

Blended Learning Proposal for School District #68

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Inquiry Question: How do we create the ideal blended learning program?

Proposal: To create a pilot program in the Nanaimo-Ladysmith Public Schools (NLPS) at three elementary schools, two classes per school at the intermediate level to implement station rotation models. This blended learning delivery model is a cohesive way to address the School District's response to intervention initiative and build on special presenter, Chris Weber's RTI work with the district. Between 2012 - 2015 Chris Weber made several presentations to administrators and lead teachers from NLPS about RTI and its benefits. Part of Chris Weber's RTI plan is to provide three to five buffer days after each unit to provide catch up time for those students who did not reach a level of mastery (Hierck, T., Coleman, C., & Weber, C. 2011). We would suggest that a blended learning approach would enable learners to more quickly gain mastery levels of achievement and simultaneously remove the need for these buffer days.

What is a Station Rotation model of Blended Learning? Horn and Staker (2015) define blended learning as

“a formal education program in which a student learns: at least in part through online learning, with some element of student control over time, place, path, and/or pace; at least in part in a supervised brick-and-mortar location away from home; and the modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience.”

The station rotation model of delivery allows the teacher to set the schedule and choose the types of learning activities at each station. Note, “at least one station must be online learning” (Horn and Staker, 2015).

1) What problems are you trying to solve with this program?

Our purpose for implementing the station rotation model is to increase small group/individual instructional time and thereby improve student learning. The main problem is the huge range of student diversity and learning needs. In our opinion, some students really need small group or individual instruction to achieve some level of mastery over the learning outcomes. This program will cater to mainstream students in order to make the learning more efficient and reach more learners at a personalized level. In relation to the RTI model, students in both tiers one and two will gain learning benefits of the station rotation model in terms of targeted intervention and enrichment (Hierck, T. et al., 2011). With the appropriate scheduling, tier 3 students could be able to have two rotations with either an

instructor, educational assistant and/or school support teacher. This extra support time could be extremely valuable for these children reaching their individual educational plan goals.

Our targeted group for this pilot project includes intermediate students from grades 4 to 7 and is centered around both Mathematics and “Daily Five” style Language Arts. The following video clip of “ERES Academy uses a Station Rotation to facilitate differentiated instruction” (Horn & Staker, 2015).

<http://ca.wiley.com/WileyCDA/Section/id-822690.html>

2) How will you organize your team?

Putting together the right team is paramount for the success of this blended learning pilot project. According to Horn & Staker, blended learning teams can be functional, lightweight, heavyweight and/or autonomous. Our model is a “hybrid which improves the traditional classroom without disrupting it.” (2015). Therefore, our team will not be autonomous. Typically, Station Rotation models require “lightweight” teams to function. As the pilot projects progress, other teachers may replicate the Station Rotation models. These teachers should have little to no impact on others at their schools and will be working as “functional” teams (2015).

