Bachelor of Education (Elementary) &
Bachelor of Education (Secondary) STEM
Unit Plan Template

Unit Title:	Exploring Measurement and Perimeter	Number of Lessons	8	Time (in weeks):	2 Weeks
Name:	Kyra Doehle & Daniella Falsetta	Subject(s):	Math	Grade(s):	5/6

Rationale

This unit is important because it includes fun, practical lessons that demonstrate the use of the measurement of perimeter. By exploring concepts of perimeter through hands-on, practical assignments that rely on creative problem solving, students will gain an understanding and appreciation of how this concept works before learning the simplified formulas for solving these problems.

Overview:

Throughout the unit on measurement and perimeter, students engage in a series of interactive lessons designed to deepen their understanding of key concepts. Starting with lessons on standard and non-standard units, students explore the importance of precision in measurements and practice converting between different units. Subsequent lessons involve activities on scale and measurements, calculating perimeters of basic and irregular shapes, and applying perimeter concepts in real-life scenarios like designing dream houses. The unit emphasizes critical thinking, problem-solving skills, and the practical applications of perimeter in various contexts. Students actively participate in hands-on activities, discussions, and reflections to reinforce their learning and creativity in understanding and utilizing measurement and perimeter concepts effectively.

CORE COMPETENCIES

Communication	Thinking	Personal & Social

● Collaborating: Students combine their efforts with those of others to effectively accomplish learning and tasks. ● Communicating: Students engage in informal and structured conversations in which they listen, contribute, develop understanding and relationships, and learn to consider diverse perspectives.	● Critical: Students think critically to develop ideas. Their ideas may lead to the designing of products or methods or the development of performances and representations in response to problems, events, issues, and needs. ● Creative: Students reflect on their creative ideas in order to decide which ones to develop.	● Positive personal and cultural identity: Students acknowledge their strengths and abilities, and they intentionally consider these as assets, helping them in all aspects of their lives. ● Personal awareness and ● responsibility: Students who are personally aware and responsible take ownership of their choices and actions.

BIG IDEAS
(multiple subject areas for integrated unit)

Subject Name: Math 5	Subject Name: Math 6	
Closed shapes have area and perimeter that can be described, measured, and compared.	Properties of objects and shapes can be described, measured, and compared using volume, area, perimeter, and angles.	

LEARNING STANDARDS

Curricular Competencies	Content
● Reasoning and Analyzing: ○ CC1: Use reasoning to explore and make connections ○ CC2: Estimate reasonably ● Understanding and Solving: ○ CC7: Visualize to explore mathematical concepts ● Communicating and Representing:	● C8: Addition and subtraction facts to 20 (extending computational fluency) ● C9: Multiplication and division facts to 100 (emerging computational fluency) ● C12: Area measurement of squares and rectangles ● C13: Relationships between area and perimeter

○ CC10: Communicate mathematical thinking in many ways ● Connecting and Reflecting: ○ CC14: Reflect on mathematical thinking ○ CC15: Connect mathematical concepts to each other and to other areas and personal interests	

Prerequisite Concepts and Skills:

- Addition, subtraction, multiplication of at least two digit numbers
- Basic problem-solving skills
- Familiarity with length, width, and height
- Experience with using rulers

Teacher Preparation Required:

Lesson #	Teacher Preparation Required
Lesson 1	● Length, width, and height diagram ● Writing materials ● Rulers/measuring tapes ● Worksheets
Lesson 2	● Writing materials ● Broken centimeter rulers ● Worksheets ● Visual representation of different units (mm, cm, m, km) ● Video about the significance of standard units
Lesson 3	● YouTube video: https://www.youtube.com/watch?v=0KC_rd7-bf0. ● White/Chalk board ● Chalk/Whiteboard markers
Lesson 4	● Paper or whiteboards ● Rulers ● Geoboards ● Rubber bands ● Writing materials ● Examples of rectangles and squares ● Worksheets ● Calculators (optional)

