Wolf Creek Public Schools
Creating Success For All Learners

Health in Action Project

Alberta Health Services

Lifestyles for Learning

Pillar: Active Living
Division: I, II, III
Grade Level: 3-7
Core Curriculum Connections: Math

I. Rationale:

It is a well-known fact that health and education are inseparable - good health supports successful learning and successful learning supports good health. Healthy students are more attentive, have better attendance, and perform better in school. Through participation in this math activity, students will explore how their activity levels and sleep habits influence their learning and behaviour. Over the period of a week, students will record the amount of time they spend exercising, sleeping, watching T.V., going to school, and doing homework. After creating graphs based on this information, students will actively analyse the data to identify ways to improve their overall health and learning.

II. Activity Objectives:

Students will be able to:

- recognize that personal habits, behaviours, and lifestyles choices influence learning
- identify ways to make improvements to their habits and develop a healthier lifestyle

III. Curriculum Outcomes: Math

Statistics and Probability **General Outcome:** Collect, display and analyze data to solve problems. Collect, display and analyze data to solve problems.				
Grade 3	**Grade 4**	**Grade 5**	**Grade 6**	**Grade 7**
1. Collect first-hand data and organize it using: • tally marks • line plots • charts • lists to answer questions. [C, CN, PS, V] [ICT: C4–1.3]	1. Demonstrate an understanding of many-to-one correspondence. [C, R, T, V] [ICT: C6–2.2, C6–2.3]	1. Differentiate between first-hand and second-hand data. [C, R, T, V] [ICT: C1–2.2, P5–2.3]	1. Create, label and interpret line graphs to draw conclusions. [C, CN, PS, R, V]	1. Demonstrate an understanding of central tendency and range by: - determining the measures of central tendency (mean, median, mode) and range - determining the most appropriate measures of central tendency to report findings. [C, PS, R, T] [ICT: P2–3.4]

2. Construct, label and interpret bar graphs to solve problems. [C, PS, R, V] [ICT: C4–1.3, C7–1.3, C7–1.4]	2. Construct and interpret pictographs and bar graphs involving many-to-one correspondence to draw conclusions. [C, PS, R, V]	2. Construct and interpret double bar graphs to draw conclusions. [C, PS, R, T, V] [ICT: C6–2.2, P5–2.3]	3. Graph collected data, and analyze the graph to solve problems. [C, CN, PS, R, T] [ICT: C6–2.5, C7–2.1, P2–2.1, P2–2.2]	2. Determine the effect on the mean, median and mode when an outlier is included in a data set. [C, CN, PS, R]
Number **General Outcome:** Develop number sense.				
6. Describe and apply mental mathematics strategies for adding two 2-digit numerals 7. Describe and apply mental mathematics strategies for subtracting two 2-digit numerals	5. Describe and apply mental mathematics strategies, to determine basic multiplication facts to 9 × 9 and related division facts. [C, CN, ME, R]	3. Apply mental mathematics strategies and number Properties to determine, with fluency, answers for basic multiplication facts to 81 and related division facts. [C, CN, ME, R, V]	6. Demonstrate an understanding of percent (limited to whole numbers), concretely, pictorially and symbolically. [C, CN, PS, R, V]	3. Construct, label and interpret circle graphs to solve problems. [C, CN, PS, R, T, V] [ICT: P2–3.3]

IV. Materials:

- "Habit Tracking" handout (included)
- graphing paper for each student
- 1 poster board for each student
- markers and/or crayons

V. Procedure:

1. Explain the information students will be collecting throughout the week.
2. Handout the "Habit Tracking" sheet and explain how to record the information.
3. At the end of the week, students will create graphs to illustrate the information they have collected (bar graph, pictograph, double bar graph, line graph, or circle graph, etc.). The first draft will be done on a regular sheet of graph paper. Have students transfer their graphs to poster board so that they can be better analysed by the class.
4. Have each student share and discuss their graph.
5. Create problems for students to solve based on the information provided in the graphs (incorporate Number outcomes as identified in the table above). For example, Grade 6 students could be asked to calculate the percentage of time they spend sleeping, exercising, doing homework etc. each day. Have students circulate in pairs to perform calculations, solve problems, and draw conclusions.
6. Have each student analyse their own graph and then write down ways they could improve their habits to influence their learning in a positive way.

VI. Extensions and Variations:

- Special needs learners could focus on recording just a couple of the activities; e.g., time spent sleeping and watching T.V.
- Have students repeat the activity the next week, to see if students were able to implement any changes in their habits.

VII. Assessment Ideas:

- completed graphs and calculations

Habit Tracking

Activity / Time	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Sleep							
Exercise							
School							
Homework							
Watching T.V.							