



Sparwood Secondary School (SSS)

Growth Plan

6 YEAR PLAN: 2021/2022 to 2026/2027

September, 2024 for the 2024/2025 Edition

CONTEXT: COMMUNITY OF SPARWOOD & SCHOOL	SCHOOL GOALS	STAKEHOLDERS
<p>Community of Sparwood</p> <p>The community of Sparwood has a population of 4200 and is situated in the Southeastern region of British Columbia. Sparwood’s economy is based on a vibrant open pit coal mining network of four mines that deliver coal to domestic and foreign markets including Asia, Europe, and South America.</p> <p>Sparwood Secondary School</p> <p>Sparwood Secondary School has a student population of approximately 320 students and a staff of 44. SSS is known as an inclusive and diverse school with a variety of opportunities to meet the needs of our students. Students have the opportunity to participate in a wide range of athletic activities. SSS offers academic programs as well as practical and fine arts electives. SSS supports students with a various needs through Indigenous Supports (for cultural and academic needs), Youth Care, Alternate Education opportunities, and Student Services programs.</p>	<p>Goal 1 – Numeracy:</p> <p>Improve student numeracy through a “Thinking Classrooms”* approach beginning with the implementation of a grade 8 numeracy support block. Teachers in all subject areas will also incorporate numeracy into their discipline.</p> <p><i>* from: Building Thinking Classrooms in Mathematics – Peter Liljedahl</i></p> <p>Goal 2 – Human and Social Development:</p> <p>Students develop stronger feelings of safety, being welcomed and have a sense of belonging in our school community.</p>	<p>The following stakeholders were engaged in the ongoing development of this Growth Plan:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> School Staff <input checked="" type="checkbox"/> Indigenous Education Support Worker <input checked="" type="checkbox"/> Students (Student Council) <input checked="" type="checkbox"/> Parents (PAC) <input type="checkbox"/> Trustee <input type="checkbox"/> School District management
<p style="text-align: center;">OUR SPARWOOD SECONDARY SCHOOL COMMUNITY:</p>		
<ul style="list-style-type: none"> ▪ Understands the success of the educational process depends on a deep belief in, and a commitment to ensuring that all students can learn. ▪ Recognizes the value in project-based learning. ▪ Understands that the concept of numeracy is cross curricular. ▪ Values student connectedness and engagement ▪ Recognizes the need for personalized learning and is exploring how digital media and technology can help to differentiate instruction and meet the needs of all student learners. ▪ Recognizes that importance of a focus on socialization of students as well as intellectual development. ▪ Values social-emotional learning as part of a fundamental skill set students need to lead a happy and healthy life. ▪ Continually strives to develop teacher collegiality, reflective practice and collaborative planning. ▪ Consistently works towards building positive relationships with students to support student success. 		

Our school growth Plan is a six-year living document. We adjust and adapt to the needs of our students as needed, but maintain the targets we have set for this plan.

GOAL 1: Improve student numeracy through a “Thinking Classrooms” approach beginning with the implementation of a grade 8 numeracy support block. Teachers in all subject areas will also incorporate numeracy into their discipline.

Our Five-Part Strategy for Numeracy Growth

1. Our staff engages in continuous professional development on cutting edge teaching and assessment techniques related to numeracy and how to embed Indigenous pedagogy into daily classroom practice.
2. We work weekly with Grade 8 students in small groups to develop authentic problem-solving skills in a Thinking Classroom. We build on this foundation in math classes through Grade 12.
3. We infuse numeracy across the curriculum and build a school culture which values and supports numerate thinking and Indigenous pedagogy.
4. We patiently collect and carefully analyze quantitative and qualitative data related to student performance in numeracy.
5. We respond swiftly and definitively to signals in our data to build a timetable which supports mathematics learning as effectively and responsibly as possible.

By centering culturally responsive instructional and assessment practices will create more equitable achievement outcomes for all students.

STUDENT- CENTERED ASSESSMENT AND INSTRUCTION PRACTICES THROUGH THE LENS OF THE FOUR R’s (Kirkness & Barnhardt, 1991)			
Respect honoring Indigenous pedagogies	Relevance ways to consume and communicate knowledge	Responsibility access to power, authority, and opportunity	Reciprocity producer and consumer of knowledge
De-front the classroom and present tasks orally and through story	Understand, invite, and elevate diverse mathematical strategies through thinking tasks and consolidation	Implement standards-based assessment practices (clear proficiency scales) Implement formative assessment strategies to provide timely and specific feedback	Focus on process over product Mobilize knowledge through VNPS and peer feedback

Our Numeracy Data Set

The **primary data set** used in growth plan research measures the grade seven class who joined SSS in 2021 and who will graduate in 2027.

Measures in the data set include (or will include):

- Fall 2021 FSA results
- Provincial Numeracy Assessment results in the 2024/2025 school year.
- WF:AS Numerical Operations results from a first test in January 2022 and a second in January 2023
- Ten assessments of Numeracy competencies made in the fall of 2022, and a further number made in the 2024/2025 school year.
- Mathematical Mindset surveys taken in fall 2022 and in fall 2024.
- A survey of class participation in numeracy-based electives in the 25/26 and 26/27 school years.

Parallel data sets are being collected as often as possible for other classes as described in Table 1 below. We will break down the into specific populations of Indigenous students, diverse learners and children in care.

Table 1 – Our Numeracy Data Set

CLASS OF...	FSA	GRADE 7 WF:AS	NUMERACY CLASS DATA	GRADE 8 MINDSET	GRADE 8 WF:AS	FOMPC 10 NUMERACY	GRADE 10 MINDSET	NUM 10 RESULT	SENIOR ENROL
2021	2015 F							2018/2019	2019-2021
2022	2016 F							2019/2020	2020-2022
2023	2017 F							2020/2021	2021-2023
2024	2018 F							2021/2022	2022-2024
2025	2019 F							2022/2023	2023-2025
2026	2020 F					2023 F	2023 F	2023/2024	2024-2026
2027	2021 F	2022 W	2022 F	2022 F	2023 W	2024 F	2024 F	2024/2025	2025-2027
2028	2022 F	2023 W	2023 F	2023 F	2024 W	2025 F	2025 F	2025/2026	
2029	2023 F	2024 W	2024 F	2024 F	2025 W	2026 F	2026 F	2026/2027	
2030	2024 F	2025 W	2025 F	2025 F	2026 W	2027 F	2027 F	2027/2028	
2031	2025 F	2026 W	2026 F	2026 F	2027 W			2028/2029	
2032	2026 F	2027 W						2029/2030	

“2015 F” is the fall semester of 2015. The first half of the 2015/2016 school year

“2016 W” is the winter semester of 2016. The second half of the 2015/2016 school year.

The class of 2027 (**in bold**) provides the primary data set.

Dates after 2023 F (*in italics*) are tentative.

Our Numeracy Research Questions

Research Questions provide structure for our Growth Plan, directing attention to specific parts of our data set as we focus on improving a new aspect of our numeracy curriculum each year.

There are three questions which we began investigating in the first year of our plan and which we'll continue to explore through 2027. There are also five year-specific questions.


R1. Research Question 1 (2021-2026)	Did implementing a Numeracy Support program improve student achievement as assessed by the numeracy team in accordance with the new provincial language?
R2. Research Question 2 (2021-2026)	Did our six-year plan create and maintain a culture of positive mathematical mindsets at SSS, as indicated by student participation in senior math electives?
R3. Research Question 3 (2021-2026)	Were our interventions equitable and did they create improvements for Indigenous students that are on par with those for non-Indigenous students?
R4. Research Question 4 (2022/2023)	Did specific timetable-based interventions in grade 8 improve core math skills relative to the population benchmark?
R5. Research Question 5 (2023/2024)	Did regular 'Thinking Classroom' activities improve student competence and confidence ahead of the Provincial Numeracy Assessment?
R6. Research Question 6 (2024/2025)	Did increasing the number of collaborative projects involving teachers of math, science and design courses lead to more authentic engineering tasks and improve achievement in Numeracy as measured in Physics and Chemistry classes?
R7. Research Question 7 (2025/2026)	To Be Determined
R8. Research Question 8 (2026/2027)	To Be Determined

Focus for 2024/2025: Research Question 6

Did increasing the number of collaborative projects involving teachers of math, science and design courses lead to more authentic engineering tasks and improve achievement in Numeracy as measured in Physics and Chemistry classes?