Lesson 5	● Grid paper ● Rulers ● Writing materials ● Markers/coloured pencils ● Whiteboard ● Calculator (optional)
Lesson 6	● Grid paper ● Rulers ● Writing materials ● Real-life scenario cards (prepared before) ● Markers/coloured pencils ● Whiteboard ● Calculator (optional)
Lesson 7	● Video clip ● Sketching materials ● Graph paper ● Whiteboard
Lesson 8	● Sketching materials ● Colouring markers ● Graph paper/designed template ○ Hand back their sketches from last lesson ● Whiteboard

Cross-Curricular Connections:

- PE: Could measure their running distance in perimeter
- ELA: Writing reflections/journals on their findings
- Science: Can explore measurement in scientific experiments

Aboriginal Connections/ First Peoples Principles of Learning:

Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place)

Assignments in this unit will be reflexive as they build upon what they already might know about measurement, reflective as they will look back at their own work in order to improve, and experiential as they will be directly involved in the process of measuring an object for a purpose. By working in groups and sharing strategies, students will focus on connectedness.

Universal Design for Learning (UDL)

Representation:

- Prior knowledge of measurement will be activated when discussing the task
- Mnemonic strategies for memorizing the difference between perimeter and area will be discussed in the explanation
- Explanation will be accompanied by drawings on the board
    - Videos/visuals

- Real-life examples and practical applications to illustrate the relevance of measurement concepts

Engagement:
- Activities are authentic and purposeful
- Allows for active participation, exploration and experimentation
- Collaborative work in groups to promote peer learning and discussion

Expression:
- Base 10 blocks will be provided if necessary
- Students can express their understanding in different ways through writing, oral presentations, visual representations, or hands-on projects.

Differentiated Instructions (DI)

- Students with difficulty writing could demonstrate their work through diagrams
- Significance of units of measurement will be reviewed
- Students who need to move around during periods when there is no group discussion are free to do so
- Brain breaks and movement breaks will be utilized when necessary
- The use of wiggle chairs and fidgets is allowed

Overview of Lessons:
Lesson 1

Name & Time (Minutes Allotted):	Introduction to Measurement and Perimeter (40 min)
Learning Standards: Curricular Competencies	● CC1: Use reasoning to explore and make connections ● CC2: Estimate reasonably ● CC15: Connect mathematical concepts to each other and to other areas and personal interests
Learning Standards: Content	● C8: Addition and subtraction facts to 20 (extending computational fluency) ● C9: Multiplication and division facts to 100 (emerging computational fluency) ● C12: Area measurement of squares and rectangles ● C13: Relationships between area and perimeter
Instructional Objectives	Students will be able to understand basic measurement concepts such as length, width, height, and perimeter, identify and utilize different tools for measuring, differentiate between standard and non-standard units of measurement, apply measurement skills practically by measuring classroom objects accurately, and collaborate with peers to discuss and compare their findings.
Assessment:	Observation: During the scavenger hunt activity, discussions, and hands-on measurements. Their ability to use measuring tools accurately,

	differentiate between standard and non-standard units, and collaborate effectively with their peers. Conversation: Understanding of measurement concepts by listening to their explanations, responses to questions, and the connections they make between different measurement tools and units. Product: Worksheets showcasing their measurement findings, comparisons between standard and non-standard units, and key takeaways from the lesson.
Teaching Strategies:	● Hands-on ● Using different tools/manipulatives ● Collecting data ● Group work (groups of 3)
Materials:	● Length, width, and height diagram ● Writing materials ● Rulers/measuring tapes ● Worksheets
Lesson Activities:	
Introduction/Hook (5 min):	● Start by introducing that we are going to be diving into learning about measurement and perimeter! ● Ask students what they think these terms mean and why they might be important in our daily lives. ● The teacher will introduce different tools for measuring length and how they work; clarify any questions. ● Teacher will discuss the difference between length, width, and height - leaving a diagram on the board
Body (30 min):	Activity 1: Scavenger Hunt (10 min) ● Divide students into groups of 3 and provide them with measuring tools like rulers and measuring tapes. ● Ask them to measure various classroom objects like desks, windows, and books. ● Encourage them to work together and discuss their findings. ● Students will each record their measurements on a sheet of paper. ○ Remind the class that we want to see how many different results we get, so please don't copy other people's measurements, it's okay if they are not the same. Discussion: Different Tools for Measuring (5 min) ● After the scavenger hunt, gather the students and discuss the different tools they used for measuring. ● Talk about the importance of choosing the right tool for accurate measurements and how different tools serve different purposes. Activity 2: Non-Standard Units (15 min) ● Now, introduce the concept of non-standard units by providing students with alternative tools like strings and textbooks.

