THOMPSON RIVERS UNIVERSITY | Education & Social Work

Bachelor of Education (Elementary) & Bachelor of Education (Secondary) STEM Lesson Plan

Lesson Title:	Geometry	**Lesson #**	1	**Date:**	Feb 14, 2025
Name:	Lexi Grisenthwaite	**Subject:**	Math	**Grade(s):**	2

Rationale:

This lesson is important because it incorporates fun and engaging ways to help students deepen their knowledge regarding geometry and shapes. Deepening these connections can help students create meaning in the world around them.

Core Competencies:

Communication	Thinking	Personal & Social
Students seek to listen attentively, take turns in discussion and acknowledge contributions.	Students may generate creative ideas through free play, engagement with others ideas, or consideration of a problem or constraint, and/or because of their interests and passions.	Students are aware that learning involves patience and time.

Big Ideas (Understand)

Objects and shapes have attributes that can be described, measured and compared.

Learning Standards

(DO)	(KNOW)
Learning Standards - Curricular Competencies	**Learning Standards - Content**
• Students are expected to use reasoning to explore and make connections. • Students are expected to model mathematics by drawing pictures. • Students are expected to develop, demonstrate and apply mathematical understanding through play, inquiry and problem sovling.	• Students are expected to know multiple attributes of 2D shapes. • Students are expected to know how to describe, compare and construct 2D shapes, including triangles, squares, rectangles and circles.

Instructional Objectives & Assessment

Instructional Objectives (students will be able to…)	Assessment

• Students will be able to identify several different 2D shapes. • Students will be able to distinguish between different shapes. • Students will be able to illustrate shapes into a picture. • Students will be able to arrange shapes in a creative way that forms an idea.	• Students will be formatively assessed by their abilities in “I Spy” and “Bingo”. The teacher will pay close attention to ensure that students are referring to the shapes correctly. • Students will also be assessed by the completion of their shape worksheet as well as the shapes in the pictures they created. This would be known as a formative as well because it would be low-stakes.

Prerequisite Concepts and Skills:

Students need to be able to be able to sit quietly at their desks during each of the activities to ensure they are not disrupting their classmates. Students need to be patient in waiting for their turn and understand that not everyone wins at bingo (although the teacher would ensure that throughout the year, everyone wins at least once). Students need to know their basic shapes or at least have an idea of their names.

Indigenous Connections/ First Peoples Principles of Learning:

Learning takes patience and time. This FPPL is included in this lesson because each of the activities (I Spy, the story, and creating the picture) all take time and patience. This lesson shows that things can not simply be rushed through. It takes time and patience to both play games and create things.

Universal Design for Learning (UDL):

This lesson is designed to engage auditory and visual learners through oral storytelling. The teacher will also take their time reading the story so students have ample time to make connections about the shapes found throughout the story.

Differentiate Instruction (DI):

This lesson could be adapted more for visual learners by creating a slideshow or presentation to go along with the shape worksheet part. Perhaps the teacher could use the slideshow to work with the students together on finishing their shape worksheet before starting their picture. The story could also possibly be shown on a projector rather than having the teacher walk around to show the pages.
If students who don’t normally raise their hands do put their hands up, then the teacher will make an effort to call upon those students first.

Materials and Resources

- “City Shapes” book by Diana Murphy
- Shape Worksheets
- Blank paper for the students’ pictures
- Pencil, pencil crayons, crayons, erasers.
- Bingo cards and markers
- Bingo prize (sticker, small treat, small toy, etc.)

Lesson Activities:

Teacher Activities	Student Activities	Time

Introduction (anticipatory set – “HOOK”): The teacher would start the lesson by having the students play a game of “I Spy.” The teacher would pull names that were on popsicle sticks and have one student at a time go to the front and describe a shape they saw somewhere around the room. The teacher would explain that the person at the front would start by saying, “I spy with my little eye…” followed by the shape they have found around the class. The teacher would explain to the other students that they will raise their hands if they want to guess what their classmate is describing. After at least five students have played, the teacher will read the book called “City Shapes” by Diana Murphy. The teacher will ask students to keep in mind what shapes are mentioned in the story.	One at a time, the students chosen by popsicle sticks will go to the front of the class and start a game of “I Spy” with the class. Students not going to the front will raise their hands if they want to guess what their classmate is “spying on”. Next, the students will sit quietly and listen to the teacher read the book “City Shapes” by Diana Murphy. While listening, the students will keep in mind of what shapes they see throughout the story.	10-15 min
Body: Next, the teacher will hand out a shape worksheet for students to refresh and review their knowledge of shapes before completing the next activity. The teacher will then give each student a blank piece of paper and ask students to draw a picture using as many shapes as they can. The teacher will show their example to give students some ideas.	The students will then individually work on a quick worksheet where they will identify the names of 8 different shapes. Once they finish their worksheet, they will draw a picture with as many shapes hidden in it as they can. The students will be able to see an example to give them some ideas.	20 min
Closure: To finish the class, the teacher will have the students play a game of geometry bingo. The teacher will hand out the bingo sheets and markers to all of the students.	Students will then play a game of geometry bingo to finish the lesson. In geometry bingo, there are shapes in place of where numbers would normally be.	10-15 min

Organizational Strategies:

- Students will participate in a brain break if the teacher notices students needing to release energy or gain a bit of energy.
- When students are at their desks, they will be asked to listen attentively.
- Students may use exercise balls or special chairs if they are feeling antsy.
- Worksheets will not be handed out until story is finished and instructions have been given.

Proactive, Positive Classroom Learning Environment Strategies:

- The teacher will be moving around the room as they read the story and spend more time in close proximity of students who are not focused or distracting to others.
- To get the students’ attention the teacher will use a strategy that their TM already has in place such as a bell or special clap.
- The teacher will acknowledge students who are on task and verbally address students who are distracting to others.
- If necessary, the teacher will separate students who distract each other.
- The teacher will read expressively to engage the student's interests and ask questions along the way

Extensions:

This lesson could be extended by teaching the students about 3D shapes. The teacher could make a short presentation to teach their students what 3D shapes are. After the students have a better understanding of 3D shapes, they could then use Play-Doh to deepen their understanding. The teacher would create a Play-Doh scene or object of their own using 3D shapes to use as an example (for example, they could make a sphere and a cone to make an ice cream cone).

Reflections (if necessary, continue on separate sheet):

To create a geometry lesson for grade two, I wanted to ensure it was going to be engaging and fun. I think starting the class with a fun game of “Geometry I Spy” gets students interested and makes them work together. I felt like reading a book would be a good way to review with students the names of some shapes. The worksheet I felt like a good way to assess where the students are at. Lastly, finishing the lesson with a game seemed perfect since it brings students back in after the worksheet for another review on geometry in a fun and engaging way. I chose these activities because they give a wide variety of ways to learn geometry.