Due to growing enrollment and a swell in interest, SSS saw an enormous number of grade 11 students enroll in Chemistry, Physics, and Design courses in 2024. We had to rearrange our timetable to respond. Staff saw this as an opportunity to engage in novel collaboration and grow these programs.

Qualitative **Pre data** was collected in a survey of the graduating class of 2021. They were asked to comment on their experiences with STEM education at SSS.



Post data will include:

- A similar survey of the class of 2026, to be conducted in June 2025
- Numeracy Assessment data for grade 11 students enrolled in Chemistry 11 and Physics 11, collected in January 2025 and June 2025 (to be contrasted with GNA results obtained in the 2023/2024 year)
- A living record of meetings between teachers of STEM subjects at SSS

Target for 2024/2025 = (a) All grade 11 students at SSS report a positive, memorable STEM experience in the 2024/2025 school year and (b) statistically significant improvement in Numeracy assessment for students enrolled in Chemistry 11 and Physics 11.

Almost all students reported taking fewer STEM classes as time went on.
In grade 8 every senior enjoyed a blend of science, math, computers, and shop classes.
Not one student in the class of '25 took both Automotive 11 and Physics 11.

The most common theme in the survey was the need for more technology infusion across the curriculum.

Many students noted that the "no phone" rule felt like a step backwards for STEM projects.

Students had fond memories of "classic" lab activities including dissections and Van De Graaff experiments. They felt engaged when classroom activities met their cultural expectations for science experiments.

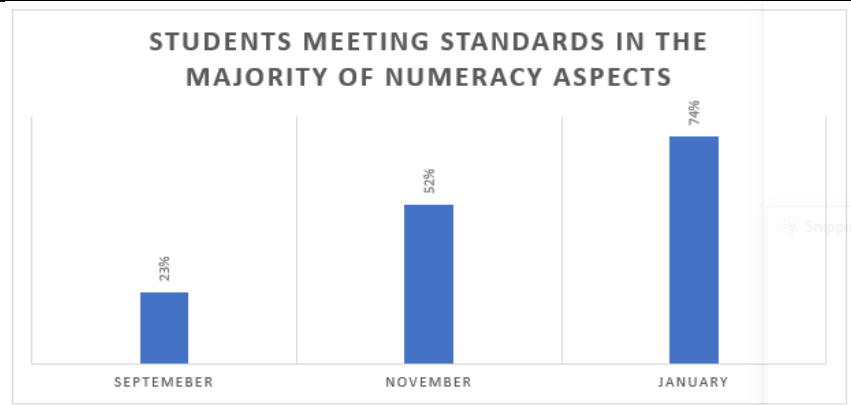
On average students in the class of 2025 reported completing **fewer than 2** memorable STEM projects during their grade 11 year.

44% of students said they'd been involved with zero such projects.

Ongoing Analysis of Research Questions 1-5:

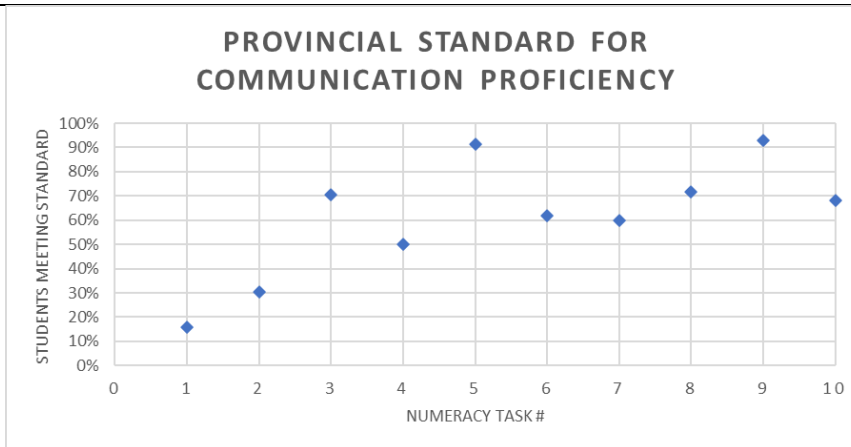
Research Question 1: Did implementing a Numeracy Support program improve student achievement as assessed by the numeracy team in accordance with the new provincial language?

In the 2022/2023 school year we observed consistent month-over-month improvement in Numeracy scores after working with Grade 8 students in a thinking classroom setting. This goal was achieved in the 2023-2024 school year.



