



Cloquet Public Schools

Regular Meeting

Monday, February 22, 2021 at 6:00 PM
Garfield Board Room
302 14th Street
Cloquet, MN 55720
302 - 14th Street, Cloquet, MN

5:30 pm Working Session

6:00 pm Regular Meeting

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3. Monday, March 8, 2021 - Regular School Board Meeting	
5:30 p.m. Working Session	
6:00 p.m. Regular Meeting	
4. Tuesday, March 16, 2021 - Health, Safety and Crisis Committee Meeting - 3:45 p.m.	
5. Monday, March 22, 2021 - Regular School Board Meeting	
5:30 p.m. Working Session	
6:00 p.m. Regular Meeting	
XV. Adjournment	

* If any one board member wishes to remove an item from the consent agenda for discussion, that item should be added to the board meeting agenda prior to its approval.



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2. Consider Approving the Bid From Gardner Builders for the Renovations of the Career Technology Education (CTE) and Art Space at Cloquet High School
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4. Consider Approving the Mid-Year Budget Revisions (Revenue and Expenditures FY 20/21)
5. Building and Department Reports

VII. Claims

1. Claims, February 17, 2021
2. Hand Checks, February 5, 2021
3. Treasurer's Report, September 2020

VIII. Consent Items

1. **Retirement Letters**
 - a. 1.0 FTE 6th Grade Teacher at Cloquet Middle School Effective April 2, 2021
2. **Resignation Letters**
 - a. 6.5 hrs/day Paraprofessional at Washington Elementary effective February 17, 2021
3. **Recommendations for Employment**
 - a. 0.5 FTE American Indian Education (AIE) Teacher at Washington Elementary for the Remainder of the 2021-2022 School Year
 - b. Water Safety Instructor for Cloquet Community Education
4. **Extra Services Contracts**
 - a. Spring Coaches As Presented in Attachments
 - b. Additional Hours for Extended Day Hours at CAAEP
5. **Permission to Post**
 - a. 6.5 hours/day Consistent Support Special Education Paraprofessional at Washington Elementary School

b. 6.5 hours/day Consistent Support Special Education Long Term Substitute Paraprofessional at Cloquet Middle School

6. **Staffing Adjustments**

a. Increase in FTE for Specialist Time for Churchill Elementary School's Distance Learning Students

b. Increase in Hours for Van Driver from 3 hrs/day to 6.5 hrs/day

IX. **School Board Committee Report**

1. Student Enrollment Report as of February 16, 2021

X. **Agenda Addendums**

XI. **New Business**

1. Consider Approving MSHSL Proposed Constitutional Amendment

2. Consider Authorizing Cloquet School Board Chair and Superintendent to Enter Into Conversations with Carlton School Board Chair and Superintendent About Future Collaboration Opportunities

3. Consider Approving the All Night Grad Party Requests

4. 3rd and Final Reading of Policy #522 Title IX Sex Non-Discrimination

5. Consider Approving the Revisions to Policy #522 Title IX Sex Non-Discrimination

XII. **Superintendent's Report**

1. Carlton Schools Discussions

2. 2021-22 Budget Projections

3. Vaccine Update

XIII. **For Your Information**

1. Letter of Intent to Participate in Public Employees Insurance Program (PEIP) from EMC Group

XIV. **Upcoming Meetings/Events**

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XV. **Adjournment**

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February 8, 2021

Board Chair Ted Lammi called the working session to order at 5:30 p.m.

Topics discussed:

Dr. Cary updated the School Board on the Covid-19 vaccine process. He commended the Carlton County Health Department for the smooth and organized process in the distribution of vaccines. He explained that we have been able to offer vaccines to most of our compromised staff members and will continue to work through the active members of the staff as more shots are available. Dr. Cary also discussed there will be a need to relocate Lil' Lumberjacks daycare during the CTE remodel, the HITA process for insurance bids, and open enrollment. Further discussion was held the following agenda items: the revision to Policy #522, the CMS leadership team, the renewal of the credit union agreement and the NLA employment postings.

There being nothing further to discuss, Board Chair Ted Lammi adjourned the working session at 6:10 p.m.

February 8, 2021

The Regular Meeting of the School Board of Independent School District No.94, in the City of Cloquet on January 25, 2021 was called to order by Board Chair T. Lammi at 6:12 p.m.

Roll Call – The following members were present on roll call:

- Dave Battaglia
- Melissa Juntunen
- Ted Lammi
- Nate Sandman
- Ken Scarbrough

Present in Person:

- Dr. Michael Cary, Superintendent
- Mary Marciniak, Executive Assistant to the Superintendent
- Bill Bauer, Technology Support Specialist
- Jana Peterson, Pine Knot Newspaper Representative

Building principals, teacher representatives, AIE Director, Community Education Director, District Facilities & Grounds Director will be excused from attending Board meetings until further notice.

APPROVAL OF BOARD AGENDA

- RESOLVED by D. Battaglia to approve the February 8, 2021 board agenda. K. Scarbrough seconded the motion and the resolution was approved by unanimous yea vote of all members present on roll call.

APPROVAL OF MEETING MINUTES

- RESOLVED by N. Sandman to approve the January 25, 2020 school board meeting minutes, as presented. K. Scarbrough seconded the motion and the resolution was approved by unanimous yea vote of all members present on roll call.

OPEN FORUM AND RECEPTION OF DELEGATIONS, PETITIONS, AND COMMUNICATIONS

The following reports were provided:

- Building and Department Reports
- February Washington Elementary School Newsletter
- NHS Students' Snow Sculptures at Sunnyside Get Recognition In McKnight Long Term Care News

CONSIDER APPROVAL OF CLAIMS, HAND CHECKS, TREASURER'S REPORT, INVESTMENT REPORTS AND WIRES

- RESOLVED by T. Lammi to approve to approve Claims, February 3, 2021; Hand Checks, January 22, 2021 and January 28, 2021, as presented. M. Juntunen seconded the motion and the resolution was approved by unanimous yea vote of all members present on roll call.

CONSENT ITEMS

RESOLVED by M. Juntunen to approve the Consent Items, as presented:

1. Recommendations of Employment:

NAME	POSITION/LOCATION	SALARY**	START DATE
a. Zoe Bystrom	1.0 FTE LTS Title 1 until 6/9/21 – Washington Pending appropriate licensure	\$223.65/day	2/8/21
b. Sarah Jurek	1.0 FTE LTS 3rd Grade – Washington	\$223.65/day	2/8/21 for 6 weeks

2. Extra Services Contracts

- c. Tyler Korby as Head Softball Coach
- d. Rodrick Syck as ACT Prep Advisor for the 2020-2021 School Year – 21 hours at \$33.46/hr

3. Permission to Post

- e. 1.0 FTE Title I Long Term Substitute Teacher at Washington Elementary School for remainder of the 2020-2021 school year
- f. 6.75 hrs/day Paraprofessional at NLA for the remainder of the 2020-2021 School Year
- g. 1.0 FTE Special Education Teacher at NLA for the remainder of the 2020-2021 School Year
- h. 1.0 FTE 6th Grade Long-Term Substitute Teacher at Cloquet Middle School from April 2, 2021 until the end of the 2020-2021 School Year.

4. Staffing Adjustments

- a. Internal transfer of Heather Johnson from Title I to Grade 3 for the reminder of the 2020-2021 school year
- N. Sandman seconded the motion and the resolution was approved by unanimous yea vote of all members present on roll call.

SCHOOL BOARD COMMITTEE REPORT

- The Student Enrollment Report as of February 2, 2021 was presented and reviewed.

AGENDA ADDENDUMS

- There was nothing to discuss currently.

NEW BUSINESS

- RESOLVED by N. Sandman to approve the Members Cooperative Credit Union (MCCU) Credit Card Consent Agreement, as presented. K. Scarbrough seconded the motion and the resolution was approved by unanimous yea vote of all members present on roll call.
- The School Board had a 2nd Reading of Policy #522 Title IX Sex Non-Discrimination

SUPERINTENDENT'S REPORT

Dr. Cary had reviewed most of the topic in the working session. He informed the School Board that we have seen an increase in enrollment since returning to the in-person model and the last meeting, especially at CAAEP. He informed them that the mid-year budget presentation and the approval of the bids for the CTE remodel will be at the next meeting.

FOR YOUR INFORMATION

- Just Kids Dental notified the district they will still be able to provide dental care this year under proper Covid guidelines.

UPCOMING MEETINGS/EVENTS

- Monday, February 22, 2021 Regular Meeting
5:30 Working Session
6:00 Regular Meeting
- Wednesday, February 24, 2021 - JOM/LIEC - 5:30 p.m.
- Monday, March 8, 2021 Regular Meeting
5:30 p.m. Working Session
6:00 p.m. Regular Meeting

ADJOURNMENT

There being nothing further to discuss, Board Chair Ted Lammi adjourned the meeting at 6:20 p.m.

ATTEST:

Clerk of the School Board

Chair of the School Board



Cloquet High School CTE & Art Space Renovation

ARI Project #: 20-081

Bid Date & Time: February 5, 2021 @ 2:00 p.m. local time

Contractor	Base Bid	Alternate No. 1	Alternate No. 2	Mechanical Contractor / \$	Electrical Contractor / \$	Base Bid	Base Bid & Alt. 1	Base Bid & Alt. 2	Base Bid & Alt. 1, 2
Adolfson & Peterson 408 W Superior Street Duluth, MN 55802	\$ 1,710,327.00	\$ 15,828.00	\$ 55,977.00	\$ 577,030.00 A.G. O'Brien	\$ 367,500.00 Hunt Elec.	\$ 1,710,327.00	\$ 1,726,155.00	\$ 1,766,304.00	\$ 1,782,132.00
Donald Holm Construction 3211 West 3 rd Street Duluth, MN 55806	\$ 1,814,105.00	\$ 19,583.00	\$ 65,830.00	\$ 577,030.00 A.G. O'Brien	\$ 367,800.00 Duluth Elec.	\$ 1,814,105.00	\$ 1,833,688.00	\$ 1,879,935.00	\$ 1,899,518.00
Four Star Construction 7500 Tower Ave Superior, WI 54880	\$ 1,689,000.00	\$ 12,450.00	\$ 64,000.00	\$ 596,820.00 A.G. O'Brien	\$ 360,000.00 Benson Elec>	\$ 1,689,000.00	\$ 1,701,450.00	\$ 1,753,000.00	\$ 1,765,450.00
Gardner Builders 2 West First St, Ste. 133 Duluth, MN 55802	\$ 1,674,191.00	\$ 7,970.00	\$ 49,214.00	\$ 577,030.00 A.G. O'Brien	\$ 367,500.00 Hunt Elec.	\$ 1,674,191.00	\$ 1,682,161.00	\$ 1,723,405.00	\$ 1,731,375.00
Johnson-Wilson Constructors 4431 West Michigan St Duluth, MN 55807	\$ 1,696,800.00	\$ 12,901.00	\$ 38,480.00	\$ 577,030.00 A.G. O'Brien	\$ 367,500.00 Hunt Elec.	\$ 1,696,800.00	\$ 1,709,701.00	\$ 1,735,280.00	\$ 1,748,181.00
Maertens-Brenny Construction 8251 Main Street NE Minneapolis, MN 55432	\$ 1,732,000.00	\$ 11,000.00	\$ 60,000.00	\$ 588,000.00 Thielen	\$ 367,800.00 Duluth Elec.	\$ 1,732,000.00	\$ 1,743,000.00	\$ 1,792,000.00	\$ 1,803,000.00
Nordic Group 1583 County Rd 4 Carlton, MN 55718	\$ 1,840,000.00	\$ 17,950.00	\$ 78,885.00	\$ 580,000.00 A.G. O'Brien	\$ 370,000.00 Duluth Elec.	\$ 1,840,000.00	\$ 1,857,950.00	\$ 1,918,885.00	\$ 1,936,835.00
Ray Riihiluoma Inc. 1415 Highway 33 South Cloquet, MN 55720	\$ 1,667,788.00	\$ 15,555.00	\$ 77,777.00	\$ 577,030.00 A.G. O'Brien	\$ 367,500.00 Hunt Elec.	\$ 1,667,788.00	\$ 1,683,343.00	\$ 1,745,565.00	\$ 1,761,120.00

ARCHITECTURAL RESOURCES INC

704 East Howard Street | Hibbir 126 East Superior Street | Duluth, MN 55802

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February 08, 2021

Dr. Michael Cary, Superintendent
Dylan Carlson, Director of Facilities and Operations
Cloquet Public Schools – ISD94
302 14th Street
Cloquet, MN 55720

Cloquet High School CTE and Art Space Renovation
ARI Project # 20-081

Dear Dr. Cary and Dylan:

Bids for the above project were received at 2:00 pm on February 5, 2021, and opened in public at 2:30 pm on that same date. The Bid opening took place in the Auditorium of the Cloquet High School. There were eight (8) sealed bids received, consisting of a base bid and two alternate bids. The attached Bid Tabulation was created by ARI to summarize results of bids received. We have contacted the apparent low bidder, Gardner Builders, to qualify their bids. Tim Huber, Project Manager, indicated they agree with and will honor the Base Bid Amount of \$1,674,191.00 and had no reservations about performing the work for that dollar amount. Additionally, they will honor their Alternate Bid 1 in the amount of \$7,970.00 to add windows in the new art room and their Alternate Bid 2 in the amount of \$49,214.00 to provide additional fencing and site work. All bids received were competitive, consistent and within the budget parameters provided by District and preliminary estimates provided by ARI.

ARI has reviewed the qualifications of Gardner Builders, we have worked with them successfully in the past, and have witnessed several of their past projects. We have discussed their understanding of the project, their internal team, intended subcontractors, and their approach to the challenges of this specific project. All items reviewed indicate that they are a competent contractor, with relevant experience, and are capable of completing the project scope successfully within the required timeline for the District.

Based on the above information ARI recommends awarding a contract to Gardner Builders for the Base Bid in the amount of \$1,674,191.00 plus whichever alternates the District wishes to include.

Should the District elect to award only the Base Bid then the lowest responsible bidder is Ray Riihiluoma who confirmed they are very willing to perform the Base Bid scope of work for their Bid Amount of \$1,667,788.00.

Please feel free to contact us if you have any questions regarding this recommendation.

Respectfully submitted,

ARCHITECTURAL RESOURCES, INC.

Kerry M. Leider, Owner Representative

Encl.

cc: Candice Nelis, District Business Manager

ARCHITECTURAL RESOURCES INC

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Adopted 6/8/2020

REVENUES AND EXPENDITURES FY 20/21

Revised: 2/22/2021

INDEPENDENT SCHOOL DISTRICT NO. 094

Operating Fund Balances:

FUNDS	DESCRIPTION	AUDITED	PROPOSED	TRANSFERS	PROPOSED	TRANSFERS	EXPENSE	ESTIMATED
		JUNE 30, 2020	2020-2021	IN	2020-2021	OUT	REVENUE	JUNE 30, 2021
		FUND BALANCE	REVENUES	2020-2021	EXPENDITURES	2020-2021	DIFFERENCE	FUND BALANCE
01	Unassigned General Fund	\$5,715,810.00	\$31,527,019.00	\$0.00	\$31,996,195.00	\$0.00	(\$469,176.00)	\$5,246,634.00
	Non-Spendable - General Fund Inventory	\$0.00	0.00	0.00	0.00	0.00	\$0.00	\$0.00
	Non-Spendable - General Fund Pre-Paid Exp	\$87,909.00	0.00	0.00	0.00	0.00	\$0.00	\$87,909.00
(01)	Assigned for Achievement and Integration	86,217.00	318,557.00	0.00	404,774.00	0.00	(\$86,217.00)	\$0.00
(01)	Assigned for Curriculum	0.00	500,000.00	0.00	500,000.00	0.00	\$0.00	\$0.00
(03)	Assigned for Pupil Transportation	\$283,477.00	1,489,585.00	0.00	1,489,585.00	0.00	\$0.00	\$283,477.00
(12)	Assigned for Student Activities	\$514,941.00	620,030.00	0.00	620,030.00	0.00	\$0.00	\$514,941.00
(05)	Restricted for Operating Capital	\$350,835.00	650,760.00	0.00	707,315.00	0.00	(\$56,555.00)	\$294,280.00
	Restricted for Long Term Fac Maint	\$254,452.00	263,277.00	0.00	388,850.00	0.00	(\$125,573.00)	\$128,879.00
	Restricted for Safe Schools levy	95,571.00	0.00	0.00	0.00	0.00	0.00	\$95,571.00
	Committed for Severance Payments	\$1,710,582.00	0.00	0.00	0.00	0.00	\$0.00	\$1,710,582.00
	Total Fund 01	\$9,099,794.00	\$35,369,228.00	\$0.00	\$36,106,749.00	\$0.00	(\$737,521.00)	\$8,362,273.00
02	Restricted for Food Service Fund	\$290,802.00	\$1,102,000.00	\$0.00	\$1,228,052.00	\$0.00	(\$126,052.00)	\$164,750.00
	Non-Spendable - Food Service Inventory	\$44,507.00	0.00	0.00	0.00	0.00	\$0.00	\$44,507.00
	Non-Spendable - Food Service Pre-Paid Exp	\$0.00	0.00	0.00	0.00	0.00	\$0.00	\$0.00
	Total Fund 02	\$335,309.00	\$1,102,000.00	\$0.00	\$1,228,052.00	\$0.00	(\$126,052.00)	\$209,257.00
04	Restricted for Community Education	\$153,905.00	\$1,891,194.00	\$0.00	\$1,891,532.00	\$0.00	(\$338.00)	\$153,567.00
	Restricted for Early Child/Family Ed.	\$98,729.00	0.00	0.00	0.00	0.00	\$0.00	\$98,729.00
	Restricted for School Readiness	\$245,353.00	0.00	0.00	0.00	0.00	\$0.00	\$245,353.00
	Restricted for Adult Basic Education	\$0.00	0.00	0.00	0.00	0.00	\$0.00	\$0.00
	Unassigned for Community Services	\$0.00	0.00	0.00	0.00	0.00	\$0.00	\$0.00
	(Non-Public, Pre-School)							
	Non-Spendable - Pre-Paid Expenses	\$0.00	0.00	0.00	0.00	0.00	\$0.00	\$0.00
	Total Fund 04	\$497,987.00	\$1,891,194.00	\$0.00	\$1,891,532.00	\$0.00	(\$338.00)	\$497,649.00
	TOTAL OPERATING FUNDS	\$9,933,090.00	\$38,362,422.00	\$0.00	\$39,226,333.00	\$0.00	(\$863,911.00)	\$9,069,179.00

	AUDITED JUNE 30, 2020 FUND BALANCE	PROPOSED 2020-2021 REVENUES	TRANSFERS IN 2020-2021	PROPOSED 2020-2021 EXPENDITURES	TRANSFERS OUT 2020-2021	EXPENSE REVENUE DIFFERENCE	ESTIMATED JUNE 30, 2021 FUND BALANCE
<i>NON-OPERATING FUND BALANCES :</i>							
06 <i>Restricted</i> for Bldg. Constr.	\$45,840.00	\$1,962,487.00	\$0.00	\$1,957,237.00	\$0.00	\$5,250.00	\$51,090.00
Total Fund 06	\$45,840.00	\$1,962,487.00	\$0.00	\$1,957,237.00	\$0.00	\$5,250.00	\$51,090.00
07 <i>Restricted</i> for Debt Service Fund	\$1,057,661.00	\$5,178,610.00	\$0.00	\$5,103,006.00	\$0.00	\$75,604.00	\$1,133,265.00
Total Fund 07	\$1,057,661.00	\$5,178,610.00	\$0.00	\$5,103,006.00	\$0.00	\$75,604.00	\$1,133,265.00
47 <i>Restricted</i> for OPEB Debt Service Fund	\$181,931.00	\$400,971.00	\$0.00	\$464,306.00	\$0.00	(\$63,335.00)	\$118,596.00
Total Fund 47	\$181,931.00	\$400,971.00	\$0.00	\$464,306.00	\$0.00	(\$63,335.00)	\$118,596.00
<i>Fiduciary Funds -</i>							
45 OPEB Trust Fund	\$4,559,800.00	\$430,000.00	\$0.00	\$725,000.00	\$0.00	(\$295,000.00)	\$4,264,800.00
TOTAL NON-OPERATING FUNDS	\$5,845,232.00	\$7,972,068.00	\$0.00	\$8,249,549.00	\$0.00	(\$277,481.00)	\$5,567,751.00
TOTAL FUNDS	\$15,778,322.00	\$46,334,490.00	\$0.00	\$47,475,882.00	\$0.00	(\$1,141,392.00)	\$14,636,930.00

Rubbing elbows with them: Building capacity in STEM through science and engineering fairs

Michele H. Koomen¹  | Mary N. Hedenstrom² | Molly K. Moran³ 

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Abstract

Using social cultural career theory (SCCT) linked with tenets of equity, we examined the role of participation in science and engineering fairs (SEFs) on youth's science, technology, engineering, and mathematics (STEM) educational and career choices. We analyzed data for evidence of the SCCT constructs of self-efficacy, interest, and learning experiences using constructs of Native American (NA), culturally responsive, and rural equitable pedagogies. Qualitative data included semi-structured interviews, focus groups, practice presentations of SEF projects, classroom observations, and mentoring students. Quantitative data consisted of two surveys: STEM Semantics Survey and the Motivation Strategies for Learning Questionnaire. Qualitative results reveal how the teacher built self-efficacy using equitable pedagogy by putting the students in control of their projects, created a network of experts in various science disciplines, developed a culture of mentorship that promoted belonging, and removed barriers for student participation by blending academics with culture for NA and rural mixed socioeconomic status students. She evoked asset-based pedagogies that inspired students to further their education and go into STEM fields. Quantitative findings reveal former student's orientation to participation in science fair activities related to their high interests, perceptions of a challenge, curiosity, and emerging mastery, where students demonstrated high dispositions in science and engineering and self-identified as

STEM people. Implications include the use of SCCT, linked with equitable pedagogies to understand interest in STEM fields, mentoring, tapping into the expertise of local professionals to support development of projects, and navigating cultural barriers to provide access for underrepresented youth.

KEYWORDS

equitable pedagogy, mixed SES and rural students, Native American, science fairs, social cognitive career theory

1 | INTRODUCTION

Science, technology, engineering, and mathematics (STEM) professions are constantly growing (Bureau of Labor Statistics, 2015) fueling a need for STEM professionals (National Research Council [NRC], 2009; Sahin et al., 2015). Women and people of color are disproportionately absent in the STEM workforce (National Science Foundation [NSF], 2017) providing a rationale for developing interest in STEM education and career opportunities for all K12 students (NRC, 2009; Sahin et al., 2015). Specific to this study, Native Americans (NAs) are underrepresented in STEM disciplines where the U.S. Census Bureau (2015) reported they were 1.7% of the population. As a group they account for only 0.6% of bachelor's degrees, 0.4% of master's degrees, and 0.2% of doctoral degrees in science and engineering (NSF, 2017). Additionally, students in rural areas are underserved in STEM education where their counterparts in urban areas outperform them and are more likely to engage in future STEM endeavors (Murphy, 2020).

Recent research suggests the high school years are critical junctures for developing interest and success in STEM fields (Wang, 2013). On the front lines, K12 teachers are positioned to open paths to STEM careers for all students. While young people may hold science in high esteem, many believe it is only for a gifted minority of the population, a stereotype science and engineering fair (SEF) involvement may disrupt (Palomba & Tintori, 2017). Lent and Brown's (2008) research illustrated the importance of stimulating positive student attitudes and self-efficacy for STEM while Hidi and Renninger (2006) demonstrated that students' interest promoted career choices in STEM. With support and mentoring, SEFs may cultivate interest in STEM education and career opportunities for participating students (Sahin, 2013). Although SEFs are common throughout the United States and other countries (Chen et al., 2011), peer-reviewed research reveals gaps in learning and inclusion for underrepresented students (Welsh, 2008).

SEFs refer to competitive events where students present and discuss their SEF research projects (Chen et al., 2011) that are evaluated and celebrated (Bencze & Bowen, 2009). SEFs provide opportunities for student engagement in science and engineering (Koomen et al., 2018; Koomen et al., *in press*). SEF procedures are specific to each venue, but generally follow the scientific enterprise including (1) "formulating a question, (2) generating a theory-based hypothesis, (3) designing the experiment, (4) conducting the experiment and collecting data, (5) preparing and evaluating data, (6) interpretation and discussion of the results and their conclusions, and (7) communication of findings" (Paul, et al., 2016, p. 2368).