Figure 4.2 Relationship between Type of Project and Team at Schools

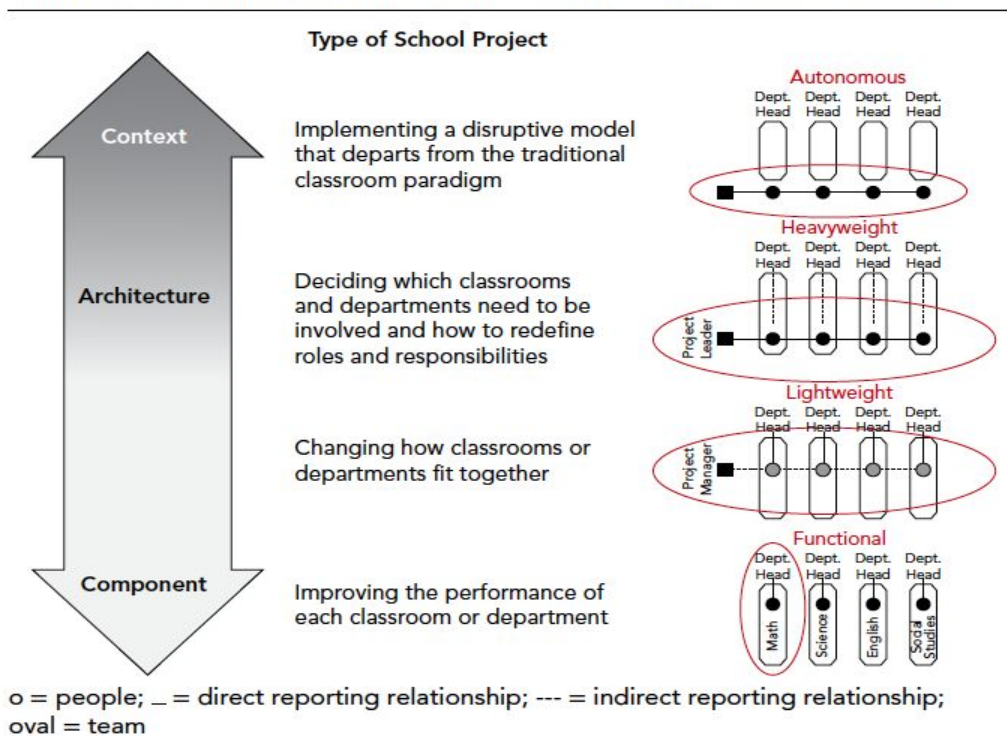


Image Source: Horn & Staker, 2015, p 121.

Our lightweight teams will consist of project managers, classroom teachers, inquiry and innovation teachers, administrators, district I.T. personnel, student support teachers, and educational assistants. Initially, there will be some planning and organization between the project manager and classroom teachers to discuss various aspects of implementation such as classroom layout, scheduling of rotations and the roles of other staff. School support teachers and inquiry and innovation teachers may have various levels of involvement depending on what's going on at the school and their availability. Educational assistants may be able to play strong roles if they are normally scheduled to work within the blended classroom. Likewise, most elementary administrators have teaching time and may choose to invest this time during a blended Station Rotation. Administrators will have to help find scheduled time for about 10 Google Chromebooks, from each school's inventory of 60 for each of the blended classrooms. Overall, the main person involved in the implementation of this project will be the classroom teacher.

3) What experience would you like to provide to students?

One hindrance to effective learning is the effect of one's peers. If a student sees themselves as inferior to his or her peer in a particular area, they are less likely to participate for fear of looking bad. This is especially true for literacy and numeracy where students are asked to show and apply what they know on a regular basis whether directly or indirectly. This can lead to a phobia of these areas and the student falling further and further behind his or her peers. (Ganguly, 2013) It is very difficult to effectively help a student catch up to their peers when they are far behind and unwilling to participate because of their fear of being ridiculed.

We would like students to be able approach Math and Language Arts in a safe and low stress environment in which they can use various resources including online, peer, and teacher(s) to achieve full understanding of each concept. As each student will be working on individualized programs according to their level, it is possible that every student will be at different places along the learning continuum. As the online portions are individual work, the student can work at their own pace to learn what they need to know. If the student has access to the Internet outside of school, they could work to increase their abilities away from the prying eyes of their peers.

From the data and progress in the online portions of the program, the teacher is able to group students into similar ability levels so that there isn't as much of a burden on lower level students to perform up to higher level students' abilities.

By offering the students some independence and control over their learning and having part of it take place in an engaging gamified platform through Mathletics and RAZ Kids, students can regain some of the lost motivation and confidence from the whole class instruction model. Project-based activities that relate the concepts to practical applications will engage the students in inquiry and creativity.

What do you want students to control?

In our program students would have control of their *pace* while working through the blended portion of the program. For instance, in the math and reading portions of the program students would work at their own *pace* until they could demonstrate a designated level of competency. There would, however, be overarching deadlines that may be individual or group-based. For example, each student may have to read a certain number of books on RAZ Kids according to their level by the end of the month, but they could complete that as quickly or slowly as they needed as long as it was done by the end of the month. Students would have some choice as to where within the classroom they worked. For instance, a student may want to work on the couch one day then at their own desk the next. However, during small group instruction, students would work with peers who are at similar levels or working on the same content in designated areas.. Students would follow station rotation *times* at school. If possible, some students may be able to work at home or elsewhere outside school hours and thereby have some control over *time*. Students would have opportunities to show their learning in multiple ways. So, they would have some choice over their learning *path*.

How much control do you want to give students over the time, place, path , and pace of their learning?