Specific improvements were noted in student ability to communicate numerate thinking, in line with the trial performance standards.

During the following year, we measured a significant improvement in students' ability to analyze solutions offered by their peers; 80% of student were measured as proficient by January, 2024. This result exceeded our target of 60%.



In 2024/2025 we will again use September assessment of Numeracy Skills based on the provincial performance standards as **pre-data** and November and January assessments as **post-data** in our continuing exploration of this research question. We will increase our efforts to engage parents in discussions about Numeracy.

2023/2024 Target = Show statistically significant population improvement in all grade 8 students.

Research Question 2

In the 2022/2023 school year we expanded our offerings of senior math electives with a new session of Foundations of Math 12 which put an emphasis on Business Administration. Following our addition of Statistics 12 to the timetable in 2021/2022 this continued to boost participation in math electives by senior students.

CLASS OF...	SENIOR MATH ELECTIVE ENROLMENT
-------------	--------------------------------

2021	3%
2022	37%
2023	46%
2024	58%
2025	...

In 2023/2024 we have again expanded our timetable with a senior Entrepreneurship and Marketing course. We will continue our latitudinal analysis of student interest in math by using previous years' elective-participation rates as **pre-data** and this year's rates as **post-data**. We will hold to our ongoing target.

Ongoing Target = 40% of grade 12s enrolled in a math 12 elective.

Some students from a previous grade 11/12 Entrepreneurship and Marketing class were motivated to complete numeracy-based Capstones through their participation in this class.



Research Question 3

Were our interventions equitable and did they create improvements for Indigenous students that are on par with those for non-Indigenous students?

Because our sample sizes are small we rely on district-wide efforts to track measures of equity in our school. The SD5 Indigenous Enhancement Agreement (June 2023 edition) sets the goal of improving numeracy for indigenous learners and details the performance indicators which are tracked at the district level in service to that goal. Our numeracy programs at SSS are just one small piece of this broad effort.

Beginning in the 2023/2024 school year we've committed to holding conversations with our indigenous learners specifically addressing our numeracy strategies and their experiences in math and numeracy classes at SSS. This will form a qualitative data set which will grow over the next four years.

Target = Our indigenous students report a positive experience with our numeracy interventions, meanwhile Indigenous numeracy data stays on par with non-Indigenous students at the district level.



Research Question 4

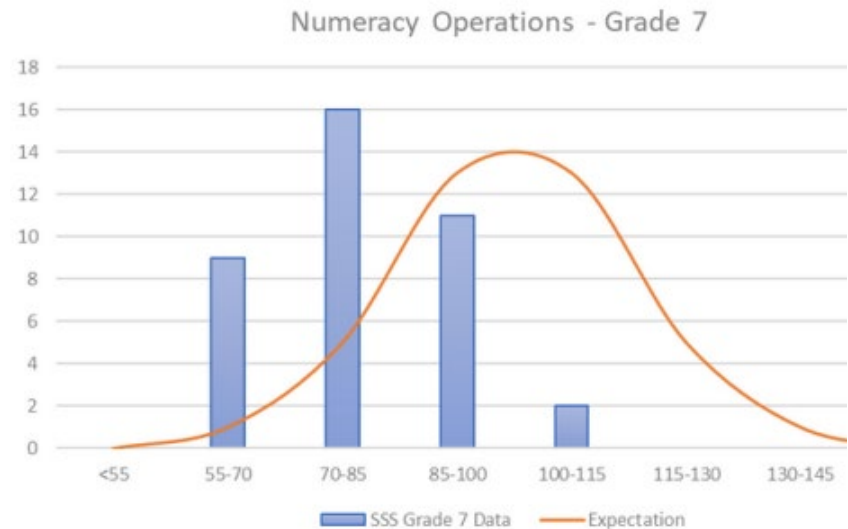
Did specific timetable-based interventions in grade 8 improve core math skills relative to the population benchmark?

In the 2022/2023 year we took major steps in timetable building to address gaps in fundamental math knowledge in our grade 8 cohort. The WF:AS screener was used to generate pre- and post-data for our analysis of this effort.