Recent literature on SEFs report many positive outcomes for student participants. Bencze and Bowen (2009) found that engagement in SEFs developed expertise and confidence for problem-solving while Melchior et al. (2015) showed that participation in robotics competitions boosted student-positive attitudes toward STEM. Gomez (2007) found that science fairs provide students with an opportunity to study a phenomenon of interest to

them and “learn to organize, analyze, display data, and develop a presentation” (p. 59). SEFs allow students to learn open experimentation, and when coupled with a reflective component, allow students to take responsibility for their accomplishments (Paul et al., 2016). SEFs contribute positively to performance in the science and engineering practices (SEPs; Koomen et al., 2018; NGSS, 2013; Koomen, et al., in press), although students need more scaffolding to form conclusions based on data (Chen et al., 2011).

Negative aspects of SEFs are also found in the literature, especially for underrepresented students in science including English learners, minorities, and students with low socioeconomic status (SES). Bencze and Bowen's (2009) work asserts that SEFs favor students with significant cultural and social capital, where high achieving students have access to human and material resources and benefit from higher SES. Hampton and Licona (2006) reported that students who participated in SEFs on the United States–Mexico border had a decreased interest in science due to their family's lack of expertise in science compared to students whose families had some level of scientific competence. Also, families observed a mismatch between their students' skills and the task, leading to overdependence on family members and misconceptions in science (Hampton & Licona, 2006). The competitive nature of SEFs is also cited as a deterrent for some students (Craven & Hogan, 2008), especially if participation in the competition is required (Grinnell et al., 2020).

The focus of research in STEM competitions is on student participants, with limited research related to the teacher's role. De Barros Miller (2016) found that teachers who embrace both the investigative nature of science practices (NGSS, 2013) and science fair competitions believe these practices facilitate student learning, enhance performance, and allow students to take ownership of their learning. Tortop (2013) found that teachers feel they do not do enough to support their students and felt only negative attitudes about the SEFs from parents. Bunderson and Anderson (1996) reported a majority of teacher candidates had positive attitudes toward their involvement in SEFs and benefits they might have for students. Fisanick (2010) described a significant relationship between a teacher's positive attitude and participation of students in SEFs. Additionally, she reported that teachers who help with SEF work between 50 and 150 of unpaid hours. Koomen et al. (2018) found that a teacher in informal settings serves a dual role in working with students in SEFs as both a mentor (to students) and a master (science content). Teachers were crucial in scaffolding students to draw evidenced-based conclusions for their SEFs (Chen et al., 2011). The last two studies described promising, yet, minimal aspects of the role of the teacher in formal settings SEFs, a gap we intend to fill here, building on recent studies (De Barros Miller, 2016; Miller et al., 2018), but with direct teacher involvement.

Salient to the goals of the current study, research points to the possible role of SEFs in inspiring students into possible STEM careers. Miller et al. (2018) found that students who participate in STEM-related competitions are more likely to pursue a STEM career after completion of high school than students who did not. Top et al. (2015) studied the factors that affected career aspirations of youth in Science Olympiads (SOs) revealing that parents, teachers, and personal interests had the greatest influence on career trajectories. These studies suggest promising STEM career trajectories from SEFs, however, neither of the aforementioned studies looked at the role of a teacher or her instructional moves and how they might support students from underrepresented groups, including NA and rural students, and inspire interest in STEM education and careers through SEFs, the goals for this study.

2 | THEORETICAL FRAMEWORK

Our research and analysis drew from a conceptual framework grounded in the social cognitive career theory (SCCT; Lent et al., 2000) where we link principles of equitable pedagogies, including culturally responsive pedagogy (CRP; Ladson-Billings, 1995a, 1995b, 2014), pedagogies supporting NA (Bang & Marin, 2015; Hermes, 1998, 2007), and rural youth (Avery, 2013) within the SCCT framework. We introduce SCCT and equitable pedagogies briefly and then lift up the constructs of both as a linked framework to weave together the principles of each for meaningful analysis of the data collected in our student population representing many underrepresented youth.



2.1 | SCCT

SCCT (Lent et al., 2000) is built on the career development attributes of interrelated constructs of self-efficacy, outcome expectations, and personal goals with aspects of interest and learning experiences to understand career choice and satisfaction. SCCT asserts that there are “mutual, interacting influences among persons, their environment, and behavior” that “operate as interlocking mechanisms that affect one another bidirectionally” (Lent et al., 2002, p. 261), thus the constructs, together, are integrated in a complex web. In their systematic review of the SCCT model, Flores et al. (2017) contend that the focus of SCCT “is on the career development of an individual within a context” (p. 15), allowing for flexibility of a host of environmental factors to enhance or even hinder career development and flexibility in using the full model or parts of it to study those factors.

2.2 | Equitable pedagogies

We, like many scholars, assert that equity is a priority in all educational improvement efforts (Rozowa et al., 2017). The NGSS make clear in Appendix D (NGSS, 2013) that science education ought to encompass “all standards, all students” (p. 1), however, achieving equity continues to be a challenge, especially for underrepresented communities who often face “opportunity gaps” in their educational experience (Rozowa et al., 2017). Our equitable framework unifies the asset driven, culture and community-oriented relational aspects across CRP, NA, and rural pedagogies (Avery, 2013; Hermes, 2000; Ladson-Billings, 1995b).

2.2.1 | Culturally relevant pedagogy

CRP (Ladson-Billings, 1995a, 1995b, 2014) reflects three core components: academic success, cultural competence, and sociopolitical consciousness. CRP works to strengthen the performance of students of color by “using their [students'] cultural knowledge, prior experiences, frames of reference, and performance styles” (Gay, 2010, p. 31). Academic success draws on ideas or issues that students find meaningful that may allow them to take on leadership roles in their journey to intellectual growth (Ladson-Billings, 2014). Cultural competence is the “ability to help students appreciate and celebrate their culture” (Ladson-Billings, 2014, p. 75). Teachers enacting moves toward cultural competence create bonds with students, use students' culture as a bridge to learning that may allow students to act as teachers and serve in leadership roles (Ladson-Billings, 1995b) where the cultural competencies are enhanced in practices of others (Mensah, 2011). Sociopolitical consciousness is “learn[ed] beyond the confines of the classroom using school knowledge and skills to identify, analyze, and solve real-world problems” (Ladson-Billings, 2014, p. 75). Students are pushed to consider “critical perspectives on politics and practices that may have direct impact on their lives and communities” (Ladson-Billings, 2014, p. 78).

2.2.2 | Equitable pedagogies for NA students

Thirty percent of the students in our study are Ojibwe, an Indigenous people of the Great Lakes area in the United States and Canada, and an underrepresented group in science. It is essential that teachers of STEM and the learning experiences they provide honor the everyday experiences of American Indians (Bang & Marin, 2015), build community (Hermes, 1998), develop positive identity formation and the importance of family and community (Welsh, 2008), and develop agency in students (Bang & Marin, 2015). For many NA people, no matter the Tribal affiliation, “is the importance of their family and community in the development of who they are” (Welsh, 2008, p. 118). NA strategies recognize that student engagement is contingent on helping students see the value of the



instructional content for students from all cultures. The teacher is key in mediating these culturally affirming environments emphasizing the relational dynamics “in which learning takes shape in how people, ideas, tools, resources, bodies, and relationships move and remix as people engage in social practice toward new futures” (Calabrese Barton & Tan, 2018, p. 766). Additionally, school-based mentoring and informal learning experiences in STEM increase interest in STEM and science beliefs (Stevens et al., 2016) for NA students.

2.2.3 | Equitable pedagogies for rural areas

This study takes place in a rural area where 44% of students receive free and reduced lunch, a percentage that is often underreported, because families feel ashamed or too proud to apply for services (Avery, 2013). Williams (2010) noted that rural schools receive less state and federal funding than their counterparts in urban schools where two in five rural children live in poverty (Strange et al., 2012). There are pernicious disparities in college enrollment for rural students where lower SES, lower parental expectations, and less intensive high school preparation and curriculum leave them behind (Byun et al., 2015). Despite these opportunity gaps (Rozowa et al., 2017), school practices that emphasize academics play a major role, particularly in mediating the relationship between SES and 4-year college enrollment (Palardy, 2013). Rural communities can be rich environments for STEM learning where educators pursue and cultivate connections and local knowledge (Avery, 2013) and focus on the interests (Lent et al., 2002) and lived experiences of youth within their community (Huffling et al., 2017).

2.3 | Linking SCCT with pillars of equitable pedagogies

Our linked model uses SCCT constructs (Flores et al., 2017) and merges them within an equitable pedagogical framework, a novel use for SCCT, illustrated in Figure 1. We did not aspire to an exact match up of one construct from SCCT with one from an equitable framework, as each on their own is interreacted and interwoven. Rather, we sought to demonstrate that using SCCT together with equitable pedagogies allows for a more nuanced and authentic analysis of our data than using SCCT alone, especially because our rural population includes a significant cohort of NA and mixed SES students.

2.4 | SCCT

SCCT seeks to link social cognitive theories with learning theories and holds that the relationship between people and their environment influences career choices and preferences (Lent et al., 2002). The theory recognizes that the people–environment relationship is changeable and dependent on actors' responses or behavior to the situation, which favors the capacity of people to change their behavior and thus change their career choices and preferences.

2.4.1 | Self-efficacy

Self-efficacy is a person's beliefs about their “performance capabilities” (Lent et al., 2002), which impacts their personal choices, behaviors, and levels of effort when approaching various tasks and endeavors, including academic learning experiences, an SCCT construct closely linked with self-efficacy (Bolds, 2017). In SCCT, self-efficacy is understood through four learning sub-constructs of mastery experiences, vicarious experiences, social persuasion,

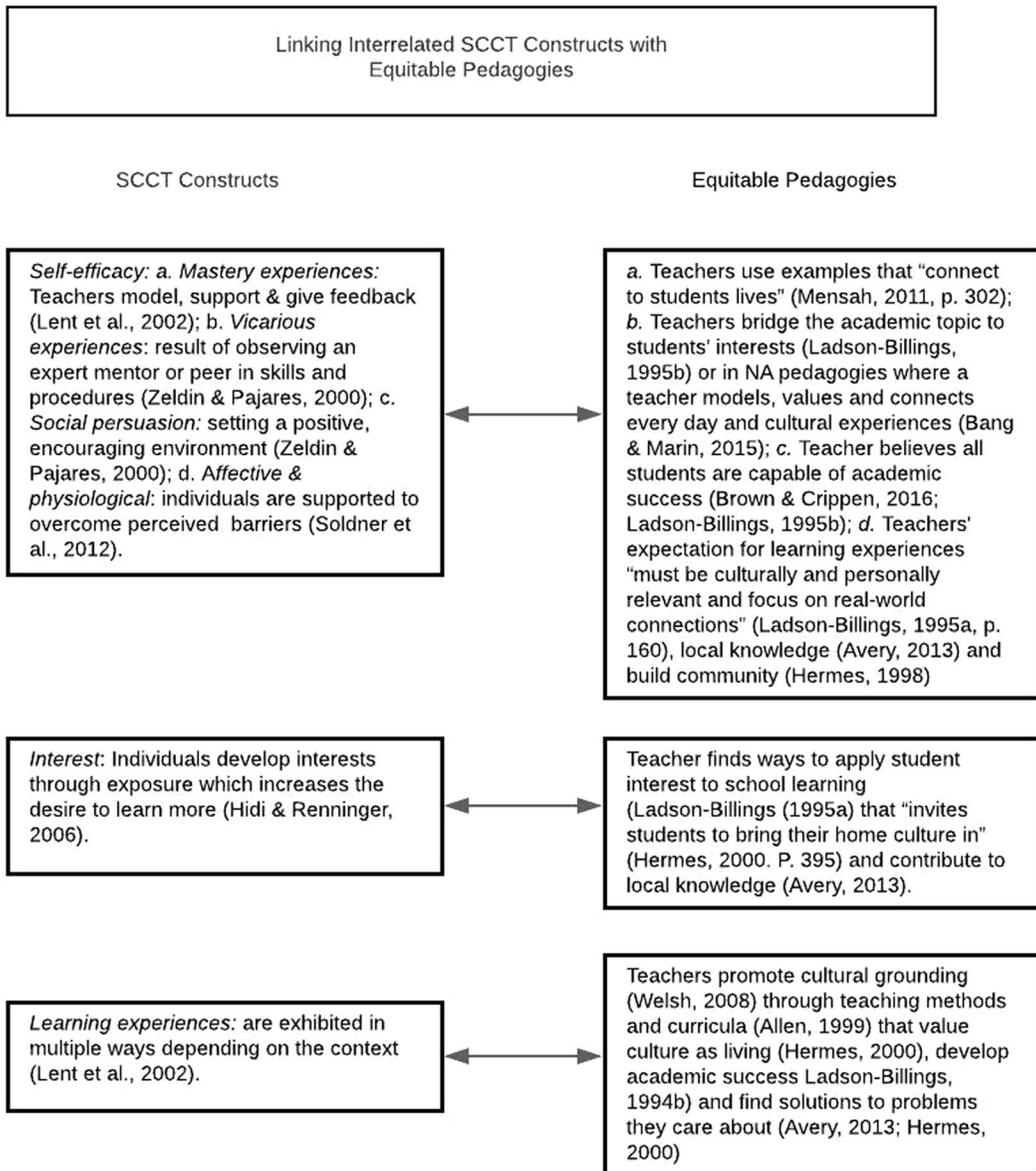


FIGURE 1 Outlines a model of SCCT linked with equitable pedagogies. SCCT, social cognitive career theory

and affective and physiological states (APs; Bandura, 1986). Mastery experiences help students develop self-efficacy as they repeat or experience an activity to develop their own expertise or mastery (Lent et al., 2000) as teachers' model, support, and give feedback. In line with equitable pedagogies, like CRP, in mastery experiences teachers “elicit student roles that will empower students to want to do and learn science” (Mensah, 2011, p. 301), using teaching and learning “examples that connect to student lives” (p. 302) to achieve academic success (Ladson-Billings, 1995b). Vicarious experiences are the result of observing, and then imitating, an expert mentor or peer to complete skills and procedures (Zeldin & Pajares, 2000) where a CRP teacher bridges the academic topic to students' interests and background (Ladson-Billings, 1995b, p. 481) or in NA pedagogies where a teacher models,



values, and connects every day and cultural experiences (Bang & Marin, 2015) to facilitate learning. Social persuasion increases self-efficacy as students receive positive feedback or social encouragement (Zeldin & Pajares, 2000) through their teachers' and mentors' words and actions, setting a positive, encouraging environment. Asset-based pedagogies, like CRP (Ladson-Billings, 1995b) promote social persuasion where a teacher believes that all students are capable of academic success, learns from her students, sees herself as part of the community, and thinks and acts with underrepresented youth in non-deficit terms (Brown & Crippen, 2016; Ladson-Billings, 1995b). APSs increase self-efficacy when individuals are supported to overcome perceived barriers such as gender, race, social class, or personal anxiety (Soldner et al., 2012). Equitable pedagogies, described in this study, strive to positively increase APSs because there is an expectation for learning experiences that "must also be culturally and personally relevant and focus on real-world connections" (Ladson-Billings, 1995a, p. 160), local knowledge (Avery, 2013), and build community (Hermes, 1998), that allow students to develop a critical consciousness to overcome barriers.

2.4.2 | Interest

Individuals develop interests through exposure, which increases the desire to learn more about a topic (Hidi & Renninger, 2006). Teachers support students by helping them to identify their interests as they gain experiences in the topic through conducting investigative research and working with experts in the field (Hidi & Ainley, 2009). Interest is often viewed as a combined function of self-efficacy beliefs and outcome expectations (Lent et al., 2002; Top et al., 2015). Students will express interest in a SEF topic, for example, if they think they can pursue that topic successfully. Ladson-Billings (1995a) describes how a culturally competent teacher finds ways to apply student interest to school learning. One challenge specific to creating culturally relevant learning experiences for NA students is that the teacher understands the dichotomy between Western, colonial cultures, and NA cultures. To meet the needs of Ojibwe students for academic rigor and cultural relevance, Hermes (2000) suggests building learning experience structures "where students can learn the skill of a discipline, and yet draw on their own experiences and background to fill in the specific content, invites students to bring their home culture into the classroom" (p. 395). Connecting student interest to Ojibwe cultural values might include the coherence of the natural world through the relationship of wild rice (manoomin) and water (nibi), the wolf (ma'iingan), and seasons (David, 2009; Hermes & Haskins, 2018; Treuer, 2012; Williamson, 2011), or reverence and relationships with elders (gichi-aya'aag; Hermes, 2000, 2007; Treuer, 2012), thereby serving rural students with a focus on the lived experiences of youth (Huffling et al., 2017).

2.4.3 | Learning experiences

Learning experiences (Lent et al., 2000) are exhibited in multiple ways depending on the context and intersect with other constructs such as self-efficacy and interest (Lent et al., 2002). "SCCT is more concerned with the specific cognitive mediators through which learning experiences guide career behavior" (Lent et al., 2002, p. 259) and with the manner in which variables such as self-efficacy and interest interrelate together. In this study, we refer to learning experiences as the content knowledge students exhibit in the process of developing SEF projects (i.e., SEPs and development of scientific explanations; McNeill & Krajcik, 2012; NGSS, 2013), similar to Hiller and Kitsantas (2014). Lent et al. (2000) describe background contextual factors that may affect learning experiences such as type of career role models, the opportunity for skill development one is exposed to, or the support or discouragement one might receive when engaged in academic or extracurricular activities that in turn may positively or negatively impact self-efficacy and interest in educational or career pursuits.



Learning experiences for NA students ought to promote cultural grounding (Welsh, 2008) through teaching methods and curricula (Allen, 1999) that value culture as living (Hermes, 2000). In Ojibwe culture, if you want to learn something you start with a problem (Hermes, 2000). For example, if you want to learn about the medicinal properties of plants, you start with a problem like a stomachache and figure out who might be able to help you to learn to identify plants soothing to the stomach.

Development of academic success, is a major pillar of CRP (Ladson-Billings, 1995b) where knowledge is shared, recycled, and constructed with social interactions that allow teachers and their students to engage in all three pillars of CRP (Ladson-Billings, 1995b). Students drive learning that is based in their communities and their daily lives where they may use school knowledge and skills to solve real-world problems (Ladson-Billings, 2014), actions that support local knowledge and problem-solving for rural students (Avery, 2013).

SCCT applications include studies of diverse groups of people (e.g., Blake, 2018; Fabian, 2000), in a variety of settings (e.g., Ansala & Uusiautti, 2017; Garriott et al., 2013), cultural contexts (e.g., Flores et al., 2017), work-based education (e.g., Hutchinson et al., 2008), and career interventions (Ali et al., 2019). Additionally, SCCT was used in studies in diverse academic and vocational arenas, including music (Thornton & Bergee, 2008), educational technology use by university faculty (Sahin, 2008), and intercultural competency and motivation (Ramsey, & Lorenz, 2016). In education, SCCT was used to understand student academic and career choices (Ansala & Uusiautti, 2017; Sahin et al., 2015), perceived career challenges and contextual challenges of learners with disadvantaged backgrounds (Alexander et al., 2009), the role of interest in careers in engineering for underrepresented youth (Carrico & Matusovich, 2016; Matusovich et al., 2017), and the role of citizen science in promoting interest in STEM (Hiller & Kitsantas, 2014; Koomen et al., 2019).

2.4.4 | SCCT in STEM review

SCCT is a beneficial lens to examine career aspirations in STEM. Sahin et al. (2017) studied how students' high school experiences, math and science efficacy, and student, parent, and teacher expectations affected student plans for college major choice. Using the interconnectedness between self-efficacy and environmental factors, they found students were more likely to major in STEM field in college if they had high math or science efficacy, encouraging teachers or parents, completed STEM projects, or attended summer STEM programs (Sahin et al., 2017). The study population of Sahin et al. (2017) reflected diversity (school with 61% free and reduced lunch and majority Latinx), however they do not report on possible roles of STEM teachers in student STEM choice nor focus on outcomes related to SEFs. Wang (2013), used the full SCCT model, and similarly found the intent to major in STEM was influenced by high school math achievement, exposure to math and science courses, and math self-efficacy beliefs with an absence of the role of SEFs or teachers in those intentions. SCCT helped document choices, career decisions, and challenges in attracting women and underrepresented people in STEM fields (Fouad & Santana, 2017), demonstrating the effectiveness of the model with diverse populations. More recently, Maiorca et al. (2020) found that middle school students' summer learning experiences in STEM heightened interest in possible STEM education or careers.

Salient to the current study, SCCT was used in a few studies regarding STEM competitions. Smith et al. (2019) investigated the long-term impact of participation in out of school programs like SO. In the United States, SO secondary school students compete in one of the three categories (energy, engineering, or environment) and qualify by having won an award at regional, state, or national SEF. In SO, students do not present their own research projects. The Smith team (2019) found the SO influenced postsecondary college selection and choice of major because the state level SO tournament was located at the institution studied providing exposure and exploration of new subject areas with limited risk. Research by Sahin et al. (2015) surveyed 172 participants in 2012 and 273 participants in 2013 (Top et al., 2015) at the International Sustainable World Energy, Engineering, and Environment Project (I-SWEEEP) where both studies affirmed that teachers, parents, and interest had more



impact on career trajectories than I-SWEEEP competitions. None of the previous studies include a focus on a teacher's role nor an equitable lens to understand the ways in which STEM competitions might impact educational attainment or career trajectories in STEM, yet researchers have bemoaned the fact that SEF favor students with social and material capital (Bencze & Bowen, 2009) where underrepresented groups are absent (Koomen et al., 2018), gaps this study seeks to fill. Additionally, learning outcomes through presentation of SEF boards and review of competition boards are not factored in, as we do here with the NGSS SEPs (2013) and explanation frameworks (McNeill & Krajcik, 2012). Our study uses the lens of SCCT coupled with tenets of equity to understand the impact of participation of rural and underrepresented youth in SEFs to cultivate their interest in STEM education and career choice, adding to an area of limited research. SCCT coupled with equitable frameworks guided our examination of one teacher who sought to build access, develop capacity for science, and foster interest in STEM careers through the following research questions.

1. In what ways does one teacher provide equitable and accessible opportunities for students to build their capacity to do science while they develop science fair projects?
2. In what ways does engaging in the development and presentation of a science fair project foster interest in pursuing career goals in STEM?

3 | METHODOLOGY

3.1 | School

Nibi Secondary (pseudonym; enrollment of 1524 in 2018) is a rural public Upper Midwestern middle and high school. The 2018 student population included 73% White and 24% American Indian/Alaska Native, with 1% each for African American and Hispanic students. Forty-four percent of students qualified for free and reduced-priced lunch. Students have a choice to attend a Tribal School or Nibi Secondary, with both schools on or near reservation land. The Tribal School enrolled 142 students in Grades K–12 in 2018.

3.2 | SEF projects

Seventh grade students completed a science investigation as a class assignment where they were invited but not required to present their projects at a local ecology fair or the regional SEF. Beyond these classroom experiences, the SEF program is a hybrid academic extracurricular activity for Grades 8–12. Students receive 0.25 academic credits per year and meet at the high school during the last 2 hours of the academic day and after school. Table 1 summarizes participation in SEFs by students of Dr. Olson's over the past 5 years. Students at Nibi Secondary may participate in local, regional, state, national, and international SEFs described in Table 2. Expenses for these events are partially covered through the school district's educational foundation, contributions from local businesses, funded grants authored by the teacher, and regional fair sponsorship.

3.3 | Participants

3.3.1 | Teacher participant

Dr. Olson (pseudonym), identifies as White, has a doctorate degree in educational leadership and over 20 years of experience teaching secondary science. Dr. Olson learned SEF protocols from the school librarian, an experienced

TABLE 1 Manoomin Secondary Student Science Fair Participation 2014–2018

	2014	2015	2016	2017	2018
Participants	64	86	81	69	70
Native Students	20	22	23	26	20
Ecology	21	34	30	28	28
Regional	60	80	79	69	63
State SEF	28	54	54	49	31
ISEF	9	8	5	7	5
JSHS	11	20	18	23	22
NAIVSEF	6	5	8		

Abbreviations: ISEF, International Science and Engineering Fair; JSHS, Junior Science and Humanities Symposium; NAIVSEF, National American Indian Science and Engineering Fair; State SEF, State Science & Engineering Fair.