As mentioned, students will be given overarching deadline goals to meet. Every effort will be given to let the student take as much time as necessary to achieve full understanding of the concepts in sequential order to avoid gaps in learning. Students who have a hard time keeping on task or understanding will be given the necessary assistance to help guide them to their goals. Such assistance may include friendly reminders of what the task at hand is, working with the student to outline a learning timeline they can manage, one-on-one guidance, or outside of class support.

The table below shows what might be a weekly and monthly reading timeline for students of three different reading levels. As students progress in their reading, they might go between or up to the next set of goals. Students would read their required allotment through a combination of RAZ Kids and physical books. Students would be expected to complete a minimum number of assessment activities on RAZ Kids per month to help track their reading and comprehension progress and adjust levels accordingly.

Sample pacing and goals for Reading

Student	Pacing	Goal
Student 1 (Beginner)	2 short (10~20 page) books/week	8 books by end of month (4 RAZ Kids Assessments)
Student 2 (Intermediate)	1 medium length (40~100 page) book/week	4 books by end of month (2 RAZ Kids Assessments)
Student 3 (Advanced)	1 book (100+ pages)/ week	4 books by end of month (2 RAZ Kids Assessments)

The same concepts as above would be incorporated into the Mathletics program timelines. For project-based learning, students would need to showcase or present their learning at predetermined intervals. This may include the presentation of a project, explaining a concept to the class, or a combination of techniques that rolls multiple concepts and smaller presentations into a single, larger presentation.

4) What do you want the primary role of the teacher to be?

Initially the role of the teacher is to create and implement relevant lessons for the students. Through various types of assessment and data tracking through the computer software, the teacher will place students into appropriate learning groups. The primary role of the teacher in a station rotation model is face-to-face direct instruction. The teacher will continue to monitor the entire class and provide any student assistance. However, the main goal of the teacher is to maximize student support during small group instruction. The teacher will also provide enrichment opportunities when applicable.

What opportunities would you like teachers to have in their jobs?

- This program will offer the teacher a chance to do more personalized instruction. This will be done in the following ways:
 - Small group face-to-face instruction - groups of 8-10 students will work with the teacher on a rotation basis to learn the target concept. By using smaller groups, the teacher can focus more on individual understanding during this time.
 - By using software for the online portion of the program, the teacher will be able to monitor the data regarding each student's progress. With this data, he/she can adjust the small group instruction to match similar skilled students for more effective instruction.
 - Group assignments may change frequently depending on individual progress through the content.

- With two classes in each school taking part in this pilot, it would be possible to collaborate to further differentiate learning if necessary. This would not be a permanent move from one class to another for a student, but perhaps for group activity or face-to-face time.

5) What hardware, software and physical space will you choose?

There will be minimal changes to the classroom environments as they will be adapted to fit the Station Rotation model. Teachers will have their own discretion of what furniture to keep or possibly add. Because NLPS is a large school district, it has a storage of furniture which can be accessed by the administrators calling cartage.

Depending upon what is available teachers may simply group student desks into pods that serve as stations. They may use couches, rugs, tables or individual desks as stations. Or, teachers may have access to horseshoe tables which serve nicely for small group instruction. Some classrooms even have separate smaller rooms within them that can serve as stations. A lot of the physical organization will depend upon the size of the classroom and the classroom teacher's personal choice.

In terms of available devices each elementary school in NLPS will soon have 60 Google Chromebooks to share within their individual schools. Some classrooms/schools have found funding for much more technology such as sets of iPads, classroom desktop computers, iPad minis etc.

Each school pilot class would require regular sign out times for approximately 8 to 10 Google Chromebooks to use during the Station Rotation times throughout the week. Depending on the school, the amount of technology already in the classroom will greatly vary. For instance, Mike Eyres' class (SD #68) is already fully equipped with the needed technology due to school spending and successful grant applications. If necessary, I would foresee some available technology being made available from the school district's E-TAG team.

As far as software goes, we plan on using [Mathletics](#) and [Reading A to Z](#). Both of these programs allow students to take part in some form of challenge of game style component which most students find motivating.

Mathletics allows the teacher to assign tasks and differentiate student learning. It marks all assignments providing instant feedback and great assessment data for the teacher. It even allows us to follow the BC curriculum.