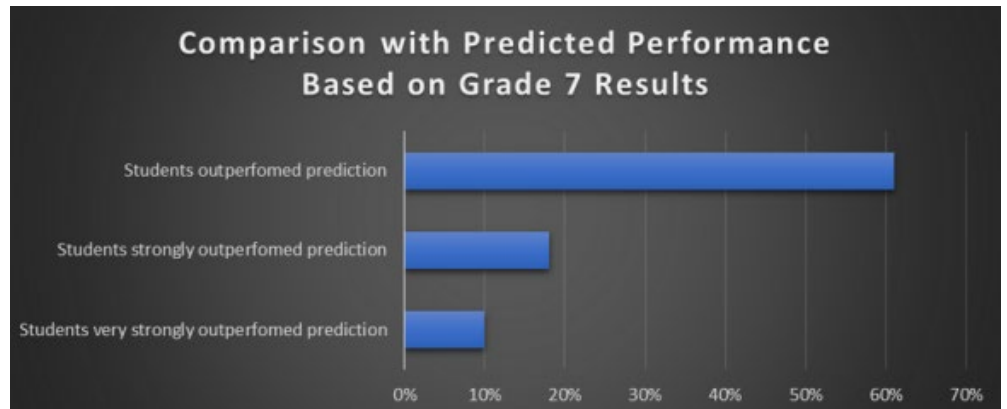
Full results are described in the [2023 SSS Engagement Night](#) document which can be found on our school webpage.

Data collected in grade 7 indicated that similar interventions were not required for the 2023/2024 grade 8 class. That noted, we continue to monitor growth in mathematical fundamentals via the WF:AS.

*Target = Statistically significant improvement in core math skills.
(This target was **met** in 2023 and several important secondary results were demonstrated.)*



Pre-Data – Grade 7 WF:AS Results



Post-Data – Growth Scale Improvement on Grade 8 WF:AS Retest

Research Question 5

Did regular 'Thinking Classroom' activities improve student competence and confidence ahead of the Provincial Numeracy Assessment?

In a trial Assessment written in September most Grade 10 students were measured to be at the "developing" level, with only 17% of students measured as "proficient".

Specifically, our students showed weaknesses in

- a. the ability to remember and **apply** concepts learned in past years
- b. the ability to present a solution effectively using a combination of diagrams, symbols, and phrases – to **communicate** to an audience.

Focusing on these area throughout the year with targeted Numeracy tasks engendered significant improvement and by January the official GNA measure 31% of students at SSS to be at the proficient or extending level.

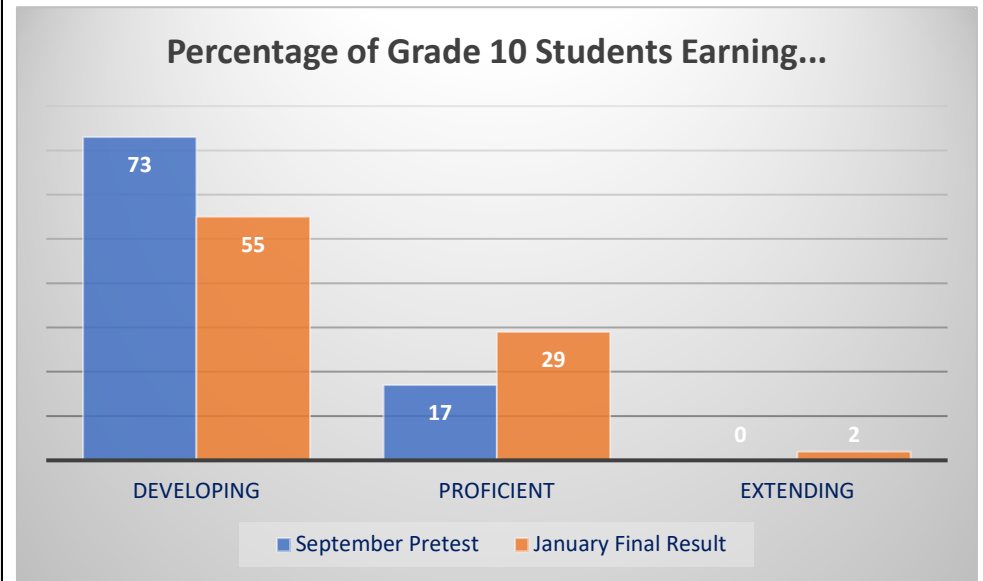


Fig. 1 – Assessed Competence

GOAL 2: Human and Social Development: Students develop stronger feelings of safety, being welcomed and have a sense of belonging in our school community.

