

EDCI 300/306A Lesson Plan Final #1.

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Course & Grade: Integrated music and math lesson – grade 2 level.

Unit/Topic: Rhythm syllables, musical notation, and patterns.

Mentor Teacher: N/A

Date: N/A

Time: N/A

School: N/A

1. Learning Outcomes and Cross Curricular Competencies

a) Two 3-part Learning Outcomes.

1. Arts:

- **Given** a focus on rhythm syllables and musical notation through various instruction methods (direct instruction, interactive instruction/guided practice, group/partner work, independent work), and accompanied with song, **students will be able to** recognize the rhythms and music notes associated with Ta and Titi as well as the relationship between the two, **as demonstrated by** their ability to accurately clap them (proper hand motions, beats per note), and identify them from a sheet of music (including the composition they create in the provided worksheet), both in a group setting and independently.

2. Math:

- **Given** a focus on the properties and importance of patterns to everyday life through various instruction methods (direct instruction, interactive instruction/guided practice, group/partner work, independent work), as well as symbolic and visual representation, **students will be able to** describe the rules of, observe, and create their own patterns **as demonstrated by** their ability to explain, identify, and appropriately design a repeating sequence of colour coordinated music notes (including the composition they create in the provided worksheet) both in a group setting and independently.

b) BC K-9 Arts and Math Curriculum Documents.

1. Core Competency.

- Thinking → critical and reflective thinking → profile #2 “I can use evidence to make simple judgment.” → profile #3 “I can gather and combine new evidence with what I already know to develop reasoned conclusions, judgments, or plans.”

2. Understand - Big Ideas.

- Arts: “Inquiry through the arts creates opportunities for risk taking.”
- Math: “The regular change in increasing patterns can be identified and used to make generalizations.”

3. Know - Content Knowledge.

- Arts:
 - “Music: beat/pulse, duration, rhythm, tempo, pitch, timbre, dynamics, form, texture.”
 - “Visual arts: elements of design: line, shape, texture, colour, form; principles of design: pattern, repetition, rhythm, contrast.”
 - “Personal and collective responsibility associated with creating, experiencing, or sharing in a safe learning environment.”
 - “Symbolism as a means of expressing specific meaning.”
 - “Processes, materials, technologies, tools, and techniques to support arts activities.”
 - “Notation to represent sounds, ideas, and movement.”
- Math:
 - “Repeating and increasing patterns.”
 - “Change in quantity, using pictorial and symbolic representation.”

4. Do - Curricular Competency.

- Arts:
 - Exploring and creating: “Explore elements, processes, materials, movements, technologies, tools, and techniques of the arts,” “Create artistic works collaboratively and as an individual using ideas inspired by imagination, inquiry, experimentation, and purposeful play.”
 - Reasoning and reflecting: “Reflect on creative processes and make connections to other experiences.”
 - Communicating and documenting: “Experience, document and share creative works in a variety of ways,” “Demonstrate increasingly sophisticated application and/or engagement of curricular content.”
- Math:
 - Reasoning and analyzing: “Use reasoning to explore and make connections,” “Model mathematics in contextualized experiences.”
 - Understanding and solving: “Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving,” “Visualize to explore mathematical concepts.”
 - Communicating and representing: “Communicate mathematical thinking in many ways,” “Use mathematical vocabulary and language to contribute to mathematical discussions,” “Explain and justify mathematical ideas and decisions,” “Represent mathematical ideas in concrete, pictorial, and symbolic forms.”
 - Connecting and reflecting: “Reflect on mathematical thinking.” “Connect mathematical concepts to each other and to other areas and personal interests.”

5. First Peoples Principles of Learning (FPPL).

- “Learning involves patience and time.”
- “Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).”
- “Learning is embedded in history, memory, and story.”

c) Professional Growth Goal(s):

Chloe: “As I teach my portion of our created lesson plan, I would like to work on initiating meaningful dialogue with my audience by asking guiding questions and encouraging student participation. In addition, I will make an effort to actively listen and take input from their responses; I want them to feel heard. Reading the class is another one of my goals – if engagement is particularly difficult or an activity is not proving to be successful, I want to be able to formulate a confident decision in moving forward and making a plan that is in their best interest.”

Kailee: “My personal growth goal is to maintain student connection throughout my parts of the lesson, and to be able to notice when student understanding is on course or when I need to take a step back and go to plan B of how to explain things. In order to have a plan B, I need to go through my part of the lesson and think of different ways students might understand something better, and the questions/ lack of understanding that can come up and how to address it.”