	● Ask them to measure objects using these non-standard units and compare the results with measurements taken using standard tools. ● Encourage them to discuss any differences they observe.
Closure (5 min):	Sharing/Recap ● Class will share answers and see how many different answers there are for each one, discuss reasons people might've got different answers. ● Remind students to write any questions they have on sheet To wrap up the lesson, summarize the key points covered: ● Difference between measurement and perimeter ● Understanding of standard and non-standard units ● Differentiating between length, width, and height

Lesson 2

Name & Time (Minutes Allotted):	Understanding Standard Units and Perimeter - Conversions (45 min)
Learning Standards: Curricular Competencies	● CC7: Visualize to explore mathematical concepts ● CC15: Connect mathematical concepts to each other and to other areas and personal interests
Learning Standards: Content	● C8: Addition and subtraction facts to 20 (extending computational fluency) ● C9: Multiplication and division facts to 100 (emerging computational fluency) ● C12: Area measurement of squares and rectangles ● C13: Relationships between area and perimeter
Instructional Objectives	SWBAT comprehend the importance of standard units in measurements, explore precision in measuring using accurate tools like broken centimeter rulers, understand and apply conversions between millimeters, centimeters, meters, and kilometers, and practice converting measurements through various problems.
Assessment:	Observation: Participation in activities, collaboration with peers, and ability to apply unit conversions accurately. Conversation: Discussions/conversations about the importance of standard units, precision in measurements, and conversions will allow teachers to evaluate students' grasp of the concepts and their ability to articulate their understanding. Product: Problem solving worksheet to showcase their understanding of standard units and perimeter concepts.
Teaching Strategies:	● Visual displays ● Modeling

	● Demonstrating ● Group/individual work
Materials:	● Writing materials ● Broken centimeter rulers ● Worksheets ● Visual representation of different units (mm, cm, m, km) ● Video about the significance of standard units
Lesson Activities:	
Introduction/Hook (5 min):	● Ask students if they can give some examples of standard units and why they think they are important in our everyday lives. ● The teacher will refresh memory on meter sticks by asking how many cm are on the meter stick. ● Then ask how many mm would that be - So if we had a tree that was 5m tall, how many cm would it be? How many mm?
Body (30 min):	Discussion: Importance of Standard Units (5 min) ● Engage students in a discussion/video about the significance of using standard units in measurements. ● Discuss why consistency in units is crucial for accurate and reliable measurements in various fields. Activity: Broken Centimeter Ruler - Explore Precision in Measurements (10 mins) ● Provide students with a broken centimeter ruler and challenge them to measure objects with precision. ● Encourage them to think about the impact of inaccuracies in measurements and the importance of precise measuring tools. Discussion: Conversions between mm, cm, m, and km (10 min) ● Introduce students to different units of measurement, including millimeters, centimeters, meters, and kilometers. ● Discuss how to convert between these units and the relevance of using the appropriate unit for different measurement tasks. Practice Problems: Convert Measurements (10 min) ● Present students with practice problems that require them to convert measurements between mm, cm, m, and km. ● Allow students to work individually or in groups to apply their understanding of unit conversions and reinforce their learning.
Closure (5 min):	Summary and Application ● Summarize the key points covered in the lesson, highlighting the importance of standard units, precision in measurements, and conversions between different units. ● Encourage students to reflect on how these concepts apply to real-world scenarios and discuss any challenges they faced during the practice problems.