TABLE 2 Description of SEFs participated in by Manoomin Secondary Students 2014–2018

Type of fair	Description
Ecology	The Fair is sponsored by University of Minnesota Department of Fisheries, Wildlife and Conservation Biology. Students share projects in small peer groups in which projects are evaluated by scientists, educators, and community members.
Regional	Students may participate in their regional science fair, one of eight fairs in the state, which comply with SSP and ISEF in 22 categories (SSP, 2016). Students present their projects numerous times during a 90-min judging session to judges. 35% of students advance to state SEF with two to four students advancing to ISEF. Due to the large community of NA student scientists in the region, the regional fair also serves as a NA fair.
State SEF	Qualifying students from regional SEFs advance to the state SEF. The state SEF selects four to six students to attend ISEF.
ISEF	Qualifying students attend ISEF, an international science fair where high school students from around the world participate in the 5-day-long conference with student awards equaling approximately four million dollars (SSP, 2016).
JSHS	Students are encouraged to write a science fair paper representing their research for the tristate regional sponsored by the U.S. Army, Navy, and Marines to promote student research in one of seven STEM categories and present the paper to a panel of disciplinary experts. Five students advance to the national competition (JSHS, 2017).
NAIVSEF	NA students qualify to participate in NAIVSEF, which also conforms to SSP rules for SEFs. NAIVSEF (AISES, 2016) meets online since 2014 but previous Manoomin students participated in the physical fair located in Albuquerque, New Mexico. NAIVSEF selects two students to attend ISEF each year.

Abbreviations: ISEF, International Science and Engineering Fair; JSHS, Junior Science and Humanities Symposium; NA, Native American; NAIVSEF, National American Indian Science and Engineering Fair; SSP, Society for Science and the Public; State SEF, State Science & Engineering Fair.

SEF mentor, resulting in a commitment to over 20 years of participation in SEF. She teaches middle school science (four sections) and two sections of high school SEF through course releases. She guides students in their projects and connects them with community experts and resources. She is a Presidential Award for Excellence in Mathematics and Science Teaching finalist. We met Dr. Olson through her participation in the Ecology Fair, and invited her to be part of the SEF research.

3.3.2 | Student participants

This study includes two groups of student participants all identified with pseudonyms. Group A represented former students (high school graduates) who earned awards at the regional SEF or higher. Group A allowed us to understand all SCCT constructs except learning experiences, retrospectively. Table 3 includes pseudonyms, current occupation, college majors/minors, graduate degrees, and awards at SEF for Group A. The researchers contacted participants from a list of 39 former students provided by Dr. Olson by email or phone. All interested students participated in a 1-hour semi-structured interview (21) and an online survey (21). The years of high school graduation years span from 2005 to 2018, with the length of participation in SEF from 1 year to 6 years.

TABLE 3 Interview participants (former students of Dr. Olson (Group A))

Pseudonym	Gender	Current occupation	College major/minor	Master degree	Awards
<i>Abby</i>	Female	Undergraduate Student	Biology(pre-med); NA/I Studies		1, 2, 3, 4
<i>Auggie</i>	Female	Aviation Maintenance	Aviation Maintenance		1, 2, 3, 4
<i>Ava</i>	Female	Business Owner	Engineering		
<i>Berndt</i>	Male	Graduate Student	Environmental Science	Visual Arts	1, 2, 3
<i>Brittany</i>	Female	Water Resource Scientist	Environmental Science		1, 2, 3
<i>Daisy</i>	Female	Stay at home mom	Biology	Water Resources	1, 2, 3
<i>Derek</i>	Male	IT Specialist, SEF Mentor	Computer science		1, 2, 3
<i>Dyani</i>	Female	Event Coordinator	Communications		1, 2, 3
<i>Dominik</i>	Male	Web Developer	Spanish & Environmental Studies		1, 2, 3
<i>Dakota</i>	Female	PhD Student	Geography	Geography	1, 2, 4
<i>Felicity</i>	Female	Undergrad Student	Business		
<i>James</i>	Male	Undergrad Student	Chemistry		1, 2, 3
<i>Jacinta</i>	Female	Acute Care Pharmacist	Biochemistry	Pharmacy	1, 2, 3, 4
<i>Kelsie</i>	Female	Undergrad Student	Biology		3
<i>Kylee</i>	Female	PhD Student: Climate Change	Geology, minor in Physics		1, 2, 3
<i>Landon</i>	Male	PhD Student: Whales	Environmental science	GWM	1, 2, 3, 4
<i>Pete</i>	Male	Mechanical Engineer	Mechanical Engineering		
<i>Pachu'a</i>	Male	Undergraduate Student	Geology		1, 2, 3, 4
<i>Rose</i>	Male	Speech-Language Pathologist	Speech-Language Pathology	SLP	1, 2, 3
<i>Rajvi</i>	Female	Graduate Student	Science		1, 3
<i>Sami</i>	Female	Undergraduate Student	Psychology		1, 2, 3, 4

Note: Native American students are italicized.

Abbreviations: 1, State Science and Engineering Fair; 2, International Science and Engineering Fair; 3, Junior Science and Humanities Symposium; 4, National American Indian Science and Engineering Fair; GWM, groundwater management; NA/I Studies, Native American/Indigenous Studies; SLP, Speech-Language Pathology.



Group B included 13 current students who all participated in practice presentations of their SEF projects and some in the focus groups and/or interviews with the research team. This group allowed us to understand the SCCT construct of learning experiences in real time. Table 4 includes student pseudonyms, grade level at the time of the study, SEF mentor, project research question, and SEF awards earned.

3.4 | Data collection

Our research featured a parallel/simultaneous mixed methods case study design allowing a close, descriptive view of the ways Dr. Olson, used SEF participation to impact student capacity in science and interest in pursuing STEM education and career objectives through the lens of equity and SCCT. We collected quantitative and qualitative data simultaneously, analyzing in a complementary style (Tashakkori & Teddlie, 1998). The case study was bounded by the experiences of Dr. Olson and her former and current SEF students (Merriam, 1998) Groups A and B. Group A students were recruited by Dr. Olson because they had competed in SEFs during the last 8 years. Group B consisted of current Nibi Secondary, at the time of the study, student mentees. Group B students were recruited by an overview of the research study made during class by Dr. Olson for SEF. Group B, current students, allowed us to apply all aspects of the SCCT model including learning experience domains using actual products, rather than self-reports as in Group A.

3.5 | Quantitative methods

Quantitative methods were collected using an online survey consisting of two different scales with former students of Dr. Olson (Group A only). We did not receive permission from the school to use school time for Group B students to complete surveys, which would have provided greater access to students with barriers to completing online instruments away from the school computer lab. To help us to understand the SCCT constructs, we selected instruments from the literature with known reliability and validity: STEM Semantics Survey (Knezek et al., 2011) for the SCCT construct of interest and the Motivation Strategies for Learning Questionnaire (MSLQ; Pintrich et al., 1991) for the SCCT constructs of self-efficacy (affective/physiological states), learning experience and interest, summarized in Table 5.

3.5.1 | STEM semantics survey

The STEM Semantics Survey (used verbatim with a Cronbach's α highly reliable value of 0.91) features a series of adjective pairs with statements that reflect perceptions of and interest in STEM areas and career interests with reliability and validity suitable for participants from Grade 6 through adult (Knezek et al., 2011). Each adjective pair (e.g., fascinating/mundane) is counterbalanced in the survey allowing for direct comparison between two target content areas.

3.5.2 | Science Fair MSLQ

To assess motivation in students we used only the motivation scales from the MSLQ (Pintrich et al., 1991) like other researchers (Nausheen, 2016). The Science Fair MSLQ (Cronbach's α for the MSLQ reliable at 0.70) is



TABLE 4 Science Fair Projects of Current Student Participants (Group B)

Name	Grade	Topic	Mentor	Research question(s)	SEF awards
Liz	10	Electrical Mechanical Engineering	Dr. Olson	What effect do different types of materials in an acoustically designed classroom have on the reflection coefficient measured with a designed apparatus?	1, 2, 3
Antonia	11	Microbiology	Microbiology Professor; Dr. Olson	What effect does wax and mealworm gut bacteria have on polyethylene and polystyrene?	1, 3
Zoey	11	Biochemistry	Microbiology Professor	What effect does acetylsalicylic acid have on the growth and biofilm production of <i>Staphylococcus epidermidis</i> ?	1, 2, 3
Sarah	12	Computational Biology and Bioinformatics	Biology Professor; Dr. Olson	If leopard zebrafish melanocyte patterns are mathematically analyzed, will a specific dashed striped pattern will be noted?	1, 2, 3
Gary	9	Earth Science	Geology Professor/Computer Programmer; Dr. Olson	What effect does time/lake core sediment stratification have on have on the percentage of microfossils versus mineral sediment fragments and what does that tells us about the past?	1
Leigh	12	Behavioral and Social Science	Computer Programmer/Professor; Dr. Olson	What effect does playing video games/screen time have on academic performance, attention span, and spatial skills?	1, 3, 4
Kait & Laura	10	Environmental Management	Wildlife Biologist from DNR; Dr. Olson	Q1-What effect does different mapping software (Google Earth vs. ArcGis Pro) have on how long it takes to process data in a map? Q2-What effect does the season (winter vs. summer) have on average daily Canis lupus (movement per day and home range)?	1, 4
Kala & Lynn	11	Medicine and Health	Dr. Olson & Care Facility Activities Dir.	What effect does the use of a hand-held device have on an elder's perception of well-being and general overall health, in skilled care facility?	1, 3, 4

(Continues)



TABLE 4 (Continued)

Name	Grade	Topic	Mentor	Research question(s)	SEF awards
Rose & Jodell	12	Biochemistry	PhD graduate student from Environmental Protection Agency; Dr. Olson	Q1: What effect does the implementation of pharmaceutical filtration systems have on ibuprofen-contaminated Lake Superior water effects on <i>Lumbriculus variegatus</i> ? Q2: Does the implementation of an activated charcoal, or a clay filtration system result in better removal of ibuprofen in contaminated Lake Superior water?	1, 2, 3
Lilly	10	Cognitive Psychology	Dr. Olson	What effect does a gustatory stimuli (mint) have on a state dependent learning and memory consolidation?	1

Note: Italicized names represent Native American students.

Abbreviations: 1, State Science and Engineering Fair; 2, International Science and Engineering Fair; 3, Junior Science and Humanities Symposium; 4, National American Indian Science and Engineering Fair.

TABLE 5 Instruments aligned with SCCT constructs and group of students involved

Instruments	SCCT constructs	Student Group
Science Fair Motivated Strategies for Learning Questionnaire ^a	Self-efficacy (affective/physiological states), learning experiences, interest	Group A
STEM Semantics Survey ^b	Interest	Group A
NGSS & Explanation Rubrics ^c	Learning experiences	Group B

Abbreviation: SCCT, social cognitive career theory.

^aPintrich et al. (1991).

^bKnezek et al., 2011).

^cKoomen et al. (2018).

TABLE 6 Motivation scales of the Science Fair MSLQ defined^a

Motivation subscale	Subscale defined	SCCT construct comparable to
Value components		
Intrinsic goal orientation Items 1, 16, 22, 24	Refers to student's perception of the reasons why she is engaging in a learning task	Learning experiences Interest
Extrinsic goal orientation Items 7, 11, 13, 30	Concerns the degree to which the student perceives herself to be participating in a task for reasons such as grades, rewards, performance evaluation by others, and competition	Affective/physiological states
Task value Items 4, 10, 17, 23, 26, 27	Refers to the student's evaluation of how interesting, how important, and how useful the task is	Interest
Expectancy components		
Control of learning beliefs Items 2, 9, 18, 25	Refers to believe that their efforts to learn will result in positive outcomes	Interest
Self-efficacy for Learning and Performance Items 5, 6, 12, 15, 17, 18, 29, 31	It is a self-appraisal of one's ability to master a task	Self-efficacy
Affective components		
Task anxiety Items 3, 8, 14, 19, 28	As a cognitive and emotional component. The worry component refers to student's negative thoughts that disrupt performance, while the emotional component refers to affective and physiological arousal aspects of anxiety	Self-efficacy: Affective/physiological states

Note: Each separate subscale scored on a scale of 1–7, from (1) *strongly disagree* to (7) *strongly agree*.

Abbreviation: MSLQ, Motivation Strategies for Learning Questionnaire.

^aTable drawn from Pintrich et al. (1991).

comprised of the three scales of motivation (value, expectancy, and affective). Table 6 defines each subscale and makes comparisons to SCCT constructs to address our research questions. The Science Fair MSLQ was not designed for use with SCCT, thus there is some overlap between the motivation subscales and the SCCT constructs.



3.5.3 | Rubrics

Two analytical rubrics developed in prior work (Koomen et al., 2018) helped us to understand the SCCT construct of learning experience for Group B students. One rubric aligned with the NGSS (2013) SEP and the other, an explanation rubric, drew from McNeill and Krajcik (2012; see Koomen et al. (2018) for full rubrics). The NGSS rubric includes all eight practices and a generic design that allowed us to evaluate each of the 10 practice SEF presentations. The explanation rubric included the canonical form of primary scientific investigation (Koomen et al., 2016) and SEFs: question, hypotheses, methods, results, and discussion. The two rubrics drew from the language of the NGSS (2013), McNeill and Krajcik (2012), and Moje et al. (2004); and earlier work of the research team (Koomen et al., 2016), to create reliable and valid instruments. We used the SEF project boards and the practice presentations to score current student Group B SEF projects (Jonsson & Svingby, 2007).

The author of the rubrics (Koomen et al., 2018) trained author Mary N. Hedenstrom (STEM education graduate student) and author Molly Moran (undergraduate research student) in the use of the rubrics. The training consisted of familiarization of the two rubrics' content, practice scoring SEF projects, and discussion of independent scores. This process was continued until our interrater α value were considered adequate for interrater reliability (above 0.70; Baker et al., 1996).

3.6 | Qualitative methods

Qualitative data collection methods included over 500 pages of interview and observational data (Supporting Information File A), providing a thick, rich description of teacher and student voice as they described SEF experiences (Ryle, 1949).

3.6.1 | Semi-structured interviews: Teacher and Group A only

We conducted semi-structured interviews of student (21) and teacher participants (2) (Rubin & Rubin, 2004) focused on teacher's goals, pedagogical strategies, barriers, material resource considerations, and equity with SEFs. Questions directed at students included interest in STEM, awards received, the role of Dr. Olson and other mentors, and for the SEFs projects an overview of, the social aspects of completing it and inclusion. Table 7 illustrates the way the interview questions for the teacher and students aligned with the SCCT constructs and equity.

3.6.2 | Practice presentations of SEF projects: Student Group B only

With the help of Dr. Olson, we recruited 13 current students to present their projects to us. When they finished their presentations, we followed-up with additional questions about impacts of the project on their practice of science, possible career aspirations, and inclusion.

3.6.3 | Focus groups: Student Group B only

We met with Group B students for focus group interviews during either their science class or a study hall, as we were not granted permission to complete individual interviews within the school day. Group B students were

invited to talk about their projects (what they did, how they collected and analyzed data, and the outcomes), the role of their teacher or other mentors, and logistics in developing the project to align with constructs of SCCT and equity following prompts outlined above for Group A and Dr. Olson (see Table 7).

3.6.4 | Classroom observations

Classroom observations (consisted of audio and video recordings) were coded in 5-min increments following the protocol of the *Collaboratives for Excellence in Teacher Preparation and Classroom Observation Protocol* (CETP-COP; Lawrenz et al., 2002), a criterion-referenced instrument well established in the literature (i.e., Bang & Luft, 2013) for use in K12 science classrooms and used by the authors in other studies (Koomen et al. 2014, 2016, 2019).

3.7 | Data analysis

Deductive coding of our qualitative data (interviews, focus groups, observations and review of SEF boards [Group B only; Miles & Huberman, 1994]) is often used to test a hypothesis or a model (Marshall & Rossman, 1995). We developed an a priori SCCT categorization matrix to code the data into categories aligned with SCCT constructs (Blake, 2018; Supporting Information File B). The codebook was used as a reference tool for the researchers as they coded qualitative text using constructs, working definitions, and descriptions of SCCT categories. All text was reviewed line by line for alignment with the SCCT constructs linked with equitable pedagogies (Polit & Beck, 2004). Two researchers, experts in science education, reviewed the interview, focus group, and practice presentation interview transcripts to identify SCCT constructs and themes in the classroom observations, practice presentation interviews, and SEF rubric scores complying with triangulation of qualitative data using multiple analysts (Patton, 2015). To establish consensus using the categorization matrix (Supporting Information File B), two researchers each reviewed and discussed 10% of the interview data to establish greater consistency and reduce bias (Patton, 2002). We performed a cross-case analysis after about 25% of the data were analyzed to extract and compare themes (Patton, 2002). In this exercise, we discussed similarities and differences across themes to come to acceptable interrater reliability (Baker et al., 1996). Interrater consistency for the interview and focus group data were established by the researchers through the use of a set of questions (Noble & Smith, 2015), where we avoided leading questions (Bryman et al., 2004). To triangulate the mixed methods data, we compared findings from the quantitative survey, questionnaire, and rubric scores with the qualitative data to identify converging themes (Patton, 2015). Supporting Information File D provides a frequency graph of selected and prevalent text themes from student interviews or focus groups of Group A and B.

The CETP-COP (Lawrenz et al., 2002) provided internal consistency reliability through the use of well-defined categories and scoring descriptors (Creswell & Miller, 2000). We conducted interrater reliability exercises, led by Author Michele H. Koomen who was trained in the CETP-COP protocol with Lawrenz et al. (2002). In the exercises, we watched a science lesson video excerpt where each researcher coded the observation followed by discussion of coding and scores to come to a common code or score, repeating the exercises until we established an acceptable interrater rate of 84% (Baker et al., 1996).

With a former student cohort of 21 (Group A) and 13 current students (Group B), our quantitative analysis (survey data of Group A and rubric scores Group B) was based solely on descriptive statistics, including central tendencies of mean and standard deviation. Because of our small sample size, we were not able to use inferential statistics, thus, our results of central tendencies need to be reviewed with caution.

**TABLE 7** Alignment of research interviews with SCCT constructs and equity

SCCT construct	Interview	Item
Mastery experiences	Teacher	How did you teach students the process of science?
	Student	How did your confidence grow in your ability to participate in science fair?
Vicarious experiences and social persuasion	Teacher	How did you identify and mediate mentors for student research?
	Student	What part did Dr. Olson or your science fair mentor play in your initial and continued participation in science fair?
Affective or physiological states	Teacher	What limitations or constraints, if any, are there on science fair topics either because of resources or level of difficulty?
	Student	When you think back to the science fair experiences, how did you feel as you were conducting an investigation and collecting data?
Interest	Teacher	How did students choose their science fair projects?
		What are your goals for students participating the science fair program?
		What do you think the take-aways were from students who participated in science fairs?
	Student	How important was interest to your involvement in science fair?
		What did you hope to accomplish in science fair?
		How did you stay on task and manage your time to meet the science fair deadlines?
Learning experiences	Teacher	What do you think students learned?
	Student	What did you learn about your capability to do science fair and science, math, and technology in doing science fair projects?
Equity	Teacher	Many of your students are Native American. In what ways did you promote inclusion of NA students in SEFs?
Equity	Student	Talk about your Native American background in relation to the work that you did on your SEF project and progression through science fairs or your career or educational goals?

Abbreviations: SCCT, social cognitive career theory; SEF, science and engineering fair.

4 | RESULTS

The results section is organized by the two research questions using the codebook based on the interrelated constructs of SCCT and equitable frameworks for the qualitative findings for the teacher and then the students. For brevity, we include one text excerpt per construct since they collectively represent the sentiments of the majority, greater than 75%, of our study participants as determined by our analysis.

4.1 | Teacher promoted equitable opportunities for students to build capacity to do science while developing science fair projects

This section describes Dr. Olson's instructional moves and practices in alignment with SCCT constructs linked with equitable pedagogies that lay the foundation for students to build their capacity in science through SEF, using the voices of both Dr. Olson and her students.

4.1.1 | Self-efficacy mastery experiences

From the beginning, Dr. Olson modeled and supported students as they began SEF projects tapping former students to illustrate what SEFs are and how they are done. Former students sat in their places not too many years before and like them were of NA (i.e., Landon) or mixed SES rural backgrounds, empowering students to see they, too, can learn and do complex science (Mensah, 2011).

Past students come in and talk to [current students] about their own experiences in SEFs, about what their project was, using a PowerPoint showing themselves and where they were doing the projects and then what they're doing now, like the research they're doing [in Grad school]. They present research they're working on to show they were sitting in their seats and doing a monarch chrysalis project and now they're in Antarctica studying humpback whales [Landon]. It's when there's multiple stories like that, you begin to believe that's something I can do. (Dr. Olson)

Dr. Olson aspired to student-centered instructional moves, where students drive their projects, to solve a problem, cultural practices important to Ojibwe (Hermes, 2000).

With Dr. Olson, we [Sami and her partner] realized that we wanted to go in a behavioral health direction, working in the community with [NA] elders who had agitated behaviors with dementia to see if music would calm them down. I was able to find out something that I wanted to know, like figuring out how to put the surveys together, how to ask people [for help] and put all the data in spreadsheets. The way Dr. Olson sets up [SEFs] we have all the control. It boosted my confidence because it made me feel smarter because I knew how to do all this stuff by myself. (Sami)

Dr. Olson functioned as a learner in the classroom (Ladson-Billings, 1995a) by modeling for students how to learn by asking questions until you, as the learner, understand what to do, for example, when she connected a student with a professional expert.

She would actually go with me to the University, go up to the lab and she would ask questions just like I would and make sure that both of us understood what was happening. She would say, Abby, do you know why we're doing this? (Abby)

4.1.2 | Vicarious experiences

Dr. Olson built a relational network of experts in various science discipline that provided guidance beyond her own areas of expertise, sometimes with NA professionals, where the teacher "is responsible for creating a context in which the students will accept the responsibility to want to learn" (Hermes, 2000, p. 394). Eighteen of the 21 students (Group A) recognized these experts as an important part of their SEF experience.

Dr. Olson is really good at getting us connected with scientists in the community. In 12th grade, I worked with a [native] scientist who was doing research on wild rice bacteria. I set my entire project and experiment up at the local native Tribal college in his lab. I got to use a lot of the new processes that I learned through the years. I was still doing my own project and making the decisions, just under his supervision in a real college lab. (Dyan)



Olson was deeply committed to mentoring that was supportive and allowed students autonomy. In one class observation, she mentored a pair of students who were investigating: *What effect do artificial sweeteners (saccharin) have on probiotic bacterial growth?*

You can look visually [at the graphs] and tell they're different but you need to do the math. This is what's called an ANOVA, which is an analysis of variance. It analyzes the difference between group means in your study. This is a colony count when incubated with sugar and saccharin. This [graph] has a p -value which is less than .01. There were significantly fewer bacteria on the probiotic plates treated with saccharin compared to the sugar treated plates. (Olson, classroom audio)

4.1.3 | Social persuasion

Dr. Olson expertly used upper-class students in a cross-generational model (Barma et al., 2017) to pique interest in SEFs assisting younger students to see the instructional context toward a possible new future (Calabrese Barton & Tan, 2018).

It's not uncommon for her when she's introducing the scientific inquiry unit in 7th grade life science to pull out a seniors' project from a few years before and say this is what a really polished project is. Being able to see those examples as a middle schooler was like, wow, I'm going to do that someday. I think it really set the tone of what you can achieve by virtue of being similar to the older kids, that was a big deal for me. I was going to the state fair, as a seventh grader. I was rubbing elbows with them. (Brent)

Students saw Dr. Olson as creating a culture of mentorship.

She's approachable, encouraging and always available to answer questions and connect us with folks. She created a great culture of mentorship with former students or current older students helping newer science fair students. I think we all valued that experience so much that we keep coming back to help because we know that it helped us. (Dominik)

4.1.4 | APSs

Dr. Olson supported students' perceived barriers in gender or even personal anxiety and helped them to overcome them (Soldner et al., 2012).

As a teacher, she has the ability to frame things where she isn't "talking down" to us, and is treating us as equals. She really advocated for minorities and women in STEM. Sometimes, being in the engineering category [white noise reduction in school], I would be the only female. Dr. Olson always made sure I knew I had just as much right to be there as anyone else. (Elizabeth)

Dr. Olson brokered trust and mutual respect (Hermes, 2000) with families by communicating with them when they come to pick up their child after school. NA and rural parents saw for themselves exactly what was taking place after school, then shared what they learned with other parents in the community.