Reading A to Z, commonly known as Raz Kids, is a great reading program that allows students to read a huge variety of books from the K to 5 grade levels. After reading each book the student is given a short comprehension exercise. Teachers are able to view the student's progress in terms of the amount of books read, their comprehensive achievement and the level of books read.

6) What model of blended learning will you adapt?

The following figure below from Horn & Staker (2015, p. 38) shows the different types of blended learning widely used today. Our program plans on using the station rotation from the selection of rotation models.

Figure 1.1 Blended Learning Models

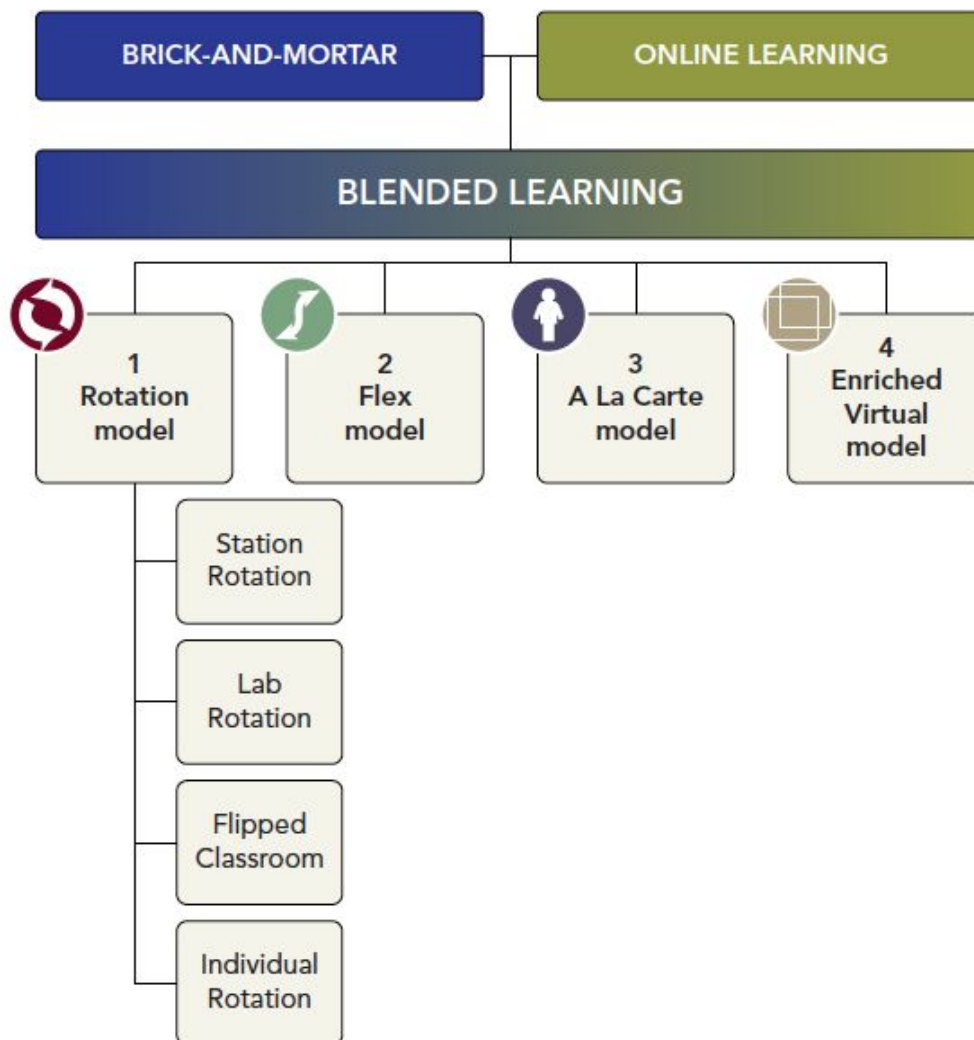


Image Source: Horn & Staker, 2015, p 38.

Station rotation involves organizing the classroom into centres, or stations. One of the stations uses Internet-connected technology such as laptops or tablets for the purpose of individualized instruction. Another station is for small group face-to-face instruction which is led by a teacher. Other stations are for small group projects or individual work. The difference between station rotation and other rotation models is that station rotation all happens within the existing classroom.