Human and Social Development – Strategy:

- ✓ To use the Crisis Prevention Institute Reframing Behaviour resource to support our learning.
 - Staff explore their perceptions of student behaviour and learn to recognize stress responses in students
 - As a staff, we will learn and implement the following strategies:
 - Notice, name, navigate and assume stress behaviour first strategies
- ✓ Communicate our successes regularly with external stakeholders
 - SSS Updates to Parents weekly highlighting our successes and connections to our Growth Plan
- ✓ Communicating to students our Spartan Pride
 - Slide shows at assemblies
 - Pep Rallies
 - School screens for announcements will be used to celebrate and recognize our students
 - Targeted, intentional small group activities to support student connection and sense of belonging.
 - Accessing SSS “Street Data” to capture and understand our students’ voice.
- ✓ Promote shared understandings and common language around Core Competencies

Our Human & Social Development Data sources:

Measures in the data set include (or will include):

- Student Learning Survey results
 - measured midyear each school year
 - students in grades 7, 10 and 12 are included in this survey
- Middle Years Development Instrument (MDI)
 - measured each spring for each school year
 - students in grades 5 and 8 are included in this survey
- SSS Street Data to collect feedback from our parent community about their children's feelings about feeling welcomed and safe with a sense of belonging at Sparwood Secondary – focus on school bathroom and creating safe places in the school.
 - Deep listening events with various groups, including Indigenous, LGBTQS and vulnerable groups
 - Grades 7-12 groups and conduct tracking in MyEd
- Parent/Stakeholder survey
 - To develop an understanding of stakeholder perceptions of our school
 - Spring Survey will be sent to all SSS parents and guardians

Research Question #1

Did targeted school activities promoting positive relationships with peers and with school staff result in a more welcoming feeling for students at SSS?

Target: 5% growth year over year based on student responses from the annual Student Learning Survey.

‘Do you feel welcome at your school?’

‘Is school a place where you feel like you belong?’

HUMAN & SOCIAL DEVELOPMENT

Pre & Post Data: Ensuring a Continuous Cycle of Improvement

Student Learning Survey – Grade 7							
Question	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Do you feel welcome at school?	46%	44%	67%				
% change		-2%	+23%				
Is school a place where you feel like you belong?	24%	39%	46%				
% change		+15%	+7%				

	Not meeting 5% target
	Meeting 5% target

Reflections

- We have had noticeable growth among our Grade 7 cohorts about their feelings of being welcomed at Sparwood Secondary and their sense of belonging at Sparwood Secondary School.
- We are looking forward to seeing the results from the Grade 10 cohort in the 2024/2025 school year. We will be able to observe if there has been any change in their feelings of being welcomed and having a sense of belonging at Sparwood Secondary since this cohort was in Grade 7 in the 2021/2022 school year.

Consideration for Truth & Reconciliation Calls to Action in the SSS School Growth Plan

Within our growth plan, we will continue to strive to implement the Truth and Reconciliation Calls to Action. We will also continue to deepen the understanding of the First Peoples' history and perspective through a vibrant and current offering of numeracy learning opportunities from the First Peoples' perspective. Data will be collected and used to inform next steps based on the study of results from the Indigenous sub-category of SSS student results. We work closely with the SSS Indigenous Education Support Worker to generate leadership opportunities and opportunities to strengthen healthy relationships. We are also collaborating to bring the 'Little Warriors' program to SSS to promote inclusivity and the implementation of Indigenous perspectives in our classrooms and around our school.

Ongoing Strategic Engagement

This School Growth Plan will remain a monthly agenda item for staff meetings. Indigenous student data will be reviewed continuously with the Indigenous Education Support Worker. The Human & Social Development of students will also be a focus of school and Parent Advisory Committee collaboration. Student Council will be actively engaged in peer mentoring and collaboration with reflection on the success of the planned activities. Grade 7 FSA data will be used to guide Grade 8 numeracy support. Data will be updated throughout the school year and the School Growth Plan will be treated as a living document. SSS Updates – regular parent communication about the upcoming activities at SSS

Professional Development

Sparta Notes – weekly staff newsletter with school pedagogy and school culture communication
Professional Development opportunities for supporting Numeracy.
Staff collaboration for how to support students so they feel welcome, connected, and have a sense of belonging to the Sparwood Secondary School Community.