Getting to know parents builds trust. Their kids work after school and their parents come to get them. Their parents will come in and we'll talk. They're not really involved in the project, but sometimes come to help like put a board together or to listen to some kids. Then the people who don't come [in] talk to the people who do [come in to talk]. (Olson)

Dr. Olson removed barriers (Ladson-Billings, 1995b) for mixed SES student participation through successful grant writing and support from the school district that allowed all students with a desire to go to the science fair. The grant (\$4000 per year) paid "for buses and fees for the regional fair and a little bit of equipment. It helps pay for kids who can't afford to pay the regional fair fee (about 1/3 of my kids)." Additionally, the school district paid about \$15,000 for registration fees, buses, and hotel rooms each year for students who qualified for the state competition because they "look at it like a kid made it to state just like a hockey player" (Olson). Dr. Olson successfully petitioned the school board to provide her time within the school day to work with students on SEFs, making it possible for mixed SES students to participate. She noted that she "could get paid for what I'm doing as an activity and if I got paid for doing an activity, then they'd [students] have to pay an activity fee [\$800] and I don't want that" (Olson).

Dr. Olson connected Ojibwe students with opportunities in SEF, including learning about a NA SEF, and in so doing, brokered trust with Ojibwe families, scarred by their own educational experiences (Welsh, 2008).

A lot of NA students were focused on their project and worked hard on it. Someone told me there was an NA SEF. I Googled NA science fair. I saw the American Indian Science and Engineering Society (AISES) online and contact emails. I emailed them and said I do SEF with kids, what is this and how do you help kids? That's how I met Molly. We started out having SEF for NA students at Sugar Bush High School. I often would get Native kids to go to the NA SEF, but they would not go to the regional SEF. I would have parents say I don't want my kid going there because they will be judged. They trust me. They didn't trust the SEF. As more success stories started happening, the more they trusted me, and more NA got to do it. I had to earn that trust and if I'd mess up, you know, I could lose their trust. I had to work to be trusted and show I would take good care of their children and not traumatize them. (Olson)

4.1.5 | Learning experiences

Dr. Olson provided learning experiences that promoted academic success where knowledge is shared and constructed through interactions where teachers and students engage in equitable pedagogies (Ladson-Billings, 1995b). "Dr. Olson was always there as a mentor to help facilitate. There was definitely a progression from being the student to an emerging researcher with Dr. Olson as a mentor in the scientific process" (Landon). In keeping with equity practices for NA students (Archibald, 1990), her questions were supportive, yet critical, to help students develop a strong project and presentation.

We practiced our presentations to her and she would, listen and not tell us, oh, you're wrong and do it this way. She made it a learning experience. We got something incorrect, we take a step back and say 'Why did we answer this question? or What's really going on?' Having that constructive criticism from a supportive viewpoint was huge. (Brittany)

Dr. Olson encouraged students to find solutions to problems (Hermes, 2000), a pedagogical move supportive of NA students, that could be adapted for people of different means in a diverse community (Avery, 2013) to foster active citizenship of CRP (Ladson-Billings, 1995a).



My project was to place emphasis on economically viable solutions to environmental contamination. This was important to me, knowing there are many people that cannot choose environmentally friendly practices solely because the cost is too high. Coming from a household that was comfortable, we had enough money for food, but not always choose environmental practices. Dr. Olson encouraged me to find an economically viable solution that could be adapted by people of all social statuses. (Rose)

4.1.6 | Interest

Dr. Olson begins the SEF process with students by capitalizing on students' interest, creating a bridge to academic learning (Ladson-Billings, 1995b).

It all starts out with their interests. This leads them to pick a topic they're interested in and learn about it. If you can figure out what a kid is interested in they will put a lot of effort into it. That really motivates you because you have a kid begging you to stay after school and want to work hard. (Olson)

Olson used students' interest to blend together their cultural values with academics (Hermes, 2000) and for many, a focus on real-world connections, such as water quality or ways to help elders with dementia stay calm (Ladson-Billings (1995b, 2014) that built local knowledge (Avery, 2013).

Really at the heart of the kid, their interest really is about their culture and who they are in it. It's all these different community connections that students make and the whole community knows all about it. Landon [NA] picking stream and being concerned about nature comes from those places. His understanding the stream and what a rain garden can do for it helps the community. Kayla and Lynn who had the iPad, doing music in the nursing home, that was a wonderful community experience. (Dr. Olson)

4.2 | For students, completion of a science fair project built their capacity to do science

The quantitative and qualitative results for this section related to student perceptions of SEFs in separate parts, rather than simultaneously for greater reader clarity, continuing to blend SCCT constructs with the three equitable pedagogies (Avery, 2013; Hermes, 2000; Ladson-Billings, 1995b, 2014).

4.2.1 | Quantitative results using descriptive statistics

Table 8 summarizes the scales of motivation with SCCT constructs and attitudes from the Science Fair MSLQ, based on a 7-point scale (Nausheen, 2016). Self-appraisal of efforts and confidence to perform SEF activities was high (Self-efficacy for learning & performance: 6.19). Former student's goals or orientation to participate in SEF activities related to high interest, perceptions of a challenge, curiosity, and emerging mastery and the degree to which the task was an end in itself (Intrinsic goal orientation [learning experiences and interests]: 6.25). The MSLQ revealed former students' evaluation of how interesting, important, and useful SEF participation was high (Task value [interests]: 6.62). The former student's task anxiety scores (4.05) did not reflect the high stakes nature of STEM competitions (Yasar & Baker, 2003; Self-efficacy (affective & physiological state), where they did not feel uneasy about being judged or thinking about how poorly they might do in competitions.

TABLE 8 Science Fair MSLQ Scales of Motivation (Student Group A)

MSLQ Scales	SCCT construct	Mean (SD)
Self-efficacy for Learning & Performance	Self-efficacy	6.19 (0.83)
Intrinsic Goal Orientation	Learning experiences and interests	6.25 (0.85)
Task Anxiety	Self-efficacy: affective and physiological states	4.05 (1.79)
Task Value	Interests	6.62 (0.67)

Note: N = 18, each separate subscale scored on a scale of 1–7, from (1) *strongly disagree* to (7) *strongly agree*. Abbreviations: MSLQ, Motivation Strategies for Learning Questionnaire; SCCT, social cognitive career theory.

The perceptions of STEM disciplines are displayed in the STEM Semantics survey [(Table 9); subscales 1–7]. The dispositions for Group A participants were high for science (6.81), technology (6.28), engineering (5.64), and interest in STEM careers (6.36). Math (4.5) and engineering (5.64) still demonstrate positive dispositions, although not as high as the other fields.

4.2.2 | Qualitative results

Self-efficacy: Mastery

Most Group A participants started doing SEF in middle school, thus they had familiarity with the SEPs (NGSS, 2013). However, they reported their capacity to do science “definitely grew exponentially throughout the experience, especially after [they] were competing and winning awards, made me feel confident” (Daisy).

I think that there was this level of affirmation [in SEF] that came from the greater scientific community. The research we’re doing is research that people are doing. There was this level of people outside of our little science fair community being impressed with our work. I found pride in that and this is real science, valid and valuable. (Berndt)

Rose identified and solved problems in her community, a hallmark of NA pedagogies (Hermes, 2000), demonstrating a socio-critical consciousness, a CRP pillar (Ladson-Billings., 1995b), supporting a rural community with mixed SES (Avery, 2013), through a project focused on a water treatment solution.

My SEF project allowed me to explore an issue [pharmaceutical filtration systems], unknown to most people. Solutions can be economically viable to most people. My SEF project made me realize that I am person who can identify and solve problems and I am inspired to keep making changes.

Vicarious experiences

Group A participants described how their motivation to do well drew from observing a community of learners working hard and being successful.

I looked around and saw other people that were really successful in SEF and went to cool places. I knew that I could be successful if I worked just as hard as they did. If they developed it, I could too. (James)



TABLE 9 STEM Semantics Survey: Perceptions of STEM Disciplines Summary (Student Group A)

Item	Science		Technology		Engineering		Math		STEM career	
	Mean (SD)	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)	%
To me, this topic is fascinating.	6.86 (0.36)	100	6.38 (0.86)	95	5.33 (1.68)	52	4.43 (1.78)	76	6.33 (1.32)	81
To me this topic is appealing.	6.71 (0.64)	100	6.24 (0.89)	95	5.71 (1.10)	57	4.29 (1.79)	86	6.33 (1.20)	90
To me this topic is exciting.	6.90 (0.30)	100	6.09 (1.03)	90	5.90 (1.14)	48	4.33 (1.56)	86	6.48 (0.98)	95
To me this topic means a lot.	6.67 (0.44)	100	6.29 (0.90)	95	5.62 (1.12)	48	4.05 (1.99)	76	6.38 (1.20)	90
To me this topic is interesting.	6.80 (0.40)	100	6.33 (0.97)	90	5.67 (1.11)	76	5.43 (1.47)	81	6.29 (1.42)	81
Combined mean for each discipline	6.81		6.28		5.64		4.50		6.36	

Note: N = 21; Scale is 1–7; 1 is strongly disagree; 7 is strongly agree.



Social persuasion

As students continued to work on their SEF projects, they saw themselves as a member of a community of learners, a tenet supporting students in underrepresented groups (Ladson-Billings, 1995b; McKinley & Gan, 2014).

Why would we stay after school from 4:00–10:00 PM for weeks on end trying to get these projects [done]? We hang out, put our boards together, finish our research and just work together. It was so cool to be, ‘Hey Kelsie, look at your project, look how great it's looking. Or what do you need help with?’ (Dyani)

APs

SEFs gave students a sense of purpose as Dakota reported: “I was actually doing meaningful work in my life. It made me feel like I was working toward something bigger. It gave me a sense of purpose.” SEFs could bring Native people together through science (Hermes, 2000) as Abby said: “One year I met a girl at the NA SEF, her board was right next to mine. In between talking to the judges, we talked and got to know each other.”

Many students reported on the constant challenges, but those stressors could be buffered by realizing they were experiencing something their non-SEF peers were not experiencing.

I remember being at various points that were challenging. I wasn't necessarily fully understanding everything at the time. Then as the project progressed and wrapped up, the pieces started to fall into place. I began to understand everything. At the same time, it felt very cool to be doing hands-on science, whereas my other classmates weren't. (Kelsie)

Interests

Students' interests drove their participation in science fair to begin with, an equitable pedagogical move embraced by CRP, NA, and rural pedagogies (Avery, 2013; Hermes, 2000; Ladson-Billings, 2014), but also compelled them to stay in it, acknowledged in the interviews of 18/21 (86%) of Group A students.

The more that I worked on it, the more my interest continued to grow. By my fourth year, it was really exciting to work with a NASA scientist because he helped me do all the math to figure out how to actually turn an old record table into a g-force simulator. I exposed my plants to this g-force simulator and simulated what it would be like to take the plants into space to figure out if we could even make it possible. (Rose)

Student interest was sustained, too, because they felt more autonomous and independent as reported by Laura: “I love SEF because I chose what I'm doing based on my interest. I loved what my project was on. I did not like what I was learning in my science class.”

Learning experiences (quantitative)

Ten current student projects (Group B) were scored using our NGSS-aligned rubric (Table 10) and explanation rubric (Table 11; McNeill & Krajcik, 2012) to ascertain learning experiences beyond student self-reports. The mean scores provided evidence that students excelled in the NGSS SEP with a combined mean score of 2.88 and developing explanations of 2.92 on a scale from 1 to 3.

While we were not able to score SEF products of Group A, Olson provided summary data of performance (grade point average [GPA]) for high school, all science courses (Table 12). College in the Schools (CIS) is a program offered to high school juniors and seniors to enroll in college level courses at their high school administered by the local University. Group A students performed well across all measures.

TABLE 10 Rubric mean scores for NGSS (2013) practice of science for science fair projects ($n = 10$; Student Group B)

Rubric indicators	
Asking questions and defining problems	2.94
Developing and using models	2.67
Planning and carrying out investigations	2.94
Using mathematics, information, and computer technology and computational thinking	3.00
Analyzing and interpreting data	2.94
Constructing explanations	2.83
Engaging in argument from evidence	2.83
Obtaining, evaluating, and communicating information	2.89

Note: Scale 1–3; these scores represent means across the three observers.

TABLE 11 Rubric scores for explanation rubric for SEF ($n = 10$; Student Group B)

Rubric indicator	Mean
Question: Empirically testable question	3.00whi
Hypotheses 1: Hypotheses represent possible outcomes	2.89
Hypotheses 2: Use of reasoning to theorize outcomes as hypotheses	2.94
Hypotheses 3: Use of reasoning that connects research question to hypotheses	2.72
Methods: Provides reasoning about why research and data collection methods were selected	2.94
Results: Provides graphs or tables that relate to the research question	3.00
Discussion/Conclusion 1: Use of evidence to support the claim	2.94
Discussion/Conclusion 2: Claim construction	2.94
Discussion/Conclusion 3: Provides reasoning that connects evidence to claim	2.94
Discussion/Conclusion 4: Provides reasoning that links evidence back to claim and back to original hypotheses/research question	2.83
Discussion/Conclusion 5: Quantitative reasoning: evidence of quantitative or numeric reasoning to support their claims	2.94

Note: Scale 1–3; these scores represent means across the three observers.

TABLE 12 Group A GPA for high school, all science courses, 9th grade science, CIS chemistry and physics, and the number of science courses they took on average across the 4 years

	Overall high school GPA	Science GPA	9th grade science	Honors biology	CIS chemistry	CIS physics	Science credits (3 required)
All of Group A	3.69	3.88	3.74	3.75	3.92	3.92	5.81

Note: All Group A students took 9th grade science and 10th grade honors biology. All nonnative students took CIS chemistry; 6/7 native students took CIS chemistry. 12/14 nonnative students took CIS physics; 5/7 native took CIS physics.

Learning experiences (qualitative)

Table 13 illustrates students' command of the canonical features of a scientific presentation (Group B) including, introduction, research question, hypotheses, methodology, findings, and conclusion (Koomen et al., 2016). The SEF board excerpts are representative of the 10 projects as a whole.

For NA students, SEFs allowed their interests to “watch” an animal and “learn something” (Hermes, 2000, p. 393), merging SCCT constructs of interest and learning experiences (Lent et al., 2002) with an animal central to their Ojibwe culture.

I picked a topic I'm interested in, plus I was able to learn GIS and Google maps, to see patterns in wolf movement where we found they traveled a lot further in the winter than in summer. My project helped me see how misunderstood animals like wolves are. At one point in time everybody [non-NA] was hunting the wolves to the point where they almost went extinct out of fear and revenge for killing their livestock. I found they were actually amazing creatures just trying to live their lives. (Kait)

Additionally, science fair provides students opportunities for “learning hard and soft skills like navigating working with a partner and developing communication skills” (Berndt).

4.3 | Developing and presenting SEF projects fosters interest in pursuing STEM educational and career goals

For brevity, this section includes the SCCT construct of interest, only, building on the interplay of self-efficacy above, deemed most relevant for our response to research question 2.

4.3.1 | Interest

SEFs provided a context for students to understand how scientists do science (stated by 12/21 (57%) Group A students) using their interests to design and communicate their research (NGSS, 2013). SEFs supported Indigenous and underrepresented people to blend academics with culture and begin to see that they belong in that blended community, while making a difference in a local context, like Landon (Avery, 2000; Dublin et al., 2014; Hermes, 2000; Ladson-Billings, 1995b).

I spent hours fishing with my grandfather and father [where they] made it obvious to me how important the health of our watersheds are, in terms of both qualities of life of the organisms that inhabit those watersheds, but also for our quality of life as NA people who rely on those systems. In studying environmental remediation efforts on a local trout stream, I witnessed in a very short time how even the smallest changes can greatly change the health of an ecosystem but also the lives (whether physically or spiritually) of individuals who directly utilize or simply enjoy the presence of that freshwater system. Rain garden filtration systems is now used worldwide as an inexpensive natural and aesthetically pleasing approach to filtering polluted water. Had I not ventured down this path during school, I do not know if I would actively be pursuing a PhD in biological sciences focused on animal conservation and physiology. (Landon)

Students talked eagerly about the influence of SEF on their pursuit of STEM education or STEM careers where Lynn noted: “Working with this SEF project led me to the 38 I have now. I've been working at an assisted living for two years and I absolutely love it.”

TABLE 13 Canonical feature, student, scope of SEF, and text excerpts (Student Group B)

Canonical feature, student, and scope of SEF	Excerpt
<p><i>Introduction:</i> Kala and Lynn sought to understand the impact of an elder's use of a hand-held electronic device on their well-being and feeling of connection</p>	<p>Cornwell and Waite (2009) from the University of Chicago and Cornell University did research to study how multiple forms of social isolation can pose health risks (limited social network, infrequent participation in social activities, and feelings of loneliness). Developing school/community connections between seniors and children can have benefits for both young and old. The Legacy Project (Thompson & Weaver, 2015) reports that middle to high school children are often eager to help in a nursing home once they become comfortable. Assisted Living and Skilled Care facilities use the residents' personal music playlists to enhance memory, overall health, and perception of well-being as elders "age in place." This study was done to determine if using a hand-held technology and personalized music playlist would diminish skilled care facility residents' level of agitation, while possibly improving memory, health, and overall well-being.</p>
<p><i>Research question/Hypotheses:</i> Leigh studied video game usage impact on grade point average and frequency of use using a visual spatial test</p>	<p>The original hypotheses were (1) Increased frequency of video game usage will be negatively correlated with grade point average (GPA) and self-reported attention span. (2) Increased frequency of video game usage would be positively correlated with performance on a visual spatial test.</p>
<p><i>Methodology:</i> Zoey studied the effect of acetylsalicylic acid (aspirin) on <i>Staphylococcus epidermidis</i> bacteria growth and biofilm production. For brevity, we include only an excerpt on procedures</p>	<p>Using a sterile 10 ml pipette and a pipette controller, amount of SSA solution needed was added into the six separate labeled jars with distilled water. <i>Staphylococcus epidermidis</i> (<i>S. epidermidis</i>) was then added into 100 ml of 2× nutrient broth (NB) by swabbing a colony that was incubated and grown on nutrient agar for 5 days with a sterile cotton swab and swirling it against the edge of the test tube in the NB for 5 s. The wet cotton swab was then used again to swab off more <i>S. epidermidis</i> and added to the NB. The NB was in jars that were autoclaved for 15 min at a temperature of 121°C before adding <i>S. epidermidis</i>. The mouths of the jars were flamed and the NB was slowly poured into the jars with aspirin dilutions resulting in the concentrations of 0, 10, 20, 40, 80, and 100 mg/L.</p>
<p><i>Findings:</i> Jodell and Rose studied the effect of designed pharmaceutical removal filtration systems on ibuprofen-contaminated lake water with the sediment worm <i>Lumbriculus variegatus</i></p>	<p>Figure 1 (see Supporting Information File F) shows the average number of <i>Lumbriculus variegatus</i> alive in ibuprofen-contaminated Lake (Lake Superior) water (0, 10, 20 and 30 mg/L) and different filtration systems (none, clay, and charcoal). There is a similar pattern in the beakers that were not filtered and the clay filtration beakers. As concentrations of ibuprofen increased, the number of <i>Lumbriculus variegatus</i> found decreased. A similar pattern is seen in the charcoal filtration, however, overall the decrease in the number found alive was significantly less than when compared to the other filtration methods. When the number</p>

TABLE 13 (Continued)

Canonical feature, student, and scope of SEF	Excerpt
	<p>alive in the 0 mg/L control was compared to all other controls (filtered), there was significantly more worms alive ($p < .0001$) when related to the clay treated water, yet significantly more worms lived when uncontaminated (Lake Superior) water was filtered through the charcoal.</p>
<p><i>Discussion/Conclusion:</i> Antonia studied bacterial isolates cultured from the gut of meal and waxworms to see if they could be used to biodegrade polyethylene (PE) and polystyrene (PS), two common plastics found in microparticle pollution</p>	<p>The original hypothesis was if wax or mealworm gut bacteria are introduced to PE or PS, then the plastic will show signs of degradation. In this study PE and PS pieces were placed into containers containing sterile nutrient broth, the mealworm gut bacteria were incubated with PS and the waxworm gut bacterial solutions with PE. After 14 days of incubation there was no significant mass loss by either plastic, indicating that the gut bacteria of both worms were unable to degrade the plastic or did not have enough time for this to occur.</p>

Abbreviation: SEF, science and engineering fair.

It made me want to pursue STEM as a career. The research science parts of it were just so interesting to me. It made me want to continue and learn more. I never would have gone as far because I never would have known all I could do in STEM without SEFs. (James)

For Dominick, without SEFs computer programming would have been out of his grasp.

It definitely grew my confidence that I could participate in a technical field like programming or software development. SEFs grew my confidence to a place where I pursued that as a career. It gave a strong foundation to know this problem you have to figure out methodically, how you're going to work backwards and actually try and answer it or solve the problem.

For some of NA students, science fair allowed them to pursue STEM fields because they wanted to add to the sparse population of Native scientists.

My main driving force behind being NA and in wanting to do SEFs is looking back on the reservation and seeing that there isn't a whole lot of people in STEM fields coming out of any reservation. That's what pushed me to a STEM-related major, to put NA on the map within the different fields. (Pachu'a)

For Dyani, her SEF study of wild rice, an important Ojibwe food with deep cultural significance, allowed her to gain recognition for her knowledge within the NA community.

To grow up as a NA scientist and as a woman who is a NA scientist is pretty rare. I was asked to participate a lot in the NA community based on the research that I did [wild rice] and asked to speak and talk to people about it and get people involved in it. I was respected about what I knew. It was cool for my family and for our little NA community to be able to see that. It was one of those proud moments for me to continue my love and interest in science with SEFs as a NA. (Dyani)



5 | DISCUSSION

We argue that findings from this study provide evidence that, coupled with equitable practices and mentoring by a teacher and other professional experts, participation in high stakes SEFs builds capacity to engage in and do authentic science for students that for many addressed real-world problems of their community, including students from underrepresented cultures and SES (research question 1) and second, that capacity-building in science engendered interest in pursuit of educational and career opportunities in STEM (research question 2). We assert that throughout SEF participation, students were engaged in participatory learning experiences (Barab & Hay, 2001) and were initiated into a scientific community of practice (Lave et al., 1991). These experiences merged together components of equitable pedagogies that supported all students, including those of underrepresented rural communities, NA people, and mixed SES (Avery, 2013; Dublin et al., 2014; Hermes, 2000), and inspired student interest in STEM courses and careers, findings that expand our understanding about benefits of SEFs.

5.1 | SEFs develop capacity to do science with equitable practices

Our results make a case that through the development and presentation of SEF projects, participants build a capacity to do authentic science, as outlined by current reform documents (NGSS, 2013; NRC, 2012) using our analytical lens of SCCT and equity. SEFs provided authentic experiences to engage in and excel in the SEP (Table 10) with immersion in developing an explanation framework for their scientific investigations (Table 11; McNeill & Krajcik, 2012) based on an interest of their own that extends contributions of SEFs in previous work (Chen et al., 2011; Koomen et al., 2018). As students explored literature for relevant science background on their topics (Table 13, Kala), developed their methods (Table 13, Zoey), presented their results (Table 13, Jodell and Rose), and developed their conclusions (Table 13, Antonia), they were doing real science and were empowered by their efforts (Berndt, Brent, Dominik, Kelsie, Dakota, Dyani, Kala, and James). Students exhibited high self-efficacy (Table 8), were confident they could master the skills being taught (MSLQ items 3, 12 19, and 29; Supporting Information File C), and understood the most difficult material (MSLQ item 6; Supporting Information File C). These outcomes surpass past research in SEFs, where explanation frameworks are not outcomes of SEFs research (Dublin et al., 2014).

Our findings provide evidence that the capacity to do science is enhanced through mentoring by teachers, peers, and expert mentors, and sustained by heightened interest in what is studied and, in this case, supported science learning for underrepresented and mixed SES students, an underreported area of research with SEFs (Forrester, 2010; Smith et al., 2019). In earlier work, we described the role of an expert teacher in mentoring the scientist within students (Koomen et al., 2014) and the teacher's role in using citizen science as a springboard to the development of science fair projects with White students in a private school (Koomen et al., 2018). In the current study, the teacher laid a foundation for the nuances of developing a science fair project in 7th grade, using former students to share their own projects and what they learned to create a cross-generational model to elicit interest in SEF (Barma et al., 2017). As students continued under Olson's tutelage through subsequent years, they designed increasingly complex investigations, protocols, and data analysis thus moving from doing school science to doing science like professionals (Sadler, 2009). Olson built a network of professional experts that allowed students to research areas of STEM outside her considerable expertise, and in some cases, gave students access to sophisticated laboratories and equipment. Her network of expert mentors is not trivial, because it not only allows students to plan, design, and execute complex projects, but build students' understanding that science is not done in isolation, but is a "complex social activity" (Rutherford & Ahlgren, 1991, p. 8), extending Zimmerman et al.'s work (2003) on the value of student-driven research projects.