Lesson 3

Name & Time (Minutes Allotted):	Scale and Perimeter (45 min)
Learning Standards: Curricular Competencies	● CC1: Use reasoning to explore and make connections ● CC7: Visualize to explore mathematical concepts
Learning Standards: Content	● C8: Addition and subtraction facts to 20 (extending computational fluency) ● C9: Multiplication and division facts to 100 (emerging computational fluency) ● C12: Area measurement of squares and rectangles ● C13: Relationships between area and perimeter
Instructional Objectives	SWBAT deepen their understanding of scale and its implications for measurements and perimeter calculations, by engaging in hands-on scale calculations, critical analysis of design choices, and collaborative discussions.
Assessment:	Conversation: Discussions to evaluate their understanding of the concepts of scale and perimeter. Ask probing questions to assess their critical thinking, ability to apply scale ratios, and reasoning behind their choice of scales for building designs. Observation: Observe students as they participate in the activities, calculations, and discussions. Monitor their problem-solving approaches, interactions with peers, and application of scale concepts. Product: Review the measurements recorded by students on the board, the accuracy of their calculations, and their choices of scales for different design scenarios. Consider written reflections or responses from students on the importance of scale in design and the significance of precise measurements in real-world applications.
Teaching Strategies:	● Class Discussion ● Problem Solving
Materials:	● YouTube video: https://www.youtube.com/watch?v=0KC_rd7-bf0. ● White/Chalk board ● Chalk/Whiteboard markers
Lesson Activities:	
Introduction/Hook (5 min):	● Watch this youtube video as a class: https://www.youtube.com/watch?v=0KC_rd7-bf0. ○ While watching the video, encourage students to think about what may seem ridiculous and whether simply making something bigger makes it better. ● Ask the class what is ridiculous about this? Do they think making the centre 3x bigger will help?

Body (35 min):	Scale and Measurements Activity (20 min) ● Provide measurements of a model building and introduce the concept of scale using a 1cm:3cm scale ratio. ● Calculate together with the class how much bigger the model would be using this scale. ● Offer a few different scale examples and ask students to choose one to calculate accurately to determine if children could fit inside the building at that scale. Measurement Discussion (15 min) ● Have students write down their measurements on the board next to the scale they calculated. ● Engage the class in a discussion on which scales would create a realistic and feasible building design. ● Encourage critical thinking and reasoning behind their choices.
Closure (5 min):	Summary and Reflection ● Conclude the lesson by summarizing the key learnings about scale and its relation to perimeter. ● Encourage students to reflect on the importance of scale in creating accurate models and designs and its impact on real-world applications. ● Emphasize the significance of precise measurements and scale considerations in various contexts.

Lesson 4

Name & Time (Minutes Allotted):	Perimeter of Regular Shapes (45 min)
Learning Standards: Curricular Competencies	● CC1: Use reasoning to explore and make connections ● CC7: Visualize to explore mathematical concepts
Learning Standards: Content	● C8: Addition and subtraction facts to 20 (extending computational fluency) ● C9: Multiplication and division facts to 100 (emerging computational fluency) ● C12: Area measurement of squares and rectangles ● C13: Relationships between area and perimeter
Instructional Objectives	SWBAT develop a strong understanding of perimeter concepts and enhance their spatial reasoning skills, by engaging in activities that involve calculating perimeter, comparing shapes based on perimeter, and creating and measuring shapes on geoboards.
Assessment:	Conversation: Understanding of perimeter concepts related to regular shapes. Ask probing questions to gauge their knowledge of calculating perimeter,

	comparing shapes based on perimeter, and their ability to explain their reasoning behind shape comparisons. Observation: Observe students as they engage in activities such as calculating the perimeter of rectangles and squares, comparing shapes, and creating and measuring shapes on geoboards. Monitor students' problem-solving approaches, use of measuring tools, and collaboration during group activities. Product: Completed worksheets, measurements recorded on geoboards, and written reflections on shape comparisons based on perimeter.
Teaching Strategies:	● Hands-on ● Visual aids ● Collaboration
Materials:	● Paper or whiteboards ● Rulers ● Geoboards ● Rubber bands ● Writing materials ● Examples of rectangles and squares ● Worksheets ● Calculators (optional)
Lesson Activities:	
Introduction/Hook (5 min):	● Welcome students to an interactive lesson focused on calculating the perimeter of basic shapes. ● Start the lesson by posing a challenge or riddle related to perimeter to grab students' attention and encourage them to think about the significance of measuring perimeter in everyday life.
Body (35 min):	Calculating Perimeter of Rectangles and Squares (10 mins) ● Begin the lesson by introducing rectangles and squares as basic shapes. ● Provide students with examples of rectangles and squares, and guide them through calculating the perimeter of these shapes using the appropriate formulas. ● Allow students to practice calculating perimeter individually or in small groups. Discussion: Comparing Shapes Based on Perimeter (5 mins) ● Engage students in a discussion about how perimeter can be used to compare different shapes. ● Prompt them to analyze and compare the perimeters of rectangles and squares, discussing how perimeter relates to the size and characteristics of shapes.

