21st Century Lesson Cycle Template

Grade: 10

Subject: Math 10 PreIB
Textbook: Mathematics for the International
          Student Pre-Diploma SL and HL
          (second edition)
          by Haese & Harris

Topic 1: Distance between 2 Points

Driving Question:

How can we make use of the distance formula? What information is required to use the formula to solve?

Specific Curriculum Outcome:

RF08 Students will be expected to solve problems that involve the distance between two points and the midpoint of a line segment.

Prior Knowledge:

- Basic knowledge of how to plot points on a Cartesian Plane
- Pythagorean Theorem
- Distance formula

Screencast Link(s):

1. Prior Knowledge - https://youtu.be/X6hAzaSm4_8
   - https://youtu.be/Cf7GyA_N0aw

2. Further examples of how to use the Distance Formula - https://youtu.be/4JPr5fUKsds

Link for tomorrow's Quiz on Distance:
http://msltam.weebly.com/uploads/5/5/7/3/55739509/quiz_distance_formula.pdf

Expected Time: One Class (75 minutes)

Resources: (Tools & Tech)	Lesson Procedure

	I do:

Prior knowledge screencast linked to teacher website. This is simply yesterday's videos on the derivation and use of the distance formula. Students have the option of previewing this prior to the lesson, or they can watch it in class.	1. Review **prior knowledge** that is directly applicable to this lesson:
	      - Derivation of the distance formula
	      - Simple examples on how to use the formula

Further examples of how to use the Distance Formula screencast linked to teacher website. Students have the option of previewing this prior to the lesson, or they can watch it in class.	2. Do **examples** on how the distance formula can be used.
BYOD: To allow students the opportunity to work at a pace that best suits their learning, they will watch the video on their own devices (with headphones).	3. Following the videos, a class discussion can be had in order to clarify anything that may still be ambiguous to students.
	find, validate **critical thinking** remember, understand analyze, synthesize **collaborate, communicate**
	You do:
Students have a copy of the textbook.	Following the videos, students will work on questions from their textbook: Ex 5A.2 #1-4 (pages107-108)
	find, validate **critical thinking** remember, understand analyze, synthesize **collaborate, communicate**
	We do: Students will be given the opportunity to discuss their solutions and any issues they may encounter within small groups (2-3) while the teacher circulates to make sure everyone is on track.

find, validate	**critical thinking**
remember, understand	evaluate, leverage
collaborate, communicate	analyze, synthesize

We share:

After students have had the chance to discuss their solutions, the teacher will bring the class together for a final debrief. A review of the main concept will be done (verbally with reference to the lesson's videos). Following this, students will have the opportunity to ask for further clarification on anything they still do not fully understand.

find, validate	**critical thinking**
remember, understand	evaluate, leverage
collaborate, communicate	**create**, publish
analyze, synthesize	

WRAP UP/REMINDERS:

Students will be asked to review all of today's material and to complete any of the assigned questions that they have not yet done. Students will be given a short quiz at the beginning of tomorrow's class on the distance formula.

Differentiation:

Modification:	Enrichment:
Allowing students to watch the video on their own devices allows them to work at their own pace. If students need to re-watch a step they have the ability to do so.	Students who have a strong grasp of how to work with the distance formula can assist their classmates who may be having difficulty.

Evaluation:

Students will be informally evaluated during the class. The teacher will make general observations while circulating throughout the class to make sure all students are on track. As well, students will be given a quiz on the distance formula at the beginning of tomorrow's class.

Teacher Reflection:

On-Line Resources: