Healthy Diet (Intake of Table Salt)

Key Stage: 1

Strand:
　Mathematics: Number (Learning Unit: 3N5 Mixed operations (I))
　General Studies: Understand the importance of food to health
　　　　　　　　　　Develop healthy living and eating habits
　　　　　　　　　　Treasure and strive for keeping healthy

Objectives: (i)   To solve problems involving addition and subtraction, addition and multiplication, and subtraction and multiplication
　　　　　　　　(ii)   To estimate results
　　　　　　　　(iii)   To uphold and strive for healthy living, and to develop habits of healthy diet

Prerequisite Knowledge: Mixed operations of addition and subtraction

Description of the Activity:

<u>Scenario</u>

According to the information from Hong Kong's Centre for Food Safety, about one-fifth of primary students are overweight or obese. These students have a higher risk for diseases. Dietary habit is one of the important factors affecting the health. Taking a primary 3 student as an example, the upper limit of the daily intake of sodium is 1500 milligram.

(Source of reference: www.cfs.gov.hk/tc_chi/programme/programme_rafs/programme _rafs_n_01_18_CHOICE_461.html)

The following learning and teaching activity is about the daily intake of sodium.

<u>Activity 1</u>

1. The teacher discusses with students the problems of overweight and obesity with reference to the source.
2. Students are reminded the importance of developing the habits of healthy diet.

Notes for Teachers:
1. The teacher should avoid using particular students and other teachers as examples.
2. The teacher should tell students that sodium is the major ingredient of table salt, and let them recognise that sodium in table salt is one of the essential nutrients required for human bodies. However, over-intake of table salt increases the risk of suffering from high blood pressure and coronary disease.

Activity 2
1. The teacher shows how to calculate the sodium level of food in a 1-day diet including breakfast, lunch and dinner of a student Peter.
2. The students are asked to redesign the 1-day diet for Peter.

Notes for Teachers:
1. The teacher may designate the "1-day diet" to be breakfast, lunch and dinner.
2. Since the unit milligram (mg) is not required in the curriculum, in accordance to the ability of junior primary students, instead of "milligram", "unit" is used in the worksheet and the annex.
3. The teacher may remind students to use estimation when designing the diet.
4. The teacher should remind students that food combination having a relatively low sodium level may not be a healthy food combination. Some other factors, such as sugar and fat content, should also be considered.

Activity 3
Students discuss the results of calculation in groups and report the results of discussion.

Questions for discussion:
1. In your design of the food combination, does the sodium level exceed 1500 units?
2. Would you change the food combination?
3. What would you do if you do not want to change the food combination? Share your views with your classmates. (For example, it would be eating less amount of food, eating less salty food, reducing the number of times of dining out)

Notes for Teachers:
The teacher should encourage students to estimate the sodium level of different food combinations during discussion. The teacher may also point out that it is hard to avoid

exceeding the upper limit of 1500 mg sodium level when dining out.

This example mainly involves the following generic skills:

1. Mathematical Skills
    - Apply simple mathematics knowledge in daily life

2. Problem Solving Skills
    - Devise at least one solution according to the requirements of a problem

3. Communication Skills
    - Use clear and appropriate ways to express their ideas and feeling
    - Collaborate and discuss with other people to finish simple tasks

Worksheet

Below shows an example of a 1-day diet of Peter.

With reference to the information provided by the teacher and this example, calculate the sodium level of the 1-day diet.

1a. Peter had a dish of plain rice rolls (2 sets) and a cup of hot chocolate (2 sets) for breakfast.

The total sodium level in Peter's breakfast:

$242 \times 2 + 55 \times 2$

= _____

= _____

= _____

= _____ (unit)

1b. Peter had a bowl of steamed rice with chicken and winter mushroom (3 sets) and a cup of orange juice (1 set) for lunch.

The total sodium level of Peter's lunch:

= _____

= _____

= _____

= _____ (unit)

1c. Peter had steamed rice with dishes (3 sets) and a bowl of Chinese "long-hour" soup (2 sets) for dinner.

The total sodium level of Peter's dinner:

=_____

=_____

=_____

=_____(unit)

Estimate if the total sodium level in Peter's three meals exceeds 1500 units.

Design a 1-day diet (including 3 meals) with low-salt level for yourself. Compare your diet with Peter's and discuss with your classmates how to improve it.

The following three pieces of information from Centre for Food Safety and "Health@work.hk Project" are the reference of the sodium levels and the information of the food.

1.   Nutrient content of children's meals in Hong Kong (Chinese only)

http://www.cfs.gov.hk/tc_chi/programme/programme_rafs/programme_rafs_n_01_18_CHOICE_461.html

2.   Study on Sodium Content in Local Foods (Report)

https://www.cfs.gov.hk/english/programme/programme_rafs/files/programme_rafs_n_01_14_e.pdf

3.   Tips for Healthy Dining Out

https://www.healthatwork.gov.hk/en/content.asp?MenuID=37

Food	Sodium level (unit)** in each set (100g) of food	No. of sets in each serving (approximation)
Plain rice rolls	242	2 sets for 1 dish
Congee with preserved egg and pork	283	3 sets for 1 bowl
Oatmeal porridge	265	2 sets for 1 bowl
Plain breads/ cakes	350	2 sets for 1 piece
Fried noodle dishes	412	4 sets for 1 dish
Stuffed breads containing meat	462	2 sets for 1 piece
Burgers	528	3 sets for 1 piece
Sandwiches	539	2 sets for 1 piece
Hotdog	610	2 sets for 1 piece
Boiled headed lettuce	65	3 sets for 1 dish
Boiled water spinach	140	3 sets for 1 dish
Steamed rice with dishes	206	3 sets for 1 bowl
Steamed rice with chicken and winter mushroom	172	3 sets for 1 bowl

Food	Sodium level (unit)** in each set (100g) of food	No. of sets in each serving (approximation)
Steamed rice with stir-fried egg and shrimp	255	3 sets for 1 bowl
Spaghetti	336	4 sets for 1 dish
Soup noodles	387	4 sets for 1 bowl
Cookies	356	1 set for 3 pieces
Hash browns	370	1 set for 1 piece
Meat balls	744	1 set for 2 pieces
Preserved sausages	933	1 set for 1 piece
Distilled water	0	3 sets for 1 cup
Soft drinks	0	3 sets for 1 can
Orange juice	4	3 sets for 1 cup
Hot chocolate	55	2 sets for 1 cup
Chinese "long-hour" soups	225	2 sets for 1 bowl

** For the ease of calculation and discussion, the unit milligram (mg) is replaced by "unit" and some data are rounded to the nearest integer.