	Activity: Geoboard Shapes - Creating and Measuring Perimeter of Various Shapes (20 mins) ● Introduce geoboards and rubber bands to students for a hands-on activity. ● Instruct students to create various shapes on the geoboard and measure the perimeter of each shape using the rubber bands. ● Encourage creativity in constructing shapes and precise measurement of perimeters.
Closure (5 min):	Summary and Reflection ● Conclude the lesson by summarizing the key concepts learned about calculating perimeter of regular shapes. ● Have students reflect on the importance of perimeter in determining the boundary of shapes and how it can help in comparing and analyzing shapes. ● Encourage students to share their experiences with calculating perimeters and creating shapes on the geoboard.

Lesson 5

Name & Time (Minutes Allotted):	Perimeter of Irregular Shapes (45 min)
Learning Standards: Curricular Competencies	● CC1: Use reasoning to explore and make connections ● CC7: Visualize to explore mathematical concepts
Learning Standards: Content	● C8: Addition and subtraction facts to 20 (extending computational fluency) ● C9: Multiplication and division facts to 100 (emerging computational fluency) ● C12: Area measurement of squares and rectangles ● C13: Relationships between area and perimeter
Instructional Objectives	SWBAT develop a deeper understanding of calculating perimeter for irregular shapes, fostering critical thinking and problem-solving skills within a creative and interactive learning environment, through engaging activities, discussions, and challenges.
Assessment:	Conversation: Students in conversations throughout the lesson to assess their understanding of perimeter concepts related to irregular shapes. Encourage discussions during activities such as finding perimeter strategies and breaking down irregular shapes. Observation: Activities, discussions, and the Irregular Shape Challenge. Monitor their strategies for finding perimeter, collaborative efforts, and approaches to breaking down irregular shapes into simpler components. Note student interactions, critical thinking processes, and application of perimeter concepts during hands-on tasks.

	Product: Completed grid paper with block letter names, calculations of individual block letter perimeters, and any reflective notes.
Teaching Strategies:	● Check-ins ● Collaboration work ● Hands-on
Materials:	● Grid paper ● Rulers ● Writing materials ● Markers/coloured pencils ● Whiteboard ● Calculator (optional)
Lesson Activities:	
Introduction/Hook (5 min):	● Start the lesson by presenting students with a visual puzzle of an irregular shape and challenging them to determine its perimeter.
Body (35 min):	Activity: Finding Perimeter of Irregular Shapes with Different Strategies (15 min) ● Guide students through various strategies for calculating the perimeter of irregular shapes. ● Encourage them to explore methods such as breaking down the shape into simpler components, using approximation techniques, or utilizing known perimeter formulas for basic shapes within the irregular figure. ● Allow students to practice calculating perimeters of irregular shapes individually or in pairs. Discussion: Breaking Down Irregular Shapes into Simpler Components (5 min) ● Facilitate a class discussion on the concept of breaking down irregular shapes into simpler components to calculate perimeter more effectively. ● Encourage students to share their strategies and insights on how identifying simpler shapes within a complex irregular shape can help in finding the overall perimeter. Activity: Irregular Shape Challenge - Block Letter Name Creation (15 min) ● Engage students in the Irregular Shape Challenge by tasking them to create block letter versions of their names on grid paper. ● After constructing their names, students will measure and calculate the perimeter of each block letter.
Closure (5 min):	Summary and Reflection ● Conclude the lesson by summarizing the key learnings about calculating perimeter of irregular shapes.

	● Lead a reflective discussion where students share their experiences, challenges faced, and strategies discovered during the activities. ● Encourage students to reflect on the importance of precision and strategy when calculating perimeters of irregular shapes.

