MINISTRY OF EDUCATION, YOUTH & INFORMATION
Every Child Can Learn, Every Child Must Learn

MATH COUNTS

Subject:	Mathematics
Content strand:	Numbers
Grade Level:	Six (6)
Lesson Duration:	1 Hour
Specific Objectives:	At the end of the lesson, the pupils should be able to:
	a. Define finite set and infinite set;
	b. Identify sets as finite set or infinite set;
	c. Tell the difference of the finite set and infinite set;
	d. Give their examples of finite set and infinite set.
Prerequisite Knowledge:	Students would have known what a set is as well as some classification of sets.
Key Vocabulary:	finite, infinite, members, elements, limited, unlimited
Skills:	Classifying sets, identifying sets, justifying responses given.
Materials:	Pictures, cards with sets, response cards
Content Summary:	A finite set is a set whose number of elements are fixed and limited and can be determined while an infinite set is a set whose number of elements are not fixed, unlimited and cannot be determined.

Teaching/Learning Activity:

Engage and Explain:

Two pictures will be presented to the students as shown below:

A discussion will be guided with the following questions:
- What have you seen in the first picture?
- Can you describe them?
- Do you know what are the exact number of fishes that live in the ocean?
- How about in the second picture, what can you see there?
- How many fingers are there?

- Now, let's go back to the first picture, since you know already what a set is, can we consider this one as a set?
- How about the second picture? (So, we can label the first picture as set A and the second picture as set B.
- What difference have you observed in this two sets in terms of the number of elements/members they contained?
  (Similarly, in mathematics, there are also two kinds of sets, those whose elements or members are limited, fixed and can be determined and those whose numbers of elements are not fixed, unlimited and cannot be determined. Now, let's find out what are these sets!)

Explore:
In groups, students will be given cards with examples of the two kinds of sets - Example A and Example B as shown below:

1. The vowels in the alphabet   1.the set of prime numbers
2. The set of whole numbers between 5 and 12   2.the set of whole numbers
3. Positive multiple of 3 that are less than 10   3.the set of all unit of fractions

Guided questions for discussion:
  - How many sets are there in the example A?
  - How about in the example B?
  - Identify the elements in each set and list them using the roster notation method on your response cards.
  - Now compare the two sets of examples written using the roster notation method. What difference have you observed between the two sets?
  - Based from your observations of the difference of the two kinds of sets, what is then a finite set?
  - What is an infinite set?

They will now be asked to identify things in the environment that can be classified as finite and infinite giving reason.

Elaborate:
In groups, students will be asked to create a scenario showing how applicable is the concept in real world.
Each group will present their scenario to the class, who will critique objectively.

Evaluate:
  - Students will be asked to make a journal entry on what was learnt in the lesson, telling whether or not the information was beneficial.
  - In two groups, students will participate in a game. The following sets will be posted, and the students will group them according to the kind of set they belong. The first group to complete the task correctly will be given 10 points. (3 sets of cards will be posted for a maximum of 30 points).

- **Cards with sets: the days of a week, set of odd numbers, 2,4,6,8,10, 5,10,15,20,…, the first five letters of the alphabet, and set of counting numbers less than 10.**

Evaluation (Teacher):

Were students able to:

	0% - 50%	51% - 80%	81% - 100%
Create/ identify finite set and infinite set			
Compare finite set and infinite set			
Contrast finite set and infinite set			
Work collaboratively			

Comments:

Areas of strengths:

_____

Areas of weaknesses

_____

Actions to be taken

_____