Taya: “I want to work on feeling confident in my teaching. I find I often worry about not having answers for students. I need to spend time engaging with the material beforehand so that I feel confident in my abilities to answer student questions without hesitation. I want to speak clearly and explain things in a way all students will understand. I want to be able to explain things in many ways so that if my original statement doesn’t make sense to a student then I will be able to find a new way to explain it properly to them. I want to ensure that my teaching practice accommodates all learning styles.”

2. Assessment and Evaluation

Arts:

- **“Given** a focus on rhythm syllables and musical notation through various instruction methods (direct instruction, interactive instruction/guided practice, group/partner work, independent work), and accompanied with song, **students will be able to** recognize the rhythms and music notes associated with Ta and Titi as well as the relationship between the two, **as demonstrated by their ability to accurately clap them (proper hand motions, beats per note), and identify them from a sheet of music (including the composition they create in the provided worksheet), both in a group setting and independently.”**
 - The culminating assessment for the arts (music) component of this lesson includes pulling each student aside individually to the teacher’s desk (or somewhere more private), and asking them to clap out the composition that they created with the help of their finished worksheet (activity #6).
 - Here, students will need to put together and make connections with all the material covered up to this point; in order to successfully complete this task they must be able to identify which colour and musical note represents Ta and Titi, as well as the appropriate amount of claps/beats associated with a Ta and Titi. If they can do this without struggle, they will have met the expectation.
 - It’s important to note that this is fundamentally considered an introductory lesson, and accordingly students are not be expected to perfectly follow a tempo while clapping their pattern to the teacher. However, they should be able to exhibit that Titi happens in the same amount of time at as Ta, showing an understanding of the relationship between the two.

Math:

- **“Given** a focus on the properties and importance of patterns to everyday life through various instruction methods (direct instruction, interactive instruction/guided practice, group/partner work, independent work), as well as symbolic and visual representation, **students will be able to** describe the rules of, observe, and create their own patterns **as demonstrated by** their ability to explain, identify, and appropriately design a repeating sequence of colour coordinated music notes (including the composition they create in the provided worksheet) both in a group setting and independently.”
 - The culminating assessment for the math component of this lesson includes having students create their own pattern in the provided worksheet (activity #6).
 - Here, students will need to put together and make connections with all the material covered up to this point; in order to successfully complete this task they must have a full and thorough understanding of the properties of a pattern; a repeating sequence following a rule. They must thus have designed 2 sets of identical lines or measures of some combination of red and blue, and be able to recognize that they are the same.
 - To evaluate the preceding, when pulling each student aside individually to the teacher’s desk for the music portion of the lesson’s assessment, ask students to further explain the “rule” of their pattern, as well as name the colour/note that would come next in both. If they can do this without struggle, they will have met the expectation.

During class time students are expected to actively participate in answering some of the guiding questions (content and teaching strategies), in a calm and quiet manner and according to the preferred method of the teacher (raised hand, thumbs-up, etc.)

Again, with this being the first lesson of a unit, we do not feel that using such methods for a summative assessment would be necessary, as the concepts of rhythm syllables and patterns would still be very new to students. We would instead recommend using them for a formative assessment, to gauge where students fall in terms of their understanding, knowledge that could be used to confirm what would require further reiteration.

3. Considering Student Learning Needs

Modifications for a deaf student:

- Luckily, the majority of this lesson is accompanied by visuals. However, a particular section that you would need to incorporate change into for a deaf student would include activities #1, 2, and 5, which involve the listening of songs and their rhythm.
- As a teacher you could thus prepare ahead of time by pre-recording some drums beats accentuating the rhythm of each one, so that they could feel the music through vibrations. You could also encourage the class to sign along for a round instead of clapping. Additionally, for a student with a less severe hearing impairment, they could try listening using headphones (enabling them to turn up the volume as loud as possible without disturbing other classes).
- If these are not practical solutions, be sure to point to the lyrics/part of the song that is being played as the track progresses so that everyone can follow along.

Adaptations for student with autism (displays aggression and does not work well with others):

- In the case of a student with autism who displays aggression and does not work well with others, it would be potentially necessary to remove all manipulatives (activity #2

and 5), and replace them with small square pieces of paper coloured red and blue to prevent the throwing of objects.