Figure A1.1 Station Rotation

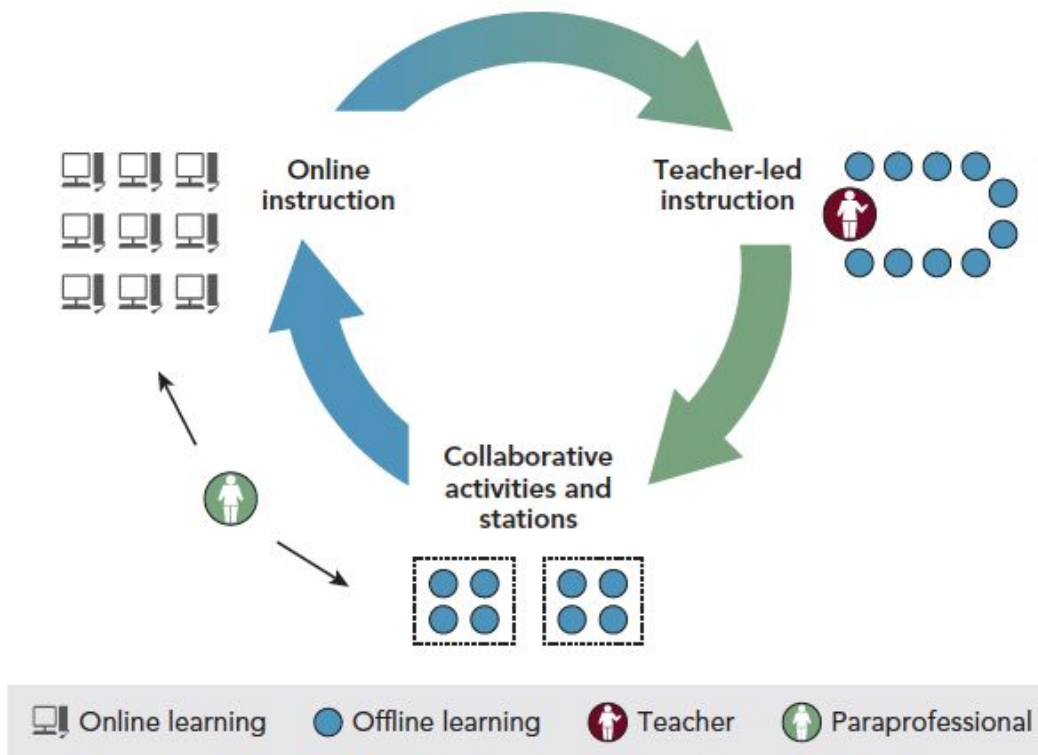


Image Source: Horn & Staker, 2015, p 56.

In a station rotation, students rotate from station to station based on a specific time period of 25~40 minutes per station. Over the hour to hour and a half, students will experience at least three modes of learning with the same content. The figure above shows how a rotation might happen. Note: the use of a paraprofessional is optional but recommended.

Calendar - Weekly schedule - what will a typical week look like?

Below is a sample schedule including Math and Daily Five in a rotation model. Daily Five is a Language Arts rotation with reading and writing. With full implementation, Science and Social Studies, and Writing would be put into a rotation as well.

Day / Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:30~9:05	Morning routine (Agendas, check-in, community building)	Morning routine (Agendas, check-in, community building)	Morning routine (Agendas, check-in, community building)	Morning routine (Agendas, check-in, community building)	Morning routine (Agendas, check-in, community building)
9:05~10:20	Math (3x25min rotations)	Math (3x25min rotations)	Science / Social Studies	Math (3x25min rotations)	Math (3x25min rotations)
10:20~10:30	S	N	A	C	K
10:30~10:45	R	E	CE	S	S
10:45~11:15	PE	Music	Genius Hour (Inquiry Projects)	Music	PE
11:15~11:45	Computers	PE		PE	Computers
11:45~12:30	L	U	N	C	H
12:30~2:00	Daily Five Rotation (3x30min rotations)	Science / Social Studies	Daily Five Rotation (3x30min rotations)	Daily Five Rotation (3x30min rotations)	Science / Social Studies
2:00~2:30	Art	French	PE	Health	Flex

7) How will you shape and maintain a positive culture in your school?