Lesson 6

Name & Time (Minutes Allotted):	Perimeter and Area Integration (50 min)
Learning Standards: Curricular Competencies	● CC1: Use reasoning to explore and make connections ● CC6: Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
Learning Standards: Content	● C8: Addition and subtraction facts to 20 (extending computational fluency) ● C9: Multiplication and division facts to 100 (emerging computational fluency) ● C12: Area measurement of squares and rectangles ● C13: Relationships between area and perimeter
Instructional Objectives	SWBAT deepen their understanding of how perimeter and area concepts are integrated and their relevance in real-world contexts.
Assessment:	Conversation: Their understanding of how perimeter and area concepts are integrated in real-life scenarios. Observation: Hands-on activities, design real-life scenarios, and solve perimeter problems. Monitor students' problem-solving approaches, interactions during group work, and application of perimeter and area concepts as they calculate measurements. Product: Designed real-life scenarios (including calculations of perimeters and areas for designs, and solutions to real-life perimeter problems).
Teaching Strategies:	● Questioning ● Discussions ● Brainstorming ● Reflecting
Materials:	● Grid paper ● Rulers ● Writing materials ● Real-life scenario cards (prepared before) ● Markers/coloured pencils ● Whiteboard ● Calculator (optional)

Lesson Activities:	
Introduction/Hook (5 min):	● Begin by posing a real-life scenario related to designing a playground or pool, prompting students to consider the importance of both perimeter and area in such contexts. ● This initial challenge will capture students' attention and set the stage for exploring the relationship between perimeter and area.
Body (40 min):	Activity: Designing Real-Life Scenarios and Calculating Perimeter (15 min) ● Task students with designing real-life scenarios such as playgrounds or pools on grid paper. ● Encourage students to calculate the perimeter of their designs using accurate measurements and appropriate formulas. ● This hands-on activity will provide students with practical application of perimeter concepts in real-world settings. Discussion: Perimeter's Applications in Various Contexts (10 min) ● Facilitate a discussion on how perimeter is used in different contexts beyond the classroom. ● Prompt students to share examples of where perimeter plays a crucial role, such as fencing a garden, measuring boundaries, or planning construction projects. ● Encourage students to think critically about how perimeter calculations are essential in various real-life scenarios. Activity: Perimeter Problem Solving with Real-Life Scenarios (15 min) ● Engage students in solving perimeter problems based on real-life scenarios. ● Present them with challenging problems that require applying perimeter concepts to solve practical challenges efficiently. ● Allow students to work individually or in groups to tackle these problems, fostering critical thinking and problem-solving skills.
Closure (5 min):	● Reflect on how perimeter and area are interconnected in real-life problem-solving situations. ● Encourage students to apply their understanding of perimeter in practical contexts and emphasize the significance of incorporating both perimeter and area considerations in various scenarios.

Lesson 7

Name & Time (Minutes Allotted):	Dream House Design Introduction (45 min)
Learning Standards: Curricular Competencies	● CC5: Model mathematics in contextualized experiences ● CC7: Visualize to explore mathematical concepts ● CC14: Reflect on mathematical thinking

Learning Standards: Content	● C8: Addition and subtraction facts to 20 (extending computational fluency) ● C9: Multiplication and division facts to 100 (emerging computational fluency) ● C12: Area measurement of squares and rectangles ● C13: Relationships between area and perimeter
Instructional Objectives	SWBAT unleash their creativity and utilize perimeter calculations in designing their dream houses, through engaging discussions, brainstorming sessions, and initial design planning.
Assessment:	Conversation: Understanding of project guidelines, expectations, and the importance of considering perimeter calculations in dream house designs. Observation: Brainstorming dream house ideas, monitoring students' creativity in sketching designs, thoughtful planning of floor layouts, and the integration of perimeter concepts in their early design processes. Product: Dream house sketches, initial design plans, and documentation of perimeter calculations in their designs.
Teaching Strategies:	● Brainstorming ● Discussions
Materials:	● Video clip ● Sketching materials ● Graph paper ● Whiteboard
Lesson Activities:	
Introduction/Hook (5 min):	● Begin by telling students they are about to embark on an imaginative journey to create their dream houses. ● Show them an inspiring image or video clip of stunning house designs to spark their creativity and enthusiasm for the project.
Body (35 min):	Discussion: Discuss Project Guidelines and Expectations (10 mins) ● Outline the project guidelines, expectations, and assessment criteria for the Dream House Design project. ● Clarify key aspects such as size constraints, design elements to include, and the importance of considering perimeter calculations in their designs. ● Encourage students to ask questions and seek clarification on project details. Activity: Brainstorming Session (10 mins) ● Engage students in a brainstorming session where they generate ideas for their dream house designs. ● Encourage them to think creatively, consider different features they would like to incorporate, and sketch initial concepts.