- Eliminating the small group work (activity #5), and having the student work either individually or with an EA could also be proactive measure.
 - Specifically, if you found that there were other students in your class that benefited from small group work, then you could put them together, or all together give a choice between independent and small group work.

4. Required Resources

See *Additional Resources PDF*.

1. Projector or document reader – all activities.
2. Access to the GoogleSlides presentation (via a laptop, etc.) – all activities.
3. Printed copy of the song *Engine, Engine Number Nine* - activity #2,3.
4. Printed copies of the song *Apple Tree* (1/group or pair) – activity #5.
5. Printed copies of the coordinating worksheet (1/student) – activity #6.
6. Red and blue markers/pencil crayons (1 of each/student) – activity #6.
7. Manipulative kits (specifically the red and blue blocks – should have for approximately 10 of each colour/group or pair) – activity #2,3,5.

5. Content and Teaching Strategies of Lesson

a) Introductory statement (Overview).

- Refer to the GoogleSlides presentation (slide 1).

“Good morning everyone! Today we will be learning about how music and math are related by exploring rhythm and patterns.”

b) Hook.

- Refer to the GoogleSlides presentation (slide 1).

“Think about your favourite song... What is it that you like about listening to it? What are your favourite lyrics? Do they repeat at all/do you sing them more than once?”

c) Content and Teaching Strategies.

Activity #1 – Rhythm Syllables, Music Notes, and Clapping.

- Refer to the GoogleSlides presentation (slides 3-8).
 1. (slides 3-5) Begin by explaining to your class what both the rhythm syllables Ta and Titi are, focusing on their musical notation (what note they look like), how many beats they represent, how they can be clapped (regular vs. two-finger) and their relationship (take up the same amount of time).
 2. (slides 6-7) Try clapping the three provided examples with your class (2 pieces of sheet music, and one video).
 - Consider asking the guiding questions: What do you notice about the Tas and Titis? How are they the same? How are they different?
- ◆ Time: approximately 2-3 minutes.
- ◆ **Learning strategy: direct instruction, interactive instruction/guided practice.**
- ◆ *FPPL: “Learning involves patience and time.” “Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).”*

Activity #2 – Engine, Engine, Number Nine.

- Refer to the GoogleSlides presentation (slides 9-12).
 1. (slide 9) Present the sheet music for the song *Engine, Engine Number Nine*.
 - Consider asking the guiding questions: What do you see? Where are the Tas? Where are the Titis?
 2. (slide 11) As a class, collectively discuss and label which notes are Tas and which notes are Titis in the sheet music, assigning a red block to each Ta, and a blue block to each Titi (found/accessible in the manipulative kits).
 - Put a printed copy of the sheet music under a projector/document reader so that the colour block you are assigning to each music note (Ta, Titi) can be visible to all students.
 - For the purpose of teaching this lesson over Zoom in an online format, we have decided to use a virtual version combined with animations.
 - Clarify that students must raise their hand in order to participate in the discussion.
- (slide 12) Finish by leading the class in singing the song lyrics and clapping out the rhythm according to the now annotated sheet music.
 - Try removing the sheet music, leaving just the coloured blocks representing the Tas and Titis for an added challenge.
- ◆ Time: approximately 4 minutes.
- ◆ **Learning strategy: interactive instruction/guided practice.**
- ◆ *FPPL: “Learning involves patience and time.” “Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).”*

Activity #3 – Making Connections.

- Refer to the GoogleSlides Presentation (slide 13-14).
 1. (slide 14) With the Tas and Titis of the sheet music for *Engine, Engine Number Nine* appropriately marked with the red and blue blocks/symbols and made visible to all students, ask your class what they notice about the orientation of the colours in each line/measure.
 - Consider asking the guiding questions: What do you notice? Which colour starts, which colour ends? Do you see any similarities? Do you see any differences? Remind me, which circles represent which notes again? How many blue circles are there? How many red circles are there? How many blue

- circles are there until a red circle appears? Do see anything repeating? Do you hear anything repeating?
 - Clarify that students must raise their hand in order to participate in the discussion.
- The ultimate goal is for students to recognize that a pattern is occurring and repeating 4 times (blue, blue, blue, red *4).
 - ◆ Time: approximately 2 minutes.
 - ◆ **Learning strategy: interactive instruction/guided practice.**
 - ◆ *FPPL: “Learning involves patience and time.” “Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).” “Learning is embedded in history, memory, and story.”*

Activity #4 – Introduction to Patterns.