Image source: https://farm8.static.flickr.com/7378/8720604364_85c5931a14.jpg

Essential to the success of a program like this is a positive, collaborative school culture. To establish this, students and staff alike must be properly informed about how a station rotation will change their classroom learning environment. The following initiatives will help establish such a culture.

5 initiatives for students and 5 initiatives for teachers

For Teachers

- Outlining and practice expectations for transitions, logging in, logging out, respect for equipment will decrease questions and frustrations. Teachers should practice these routines frequently at the beginning of the year and any time there is a change or addition to the routines.
- Clear criteria for how to ask for help; look it up, ask a friend, ask the appointed “expert” if there is one, ask the teacher. Teachers should establish a routine that encourages problem solving using various methods. Students helping each other or using available resources to find answers to their questions is a valuable skill and promotes respect and generosity.
- Clear goals and timelines for completion of tasks (may be individual or class goals. Pace is up to student’s ability, but still need to have checkpoint goals. Students should have a visual schedule of goals and when they should be met. They should check back on these frequently to make sure they are on track.
- Frequent formative feedback should be given to students regularly so that they are confident and sure of where they are headed and what needs to be done. This prevents stress and disappointment later if they fall behind.
- Positive behaviour supports should be in place to encourage a healthy classroom culture. Constructive, quality praise should be given as needed to reinforce good behaviours, work, and relationships.
- Staff collaboration / troubleshooting (PLN). A “buddy system” for teachers should be in place for those piloting the program. This will allow the teachers to troubleshoot quickly rather than having to call a conference with all pilot

classes to discuss. However, the pilot class teachers should meet regularly to discuss the project and its progress.



Image source: <https://www.jisc.ac.uk/sites/default/files/digital-student-expectations.jpg>

For Students

- Set personally attainable goals so that you have many small successes. This will help for future student planning and organization for getting tasks done in a timely manner. Procrastination and excessively high goals can lead to anxiety.
- Learn how to use resources (software, professionals, peers). Students should practice using a variety of resources to become comfortable asking for help.
- Individual progress/success charts can reduce the need for teachers to nag at students about unfinished work. If students have a list of tasks to be completed and check them off as they go. This encourages accountability on the part of the student, and they are more likely to ask for help to achieve completion than if the teacher is constantly asking about unfinished work. As a way to incentivise this, there could be a monthly activity if the class all reach their goals.
- Always practice proper netiquette where comments and posts are appropriate and positive.
- Each student should have a buddy to work with and support. Buddies can support each other inside and outside the classroom.



Image source: http://farm6.static.flickr.com/5549/12079947126_3d9c423e38.jpg

8) Budget Strategy - short term/long term



Image Source: <https://pixabay.com/en/coins-calculator-budget-1015125/>

There will be minimal costs to for the initial implementation of our pilot project.

- Staff - there will be no need for additional staffing.
- Furniture - some teachers may want to find a rug or couch. Teachers have access to a wide variety of furniture through the district, therefore these costs should be minimal.
- Computers are already available at each school and require appropriate scheduling within each school.

- Software - Mathletics costs just over \$11.50/student/year and Reading A to Z costs \$109.95 USD/year/30 licences.

So the the approximate cost in **Canadian funds** for each class with **28** students with both types of software will be:

Reading A to Z	\$145.00
Mathletics	+\$322.00
Total	\$467.00

For 2 classes at each school the approximate cost will be: \$934.00/year.

The cost for all 6 pilot classrooms: \$2802.00/year.

The real cost is to the students who don't gain the benefits of this model of learning.

Conclusion

As outlined in our presentation, the benefits of blended learning are many including:

- More personalized and competency-based learning.
- Increased small group and/or individual instruction.
- The ability for students to control the time, place, pace, and path of their learning.
- Greater variety of learning styles addressed..
- Ability for students to continue / take charge of their learning outside of class.

We hope that the information provided in our proposal sufficiently shows the merits of a blended classroom. We are confident that this pilot program will be successful for the many students involved and that it will be able to be developed into a blended program that incorporates most if not all subjects.