Additionally, the mentoring model used by Dr. Olson in student development of SEF projects supported a learning environment that moves the field forward in ~~41~~ we might use equitable pedagogies as a gateway into STEM (Dalbotten et al., 2014). Archibald (1990) noted that in the Ojibwe oral tradition, as in many Indigenous

cultures, when the learner initiates the question, the onus for learning is on the learner and not on the teacher. In Native cultures, the one being asked, in this case, the teacher, does not give a direct answer, but guides or mentors the learner to put the pieces together for herself. Dr. Olson created the context (SEFs), where students took responsibility for their learning, building from their interests. Hermes (2000) suggests that in these kinds of learning experiences, there is an element of NA culture, but not in the traditional sense. Culture is present in the relationships that develop between the student, teacher, and project where the teacher engages students with a common framework (SEFs) that unites “students' desire to produce something and in those processes, learn skills and construct knowledge” (Hermes, p. 395). Students are not forced into a set structure that defines who they and the teacher are and thus the students become engaged in the process of learning (Hermes, 2000). Olson blended the academic and cultural domains for NA, mixed SES, and rural students integrating aspects of student identities in their science learning where these identities did not have to be in competition (Hermes, 1997) thereby, increasing participation in SEFs beyond males, Asians, and Caucasians (Forrester, 2010; Lakin et al., 2019; Smith et al., 2019), extending benefits of SEF to underrepresented people.

Interest is an important construct of the SCCT framework (Lent et al., 2000) and is the foundation upon which Dr. Olson brokers engagement in SEF with students. Interest and learning experiences (Tables 8–11) in what they are doing compelled students to persevere through the challenges of conducting the research and analyzing the results (Laura), inspired them to learn more (James), and understand the sheer amount of discoveries that are yet to be made in science (Rose). The positive interest and attitudes for SEFs in our student population disrupt the negativity reported in prior work of SEFs (Craven & Hogan, 2008). Using student interest is a key method of linking both the academic and cultural domains for students not from a dominant culture (Hermes, 2000; McKinley & Gan, 2014) where students begin to see where their work could positively impact their local rural community (Avery, 2013; Dublin et al., 2014). Many students used their knowledge and skills to “identify, analyze, and solve real-world problems” that fostered their sociopolitical consciousness (Elizabeth, Landon, Rose & Jodell; Ladson-Billings, 2014, p. 75). Olson and the students honored everyday and cultural experiences (Bang & Merian, 2015), such as Landon with water quality, Elizabeth with white noise reduction in school, Kait and Laura on wolf movement across seasons, and Rose and Jodell with Elders' emotional well-being. In so doing, they contributed to local knowledge (Avery, 2013) and created efficacy in their own abilities to make a contribution to their rural communities (Ladson-Billings, 1995b, 2014), important constructs of equity linked with SCCT (Lent et al., 2002).

Building capacity to do science is at the heart of the national reform documents (NGSS, 2013; NRC, 2012). School science often emphasizes the teaching and learning of the products of scientific investigations (e.g., scientific laws, theories, and concepts) rather than the investigative process at the root of these products (Paul et al., 2016). Importantly, SEFs are a mechanism for *all* students to understand aspects of building scientific knowledge within a framework that supports students from rural and Indigenous cultural contexts with mixed SES, a significant finding of our study of the value of SEFs for underrepresented populations (Dalbotten et al., 2014; Hampton & Licona, 2006; Lakin et al., 2019).

We assert that Dr. Olson engaged in asset-driven (Kahn, 2018) and ambitious teaching (Windschitl et al., 2012) in her teacher moves that were rigorous and equitable. Dr. Olson draws from students' funds of knowledge (Gonzalez et al., 2005) when they choose a SEF topic of personal interest allowing them to draw out cultural (Landon), local knowledge and natural settings (Dyani, Kait & Laura, Landon, Rose & Jodell), local historical understandings (Dyani, Elizabeth, Kait & Laura, Pachu'a), and relational interests (Brent, Dominck, Kala & Lynn; Avery, 2013; Ladson-Billings, 2014; Miller et al., 2012). As self-chosen topics, they are relatable and inclusive of the everyday experiences (Bang & Marion, 2015) of the Ojibwe (e.g., SEFs focused on wild rice, water, wolves, or elders; Hermes, 2000; McKinley & Gan, 2014) and ideas of students as they make their thinking visible (Hermes, 2007; Windschitl et al., 2012). Olson emulates CRP moves with her deep passion for success in all her students (Murphy, 2020) where she maintains fluid student–teacher relations and a connectiveness with students, develops a community of learners, and encourages students to **lean** together and be responsible for one another (Ladson-Billings, 1995b, p. 480). Her brokerage of trust with NA parents reveals her commitment to the importance of



family and community to academic success (Bang & Marion, 2015; Cajete, 1994; Welsh, 2008). Her actions do not reflect a teacher as a historically “White savior” (Aronson, 2017), but rather elevate the ways that she strengthens existing relationships founded on mutual respect (Hermes, 2000) where outcomes are related to the students’ futures.

Calabrese Barton and Tan (2020) describe rightful presence in teaching and learning as a “justice-oriented political project, focused on the processes of reauthoring rights toward making present the lives of those made missing by the systematic injustices inherent in schooling and the disciplines” (p. 436). In this study, Olson was a justice-oriented ally who helped students to challenge and transform what meaningful learning looks like with Landon (rain gardens), Kait (wolves), Elizabeth (white noise), and Dyani (wild rice), to name just a few, where many SEF projects made injustices and solutions visible within a sociocultural context. In so doing, students established their rightful presence within a scientific community, disrupting the exclusion of students of NA cultures, mixed SES, and rural backgrounds from the SEF literature (Bencze & Bowen, 2009; Palomba & Tintori, 2017; Smith et al., 2019).

5.2 | Participating in SEF engendered interest in pursuit of educational and career opportunities in STEM

Recent studies demonstrated that student attitudes toward STEM influence motivation to pursue STEM education and careers (Maltese & Tai, 2011). Using our analytical framework of SCCT and tenets of equity, study participants displayed strong perceptions of STEM disciplines and interest in STEM careers in the STEM Semantics Survey (Table 9). Our reported scale scores (Table 9) were higher or comparable to all subscales of the Knezek et al. (2011) baseline data, except for mathematics, where they were slightly lower. Coupled with our qualitative results in interest (Dominik, James, Rose, & Laura), our combined results suggest that our participants have significant interest in STEM fields, an important result of our research that advances the impact of SEFs.

Like the programs discussed in Carrico and Matusovich (2016), SEF participation provided students with opportunities to learn about and experience STEM disciplines, to engage in hands-on, authentic activities, and to gain interest in STEM (Aschbacher et al., 2013). Study participants preferred to learn content that aroused their curiosity (MSLQ item 16), caught their interest in a STEM content area (MSLQ items 17), wanted to understand their project’s content area (MSLQ item 27), liked the subject matter of the experience (MSLQ items 26), and translated their SEF project into other experiences (MSLQ items; Supporting Information File C). Overall, the results of this mixed methods study suggest that SEF participation positively fostered participant interest in postsecondary STEM majors and careers, extending the value of SEFs as a STEM pathway (Sahin, 2013; Smith et al., 2019) especially for underrepresented youth from mixed levels of SES.

We assert that throughout the process of mentoring and engagement in SEF, students were engrossed in participatory and equitable learning experiences (Barab & Hay, 2001) that fostered “culture as relationships and meaning” in keeping with frameworks supportive of students of nondominant and NA cultures (Hermes, 2000, p. 387) which initiated them into a scientific community of practice (Lave et al., 1991). In participatory learning, students participate in the making of science being motivated to solve problems of the natural world, key elements of equitable pedagogies of CRP, for underrepresented (NA) and rural youth (Avery, 2013; Bang & Marion, 2015; Ladson-Billings, 2014). In the participatory learning environment, students built communal experiences that fostered feelings of belonging (Smith et al., 2014), a nontrivial outcome of this study. A lack of belonging has been shown to negatively impact persistence and motivation for underrepresented people (Walton & Cohen, 2007). As students worked through the process of developing their projects, under the tutelage of their teacher mentor, they brought together new forms of school science with the second space aspects of culture creating a third space inclusive of both (McKinley & Gan, 2014).

This culture of a scientific community of practice is in stark contrast with what typically takes place in schools. School science emphasizes the teaching and learning of the products of scientific investigations (e.g., scientific laws,

theories, and concepts) designed by the teacher with outcomes that are easily digested in a science class hour, rather than the investigative process generating the SEF projects (Paul et al., 2016). Sadler (2009) points out that in a scientific community, scientists “seek to create new understandings about the natural world and use scientific formalisms and practices to negotiate novel and persistent questions and problems” (p. 8). Olson reduced barriers, including the need for financial resources, for rural mixed SES and NA student participation in the regional, state, and international SEFs by building trust with native families through relationships and leveraging opportunities like the NAIVSEF and building partnerships with professionals (Dalbotten et al., 2014). Dr. Olson's initiative to investigate the NAIVSEF opened doors to educational funding and previously untapped opportunities that created greater accessibility for NA youth. As a result, many NA and rural students in this community pursued STEM education and careers and aspired to contribute to their Native and rural communities. We argue that SEFs build capacity to do authentic science like a science professional when they are coupled with inclusive equitable practices and in so doing may provide greater access for *all* students in a scientific community of practice where they rightfully belong (Calabrese Barton & Tan, 2020), debunking the claim that SEFs are only for those with significant cultural and social capital (Bencze & Bowen, 2009) or of an elite minority (Palomba & Tintori, 2017).

6 | LIMITATIONS

We acknowledge limitations of this study despite promising outcomes of ways SEF engagement builds a capacity to do science and fosters interest in STEM careers. A limited group of students participated beyond 7th grade in SEFs. They may not be typical of students in general science classrooms as they possess a drive to learn and devote hours toward completion.

Performance indicators, Table 12, suggest that student participants can be characterized as high flyers. We recognize that such outcomes might not generalize to all students participating in SEFs. Olson was dedicated to them and their projects, spent countless hours mentoring and supporting their efforts, received support from her school district to teach two sections a day devoted to SEFs as an independent study, and tapped content experts outside of her expertise, thus our results may be unique since the populations we studied may not be representative of all high school teachers and their student populations.

Our student population represented people of Ojibwe ancestry (30%; Tables 3 and 4) as well as mixed SES in a rural community, thus outcomes related to a single NA group may be different from other Indigenous groups. Similarly, outcomes in urban areas may be different than those for rural students, areas that merit additional research.

Our sample is comprised of students who were successful in state, national, and international SEFs. We wonder if students who were not as successful in SEF might have different results in terms of interest in STEM. Additionally, we did not collect data on students who chose not to participate in SEFs that may have contributed additional findings relevant to the value of SEFs.

This study may be difficult to replicate due to the teacher and students extensive time commitment and remuneration for the teacher's work with SEF students during the instructional day. Additionally, the school district paid for substitute teachers when the SEF teacher attended SEF events. This level of support may not be available in all school settings.

7 | IMPLICATIONS AND CONCLUSION

Our research findings illustrate how SCCT, along with well-documented instruments (Table 5; Knezek et al., 2011; Pintrich et al., 1991), show promise as a framework to understand interest in SEFs and STEM fields. Our use of the SEP and explanation rubrics demonstrate their usability ~~as~~ tools in studies with underrepresented youth and SEFs, filling a gap in the literature (Flores et al., 2017; Smith et al., 2019).



Dr. Olson created a learning environment that focused on student interest motivating students to engage in finding answers and solutions to real-world problems that they cared about (Avery, 2013; Hermes, 2000; Ladson-Billings, 1995b, 2014), a practice supporting equitable pedagogies that can be replicated in other science classrooms. She created a social atmosphere where students worked side by side helping each other through challenges much like a family unit, rather than focusing on the competitive nature of SEFs. She brought in former students at the beginning of the SEF process who shared their projects with current students creating a cross-generational model (Barma et al., 2017) of possibility.

Olson broke down cultural barriers for her NA students and their families (Hermes, 2000), as a start to addressing access and equity challenges for all students in SEFs (Bencze & Bowen, 2009; Smith et al., 2019). Importantly, she worked to broker trust within the NA community. She facilitated that trust through informal communication with family members when they picked up their children and opened her doors to family members to help with procedural aspects of the project, which allowed Native families to see for themselves that no harm would come to their children. She collaborated with a local Tribal high school to develop a NA SEF, further building trust with the NA community where this local NA SEF became a joint event with the regional SEF. She provided opportunities for her NA students to be involved in the NAIVSEF allowing NA students to develop relational experiences within their own demographic and increased NA students' access to the international SEF. She removed barriers for mixed SES and rural students financially by writing grants to a local education foundation, an action that teachers and administrators might replicate.

Dr. Olson tapped into the expertise of local professionals to support the development of projects that were not in her repertoire, a model that can be used by secondary teachers elsewhere. Her network of professionals was built over the years by working with the Tribal College, the Tribal Department of Natural Resources, and even cold calling professors at a University about an hour away. To preserve her network, she is careful not to "over tax" these experts by rotating their work with students every few years.

Olson taught independent study classes focused on SEFs not typical of a teacher's load. We recommend further exploration into ways to build engaging, authentic science opportunities like SEF into the instructional school day consistent with the findings of Fouad and Santana (2017).

As a result of the study's positive outcomes, we advocate for greater emphasis on student engagement in SEFs in secondary schools, including students from underrepresented groups using equitable pedagogies (Avery, 2013; Ladson-Billings, 1995b; McKinley & Gan, 2014), as a promising pathway to attract underrepresented people into STEM (NSF, 2017).

For students who participated in SEF in this setting, it was a life-changing opportunity to identify their passion for science and increase their scholarship opportunities. Students gained self-awareness, professional presentation skills, a strong work ethic, STEM content knowledge, an understanding of STEM careers, and developed a community of scientific practice where they felt they belonged, significant findings that advance the field forward as to the benefits of SEFs.

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DATA AVAILABILITY STATEMENT

The research data is not to be shared.

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SUPPORTING INFORMATION

Additional Supporting Information may be found online in the supporting information tab for this article.

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Department Reports

Churchill Elementary:

Things are going well on the frozen tundra of Churchill...we've now had students out on the playground this week for the first time in two weeks. We appreciate the fresh air. Planning for Summer School is beginning to take place with identification of students and gathering staff names. We had a successful I Love to Read month and ended with an author presentation from Tom Peacock. Churchill continues to focus on the GELN Literacy Standards and through assessment of our teachers we've identified writing as a learning focus area for staff. I will be working with my building leadership team on conference planning following the second vaccine dose and preparing for adjustments to our conference schedule. Family Conferences are coming up and both elementary buildings are holding virtual conferences. The virtual conference has been very well attended in previously and I expect it will again. It's been great to have our 3rd and 4th grade students back and it seems students are also enjoying being back in our classrooms.

Submitted by David Wangen, Churchill Elementary Principal

Washington Elementary:

We are back in business and busy as ever at Washington. It is fantastic to have all of our in-person students back, and we have several more who have notified us that they are returning on March 8th at the beginning of Trimester 3.

Other updates include:

-Parent-Teacher conferences are coming up on March 2 & 9. We had to change one of the dates due to county COVID vaccine distribution impacting about 30% of Washington staff during conference week.

-PBIS staff are planning our Winter Carnival for trimester two as a reward activity for all students. We are looking at taking the kids offsite to do some outside activities and play together in a structured and COVID-compliant way!

-We have completed progress monitoring for our in-person students K-4 and we have intervention groups up and running for all students in Title One and American Indian Education.

-This week is our final week of "I Love to Read Month" and we will be enjoying our featured author's presentation later this week. Thomas Peacock will be sharing one of his books with us!!

Submitted by Robbi Mondati, Washington Elementary Principal

Cloquet Middle School:

We are back full with students and everything is going well as can be expected. We have had some days without subs but our staff has done a great job covering each other. We have even had some normalcy with our Student Council running their annual Crush Pop fundraiser on Valentine's day. The student council sold over 2,000 cans of pop!

I asked the teachers if they had any updates for the school board on anything special happening in their classrooms, and one of the first messages I received was from Vicky Green, who teaches 8th grade English.

"I will have taught from home for a total of five weeks (almost 19 school days) this year due to Covid exposure. I am very thankful for the opportunity to teach from home with students logging into Zoom. The ability to do this comes from what ISD 94 had in place--technology, training, supplies (hotspots for students), & resourcefulness when there are not enough subs or paras."

This also works for our students that have to quarantine due to COVID exposure. Without the teachers' cooperation to run the hybrid learning model where they teach in-person students and distance learning students

together, this would not be possible. Many students would have lost many days of new learning to being quarantined. Our hybrid learning model is not the norm from district to district, and our families and students are the benefactors of their commitment.

I have attached a research article that Michelle Hollingsworth Koomen, Ph.D., from Gustavus Adolphus College, that involved Dr. Cindy Welsh and her student's STEM work with the science fair. Here is the note Dr. Hollinsworth Koomen sent with the article.

"We would never have been able to tell this story without you. Science Education is a great journal. I am so proud that the work you do with your kids will be available to others. You and the students deserve to be recognized in this way. Enjoy reading it!"

Finally, I want to give both the CMS and CHS counseling crew a shout-out for the hard work they do to get our 8th-grade students registered. This year, they held both their parent meetings and student meetings virtually, and they made that transition with a hitch.

Submitted by Tom Brenner, Cloquet Middle School Principal

Cloquet High School:

- Student class registration for 21-22 is next week
- We're working on securing quotes for furniture for the CTE wing
- Quarter 3 conferences are scheduled for next week – we're continuing with both an in-person and a phone call option
- We're in the middle of planning our credit recovery summer school options
- Our ACT test day for juniors will be April 13
- We're working with a group of senior parents to create some fun experiences for our seniors – looking at outdoor activities at Pine Valley and a potential Ski/Tubing day

Submitted by Steve Battaglia, Cloquet High School Principal

Cloquet Area Alternative Education Programs:

CAAEP is having a Restorative Processes whole school morning of activities. (a fire with storytelling, mask making, circle breakout sessions) The 1st hour classes will watch the Larry Yazzie video (on Native American dance and regalia) and discuss. There will be a survey completed by staff and students after the event.

CAAEP has conferences 2/24/21 from 3pm ~ 7pm for mid quarter 3. Parents can, once again, opt for in person, phone or video conferencing. Certified staff will be in the building for the conference times.

CAAEP has many new students enrolled for 3rd quarter. They have been a great addition to our CAAEP student body. Dave Perry has conducted the "new student circle process" for them as well to ease them into our Restorative Processes here at CAAEP

CAAEP continues to work with standards and curricular alignment. Kim Jordan from the Regional Center for Excellence (ESSA) program has been working with staff during professional development days. This is year 3 for our improvement plan for graduation rates and we will continue with a "bonus" year 4 due to Covid. We have had 2 students at the 4 year mark graduate already this year and 6 5th year sr.s have graduated this year and 4 more are close. The staff has worked diligently to get the seniors we lost last spring to come back and finish up.

Submitted by Connie Hyde, CAAEP Principal

Community Education

SACC: Since March 2020, Kids Corner has provided 14,448 child hours of care for Tier 1 workers. Kids Corner staff put in a total of 2,806 hours. This includes additional staff hours specifically tasked with facilitating distance learning and teacher communications.

Beach: Met with City facilities last week regarding opening the Beach this summer. It was decided we would postpone opening the Beach one week compared to previous years. This will allow the City more time to troubleshoot the system should there be issues from it being dormant in 2020. Anticipated opening date is June 14.

Submitted by Erin Bates, Community Education Director

Business Department:

The Business Office is working on some back pay for the custodial group and we just wrapped up the paraprofessional group. We are also just wrapping up a few last minute calendar year items and wage statements. Adrienne and I worked on the revised budget which will be presented tonight and are ready to roll into the FY 2021-2022 budget. We are uncertain of where the Legislature will end up but Dr. Cary and I are going to talk a bit more about that at the meeting.

Submitted by Candace Nelis, Business Manager

American Indian Education Department:

We are excited to rollout the remainder of the school year with extra support services included in the board packet. Monitoring student/family engagement during model changes has allowed us to recognize that additions to current interventions are needed.

Title VI Part One is now open. This will be year 1 of 4 as we start a new Federal grant cycle. Achievement & Integration year three budgets are due in mid March and we should find out if we qualify for another round of A&I early summer.

Our secondary AIE classrooms have had a lot of success getting students back on track and providing them with opportunities to get academic help. After-school tutoring is in high demand.

Feel free to stop in anytime or reach out if you have any questions. Our American Indian Education classrooms showcase devotion to quality learning.

Miigwech,

Submitted by Teresa Angell, American Indian Education Director

Building and Grounds

Bids for the Cloquet High School CTE and Art Space Renovation project were received at 2:00 pm on February 5, 2021, and opened in public at 2:30 pm on that same date. There were eight (8) sealed bids received, consisting of a base bid and two alternate bids. School Board is to review bids and consider Alternates 1 and 2. Low bidder for this project depends on the award of alternate bids.

ALTERNATE BID NO. 1: Bid in addition to Base Bid for the addition of two exterior windows in the south wall of the new Art Room space including wall masonry penetration, window, structural lintel, exterior envelope modifications, window sills and related materials and labor as shown on the drawings and specifications.

ALTERNATE BID NO. 2: Bid in addition to Base Bid to replace bituminous pavement to extents outlined in drawings, remove and replace existing bollards in locations indicated, provide (2) new chain link fences with swinging gate and secure entry gates. This includes removal of existing bituminous surface, regrading, replacement of new bituminous pavement and related materials and labor as shown on the drawings.

ARI recommends awarding a contract to Gardner Builders for the Base Bid in the amount of \$1,674,191.00 plus whichever alternates the District wishes to include. Should the District elect to award only the Base Bid then the lowest responsible bidder is Ray Riihiluoma who confirmed they are very willing to perform the Base Bid scope of work for their Bid amount of \$1,667,788.00.

Submitted by Dylan Carlson, Building and Grounds Director

Technology

The Technology Department continues to support the district as we transition back to in-person learning while we ensure readiness in the event that a transition back to distance learning, even temporarily, is necessary. We're constantly improving our ability to support our staff and this week are deploying the ability for staff and students to create appointments from within a tech ticket to better serve our users. Additionally, we will be expanding our internship program with Lake Superior College and bring in another intern on board to help assist the district. So far this school year, the Technology Department has completed over 3,000 tickets, which is 500 more than we had over the entire last school year.