- Refer to the GoogleSlides presentation (slides 15-17).
 1. (slide 16) Define what a pattern is (a repeating sequence; something that happens over and over again according to a rule), as well as present and explain the 3 examples (blue red, blue red red, blue red yellow).
 - For the purpose of teaching this introductory lesson it is not yet necessary to get into the mechanics of pattern form (i.e. AB, ABB, ABC) – although this something you should be alluding to by mentioning sequence and rules, this will fundamentally be a progression focused on in the next lesson.
 - Consider asking the guiding questions: What coloured circles are repeating in these patterns? What do you think the “rules” are for these patterns? What colour circles would come next in each of these patterns?
 - Clarify that students must raise their hand in order to participate in the discussion.
 2. (slide 17) Brainstorm with your students about the importance and relevance of patterns to everyday life.
 - Consider asking the guiding questions: Why do think patterns important? Where have you seen patterns before? Do you think there is a limit to how many times a pattern can repeat?
 - Clarify that students must raise their hand in order to participate in the discussion.
 - ◆ Time: approximately 4 minutes.
 - ◆ **Learning strategy: direct instruction, interactive instruction/guided practice.**
 - ◆ *FPPL: “Learning involves patience and time.” “Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).” “Learning is embedded in history, memory, and story.”*

Activity #5 – Apple Tree.

- Refer to the GoogleSlides presentation (slides 18-21).
 1. In small groups or pairs, give students a copy of the sheet music for the song *Apple Tree*, and ask them to again represent the Tas and Titis by placing either red or blue blocks on each one, as well as practice clapping it out.
 - Circulate and gage student learning by checking if they have been successful in identifying the correct music note with the correct colour block, and listening to the groups clap out the coordinating rhythm.
 - Consider asking the guiding questions: What do you notice? Which colour starts, which colour ends? Do you see any similarities? Do you see any

differences? Remind me, which circles represent which notes again? How many blue circles are there? How many red circles are there? How many blue circles are there until a red circle appears? Do see anything repeating? Do you hear anything repeating? Can you observe any patterns taking place? What is the “rule” of this pattern? What colour block/music note would come next in the pattern?

- The ultimate goal is for students to recognize that a pattern is occurring and repeating 2 times (blue, red, blue, red, blue, blue, blue, red *2), clapping it out with the proper hand motions and beats per note.

- ◆ Time: approximately 4 minutes.
- ◆ **Learning strategy: small group work.**
- ◆ *FPPL: “Learning involves patience and time.” “Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).” “Learning is embedded in history, memory, and story.”*

Activity #6 – Tying it all Together.

- Refer to the GoogleSlides presentation (slides 22-23).
 1. (slide 23) Hand out to each student a copy of the provided worksheet guiding them in creating a 4-piece measure composition and go over its instructions as followed:
 - a) In the top half of measure 1, colour each of the 4 squares using either red or blue – you must use both, but only one per square – this will be your first pattern.
 - b) In the bottom half of measure 1, write the music note that the colour of each square you chose represents.
 - c) In measure 2 repeat the pattern that you made in measure 1 (colour the squares and label the music notes in the same way).
 - d) In the top half of measure 3, colour each of the 4 squares using either red or blue – you must use both, but only one per square – this will be your second pattern.
 - e) In the bottom half of measure 3, write the music note that the colour of each square you chose represents.
 - f) In measure 4 repeat the pattern that you made in measure 3 (colour the squares and label the music notes in the same way).
- Later on throughout the day, call each student aside individually and ask them to clap out the rhythm of their composition/pattern, explain the “rule,” and name the colour/note that would come next in both – see assessment.

- ◆ Time: approximately 8 minutes.
- ◆ **Learning strategy: independent work/inquiry.**
- ◆ *FPPL: “Learning involves patience and time.” “Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).” “Learning is embedded in history, memory, and story.”*

d) **Consolidation**

- Refer to the GoogleSlides presentation (slide 24).

“Good work today! Together we learned about how rhythm and patterns are connected and important to our everyday lives, by studying Tas and Titis and repeating sequences. A reminder to complete the worksheet for homework if you haven’t already.”

“Next lesson we will dive into another way that music and math are related by exploring a special kind of organization called form.”

6. Reflections