Universal Design for Learning Applications

<p>Make Expectations (objectives, rubrics, grading) explicit from the start</p>	<p>Expectations are that students will learn the required concepts according to their ability or personalized goals within the term. Rubrics will be provided in advance for any work to be assessed summatively. As this is an intermediate class, there are no letter grades, but each student will be evaluated based on both their individual progress and against provincial learning standards to show their place on the learning continuum.</p>
<p>Include Multiple ways to engage students</p>	<p>Students will be able to engage in online learning with gamified aspects in both Math and Daily Five. In Math, students can practice basic skills in a gamified atmosphere where they challenge other students from the class or around the world. In Daily Five, students can listen to audiobooks or read them silently and then answer comprehension questions. Both software programs track the student’s progress and the data can be used by teachers for formative assessment. Both programs also offer certificates for completion of levels.</p> <p>Students will receive personalized direct instruction in small groups of students at similar ability levels based on data from software and teacher assessment.</p> <p>Students will be able to work individually on theme-based projects as well as with their peers in small group projects.</p> <p>With the above modes, students will be able to engage in the same content in various ways.</p> <p>As part of the Daily Five rotation, students will also practice writing in the form of reflections, creative writing, and book reviews.</p>
<p>Include multiple ways of representing big</p>	<p>Lessons are tailored to the students’ abilities in most cases, therefore the big ideas will be specific to their lesson.</p>

<p>ideas /</p> <p>Include multiple ways for students to show what they know (formative and summative assessment)</p>	<p>In online portions, they will access the big ideas depending on levels/content assigned by or moderated by the teacher.</p> <ul style="list-style-type: none"> - Representation of big ideas will be evident in their completion of assignments within the software. Summative assessment will include progress within the software tool. <p>In individual or group based work, the tasks will be themed in accordance with the big ideas for the subject</p> <ul style="list-style-type: none"> - Students can demonstrate their learning of Math through project-based learning (bridge building, modelling, etc.), for big ideas around measurement. It would be evidence of application of the concepts learned. <p>In direct instruction time (face-to-face time) students will have the chance to listen and show.</p> <ul style="list-style-type: none"> - Students can demonstrate their learning of Daily Five by sharing about what they read, reading from a text, or reading their own writing in small group discussions. This could represent big ideas from Language Arts and assess reading and speaking skills.
<p>Include alternatives to the text (e.g. website, article, video, audio summary, or lower reading level text</p>	<p>Station rotation provides online, direct instruction, and individual/group work.</p> <p>Both softwares offer students personalized learning based on current levels.</p>
<p>Include checks for understanding to shape instruction</p>	<p>Checks for understanding will be done through the analysis of software data, and through direct instruction times.</p>
<p>Includes methods that require student's active participation</p>	<p>Students are required to actively participate in each mode.</p> <ul style="list-style-type: none"> - The online programs are individualized to the specific student. - Individual and group work requires student's participation to contribute or complete projects. - Students will be called on and expected to answer and participate in direct instruction times.
<p>Provide step by step</p>	<ul style="list-style-type: none"> - There will be class-generated criteria for behaviour norms

<p>instructions for using learning strategies</p>	<p>posted in the classroom.</p> <ul style="list-style-type: none"> - Students will have the guidelines for asking questions and troubleshooting explained to them and practised at the outset of the program and regularly throughout it. <ul style="list-style-type: none"> - Try to find the answer by looking it up. (Students will be shown how to craft a question to have a better chance of narrowing their results to the information they need - online or book searches) - If they cannot find what they need, ask a classmate near to them. (Again, appropriate questioning will be practised - “Can you show me how to...”, “”How do you spell...”, etc.) - If they cannot get the answer from their classmate, ask the teacher. - Group work collaboration strategies will be discussed and practised. <ul style="list-style-type: none"> - Respectful listening - what does it look/sound/feel like? - Letting others do their part in the group - Positive comments and respectful criticism (“I’m sorry, I don’t agree with that idea because...” rather than “That idea is stupid.”) - All routines and expectations will be posted in the classroom in highly visible areas. Task specific criteria and steps are posted clearly on the whiteboard for all to see.
<p>Provide access to class notes in various formats (e.g. outline, graphic, studycast)</p>	<ul style="list-style-type: none"> - According to the task, a checklist of steps to be completed will be given to each student - Graphics pertaining to logon procedures will be posted clearly at the computer station.

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