

# LESSON PLAN

DATE: March 16, 2016

TIME: 9:10 – 10:10

CLASS: Cycle 3 Grade 5

DURATION: 60 minutes

SCHOOL: Bee Elementary

## QEP Competencies

### Mathematics:

- Competency 1: To solve a situational problem related to mathematics.
- Competency 3: To communicate by using mathematical language.

## OBJECTIVES (CURRICULUM DOMAIN)

- Students will be introduced to the mathematical concept of how to locate points on a Cartesian plane.
- Students will identify coordinates on a Cartesian plane.
- By the end of this lesson, students will gain an understanding of the Cartesian plan and learn how to identify coordinates.

## GROUP SIZE & MATERIALS

Prezi, SmartBoard, pencils, handout (provided by the teacher).

## PROFESSIONAL COMPETENCIES:

### Communicate:

**1. To act as professional inheritor, critic and interpreter of knowledge or culture when teaching students.**

*I will connect student's experiences to the context of the lesson; I will ask students what they already know about Cartesian planes and further elaborate on the topic. I will remain aware of the whole class throughout this lesson.*

**2. To communicate clearly in the language of instruction, both orally and in writing, using correct grammar, in various contexts related to teaching.**

*I will pace my lesson at an appropriate pace by instructing articulately. I will make sure to go over vocabulary students may not be familiar with (for example, coordinates).*

**4. To pilot teaching/ learning situations that are appropriate to the students concerned and to the subject content with a view to developing the competencies targeted in the programs of study.**

*I will be organized and motivate students to participate in the on going class discussion surrounding Cartesian planes. I will employ a student- centered teaching approach and encourage students to ask questions if they do not understand.*

**8. To integrate information and communications technologies (ICT) in the preparation and delivery of teaching/learning activities and for instructional management and professional development purposes.**

*I will be using Prezi as a platform to display information about Cartesian planes. I will also be using the Smartboard to further develop ideas surrounding the topic.*

TIME	LESSON
15 Min.	<p><b>Introduction:</b> To begin the lesson, I will first ask students what they know about a Cartesian plane. I will write down their initial thoughts on the SmartBoard.</p> <ul style="list-style-type: none"> <li>• I will explain to the class that today we will be exploring what a Cartesian plane is and how to locate coordinates (points) on it. I will make sure to let students know that if they have any questions along the way to raise their hand.</li> <li>• To introduce the topic I will explain the theory of a Cartesian plane by using Prezi. Through the presentation I first discuss Rene Descartes (1596-1650) the philosopher who is the father figure of the Cartesian plane. I will tell students the possible myth of how Descartes discovered the Cartesian plane. One day in bed, he noticed a fly crawling around on the ceiling. He wanted to explain to someone where the fly was. He then realized that he could describe the position of the fly by its distance from the walls to the room. Descartes described the positions of the points, the same way he described the position of the fly. Viola, the Cartesian plane apparently was born!</li> <li>• I will then show students an example of what a Cartesian plane looks like. I will make sure students understand the difference between the two different axes. I will begin to explain how it works by using the illustration that will be displayed on Prezi.</li> <li>• Once students gain an understanding of the different axes and how the numbers are represented I will explain coordinates. I will tell students how coordinates are related to the horizontal (x) and vertical axes (y). I will emphasize that x is before y.</li> <li>• I will demonstrate how to locate coordinates on the Cartesian plane (again beginning with the first number (reminding students to look on the horizontal axis which is x and then the vertical axis which is y).</li> </ul>

TIME	LESSON
30 Min.	<ul style="list-style-type: none"> <li>• <b>Development:</b></li> <li>• There will be a few examples on the SmartBoard that we will go over as a class. I will ask students to come up to the board and find the missing coordinates to the points located on the Cartesian plane.</li> <li>• Once students have gained a good understanding of the mathematical concept, I will explain the handout, which reinforces what we have learnt so far in class.</li> <li>• Students will have the remainder class time to work on the handout. I will again encourage students to ask any questions in regards to what they are learning.</li> <li>• I will circulate the room and check in with students individually to make sure that they are on the right track.</li> <li>• <i>Differentiation:</i></li> <li>• I will pay attention to the students who need extra help during the class work time. For students that are auditory learners, I incorporated a video that I will be showing during the Prezi presentation that reinforces how to locate coordinates on a Cartesian plane through a song. I recognize that all students learn differently which is why I will accommodate those learners by providing them with an adapted version of the handout. I will color coordinate the axes, so that it is easier for them to gain a better understanding of the concept.</li> </ul>
15 Min.	<ul style="list-style-type: none"> <li>• <b>Closure:</b></li> <li>• We will recap on what we have learnt in math. If time permits, I will ask students to write me an exit card. The exit card will ask students to explain one idea (or a question) about Cartesian planes. This is a great tool to use inside the classroom to get a good idea as to what students got out of the lesson and/or what students may need further explanation on.</li> <li>• Since this is an introduction to Cartesian planes, I will make sure to reinforce the concepts during the next math lesson.</li> </ul> <p><b>Follow up:</b></p> <ul style="list-style-type: none"> <li>• Battleship → Cartesian plane inspired game. A fun interactive game that involves locating coordinates on a Cartesian plane (the twist is that it's inspired by the classic Battleship game!).</li> </ul>