Submitted by T.J. Smith, Technology Director

Cloquet Public Schools
Detail Payment Register By Check
Fund Summary

Fund Description		Total
01	General	\$187,488.15
02	Food Services	\$18.64
03	Transportation	\$40.07
04	Community Services	\$1,077.39
05	Capital Expenditure	\$2,990.00
07	Debt Redemption #94	\$1,124,750.00
12	Activities	\$2,534.17
Report Total		\$1,318,898.42

Cloquet Public Schools

Check Register by Bank and Check

Batch	Co	Bank	Pynt No	Check No	Pay Type	Grp	Code	Rcd	Vendor	Print	Recon	Void	Currency	Pmt/Void Date	Amount
0094	2		93082	156978	Check	1	10233		ABRASIVE SPECIALISTS INC	Yes	No	No	USD	02/23/2021	1,169.14
			93090	156979	Check	1	1055		ADVANTAGE EMBLEM	Yes	No	No	USD	02/23/2021	670.00
			93118	156980	Check	1	5464		AFFINITECH INC	Yes	No	No	USD	02/23/2021	185.64
			93132	156981	Check	1	7329		AFTERLIFE ELECTRONICS GRAVEY/	Yes	No	No	USD	02/23/2021	308.50
			93076	156982	Check	1	02547		APPLE INC	Yes	No	No	USD	02/23/2021	2,940.00
			93150	156983	Check	1	8609		BALOW, JORDAN J	Yes	No	No	USD	02/23/2021	71.00
			93121	156984	Check	1	5655		BARTO, LINNEA	Yes	No	No	USD	02/23/2021	20.00
			93149	156985	Check	1	8497		BASHAW, EDWIN EARL	Yes	No	No	USD	02/23/2021	71.00
			93147	156986	Check	1	8468		BATES, KYLE	Yes	No	No	USD	02/23/2021	108.00
			93148	156987	Check	1	8486		BATTAGLIA, SCOTT M	Yes	No	No	USD	02/23/2021	240.00
			93135	156988	Check	1	7984		BENOIT, JOHN	Yes	No	No	USD	02/23/2021	108.00
			93163	156989	Check	1	9295		BENSON, WENDY IRENE	Yes	No	No	USD	02/23/2021	144.42
			93139	156990	Check	1	8140		BERGERON, ANDREW S	Yes	No	No	USD	02/23/2021	240.00
			93085	156991	Check	1	10236		BOTT TIMOTHY	Yes	No	No	USD	02/23/2021	71.00
			93161	156992	Check	1	9285		BRENNER, MICHELLE MARIE	Yes	No	No	USD	02/23/2021	144.42
			93102	156993	Check	1	3029		CARLTON COUNTY AUDITOR	Yes	No	No	USD	02/23/2021	2,427.75
			93077	156994	Check	1	08337		CARLTON COUNTY HUMAN SERVICE	Yes	No	No	USD	02/23/2021	400.00
			93088	156995	Check	1	1030		CDW GOVERNMENT INC	Yes	No	No	USD	02/23/2021	1,236.45
			93089	156996	Check	1	10485		CLOQUET FORD CHRYSLER CENTEI	Yes	No	No	USD	02/23/2021	40.07
			93092	156997	Check	1	11006		CLOQUET SANITARY	Yes	No	No	USD	02/23/2021	402.00
			93154	156998	Check	1	8883		DAHL, SALES AMANDA	Yes	No	No	USD	02/23/2021	441.00
			93095	156999	Check	1	1717		DULUTH NEWS TRIBUNE	Yes	No	No	USD	02/23/2021	175.76
			93152	157000	Check	1	8808		EMANUEL, BRAD	Yes	No	No	USD	02/23/2021	79.00
			93160	157001	Check	1	9244		ERICKSON, BRIANNA	Yes	No	No	USD	02/23/2021	59.88
			93143	157002	Check	1	8207		ERZAR, TYLER JAY	Yes	No	No	USD	02/23/2021	79.00
			93146	157003	Check	1	8388		FINNERTY, JAY	Yes	No	No	USD	02/23/2021	186.00
			93091	157004	Check	1	1087		GIBSON, STEPHANIE	Yes	No	No	USD	02/23/2021	199.00
			93110	157005	Check	1	4250		GRAINGER	Yes	No	No	USD	02/23/2021	537.19
			93093	157006	Check	1	12271		GREAT LAKES OFFICE SOLUTIONS I	Yes	No	No	USD	02/23/2021	1,568.53
			93172	157007	Check	1	9837		HANSON KAYLEN	Yes	No	No	USD	02/23/2021	108.00
			93122	157008	Check	1	5684		HILLYARD INC MINNEAPOLIS	Yes	No	No	USD	02/23/2021	477.58
			93125	157009	Check	1	5992		HORIZON COMMERCIAL POOL SUPP	Yes	No	No	USD	02/23/2021	239.58
			93086	157010	Check	1	10237		HUNTINGTON PUBLIC CAPITAL COR	Yes	No	No	USD	02/23/2021	149,339.96
			93175	157011	Check	1	9915		IISC-EDUCATION	Yes	No	No	USD	02/23/2021	3,723.00
			93173	157012	Check	1	9840		INNOVATIONAL WATER SOLUTIONS	Yes	No	No	USD	02/23/2021	908.50
			93087	157013	Check	1	10238		INTERSTATE POWER SYSTEMS INC	Yes	No	No	USD	02/23/2021	1,834.74
			93120	157014	Check	1	5624		ISD #0094 - LIL LUMBERJACKS	Yes	No	No	USD	02/23/2021	567.00
			93129	157015	Check	1	6866		ISD #0094 LIL THUNDER LEARNING	Yes	No	No	USD	02/23/2021	422.90
			93119	157016	Check	1	5585		JOHNSON'S PLUMBING REPAIR	Yes	No	No	USD	02/23/2021	362.56
			93153	157017	Check	1	8818		KANGAS, KEVIN W	Yes	No	No	USD	02/23/2021	98.00
			93145	157018	Check	1	8282		KEPPERS, ASHLEY	Yes	No	No	USD	02/23/2021	137.96

Cloquet Public Schools Check Register by Bank and Check

Batch	Co	Bank	Pymt No	Check No	Pay Type	Grp	Code	Rcd	Vendor	Print	Recon	Void	Currency	Pmt/Void Date	Amount
0094		2	93144	157019	Check	1	8224		KLOSOWSKI, BRETT D	Yes	No	No	USD	02/23/2021	98.00
			93169	157020	Check	1	9563		KOLANCZYK RICHARD	Yes	No	No	USD	02/23/2021	71.00
			93098	157021	Check	1	2076		KO LODGE, JENNIFER	Yes	No	No	USD	02/23/2021	20.98
			93101	157022	Check	1	29600		L & M SUPPLY	Yes	No	No	USD	02/23/2021	123.33
			93127	157023	Check	1	6599		LAKE SUPERIOR LAUNDRY	Yes	No	No	USD	02/23/2021	33.01
			93170	157024	Check	1	9569		LEMAE SARAH	Yes	No	No	USD	02/23/2021	73.95
			93142	157025	Check	1	8206		LIPINSKI, CRAIG	Yes	No	No	USD	02/23/2021	79.00
			93083	157026	Check	1	10234		MAD HATTER WELLNESS LLC	Yes	No	No	USD	02/23/2021	750.00
			93106	157027	Check	1	38650		MADISON NATIONAL LIFE INSURANC	Yes	No	No	USD	02/23/2021	3,814.29
			93167	157028	Check	1	9493		MARTIN, KYMM	Yes	No	No	USD	02/23/2021	168.92
			93081	157029	Check	1	10232		MARUNICH TODD	Yes	No	No	USD	02/23/2021	71.00
			93100	157030	Check	1	2692		MASSP	Yes	No	No	USD	02/23/2021	40.00
			93176	157031	Check	1	9936		MATH MASTERS	Yes	No	No	USD	02/23/2021	650.00
			93108	157032	Check	1	4033		MATTSON, MICHAEL	Yes	No	No	USD	02/23/2021	29.61
			93105	157033	Check	1	34310		MESPA	Yes	No	No	USD	02/23/2021	250.00
			93126	157034	Check	1	6471		MHSRC/DIP	Yes	No	No	USD	02/23/2021	364.00
			93131	157035	Check	1	7269		MIDAMERICA BOOKS	Yes	No	No	USD	02/23/2021	146.65
			93151	157036	Check	1	8706		MITCHELL, MARTHA	Yes	No	No	USD	02/23/2021	95.44
			93094	157037	Check	1	1539		NIEMI, BRENDA	Yes	No	No	USD	02/23/2021	29.98
			93109	157038	Check	1	40825		NORTHERN BUSINESS PRODUCTS	Yes	No	No	USD	02/23/2021	37.17
			93158	157039	Check	1	9110		OLSON, BRENT R	Yes	No	No	USD	02/23/2021	108.00
			93099	157040	Check	1	2084		OWENS, JENNIFER	Yes	No	No	USD	02/23/2021	150.00
			93080	157041	Check	1	10231		PASCH ALLIE	Yes	No	No	USD	02/23/2021	188.00
			93103	157042	Check	1	3091		PETERSON, STACY	Yes	No	No	USD	02/23/2021	81.24
			93107	157043	Check	1	3994		PHONAK	Yes	No	No	USD	02/23/2021	61.11
			93096	157044	Check	1	2037		PINE KNOT, LLC	Yes	No	No	USD	02/23/2021	288.00
			93078	157045	Check	1	10221		PRAIRIE MOON NURSERY	Yes	No	No	USD	02/23/2021	77.00
			93097	157046	Check	1	2064		PRITCHETT, SHELLY	Yes	No	No	USD	02/23/2021	116.00
			93112	157047	Check	1	45535		QUEEN OF PEACE SCHOOL	Yes	No	No	USD	02/23/2021	1,875.00
			93113	157048	Check	1	45540		QUILL CORPORATION	Yes	No	No	USD	02/23/2021	677.98
			93162	157049	Check	1	9288		RASMUSSEN, BRENDA	Yes	No	No	USD	02/23/2021	128.80
			93128	157050	Check	1	6703		RAYMOND GEDDES CO INC	Yes	No	No	USD	02/23/2021	188.32
			93084	157051	Check	1	10235		REHAB SEMINARS	Yes	No	No	USD	02/23/2021	489.00
			93140	157052	Check	1	8180		SALO, ADAM LEE	Yes	No	No	USD	02/23/2021	86.00
			93138	157053	Check	1	8134		SAWYER, ROBERT	Yes	No	No	USD	02/23/2021	79.00
			93114	157054	Check	1	48325		SCAN AIR FILTER INC	Yes	No	No	USD	02/23/2021	1,465.75
			93168	157055	Check	1	9545		SCHMITT DIRECTOR CENTER	Yes	No	No	USD	02/23/2021	14.50
			93115	157056	Check	1	48700		SCHMITT MUSIC COMPANY	Yes	No	No	USD	02/23/2021	120.68
			93130	157057	Check	1	7075		SCHOOL HEALTH CORPORATION	Yes	No	No	USD	02/23/2021	309.80
			93116	157058	Check	1	48980		SCHOOL SPECIALTY INC	Yes	No	No	USD	02/23/2021	1,518.89
			93136	157059	Check	1	8021		SIEDIECKI, ROBERT	Yes	No	No	USD	02/23/2021	89.00

Cloquet Public Schools Check Register by Bank and Check

Batch	Co	Bank	Pymt No	Check No	Pay Type	Grp	Code	Rcd	Vendor	Print	Recon	Void	Currency	Pmt/Void Date	Amount
0094		2	93155	157060	Check	1	8899		SNOWMEN INC	Yes	No	No	USD	02/23/2021	1,675.00
			93157	157061	Check	1	9085		SOWL, MATT	Yes	No	No	USD	02/23/2021	168.00
			93174	157062	Check	1	9888		STANCHFIELD DOMINIC	Yes	No	No	USD	02/23/2021	444.00
			93133	157063	Check	1	7941		STAPLES BUSINESS CREDIT	Yes	No	No	USD	02/23/2021	59.00
			93117	157064	Check	1	52404		STATE INDUSTRIAL PRODUCTS	Yes	No	No	USD	02/23/2021	1,199.57
			93123	157065	Check	1	5717		STATE OF MINNESOTA DEPARTMEN	Yes	No	No	USD	02/23/2021	50.00
			93166	157066	Check	1	9394		STIREWALT, HALEY	Yes	No	No	USD	02/23/2021	55.27
			93171	157067	Check	1	9626		STRICKLAND ADRIENNE	Yes	No	No	USD	02/23/2021	180.32
			93137	157068	Check	1	8055		STUKEL, ANDREW	Yes	No	No	USD	02/23/2021	86.00
			93165	157069	Check	1	9371		SWANSON, KAREN	Yes	No	No	USD	02/23/2021	71.00
			93104	157070	Check	1	33710		THE MASTER TEACHER INC	Yes	No	No	USD	02/23/2021	70.95
			93156	157071	Check	1	9082		THYSSENKRUPP ELEVATOR	Yes	No	No	USD	02/23/2021	1,323.53
			93134	157072	Check	1	7978		TILANDER, MARY	Yes	No	No	USD	02/23/2021	103.89
			93164	157073	Check	1	9346		TREMBLAY, REBECCA	Yes	No	No	USD	02/23/2021	289.00
			93141	157074	Check	1	8187		UJDUR, GERALD	Yes	No	No	USD	02/23/2021	99.00
			93111	157075	Check	1	4341		US BANK	Yes	No	No	USD	02/23/2021	1,124,750.00
			93159	157076	Check	1	9198		US BANK	Yes	No	No	USD	02/23/2021	125.36
			93124	157077	Check	1	57280		WANGEN, DAVID	Yes	No	No	USD	02/23/2021	369.60
			93079	157078	Check	1	10230		WARREN PRESTON	Yes	No	No	USD	02/23/2021	178.00

Bank Total: 2

\$1,318,898.42

Report Total:

\$1,318,898.42

Cloquet Public Schools
Detail Payment Register By Check
Fund Summary

Fund Description		Total
01	General	\$7,371.57
03	Transportation	\$379.84
04	Community Services	\$185.85
05	Capital Expenditure	\$669.97
12	Activities	\$1,053.74
Report Total		\$9,660.97

Cloquet Public Schools Check Register by Bank and Check

Batch	Co	Bank	Pymt No	Check No	Pay Type	Grp	Code	Rcd	Vendor	Print	Recon	Void	Currency	Pmt/Void Date	Amount
0094		2	93059	156957	Check	1	6078		AMAZON	Yes	No	No	USD	02/05/2021	1,169.90
			93062	156958	Check	1	9684		BLACK BEARS & BLUEBERRIES PUB	Yes	No	No	USD	02/05/2021	109.90
			93060	156959	Check	1	8125		GOLDEN PROTECTIVE SERVICES IN	Yes	No	No	USD	02/05/2021	185.85
			93058	156960	Check	1	5684		HILLYARD INC MINNEAPOLIS	Yes	No	No	USD	02/05/2021	812.67
			93057	156961	Check	1	30365		LCS COACHES INC	Yes	No	No	USD	02/05/2021	379.84
			93063	156962	Check	1	9740		PAITRICK-JOHNSON KYRA	Yes	No	No	USD	02/05/2021	78.91
			93064	156963	Check	1	9935		ROBB MARILYN	Yes	No	No	USD	02/05/2021	27.16
			93061	156964	Check	1	9545		SCHMITT DIRECTOR CENTER	Yes	No	No	USD	02/05/2021	166.50
			93055	156965	Check	1	10229		SUPERONE	Yes	No	No	USD	02/05/2021	107.46
			93066	156967	Check	1	5675		MINNESOTA ENERGY RESOURCES	Yes	No	No	USD	02/05/2021	5,892.22
			93065	156968	Check	1	2267		WALMART COMMUNITY GEMB	Yes	No	No	USD	02/05/2021	730.56
Bank Total: 2															\$9,660.97
Report Total:															\$9,660.97

**TREASURER'S REPORT
INDEPENDENT SCHOOL DISTRICT NO. 94
SEPTEMBER 2020**

FUND	Balance Beginning of Month		Receipts	Disbursements	Balance End of Month		Clerks Balance End of Month
	Cash	Investments			Cash	Investments	
GENERAL	(\$2,730,311.35)	\$10,464,197.05	\$6,958,162.34	\$7,131,975.26	(\$2,904,124.73)	\$13,192,180.54	\$10,288,055.81
FOOD SERVICE	\$266,340.68		\$36,589.20	\$68,015.65	\$234,914.23		\$234,914.23
TRANSPORTATION	\$277,317.19		\$0.00	\$58,027.69	\$219,289.50		\$219,289.50
COMMUNITY SERVICE	\$653,016.54		\$116,015.48	\$128,972.96	\$640,059.06		\$640,059.06
ACTIVITIES	\$508,134.06		\$26,675.29	\$9,877.37	\$524,931.98		\$524,931.98
<u>TOTAL OPERATING</u>	<u>(\$1,025,502.88)</u>	<u>\$10,464,197.05</u>	<u>\$7,137,442.31</u>	<u>\$7,396,868.93</u>	<u>(\$1,284,929.96)</u>	<u>\$13,192,180.54</u>	<u>\$9,179,267.55</u>
CAPITAL OUTLAY	\$364,082.42		\$0.00	\$295,520.43	\$68,561.99		\$68,561.99
DEBT REDEMPTION #94	\$2,190,156.55	\$74,385.49	\$262,875.95	\$0.00	\$2,453,032.50	\$74,385.49	\$2,527,417.99
OPEB DEBT SERVICES	\$37,788.90	\$306,194.21	\$2,069.63	\$0.00	\$39,858.53	\$306,194.21	\$346,052.74
<u>TOTAL FUNDS AVAILABLE</u>	<u>\$1,566,524.99</u>	<u>\$10,844,776.75</u>	<u>\$7,402,387.89</u>	<u>\$7,692,389.36</u>	<u>\$1,276,523.06</u>	<u>\$13,572,760.24</u>	<u>\$12,121,300.27</u>
BUILDING FUND	(\$64,869.74)	\$114,854.74	\$0.00	\$0.00	(\$64,869.74)	\$114,846.73	\$49,976.99
OPEB IRREVOCABLE TRUST	(\$826,549.18)	\$6,369,852.84	\$22,345.83	\$44,874.94	(\$849,078.29)	\$5,489,463.79	\$4,640,385.50

RECONCILEMENT OF TREASURER'S BALANCE WITH BANK

	Balance Per BANK STATEMENT	Outstanding Checks	Deposits Not Shown on Bank Statement	Other Reconciling Items	Balance Per Treasurer's
US BANK	\$1,084,854.22	\$379,500.04	\$0.00	\$0.00	\$362,575.03
ADD UNDEPOSITED CASH ON HAND					
TREASURER'S BALANCE PER BOOKS					\$362,575.03



Independent School District No. 94
Cloquet, Minnesota 55720

Central Administration
302 14th Street • 218-879-6721 • FAX-879-6724
Cloquet Senior High School
1000 18th Street • 218-879-3393 • FAX-879-6494
Cloquet Middle School
2001 Washington Avenue • 218-879-3328 • FAX-879-4175
Churchill Elementary School
515 Granite Street • 218-879-3308 • FAX-879-7034
Washington Elementary School
801 12th Street • 218-879-3369 • FAX-879-3360
Community Education
2001 Washington Avenue • 218-879-1261 • FAX-878-3013
Cloquet Area Alternative Education Programs
302 14th Street • 218-879-0115 • FAX-879-6941
<http://www.isd94.org>

16 February 2021

To: Dr. Michael Cary, Superintendent
From: Teresa Angell, AIE Program Director
RE: Recommendation of Hire for .5 AIE Teacher at Washington

For your consideration and approval, I recommend Heidi Dahlstrom to be hired as .5 AIE Teacher at Washington. Mrs. Dahlstrom has experience subbing in elementary settings and the American Indian Education program. She has a willingness to learn new educational platforms to provide distance learning interventions. I feel Heidi will be an excellent addition to the American Indian Education Program as well as Washington faculty. Mrs. Mondati is supportive of this hire.

I can be available at the next board meeting to answer any questions you may have.

Name: Heidi Dahlstrom
Position: AIE Teacher
Funding Source: 100% Title VI Grant Funding
Rate: BA Step 1
Budgeted Current Year: Yes
Reason for Hire: To fill the vacant position posted 1.26.21 per School Board Approval.
Starting date: February 23, 2021

MEMORANDUM

TO: Dr. Michael Cary, Superintendent

DATE: February 4, 2021

FROM: Erin Bates, Community Education Director

RE: I am recommending that Kimberly Miens be hired as a Water Safety Instructor for Cloquet Community Education.

RATE OF PAY: \$14.92 per hour

HOURS TO BE WORKED: Up to 40 hours week

STARTING DATE: February 4, 2021

LENGTH OF CONTRACT: Ongoing

BUDGETED CURRENT YEAR: Yes

REASON FOR HIRE: Opening

QUALIFIES FOR BENEFITS: No

“Employment is subject to Cloquet School Board Approval”

To: Superintendent Cary and ISD #94 School Board Members
 From: Paul Riess, Activities Director
 Date: February 16th, 2021
 Re: 2020-2021 Spring Extra Service Contracts

Please approve the extra service contracts for the spring season

SPORT	POSITION	NAME	DATES	AMOUNT
Baseball				
	Head Coach	Tyler Olin	3/29/2021- 6/18/21	\$4,649.00
These 3 positions are paid by combining the assistant and JV position	Assistant	Luke Olin	3/29/2021- 6/18/21	\$2,000.00
	JV	Cody Salo	3/29/2021- 6/18/21	\$2,000.00
	JV assistant	Zach Johnson	3/29/2021- 6/18/21	\$1,942.00
Softball				
	Head Coach	Tyler Korby	3/29/2021- 6/18/21	\$4,649.00
Track				
	Head Coach	Tim Prosen	3/29/2021- 6/18/21	\$5,887.00
	B/G Assistant	Erik Hansen	3/29/2021- 6/18/21	\$4,120.00
	B/G Assistant	Michelle Wick	3/29/2021- 6/18/21	\$4,120.00
	B/G Assistant	Andy Elias	3/29/2021- 6/18/21	\$4,120.00
	B/G Assistant	Arne Maijala	3/29/2021- 6/18/21	\$4,120.00
	7/8 Coach	Heather Snesrud	3/29/2021- 6/18/21	\$2,526.00
	7/8 coach	Emily Tracy	3/29/2021- 6/18/21	\$2,526.00
Golf Boys/Girls				
	Boys Head Coach	Aaron Young	3/29/2021- 6/18/21	\$2,480.00
	Girls Head Coach	Matt Carlson	3/29/2021- 6/18/21	\$2,480.00
	Assistant	Kyle Young	3/29/2021- 6/18/21	\$1,735.00
Boys Tennis				
	Head Coach	Derek Johnson	3/29/2021- 6/18/21	\$3,864.00
	JV (middle school) Coach	Tom Proulx	3/29/2021- 6/18/21	\$1,855.00
Trap Shooting				
	Head Coach	Cameron Lindner	3/29/2021- 6/18/21	\$2,265.00

To: Superintendent Cary and ISD #94 School Board Members

From: Paul Riess, Activities Director

Date: February 16th, 2021

Re: 2020-2021 Spring Contracts

Please approve the volunteers for the spring season

SPORT	POSITION	NAME	DATES	AMOUNT
<i>Golf</i>				
Paid through golf activities account	Assistant	Jim Stafford	3/29/2021- 6/18/21	\$1,000
<i>Track</i>				
<i>These positions will be paid from the track activities account</i>	Assistant coach	Tim Anderson	3/29/2021- 6/18/21	up to \$2600
	Assistant coach	Dakota Myllamaa	3/29/2021- 6/18/21	up to \$250
	Assistant coach	Joe Defoe	3/29/2021- 6/18/21	up to \$250
	Assistant coach	Jodi Lorenz	3/29/2021- 6/18/21	up to \$250
	Assistant coach	Jennifer Shepherd	3/29/2021- 6/18/21	volunteer
	Assistant coach	Ed Martin	3/29/2021- 6/18/21	volunteer
	Assistant coach	Larry Sherk	3/29/2021- 6/18/21	volunteer
	Assistant coach	Dale Flankey	3/29/2021- 6/18/21	volunteer
	Assistant coach	Dan Jago	3/29/2021- 6/18/21	volunteer
	Assistant Coach	Harry Cottrell	3/29/2021- 6/18/21	volunteer
	Assistant coach	Kevin Pfeil	3/29/2021- 6/18/21	volunteer
	Assistant coach	Thomas Udenberg	3/29/2021- 6/18/21	volunteer
	Assistant coach	Isaac Boedigheimer	3/29/2021- 6/18/21	volunteer
<i>Boys Tennis</i>				
	Assistant coach	Nick Lind	3/29/2021- 6/18/21	Volunteer
	Assistant coach	Jim Tomhave	3/29/2021- 6/18/21	Volunteer



Independent School District No. 94
Cloquet, Minnesota 55720

Central Administration
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Cloquet Senior High School
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Cloquet Middle School
2001 Washington Avenue • 218-879-3328 • FAX-879-4175
Churchill Elementary School
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Washington Elementary School
801 12th Street • 218-879-3369 • FAX-879-3360
Community Education
2001 Washington Avenue • 218-879-1261 • FAX-878-3013
Cloquet Area Alternative Education Programs
302 14th Street • 218-879-0115 • FAX-879-6941
<http://www.isd94.org>

MEMORANDUM

TO: Dr. Michael Cary, Superintendent
FROM: Connie Hyde, Cloquet Area Alternative Education Programs Principal
DATE: February 17, 2021
RE: Additional Extended Day High School Staffing

I recommend an increase in hours for the remainder of the 2020-2021 school year for the following staff:

<u>Extended Day School</u>	<u>Hours/Week (2/17/21 ~ 5/30/21)</u>	<u>Rate of Pay</u>
Rod Syck (Teacher)	Not to exceed an additional 100 hours	\$ 33.46/hour

Budgeted Current year: Yes

Reason for hire: Additional Hours For Extended Day Programming as required for ALC's

(Employment is subject to Cloquet School Board approval)



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MEMORANDUM

TO: Dr. Michael Cary, Superintendent

FROM: Robbi Mondati, Principal – Washington Elementary School

DATE: February 11, 2021

RE: Permission to Post

I am requesting permission to post for a 6.5 hours/day Consistent Support Special Education paraprofessional. This person will be supporting a student that is moving in from out of district and has extensive paraprofessional support included in his IEP. The student will be starting at Washington Elementary on or around March 8, 2021.

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MEMORANDUM

TO: Dr. Michael Cary, Superintendent

FROM: Thomas Brenner, Principal – Cloquet Middle School

DATE: February 17, 2021

RE: Permission to Post

I am requesting permission to post for a 6.5 hours/day Consistent Support Special Education Long-Term Substitute Paraprofessional starting February 22, 2021 for 12 weeks.