	● Emphasize the importance of incorporating both creative design elements and practical considerations, such as understanding perimeter calculations. Activity: Planning Your Dream House Design (15 mins) ● Provide students with graph paper or design templates to begin planning their dream house designs. ● Instruct them to sketch out floor plans, map out room layouts, and consider potential outdoor spaces. ● Encourage students to think about how perimeter calculations can aid in planning the layout and dimensions of their dream houses accurately.
Closure (5 min):	Summary and Encouragement ● Conclude the lesson by summarizing the importance of thoughtful design planning and the role of perimeter calculations in creating dream house designs. ● Encourage students to continue brainstorming, planning, and refining their ideas for the project. Express excitement for the creative designs they will bring to life in their dream house projects.

Lesson 8

Name & Time (Minutes Allotted):	Dream House Design (45 min)
Learning Standards: Curricular Competencies	● CC5: Model mathematics in contextualized experiences ● CC7: Visualize to explore mathematical concepts ● CC14: Reflect on mathematical thinking
Learning Standards: Content	● C8: Addition and subtraction facts to 20 (extending computational fluency) ● C9: Multiplication and division facts to 100 (emerging computational fluency) ● C12: Area measurement of squares and rectangles ● C13: Relationships between area and perimeter
Instructional Objectives	SWBAT showcase their design skills, apply perimeter calculations, and reflect on their learning journey throughout the unit, through the final dream house design activity, reflective discussions, and unit recap.
Assessment:	Conversation: conversations during the final design activity and reflective discussion to assess their application of perimeter calculations, creativity in dream house designs, and reflection on their learning journey. Observation: Observe students as they work on designing their dream houses, calculate perimeters, and engage in reflective discussions. Monitor their

	creative design choices, accuracy in perimeter calculations, and depth of reflection on their learning throughout the unit Product: Completed dream house designs, sketches, and design plans.
Teaching Strategies:	● Hands-on ● Reflection ● Final assessment
Materials:	● Sketching materials ● Colouring markers ● Graph paper/designed template ○ Hand back their sketches from last lesson ● Whiteboard
Lesson Activities:	
Introduction/Hook (5 min):	● Tell students they will now bring their dream houses to life. ● Begin by reminding students of their journey from project introduction to brainstorming, planning, and now the design phase. ○ Hand back their sketches from the last lesson to refer back to ● Encourage them to apply their knowledge of perimeter calculations, and envision their dream houses taking shape.
Body (35 min):	Activity: Dream House Design (30 min) ● In this final lesson, students will immerse themselves in designing their dream houses. ● Provide them with ample time to work on sketching and creating detailed designs of their dream houses, incorporating unique features, creative elements, and accurate perimeter calculations. ● Encourage students to infuse personal touches and innovative ideas into their designs as they bring their dream houses to life. Discussion/Sharing Designs (5 min) ● Facilitate a reflective discussion where students share their thoughts on what they have learned throughout the perimeter unit. ● Students who want to, will share their houses with the class and reflect on how well they understood the concepts of perimeter.
Closure (5 min):	Recap of Key Concepts and Farewell ● Celebrate the creativity and hard work of all students. Bid farewell to the unit with appreciation for students' efforts, growth, and exploration.

Resources:

- https://www.youtube.com/watch?v=0KC_rd7-bf0.

Extensions to Unit:

This unit could be extended through exploring area and volume further. Students can delve into calculating the area of various shapes such as rectangles, triangles, circles, and composite figures. They can also explore volume by determining the space occupied by three-dimensional objects like cubes, prisms, pyramids, and cylinders. It can also be extended by studying geometric properties and relationships. Students can explore angles, polygons, and symmetry.

Reflections and Revisions