <https://www.cengage.com/s/?q=social%20studies>  
(log-in's for each book are different)

To supplement the regular curriculum and help students close individual skill gaps, SciTech uses several digital curriculum resources. These include -

- MobyMax ([www.mobymax.com](http://www.mobymax.com)): MobyMax lends itself to independent practice both at school and at home. Instead of assigning worksheets, SciTech Academy uses this platform for E-Learning and to design contests for homework. In MobyMax, students are required to master material at one level before moving to the next.
- IXL ([www.ixl.com](http://www.ixl.com)): IXL is a comprehensive digital curriculum that provides practice in Math, Language Arts, Science and Social Studies.
- BrainPOP Jr. (<https://jr.brainpop.com/>)
- Super Teacher Worksheets (<https://www.superteacherworksheets.com/>)
- Reading A-Z, supplemental, also used for EL (<https://www.readinga-z.com>)

Teachers assign material using these digital curricula based on students' needs, to supplement the main curricula in the various subjects and ensure all students are keeping up.

In developing its learning program, SciTech Academy is committed to specific elements of educational design, which are stated in the school's contract with its authorizer. Specifically, Section 6.8 of the contract, Learning Program, posits five specific strategies to be used. SciTech Academy is in fact making use of these strategies, as follows (Contract language in italics):

*Student learning and achievement will improve through the use of proven curriculum and pedagogy and utilizing best teaching strategies, organizational structure and practices, which include:*

- *Smaller class sizes, ranging from 15-25 students depending on grade levels.* SciTech Academy maintains small class sizes: generally no more than 25 students in a classroom, usually less.
- *Individualized instruction:* teachers strive to individualize instruction to meet each student's needs: lesson plans are differentiated based on data showing where students need more or less work, students are put in small groups based on skills levels, and there are individual check-in's daily for all students. These strategies to individualize instruction are particularly important to keep well-connected with every student during distance learning.
- *STEM integration* – SciTech utilizes the STEMscopes program for science ([www.stemscopes.com](http://www.stemscopes.com)). This allows students to do projects in STEM topics such as designing apps for digital devices.
- *Hands-on learning and exploratory - CRA (Concrete, Representational, and Abstract) approach* – teachers at SciTech seek to utilize hands-on and exploratory approaches in order to keep students engaged. Though remote learning presents challenges for effective hands-on learning, the school is striving to maintain this approach, e.g. through science experiments students can do at home with the support of materials sent by their teachers. There have also been hands-on art projects done remotely, and an energy-saving project with supplies sent from the school. Even in the early grades students are supported and coached to carry out individual projects, and to present them via Powerpoint. This promotes interpersonal communication, and helping students build these communication skills early on will help close achievement gaps.
- *Aligned to Minnesota Academic Standards and the World's Best Workforce* – SciTech ensures all curricula are aligned to state standards, through review when curricula are adopted. For instance, STEMscopes aligns particularly well with MN state science standards, and Wonders, the elementary-grades reading curriculum from McGraw-Hill, includes an EL curriculum as well as the standard reading curriculum and therefore is particularly well-aligned to building literacy for SciTech's population of English Learners. In math, the elementary grades use the Bridges program which includes manipulatives to teach math concepts and is particularly well suited for EL students.

SciTech Academy's approach also aims to incorporate students' cultural assets and real life experiences into the learning process.

Finally, SciTech Academy seeks to involve its parents in support of student learning. There are Parent Academy events quarterly, to which all parents are invited. At these events parents are able to learn from school staff about the school, its programs, how to support their student in

completing homework, how to engage with the school, and the role of special education services in addressing specific learning needs. This is particularly important given our population of recent immigrants / English Learners. During 2020-21, Parent Academy events were held virtually, but with low participation. They are being resumed for 2021-22.

## Future Plans

For the future, SciTech Academy plans to retain the successful elements of the program that has been built, while continuing to strive for improvements to bring students to the point of closing achievement gaps, including ensuring that all students read well by third grade.

During 2019-20 a planned expansion of the school was carried out, with several additional classrooms added, and the school remained fully subscribed in 2020-21 as it moved to serve the full complement of grades K-8. During the summer of 2021 there was further work on the school facility with a library / instructional media center added (in place as of September 2021).

As of summer 2021, SciTech Academy's main ambition for the new school year is to remain in session in person throughout the year, with a focus on recovery from learning losses during the year-plus of pandemic related disruptions. With a resumption in stable, in person learning throughout the year, school leadership expects improvements in student achievement will be apparent by spring 2022.

Other long-term goals include adding an offering of after-school programming; summer school programming; building collaboration with STEM-supporting agencies; bringing in more outside resources for professional development; and continuing expansion of the program.