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MEMORANDUM

To: Dr. Michael Cary, Superintendent
From: David Wangen, Churchill Elementary School Principal
Date: February 11, 2021
Re: Staff Adjustment

I am requesting additional FTE allocated to the following teachers to provide specialist time to Churchill's Distance Learning classrooms.

Rachel Holte	Additional FTE Music	.042
Heidi Mattinen	Additional FTE Phy-Ed	.042
Amanda Sales	Additional FTE Art	.021

Employment is contingent upon Cloquet School Board approval



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<http://www.isd94.org>

10 February 2021

To: Dr. Michael Cary, Superintendent
From: Teresa Angell, AIE Program Director
RE: Increase of hours for Van Driver

For your consideration and approval, I am requesting permission to increase Joseph Hedman's hours from 3hrs/day to 6.5hrs/day for the remainder of the 2020/2021 SY. Joseph is the van driver that provides rides to students experiencing transportation barriers. He is reliable, organized, self-motivated and accommodating. There is a high demand for Joseph to deliver educational materials, backpack program kits and flexibility in student pickup situations. Adding additional hours to the van driver position would create more opportunities to liaison student, family and school deliveries, pickups and offer drop offs.

The priority will be focused on elementary needs with availability to service all schools.

The additional hours will be 100% paid out of Achievement & Integration carryover. Effective February 24, 2021 contingent upon School Board approval.

I can be available at the next board meeting to answer any questions you may have.

2020-2021 Student Enrollment Report

	Dates	9/10	9/23	10/6	10/20	11/4	11/17	12/8	1/6	1/20	2/2	2/16							
CHURCHILL																			
Handicap Kindergarten	2	11	15	16	16	16	16	16	16	16	16	16							
Early Five/Dev Kindergarten	15	24	25	24	24	24	24	24	24	25	25	25							
Kindergarten - All Day	68	60	57	58	58	57	58	58	58	57	58	58							
First Grade	59	56	56	56	57	57	57	57	58	58	63	64							
Second Grade	76	76	77	77	77	77	77	77	77	77	79	79							
Third Grade	77	75	76	76	75	75	75	74	74	74	74	75							
Fourth Grade	84	84	84	84	84	84	84	83	84	85	86								
TOTAL CHURCHILL	381	386	390	391	391	390	391	390	391	400	403	0							
WASHINGTON																			
Handicap Kindergarten	2	8	17	17	18	18	18	18	18	18	18	18							
Kindergarten - All Day	75	65	55	56	55	55	54	54	54	52	52								
First Grade	124	122	122	123	123	123	122	122	122	117	116								
Second Grade	110	107	106	105	104	104	105	104	104	104	104								
Third Grade	100	97	97	96	96	96	95	95	95	95	97								
Fourth Grade	106	100	99	99	98	98	99	99	99	99	98								
TOTAL WASHINGTON	517	499	496	496	494	494	493	492	492	485	485	0							
TOTAL ELEMENTARY	898	885	886	887	885	884	884	882	883	885	888	0							
Open Enrollment-Elementary																			
MIDDLE SCHOOL																			
Fifth Grade	200	197	197	197	197	196	196	196	194	194	194								
Sixth Grade	210	207	209	208	209	210	211	211	209	211	211								
Seventh Grade	223	220	220	219	220	221	220	220	219	219	219								
Eighth Grade	220	215	215	215	216	216	213	213	211	212	212								
TOTAL MIDDLE SCHOOL	853	839	841	839	842	843	840	840	833	836	836	0							
Open Enrollment-CMS																			
HIGH SCHOOL																			
Ninth Grade	227	224	225	225	224	226	226	226	226	224	224								
Tenth Grade	190	192	192	192	191	188	189	188	188	187	186								
Eleventh Grade	184	181	179	179	180	177	174	171	171	167	167								
Twelfth Grade	179	177	174	175	174	172	171	171	171	173	171								
TOTAL HIGH SCHOOL	780	774	770	771	769	763	760	756	756	751	748	0							
Open Enrollment-CHS																			
TOTAL HK-12	2531	2498	2497	2497	2496	2490	2484	2478	2472	2472	2472	0							
TOTAL OPEN ENROLLMENT	0	0	0	0	0	0	0	0	0										
CAAEP- FULL-TIME																			
High School (grades 9-12)	75	75	77	75	72	77	70	62	62	81	82								
Junior High (grades 6-8)	3	3	3	5	5	7	7	7	7	7	9								
TOTAL CAAEP-Full-Time	78	78	80	80	77	84	77	69	69	88	91	0							
** CAAEP - PART-TIME																			
EDHS																			
Extended Programming																			
Targeted Services																			
GRAND TOTAL	2609	2576	2577	2577	2573	2574	2561	2547	2541	2560	2563	0							

2020-2021 Enrolled Distant Learning Students

	Dates	9/10	9/23	10/6	10/20	11/4	11/17	12/8	1/6	1/20	2/2	2/16							
CHURCHILL																			
Handicap Kindergarten			3	3	4	4	4	4	4	4	3	3							
Early Five/Dev Kindergarten			3	5	4	4	4	4	4	4	6	6							
Kindergarten - All Day			18	16	16	16	16	16	16	16	14	14							
First Grade			3	3	3	3	3	3	3	3	2	2							
Second Grade			23	22	21	22	21	21	21	21	16	16							
Third Grade			15	15	17	16	16	16	16	16	15	11							
Fourth Grade			14	14	14	14	14	14	14	14	13	11							
TOTAL CHURCHILL	0	79	78	79	79	78	78	78	78	78	69	63	0						
WASHINGTON																			
Handicap Kindergarten			3	3	3	3	3	3	3	3	1	1							
Kindergarten - All Day			15	13	14	14	14	13	13	13	9	9							
First Grade			50	48	46	47	47	47	47	47	31	31							
Second Grade			24	23	23	23	23	23	22	22	18	18							
Third Grade			25	25	25	25	25	25	25	25	25	16							
Fourth Grade			25	25	25	25	25	25	25	25	26	20							
TOTAL WASHINGTON	0	142	137	136	137	137	136	135	135	110	95	95	0						
TOTAL ELEMENTARY	0	221	215	215	216	215	214	213	213	179	158	158	0						
Open Enrollment-Elementary																			
MIDDLE SCHOOL																			
Fifth Grade			39	39	37	41	41	40	40	35	28	27							
Sixth Grade			52	55	57	57	62	62	62	60	49	46							
Seventh Grade			65	72	74	75	76	76	76	70	62	57							
Eighth Grade			71	71	75	77	76	76	76	73	70	63							
TOTAL MIDDLE SCHOOL	0	227	237	243	250	255	254	254	238	209	193	193	0						
Open Enrollment-CMS																			
HIGH SCHOOL																			
Ninth Grade			55	60	67	77	80	80	80	80	68	71							
Tenth Grade			59	63	75	84	84	84	84	77	78	82							
Eleventh Grade			49	44	50	65	63	62	61	60	50	51							
Twelfth Grade			50	48	60	65	69	69	69	64	58	59							
TOTAL HIGH SCHOOL	0	213	215	252	291	296	295	294	281	254	263	263	0						
Open Enrollment-CHS																			
TOTAL HK-12	0	661	667	710	757	766	763	761	732	642	614	614	0						
TOTAL OPEN ENROLLMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CAAEP- FULL-TIME																			
High School (grades 9-12)			25	34	33	31	73	67	60	60	10	14							
Junior High (grades 6-8)			1	0	0	0	5	5	5	5	0	1							
TOTAL CAAEP-Full-Time	0	26	34	33	31	78	72	65	65	10	15	15	0						
** CAAEP - PART-TIME																			
EDHS																			
Extended Programming																			
Targeted Services																			
GRAND TOTAL	0	687	701	743	788	844	835	826	797	652	629	629	0						

** NOT included in totals.



Education and Leadership for a Lifetime

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February 10, 2021

Dear Superintendent/President/Head of School,

This letter provides notice to you and your Minnesota State High School League Member School, that a member school vote regarding a Proposed Constitutional Amendment is scheduled to be held electronically from February 22, 2021 through March 5, 2021. The member school vote will be conducted online via the MSHSL website. Specific voting information including the voting web link and ballot security code will be mailed to member schools on Thursday, February 18, 2021.

Background

On Thursday, February 4, 2021, the MSHSL Board of Directors unanimously approved a resolution directing that the Proposed Constitutional Amendment to Section 211.01 of the MSHSL Constitution be submitted for adoption by vote of member schools. A copy of the proposed amendment is included as an enclosure in this mailing.

The proposed amendment will add two members to the Board of Directors to be appointed by the Minnesota Association of School Administrators along with technical changes to existing language.

The MSHSL Board of Directors approved the following resolution which defines the voting process for the Proposed Constitutional Amendment:

The MSHSL staff is directed to conduct a mail (email) ballot vote on the proposed constitutional amendment. The Board finds that for purposes of Section 214.00 and other sections of the constitution, "mail" includes but is not limited to "email." Each member school is entitled to one vote, which may be endorsed by one or both of the designated school representatives. The voting shall take place over a two-week period commencing on February 22 and continuing through March 5. This period may be extended if in the judgment of the Executive Director and President of the Board of Directors, additional time is needed to ensure member schools have a reasonable opportunity to vote.

Process and Timeline for Member School Voting

February 10 – Member School mailing and emails sent to Superintendent/President/Head of School informing member schools of the pending member school vote, outlining the voting process and distributing the MSHSL Proposed Constitutional Amendment Section 211.01 and sample ballot. Copies of the email will also be sent to the Activities Administrator at each member school.

February 18 – Member School mailing sent to Superintendent/President/Head of School including the link for member school voting, the school specific ballot security code, and a copy of the official ballot and voting directions.

February 22 – The voting portal opens at 8:00 am CST for designated school representatives or their duly designated alternate to submit the member school vote.

March 5 – The voting portal will close at 5:00 pm CST, unless the Executive Director and President of the Board of Directors extend the voting time period per the adopted resolution.

Please prepare for the initiation of this voting process. The MSHSL Board of Directors strongly encourages all member schools to take part in the vote on this proposed amendment. The MSHSL Constitution has a 75% quorum requirement, and as a result, every vote counts.

This notice provides you with the opportunity to inform and involve your school’s governing board, administrative team members, or other primary decision-makers within your school or district.

Sincerely,

A handwritten signature in black ink that reads "Erich Martens". The signature is written in a cursive style with a large, sweeping initial "E".

Erich Martens
Executive Director, Minnesota State High School League

Enclosures: Proposed Constitutional Amendment Section 211.01
Sample Ballot



2020-2021

MINNESOTA STATE HIGH SCHOOL LEAGUE

February 4, 2021: The Board of Directors adopted a resolution proposing the following MSHSL Constitutional Amendment, directing that it be adopted at a meeting of the member schools, or when considered necessary, by taking a mail vote of member schools.

211.00 BOARD OF DIRECTORS (pages 134-135 of 2020-2021 MSHSL Official Handbook)

211.01 Election, Terms, Vacancies

1. The management of the affairs of the Minnesota State High School League shall be vested in a Board of Directors as **follows**: ~~as outlined under Section 45 of Chapter 718, Minnesota Laws 1988.~~

~~“The Commissioner of Education, or the Commissioner’s representative, shall be an ex officio nonvoting member of the governing body of the Minnesota State High School League. The governing board must include the following members: four members of the public, at least one of whom must be an American Indian, Asian, Black, or Hispanic, and all of whom must be parents, appointed by the Governor under section 15.0597; two members of the Minnesota Association of Secondary School Principals selected by the Association; and 14 members selected according to League bylaws.”~~

~~The fourteen (14) members of the Board, selected according to League bylaws, shall be:~~

- A. Four (4) designated school representatives elected from the Class “A” regions - one from Regions 1-2; one from Regions 3-4; one from Regions 5-6; and one from Regions 7-8 for a term of four (4) years.
- B. Four (4) designated school representatives elected from the Class “AA” regions - one from Regions 1-2; one from Regions 3-4; one from Regions 5-6; and one from Regions 7-8 for a term of four (4) years.
- C. Two representatives appointed by the Board of Directors of the Minnesota State School Boards Association.
- D. **Two representatives appointed by the Board of Directors of the Minnesota Association of Secondary School Principals.**
- E. **Two representatives appointed by the Board of Directors of the Minnesota Association of School Administrators.**

****note: Former paragraph D has been renumbered to “F.”**

- F. Four (4) activity representatives will be elected for a term of four (4) years. One representative will be elected to represent:
 - (1) Boys’ Sports
 - (2) Girls’ Sports
 - (3) Music
 - (4) Speech
 Each of the activity representatives must be from a member school and have been designated by the governing board of that school as its activity representative.

~~E. If the Board does not include a representative of one sex, a representative of that sex shall be appointed by the Board. Eligible appointees are individuals who are eligible to be designated school representatives. The minority representative, formerly appointed by the State Board of Education, is now included in the Legislation and shall be a parent appointed by the Governor.~~

- G. **Four members of the public appointed by the Governor pursuant to Minnesota Statutes 128C.01.**

2. The Regions shall elect their Directors in accordance with the following schedule:
Class “A”

- Director representing Area 3 (Regions 5-6) - 2021
- Director representing Area 4 (Regions 7-8) - 2022
- Director representing Area 1 (Regions 1-2) - 2023
- Director representing Area 2 (Regions 3-4) - 2024

Class “AA”

- Director representing Area 1 (Regions 1-2) - 2021
- Director representing Area 2 (Regions 3-4) - 2022
- Director representing Area 3 (Regions 5-6) - 2023
- Director representing Area 4 (Regions 7-8) - 2024

Once the initial election rotation has been established, election shall occur every four (4) years as the director vacancy occurs.

The same schedules shall be continued each year.

3. Method of Election

A. Region Directors

- (1) A director shall be elected every fourth year by the member schools of the area (combined regions assigned by the Board of Directors for governance and representation purposes). The election shall be conducted between March 1 and May 1. Every member school has two (2) votes to be cast by the designated school representatives.
- (2) Each member school may nominate one candidate. The candidate shall be an individual who is eligible to be a designated school representative.
- (3) The region committees of the area (combined regions) shall establish an election committee, establish election procedures, and conduct the election.

****note: This section has been reorganized for clarity but is not changed.

B. Activity Representatives

(1) The Executive Board of each of the four (4) activity associations shall select a slate of candidates, establish election procedures, and conduct the election. Only designated activity representatives of member schools are eligible for election. The Associations include:

- (1). Boys’ Sports - combination of Minnesota State High School Coaches Association and Minnesota Interscholastic Activities Administrators Association;**
- (2). Girls’ Sports - Minnesota State High School Coaches Association for Girls’ Sports;**
- (3). Music - Minnesota Music Educators Association; and**
- (4). Speech - Speech Activities Association**

- (2) Elected by the designated activity representatives of the member schools in each activity area between March 1 and May 1 every fourth year as follows:
 - (a) Boys’ Sports and Music in 2023;
 - (b) Girls’ Sports and Speech in 2024.

4. In the event that a vacancy occurs during the term of a director from any of the areas (combination of regions), a successor shall be appointed by the combined region committees. The new director shall serve for the remainder of the unexpired term.

In the event that a vacancy occurs during the term of an activity representative, a successor shall be appointed by the executive board of that activity association. The new representative shall serve for the remainder of the unexpired term.

5. A director who has served one (1) full four-year term on the Board shall be ineligible for any subsequent election or appointment to the Board.

6. The term of office of each member of the Board of Directors shall begin on August 1 following their **appointment or** election.

7. Directors shall not hold any other office in the Minnesota State High School League.

8. The appointments made by MASA and MASSSP pursuant to paragraphs D and E above shall rotate between a representative from a “Class A” Region and a “Class AA Region”.

9. The initial terms of the MASA members commencing in 2021 shall be for 4 and 2 years respectively. Thereafter, each term shall be four years.

SAMPLE BALLOT

MSHSL Proposed Constitutional Amendment

Member School Official Ballot

This official ballot must be authorized by the Member School's Designated School Representative or Designated School Board Representative.

Each MSHSL Member School is entitled to one vote. Districts with more than one Member School are entitled to one vote for each Member School.

After submitting this vote, the Superintendent/Head of School/President of the Member School will receive a confirmation email with a record of the Member School's vote.

Member School Name -- This field will autofill with your school's name as you begin typing the name of the school.

Email Address of Superintendent/Head of School/President -- The confirmation email will be sent to this address.

Email Address of Superintendent/Head of School/President -- The confirmation email will be sent to this address.

Confirm email

Ballot Security Code--Enter the Ballot Security Code that you received in the mail.

Name of Person Completing Ballot

MSHSL Designated School Representative and MSHSL Designated School Board Representative are authorized to vote. Please list those who authorized this vote. (At least one name is required.)

Vote:

Yes--Our Member School supports the amendment to the MSHSL Constitution

No--Our Member School does not support the amendment to the MSHSL Constitution

SUBMIT

SAMPLE BALLOT

February 17, 2021

Dear Dr. Cary and Members of the ISD #94 School Board:

Once again we are in the planning stages of the 2021 All Night Graduation Party. With this being a great year of uncertainty with the pandemic, much of our planning is tentative and subject to change based on guidelines set forth by the MN Department of Health and ISD 94 guidelines. The ANGP is scheduled to take place after graduation on Friday, May 28th in some capacity.

We are asking for assistance from our school district in the preparation and completion of the All Night Grad Party. The services we ask of you are the same as requested in previous years and may include:

- Senior High School facilities to include but not be limited to the following: gyms (new, old large, old small), kitchen/cafeteria, auditorium, locker rooms, classrooms, staff lounge, concessions, lobby area, etc.
- Senior High Custodial services
- Insurance for the evening
- Envelopes and postage
- Copying/ Print Shop services
- Secretarial services

Your support in the past has been greatly appreciated and we hope we can count on your continuing support this year.

Thank you for your time and consideration!

Sincerely,

Tracy Mattson
2021 All Night Graduation Party
Co-Chair

Melissa Kelley
2021 All Night Graduation Party
Co-Chair

Adopted: 1/12/2009

Revised: 4/8/19

522 TITLE IX SEX NONDISCRIMINATION POLICY, GRIEVANCE PROCEDURE AND PROCESS

I. GENERAL STATEMENT OF POLICY

- A. The school district does not discriminate on the basis of sex in its education programs or activities, and it is required by Title IX of the Education Amendments Act of 1972, and its implementing regulations, not to discriminate in such a manner. The requirement not to discriminate in its education program or activity extends to admission and employment. The school district is committed to maintaining an education and work environment that is free from discrimination based on sex, including sexual harassment.
- B. The school district prohibits sexual harassment that occurs within its education programs and activities. When the school district has actual knowledge of sexual harassment in its education program or activity against a person in the United States, it shall promptly respond in a manner that is not deliberately indifferent.
- C. This policy applies to sexual harassment that occurs within the school district's education programs and activities and that is committed by a school district employee, student, or other members of the school community. This policy does not apply to sexual harassment that occurs off school grounds, in a private setting, and outside the scope of the school district's education programs and activities. This policy does not apply to sexual harassment that occurs outside the geographic boundaries of the United States, even if the sexual harassment occurs in the school district's education programs or activities.
- D. Any student, parent, or guardian having questions regarding the application of Title IX and its regulations and/or this policy and grievance process should discuss them with the Title IX Coordinator. The school district's Title IX Coordinator(s) is/are:

Paul Riess, Athletic Director/Title IX Coordinator, Cloquet Senior High School, 1000 – 18th Street, Cloquet, MN 55720, 218-879-6721 ext. 1202

Tim Prosen, Assistant Principal/Alternate Title IX Coordinator, Cloquet Senior High School, 1000 – 18th Street, Cloquet MN 55720, 218-879-6721 ext. 1206

Questions relating solely to Title IX and its regulations may be referred to the Title IX Coordinator(s), the Assistant Secretary for Civil Rights of the United States Department of Education, or both.

- E. The effective date of this policy is August 14, 2020 and applies to alleged violations of this policy occurring on or after August 14, 2020.

II. DEFINITIONS

- A. “Actual knowledge” means notice of sexual harassment or allegations of sexual harassment to the school district’s Title IX Coordinator or to any employee of the school district. Imputation of knowledge based solely on vicarious liability or constructive notice is insufficient to constitute actual knowledge. This standard is not met when the only official of the school district with actual knowledge is the respondent.
- B. “Complainant” means a person who is alleged to be the victim of conduct that could constitute sexual harassment under Title IX. A Title IX Coordinator who signs a formal complaint is not a complainant unless the Title IX Coordinator is alleged to be the victim of the conduct described in the formal complaint.
- C. “Day” or “days” means, unless expressly stated otherwise, business days (i.e. day(s) that the school district office is open for normal operating hours, Monday - Friday, excluding State-recognized holidays).
- D. “Deliberately indifferent” means clearly unreasonable in light of the known circumstances. The school district is deliberately indifferent only if its response to sexual harassment is clearly unreasonable in light of the known circumstances.
- E. “Education program or activity” means locations, events, or circumstances for which the school district exercises substantial control over both the respondent and the context in which the sexual harassment occurs and includes school district education programs or activities that occur on or off of school district property.
- F. “Formal complaint” means a document filed by a complainant or signed by the Title IX Coordinator alleging sexual harassment against a respondent and requesting that the school district investigate the allegation of sexual harassment.
1. A formal complaint filed by a complainant must be a physical document or an electronic submission. The formal complaint must contain the complainant’s physical or digital signature, or otherwise indicate that the complainant is the person filing the formal complaint, and must be submitted to the Title IX Coordinator in person, by mail, or by email.
 2. A formal complaint shall state that, at the time of filing the formal complaint, the complainant was participating in, or attempting to participate in, an education program or activity of the school district with which the formal complaint is filed.
- G. “Informal resolution” means options for resolving a formal complaint that do not involve a full investigation and adjudication. Informal resolution may encompass a broad range of conflict resolution strategies, including mediation or restorative justice.
- H. “Relevant questions” and “relevant evidence” are questions, documents, statements, or information that are related to the allegations raised in a formal complaint. Relevant evidence includes evidence that is both inculpatory and exculpatory. Questions and evidence about the complainant’s sexual predisposition or prior sexual behavior are not

relevant, unless such questions and evidence about the complainant’s prior sexual behavior are offered to prove that someone other than the respondent committed the conduct alleged by the complainant, or if the questions and evidence concern specific incidents of the complainant’s prior sexual behavior with respect to the respondent and are offered to prove consent.

- I. “Remedies” means actions designed to restore or preserve the complainant’s equal access to education after a respondent is found responsible. Remedies may include the same individualized services that constitute supportive measures, but need not be non-punitive or non-disciplinary, nor must they avoid burdening the respondent.
- J. “Respondent” means an individual who has been reported to be the perpetrator of conduct that could constitute sexual harassment under Title IX.
- K. “Sexual harassment” means any of three types of misconduct on the basis of sex that occurs in a school district education program or activity and is committed against a person in the United States:
1. *Quid pro quo* harassment by a school district employee (conditioning the provision of an aid, benefit, or service of the school district on an individual's participation in unwelcome sexual conduct);
 2. Unwelcome conduct that a reasonable person would find so severe, pervasive, and objectively offensive that it denies a person equal educational access; or
 3. Any instance of sexual assault (as defined in the Clery Act, 20 U.S.C. §1092(f)(6)A(v)), dating violence, domestic violence, or stalking (as defined in the Violence Against Women Act, 34 U.S.C. §12291).
- L. “Supportive measures” means individualized services provided to the complainant or respondent without fee or charge that are reasonably available, non-punitive, non-disciplinary, not unreasonably burdensome to the other party, and designed to ensure equal educational access, protect safety, and deter sexual harassment. Supportive measures may include counseling, extensions of deadlines or other course-related adjustments, modifications of work or class schedules, alternative educational services as defined under Minn. Stat. § 121A.41, as amended, mutual restrictions on contact between the parties, changes in work locations, leaves of absence, increased security and monitoring of certain areas of the school district buildings or property, and other similar measures.
- M. “Title IX Personnel” means any person who addresses, works on, or assists with the school district’s response to a report of sexual harassment or formal complaint, and includes persons who facilitate informal resolutions. The following are considered Title IX Personnel:
1. “Title IX Coordinator” means an employee of the school district that coordinates the school district’s efforts to comply with and carry out its responsibilities under Title IX. The Title IX Coordinator is responsible for acting as the primary contact for the parties and ensuring that the parties are provided with all notices, evidence, reports, and written determinations to which they are entitled under this policy and

grievance process. The Title IX Coordinator is also responsible for effective implementation of any supportive measures or remedies. The Title IX Coordinator must be free from conflicts of interest and bias when administrating the grievance process.

