Mr. Boulter email: **bboulter@sd73.bc.ca**

Room 201 Website: Google Classroom Class Code: **qfx4d7e**

Workplace Mathematics 10/11: Course Outline (Block C)

Mathematical values and habits of mind go beyond numbers and symbols: they help us connect, create, communicate, visualize, reason, and solve. Using mathematical thinking allows us to analyze novel and complex problems from a variety of perspectives, consider possible solutions, and evaluate the effectiveness of solutions. All areas of learning are based on a "Know-Do-Understand" model to support a concept-based competency-driven approach to learning. Three elements, the Content (Know), Curricular Competencies (Do), and Big Ideas (Understand) all work together to support deeper learning.

The Big Ideas consist of generalizations and principles and the key concepts important in an area of learning. They reflect the "Understand" component of the Know-Do-Understand model of learning. The big ideas represent what students will understand at the completion of the curriculum for their grade. They are intended to endure beyond a single grade and contribute to future understanding.

The Curricular Competencies are the skills, strategies, and processes that students develop over time. They reflect the "Do" in the Know-Do-Understand model of learning. While Curricular Competencies are more subject-specific, they are connected to the Core Competencies.

The Content learning standards — the "Know" of the Know-Do-Understand model of learning — detail the essential topics and knowledge.

Big Ideas

- Proportional reasoning is used to make sense of multiplicative relationships.
- 3D objects can be examined mathematically by measuring directly and indirectly length, surface area, and volume.
- Flexibility with number builds meaning, understanding, and confidence.
- Representing and analyzing data allows us to notice and wonder about relationships.
- Mathematics informs financial decision making.
- 3D objects are often represented and described in 2D space.
- Representing and analyzing data allows us to notice and wonder about relationships.

Curricular Competencies

Reasoning and modelling

- *Develop thinking strategies to solve puzzles and play games*
- *Explore, analyze, and apply mathematical ideas using reason, technology, and other tools*
- *Estimate reasonably and demonstrate fluent, flexible, and strategic thinking about number*
- *Model with mathematics in situational contexts*
- *Think creatively and with curiosity and wonder when exploring problems*

Understanding and solving

- *Develop, demonstrate, and apply conceptual understanding of mathematical ideas through play, story, inquiry, and problem solving*
- *Visualize to explore and illustrate mathematical concepts and relationships*
- *Apply flexible and strategic approaches to solve problems*
- *Solve problems with persistence and a positive disposition*
- *Engage in problem-solving experiences connected with place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures*

Communicating and representing

- *Explain and justify mathematical ideas and decisions in many ways*
- *Represent mathematical ideas in concrete, pictorial, and symbolic forms*
- *Use mathematical vocabulary and language to contribute to discussions in the classroom*
- *Take risks when offering ideas in classroom discourse*

Connecting and reflecting

- *Reflect on mathematical thinking*
- *Connect mathematical concepts with each other, with other areas, and with personal interests*
- *Use mistakes as opportunities to advance learning*
- *Incorporate First Peoples worldviews, perspectives, knowledge, and practices to make connections with mathematical concepts*

Content

- Create, interpret, and critique graphs
- Primary trigonometric ratios
- Metric and imperial measurement and conversions
- Surface area and volume
- Central tendency
- Experimental probability
- financial literacy: gross and net pay
- Financial literacy: personal investments, loans, and budgeting
- Rate of change
- How probability and statistics are used in different contexts
- Interpreting graphs in society
- 3d objects: angles, views, and scale diagrams

Assessment

Classroom assessment is an integral part of the instructional process and can serve as meaningful sources of information about student learning. Feedback from ongoing assessment in the classroom can be immediate and personal for a learner and guide the learner to understand their misconceptions and use the information to set new learning goals. Formative and summative assessments can be conducted many different ways throughout the semester, which will allow the teacher to understand a student's learning as well allow a student to understand their own learning in the class.

You can expect assessments FOR learning and assessments OF learning.

- Assessments FOR learning may be questions, worksheets, activities, quizzes which you are required to do as a part of the learning process.,
- Assessments OF learning show me what you have learned during or after the unit. These may be labs, projects, quizzes, or tests.

Students and parents/guardians can access your grades and marks on individual assignments by logging into MyEd (http://myed73.sd73.bc.ca/).

Materials Required:

Pencil, eraser, blue pen, red pen Binder with lined paper Ruler

Scientific Calculator (not a cell phone) with these functions:

$\pm$, x^2, x^y or ^, $1/x$, $\sqrt{\ }$, $\sqrt[y]{x}$, EE or EXP, log, sin, sin^{-1}, cos, cos^{-1}, tan, tan^{-1}

Effort Mark

Refer to NorKam's Behaviour Matrix. "CARE"

Attendance

It is expected that you attend every day. Your parent/guardian must contact the school to excuse your absence. You are responsible for catching up on missed assignments on your own time. Missed tests or quizzes will be completed during lunch.

General Classroom Expectations

- Cell phones must be used responsibly. If they become a distraction I will take them.
- Be respectful of all in class.
- Be prepared for class before the class starts.

Communication

- I use Google Classroom (https://classroom.google.com/) to relay important information to students. The class code is "**qfx4d7e**"
- All my grades for the course are on available on My Education BC (https://www.myeducation.gov.bc.ca/aspen/logon.do). Both students and parents/guardians have access to MyEd through separate accounts. Additional information on logging into MyEd and its features can be found here.
    - Parent/Guardian Login ID is the email registered with the school. Student Login ID is firstname.lastname@student.sd73.bc.ca. If you do not remember your password, simply click the "I forgot my password" link and a new temporary password will be emailed to you.
    - This video (https://www.youtube.com/watch?v=AYGzLmdMUaI&feature=youtu.be) contains instructions on how to log onto MyEd. (The link to MyEd and the link to the video are on NKSS website (http://nkss.sd73.bc.ca/)
    - Once logged into MyEd, students and parents/guardians can view grades for all assignments, a cumulative grade for the course and attendance records.
    - Students are able to redo/correct most assignments to improve their mark. They may also hand in any missing assignments to improve their mark.
- You and your parent/guardian are welcome to contact me via email (**bboulter@sd73.bc.ca**) or phone (**250-376-1272**) with any questions or concerns.

Extra Help

I am generally in room 201 before school, during lunch, and after school. If you require any help, please drop by.