2. “Investigator” means a person who investigates a formal complaint. The investigator of a formal complaint may not be the same person as the Decision-maker or the Appellate Decision-maker. The Investigator may be a school district employee, school district official, or a third party designated by the school district.
3. “Decision-maker” means a person who makes a determination regarding responsibility after the investigation has concluded. The Decision-maker cannot be the same person as the Title IX Coordinator, the Investigator, or the Appellate Decision-maker.
4. “Appellate Decision-maker” means a person who considers and decides appeals of determinations regarding responsibility and dismissals of formal complaints. The Appellate Decision-maker cannot be the same person as the Title IX Coordinator, Investigator, or Decision-maker. The Appellate Decision-maker may be a school district employee, or a third party designated by the school district.
5. The superintendent of the school district may delegate functions assigned to a specific school district employee under this policy, including but not limited to the functions assigned to the Title IX Coordinator, Investigator, Decision-maker, Appellate Decision-maker, and facilitator of informal resolution processes, to any suitably qualified individual and such delegation may be rescinded by the superintendent at any time. The school district may also, in its discretion, appoint suitably qualified persons who are not school district employees to fulfill any function under this policy, including, but not limited to, Investigator, Decision-maker, Appellate Decision-maker, and facilitator of informal resolution processes.

III. BASIC REQUIREMENTS FOR GRIEVANCE PROCESS

A. Equitable Treatment

1. The school district shall treat complainants and respondents equitably. However, equality or parity with respect to supportive measures provided to complainants and respondents is not required.
2. The school district will not impose any disciplinary sanctions or take any other actions against a respondent that do not constitute supportive measures until it has completed this grievance process and the respondent has been found responsible.
3. The school district will provide appropriate remedies to the complainant any time a respondent is found responsible.

B. Objective and Unbiased Evaluation of Complaints

1. Title IX Personnel, including the Title IX Coordinator, Investigator, Decision-maker, and Appellate Decision-maker, shall be free from conflicts of interest or bias for or against complainants or respondents generally or a specific complainant or respondent.
2. Throughout the grievance process, Title IX Personnel will objectively evaluate all relevant evidence, inculpatory and exculpatory, and shall avoid credibility determinations based solely on a person's status as a complainant, respondent, or witness.

C. Title IX Personnel will presume that the respondent is not responsible for the alleged conduct until a determination regarding responsibility is made at the conclusion of the grievance process.

D. Confidentiality

The school district will keep confidential the identity of any individual who has made a report or complaint of sex discrimination, including any individual who has made a report or filed a formal complaint of sexual harassment, any complainant, any individual who has been reported to be the perpetrator of sex discrimination, any respondent, and any witness, except as may be permitted by the Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. § 1232g, or FERPA's regulations, and State law under Minn. Stat. § 13.32 34 C.F.R. Part 99, or as required by law, or to carry out the purposes of 34 C.F.R. Part 106, including the conduct of any investigation, hearing, or judicial proceeding arising thereunder (i.e., the school district's obligation to maintain confidentiality shall not impair or otherwise affect the complainants and respondents receipt of the information to which they are entitled with respect to the investigative record and determination of responsibility).

E. Right to an Advisor; Right to a Support Person

Complainants and respondents have the right, at their own expense, to be assisted by an advisor of their choice during all stages of any grievance proceeding, including all meetings and investigative interviews. The advisor may be, but is not required to be, an attorney. In general, an advisor is not permitted to speak for or on behalf of a complainant or respondent, appear in lieu of complainant or respondent, participate as a witness, or participate directly in any other manner during any phase of the grievance process.

A complainant or respondent with a disability may be assisted by a support person throughout the grievance process, including all meetings and investigative interviews, if such accommodation is necessary. A support person may be a friend, family member, or any individual who is not otherwise a potential witness. The support person is not permitted to speak for or on behalf of a complainant or respondent, appear in lieu of complainant or respondent, participate as a witness, or participate directly in any other manner during any phase of the grievance process.

F. Notice

The school district will send written notice of any investigative interviews or meetings to any party whose participation is invited or expected. The written notice will include the date, time, location, participants, and purpose of the meeting or interview, and will be provided to allow sufficient time for the party to prepare to participate.

G. Consolidation

The school district may, in its discretion, consolidate formal complaints as to allegations of sexual harassment against more than one respondent, or by more than one complainant against one or more respondents, or by one party against the other party, where the allegations of sexual harassment arise out of the same facts or circumstances.

H. Evidence

1. During the grievance process, the school district will not require, allow, rely upon, or otherwise use questions or evidence that constitute or seek disclosure of information protected under a legally recognized privilege, unless the person holding such privilege has waived the privilege.
2. The school district shall not access, consider, disclose, or otherwise use a party's medical, psychological, and similar treatment records unless the school district obtains the party's voluntary, written consent.

I. Burden of Proof

1. The burden of gathering evidence and the burden of proof shall remain upon the school district and not upon the parties.
2. The grievance process shall use a preponderance of the evidence standard (i.e. whether it is more likely than not that the respondent engaged in sexual harassment) for all formal complaints of sexual harassment, including when school district employees are respondents.

J. Timelines

1. Any informal resolution process must be completed within thirty (30) calendar days following the parties' agreement to participate in such informal process.
2. An appeal of a determination of responsibility or of a decision dismissing a formal complaint must be received by the school district within five (5) days of the date the determination of responsibility or dismissal was provided to the parties.
3. Any appeal of a determination of responsibility or of a dismissal will be decided within thirty (30) calendar days of the day the appeal was received by the School District.

4. The school district will seek to conclude the grievance process, including any appeal, within 120 calendar days of the date the formal complaint was received by the School District.
5. Although the school district strives to adhere to the timelines described above, in each case, the school district may extend the time frames for good cause. Good cause may include, without limitation: the complexity of the allegations; the severity and extent of the alleged misconduct; the number of parties, witnesses, and the types of other evidence (e.g., forensic evidence) involved; the availability of the parties, advisors, witnesses, and evidence (e.g., forensic evidence); concurrent law enforcement activity; intervening school district holidays, breaks, or other closures; the need for language assistance or accommodation of disabilities; and/or other unforeseen circumstances.

K. Potential Remedies and Disciplinary Sanctions

1. The following is the range of possible remedies that the school district may provide a complainant and disciplinary sanctions that the school district might impose upon a respondent, following determination of responsibility: counseling, extensions of deadlines or other course-related adjustments, modifications of work or class schedules, mutual or unilateral restrictions on contact between the parties, changes in work locations, leaves of absence, monitoring of certain areas of the school district buildings or property, warning, suspension, exclusion, expulsion, transfer, remediation, termination, or discharge.
2. If the Decision-maker determines a student-respondent is responsible for violating this policy, the Decision-maker will recommend appropriate remedies, including disciplinary sanctions/consequences. The Title IX Coordinator will notify the superintendent of the recommended remedies, such that an authorized administrator can consider the recommendation(s) and implement appropriate remedies in compliance with MSBA Model Policy 506 – Student Discipline. The discipline of a student-respondent must comply with the applicable provisions of Minnesota Pupil Fair Dismissal Act, the Individuals with Disabilities Education Improvement Act (IDEA) and/or Section 504 of the Rehabilitation Act of 1972, and their respective implementing regulations.

IV. REPORTING PROHIBITED CONDUCT

- A. Any student who believes they have been the victim of unlawful sex discrimination or sexual harassment, or any person (including the parent of a student) with actual knowledge of conduct which may constitute unlawful sex discrimination or sexual harassment toward a student should report the alleged acts as soon as possible to the Title IX Coordinator.
- B. Any employee of the school district who has experienced, has actual knowledge of, or has witnessed unlawful sex discrimination, including sexual harassment, or who otherwise becomes aware of unlawful sex discrimination, including sexual harassment, must promptly report the allegations to the Title IX Coordinator without screening or investigating the report or allegations.

- C. A report of unlawful sex discrimination or sexual harassment may be made at any time, including during non-business hours, and may be made in person, by mail, by telephone, or by e-mail using the Title IX Coordinator's contact information. A report may also be made by any other means that results in the Title IX Coordinator receiving the person's verbal or written report.
- D. Sexual harassment may constitute both a violation of this policy and criminal law. To the extent the alleged conduct may constitute a crime, the School District may report the alleged conduct to law enforcement authorities. The school district encourages complainants to report criminal behavior to the police immediately.

V. INITIAL RESPONSE AND ASSESSMENT BY THE TITLE IX COORDINATOR

- A. When the Title IX Coordinator receives a report, the Title IX Coordinator shall promptly contact the complainant confidentially to discuss the availability of supportive measures, consider the complainant's wishes with respect to supportive measures, inform the complainant of the availability of supportive measures with or without the filing of a formal complaint, and explain to the complainant the process for filing a formal complaint .
- B. The school district will offer supportive measures to the complainant whether or not the complainant decides to make a formal complaint. The school district must maintain as confidential any supportive measures provided to the complainant or respondent, to the extent that maintaining such confidentiality would not impair the school district's ability to provide the supportive measures. The Title IX Coordinator is responsible for coordinating the effective implementation of supportive measures.
- C. If the complainant does not wish to file a formal complaint, the allegations will not be investigated by the school district unless the Title IX Coordinator determines that signing a formal complaint to initiate an investigation over the complainant's wishes is not clearly unreasonable in light of the known circumstances.
- D. Upon receipt of a formal complaint, the school district must provide written notice of the formal complaint to the known parties with sufficient time to prepare a response before any initial interview. This written notice must contain:
 1. The allegations of sexual harassment, including sufficient details known at the time, the identities of the parties involved in the incident (if known), the conduct allegedly constituting sexual harassment, and the date and location of the alleged incident, if known;
 2. A statement that the respondent is presumed not responsible for the alleged conduct and that a determination regarding responsibility will be made at the conclusion of the grievance process;
 3. A statement explaining that the parties may have an advisor of their choice, who may be, but is not required to be, an attorney;

4. A statement that the parties may inspect and review evidence gathered pursuant to this policy;
5. A statement informing the parties of any code of conduct provision that prohibits knowingly making false statements or knowingly submitting false information; and
6. A copy of this policy.

VI. STATUS OF RESPONDENT DURING PENDENCY OF FORMAL COMPLAINT

A. Emergency Removal of a Student

1. The school district may remove a student-respondent from an education program or activity of the school district on an emergency basis before a determination regarding responsibility is made if:
 - a. The school district undertakes an individualized safety and risk analysis;
 - b. The school district determines that an immediate threat to the physical health or safety of any student or other individual arising from the allegations of sexual harassment justifies removal of the student-respondent; and
 - c. The school district determines the student-respondent poses such a threat, it will so notify the student-respondent and the student-respondent will have an opportunity to challenge the decision immediately following the removal. In determining whether to impose emergency removal measures, the Title IX Coordinator shall consult related school district policies, including MSBA Model Policy 506 – Student Discipline. The school district must take into consideration applicable requirements of the Individuals with Disabilities Education Act and Section 504 of the Rehabilitation Act of 1973, prior to removing a special education student or Section 504 student on an emergency basis.

B. Employee Administrative Leave

The school district may place a non-student employee on administrative leave during the pendency of the grievance process of a formal complaint. Such leave will typically be paid leave unless circumstances justify unpaid leave in compliance with legal requirements. The school district must take into consideration applicable requirements of Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act prior to removing an individual with a qualifying disability.

VII. INFORMAL RESOLUTION OF A FORMAL COMPLAINT

- A. At any time prior to reaching a determination of responsibility, informal resolution may be offered and facilitated by the school district at the school district’s discretion, but only after a formal complaint has been received by the school district.

- B. The school district may not require as a condition of enrollment or continued enrollment, or of employment or continued employment, or enjoyment of any other right, waiver of the right to a formal investigation and adjudication of formal complaints of sexual harassment.
- C. The informal resolution process may not be used to resolve allegations that a school district employee sexually harassed a student.
- D. The school district will not facilitate an informal resolution process without both parties' agreement, and will obtain their voluntary, written consent. The school district will provide to the parties a written notice disclosing the allegations, the requirements of the informal resolution process including the circumstances under which it precludes the parties from resuming a formal complaint arising from the same allegations, the parties' right to withdraw from the informal resolution process, and any consequences resulting from participating in the informal resolution process, including the records that will be maintained or could be shared.
- E. At any time prior to agreeing to a resolution, any party has the right to withdraw from the informal resolution process and resume the grievance process with respect to the formal complaint.

VIII. DISMISSAL OF A FORMAL COMPLAINT

- A. Under federal law, the school district must dismiss a Title IX complaint, or a portion thereof, if the conduct alleged in a formal complaint or a portion thereof:
 - 1. Would not meet the definition of sexual harassment, even if proven;
 - 2. Did not occur in the school district's education program or activity; or
 - 3. Did not occur against a person in the United States.
- B. The school district may, in its discretion, dismiss a formal complaint or allegations therein if:
 - 1. The complainant informs the Title IX Coordinator in writing that the complainant desires to withdraw the formal complaint or allegations therein;
 - 2. The respondent is no longer enrolled or employed by the school district; or
 - 3. Specific circumstances prevent the school district from gathering sufficient evidence to reach a determination.
- C. The school district shall provide written notice to both parties of a dismissal. The notice must include the reasons for the dismissal.
- D. Dismissal of a formal complaint or a portion thereof does not preclude the school district from addressing the underlying conduct in any manner that the school district deems appropriate.

IX. INVESTIGATION OF A FORMAL COMPLAINT

- A. If a formal complaint is received by the School District, the school district will assign or designate an Investigator to investigate the allegations set forth in the formal complaint.
- B. If during the course of the investigation the school district decides to investigate any allegations about the complainant or respondent that were not included in the written notice of a formal complaint provided to the parties, the school district must provide notice of the additional allegations to the known parties.
- C. When a party's participation is invited or expected in an investigative interview, the Investigator will coordinate with the Title IX Coordinator to provide written notice to the party of the date, time, location, participants, and purposes of the investigative interview with sufficient time for the party to prepare.
- D. During the investigation, the Investigator must provide the parties with an equal opportunity to present witnesses for interviews, including fact witnesses and expert witnesses, and other inculpatory and exculpatory evidence.
- E. Prior to the completion of the investigative report, the Investigator, through the Title IX Coordinator, will provide the parties and their advisors (if any) with an equal opportunity to inspect and review any evidence directly related to the allegations. The evidence shall be provided in electronic format or hard copy and shall include all relevant evidence, evidence upon which the school district does not intend to rely in reaching a determination regarding responsibility, and any inculpatory or exculpatory evidence whether obtained from a party or another source. The parties will have ten (10) days to submit a written response, which the Investigator will consider prior to completion of the investigative report.
- F. The Investigator will prepare a written investigative report that fairly summarizes the relevant evidence. The investigative report may include credibility determinations that are not based on a person's status as a complainant, respondent or witness. The school district will send the parties and their advisors (if any) a copy of the report in electronic format or hard copy, for their review and written response at least ten (10) days prior to a determination of responsibility.

X. DETERMINATION REGARDING RESPONSIBILITY

- A. After the school district has sent the investigative report to both parties and before the school district has reached a determination regarding responsibility, the Decision-maker must afford each party the opportunity to submit written, relevant questions that a party wants asked of any party or witness.
- B. The Decision-maker must provide the relevant questions submitted by the parties to the other parties or witnesses to whom the questions are offered, and then provide each party with the answers, and allow for additional, limited follow-up questions from each party.

- C. The Decision-maker must explain to the party proposing the questions any decision to exclude a question as not relevant.
- D. When the exchange of questions and answers has concluded, the Decision-maker must issue a written determination regarding responsibility that applies the preponderance of the evidence standard to the facts and circumstances of the formal complaint. The written determination of responsibility must include the following:
 - 1. Identification of the allegations potentially constituting sexual harassment;
 - 2. A description of the procedural steps taken from the receipt of the formal complaint through the determination, including any notifications to the parties, interviews with parties and witnesses, site visits, and methods used to gather other evidence;
 - 3. Findings of fact supporting the determination;
 - 4. Conclusions regarding the application of the school district's code of conduct to the facts;
 - 5. A statement of, and rationale for, the result as to each allegation, including a determination regarding responsibility, any disciplinary sanctions the school district imposes on the respondent, and whether remedies designed to restore or preserve equal access to the recipient's education program or activity will be provided by the school district to the complainant; and
 - 6. The school district's procedures and permissible bases for the complainant and respondent to appeal and the date by which an appeal must be made.
- E. In determining appropriate disciplinary sanctions, the Decision-maker should consider the surrounding circumstances, the nature of the behavior, past incidents or past or continuing patterns of behavior, the relationships between the parties involved, and the context in which the alleged incident occurred.
- F. The written determination of responsibility must be provided to the parties simultaneously.
- G. The Title IX Coordinator is responsible for the effective implementation of any remedies.
- H. The determination regarding responsibility becomes final either on the date that the school district provides the parties with the written determination of the result of the appeal, if an appeal is filed, or if an appeal is not filed, the date on which an appeal would no longer be considered timely.

XI. APPEALS

- A. The school district shall offer the parties an opportunity to appeal a determination regarding responsibility or the school district's dismissal of a formal complaint or any allegations therein, on the following bases:

1. A procedural irregularity that affected the outcome of the matter (e.g., a material deviation from established procedures);
 2. New evidence that was not reasonably available at the time the determination regarding responsibility or dismissal was made, that could affect the outcome of the matter; and
 3. The Title IX Coordinator, Investigator, or Decision-maker had a conflict of interest or bias for or against complainants or respondents generally or the individual complainant or respondent that affected the outcome of the matter.
- B. If notice of an appeal is timely received by the school district, the school district will notify the parties in writing of the receipt of the appeal, assign or designate the Appellate Decision-maker, and give the parties a reasonable, equal opportunity to submit a written statement in support of, or challenging, the outcome.
- C. After reviewing the parties' written statements, the Appellate Decision-maker must issue a written decision describing the result of the appeal and the rationale for the result.
- D. The written decision describing the result of the appeal must be provided simultaneously to the parties.
- E. The decision of the Appellate Decision-maker is final. No further review beyond the appeal is permitted.

XII. RETALIATION PROHIBITED

- A. Neither the school district nor any other person may intimidate, threaten, coerce, or discriminate against any individual for the purpose of interfering with any right or privilege secured by Title IX, its implementing regulations, or this policy, or because the individual made a report or complaint, testified, assisted, or participated or refused to participate in any manner in an investigation, proceeding, or hearing under this policy. Intimidation, threats, coercion, or discrimination, including charges against an individual for code of conduct violations that do not involve sex discrimination or sexual harassment, but arise out of the same facts or circumstances as a report or complaint of sex discrimination, or a report or formal complaint of sexual harassment, for the purpose of interfering with any right or privilege secured by Title IX, its implementing regulations, or this policy, constitutes retaliation. Retaliation against a person for making a report of sexual harassment, filing a formal complaint, or participating in an investigation, constitutes a violation of this policy that can result in the imposition of disciplinary sanctions/consequences and/or other appropriate remedies.
- B. Any person may submit a report or formal complaint alleging retaliation in the manner described in this policy and it will be addressed in the same manner as other complaints of sexual harassment or sex discrimination.
- C. Charging an individual with violation of school district policies for making a materially false statement in bad faith in the course of a grievance proceeding under this policy shall

not constitute retaliation, provided, however, that a determination regarding responsibility, alone, is not sufficient to conclude that any party made a materially false statement in bad faith.

XIII. TRAINING

- A. The school district shall ensure that Title IX Personnel receive appropriate training. The training shall include instruction on:
 - 1. The Title IX definition of sexual harassment;
 - 2. The scope of the school district's education program or activity;
 - 3. How to conduct an investigation and grievance process, appeals, and informal resolution processes, as applicable;
 - 4. How to serve impartially, including by avoiding prejudgment of the facts at issue, conflicts of interest, and bias;
 - 5. For Decision-makers, training on issues of relevance of questions and evidence, including when questions and evidence about the complainant's prior sexual behavior are not relevant; and
 - 6. For Investigators, training on issues of relevance, including the creation of an investigative report that fairly summarizes relevant evidence.
- B. The training materials will not rely on sex stereotypes and must promote impartial investigations and adjudications of formal complaints.
- C. Materials used to train Title IX Personnel must be posted on the school district's website. If the school district does not have a website, it must make the training materials available for public inspection upon request.

XIV. DISSEMINATION OF POLICY

- A. This policy shall be made available to all students, parents/guardians of students, school district employee, and employee unions.
- B. The school district shall conspicuously post the name of the Title IX Coordinator, including office address, telephone number, and work e-mail address on its website and in each handbook that it makes available to parents, employees, students, unions, or applicants.
- C. The school district must provide applicants for admission and employment, students, parents or legal guardians of secondary school students, employees, and all unions holding collective bargaining agreements with the school district, with the following:
 - 1. The name or title, office address, electronic mail address, and telephone number of the Title IX Coordinator;

2. Notice that the school district does not discriminate on the basis of sex in the education program or activity that it operates, and that it is required by Title IX not to discriminate in such a manner;
3. A statement that the requirement not to discriminate in the education program or activity extends to admission and employment, and that inquiries about the application of Title IX may be referred to the Title IX Coordinator, to the Assistant Secretary for Civil Rights of the United States Department of Education, or both; and
4. Notice of the school district's grievance procedures and grievance process contained in this policy, including how to report or file a complaint of sex discrimination, how to report or file a formal complaint of sexual harassment, and how the school district will respond.

XV. RECORDKEEPING

- A. The school district must create, and maintain for a period of seven calendar years, records of any actions, including any supportive measures, taken in response to a report or formal complaint of sexual harassment. In each instance, the school district must document:
 1. The basis for the school district's conclusion that its response to the report or formal complaint was not deliberately indifferent;
 2. The measures the school district has taken that are designed to restore or preserve equal access to the school district's education program or activity; and
 3. If the school district does not provide a complainant with supportive measures, then it must document the reasons why such a response was not clearly unreasonable in light of the known circumstances. Such a record must be maintained for a period of seven years.
 4. The documentation of certain bases or measures does not limit the recipient in the future from providing additional explanations or detailing additional measures taken.
- B. The school district must also maintain for a period of seven calendar years records of:
 1. Each sexual harassment investigation including any determination regarding responsibility, any disciplinary sanctions imposed on the respondent, and any remedies provided to the complainant designed to restore or preserve equal access to the recipient's education program or activity;
 2. Any appeal and the result therefrom;
 3. Any informal resolution and the result therefrom; and
 4. All materials used to train Title IX Personnel.

Legal References: Minn. Stat. § 121A.04 (Athletic Programs; Sex Discrimination)
Minn. Stat. § 121A.40 – 121A.575 (Minnesota Pupil Fair Dismissal Act)
Minn. Stat. Ch. 363A (Minnesota Human Rights Act)
20 U.S.C. §§ 1681-1688 (Title IX of the Education Amendments of 1972)
34 C.F.R. Part 106 (Implementing Regulations of Title IX)
20 U.S.C § 1400, *et seq.* (Individuals with Disabilities Education Improvement Act of 2004)
29 U.S.C. § 794 (Section 504 of the Rehabilitation Act of 1973)
42 U.S.C. § 12101, *et seq.* (Americans with Disabilities Act of 1990, as amended)
20 U.S.C. § 1232g (Family Educational Rights and Privacy Act of 1974)
20 U.S.C. § 1092 *et seq.* (Jeanne Clery Disclosure of Campus Security and Campus Crime Statistics Act (“Clery Act”))

Cross References: MSBA/MASA Model Policy 102 (Equal Educational Opportunity)
MSBA/MASA Model Policy 413 (Harassment and Violence)
MSBA/MASA Model Policy 506 (Student Discipline)
MSBA/MASA Model Policy 528 (Student Parental, Family, and Marital Status Nondiscrimination)

Letter of Intent to Participate

02/11/2021

School Board Chair
Independent School District # 94
302 14th Street
Cloquet, MN 55720

RE: Notice of Intent to Participate in PEIP

Dear Chair Mr. Lammi:

Please be advised that Education Minnesota Cloquet exclusive representative of the teachers of ISD # 94, intends to preserve its rights to participate in the Public Employees Insurance Program (PEIP), pursuant to Minnesota Statutes §43A.316 during the 2021-2023 contract period.

Although we have not yet reached a final determination on participation in PEIP, this letter serves as the required "notice of intent to participate." At such time as we reach such a conclusion as to our "determination to participate in the program," our union will inform you of that decision at least 30 days before entry into the program, as required.

Sincerely,



Jason Godnai, President

C: Shawn Byrne, PEIP
Dr. Cary, Superintendent
Evan Sandstede, Education Minnesota Field Staff
Mark Schmiesing, Education Minnesota Negotiations Specialist