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Grade 4 Math Assessments Curriculum Map

Includes math assessments for all five strands of math for the entire year.

Each assessment includes a rubric and is divided into 4 sections:

1. Understanding
2. Problem Solving
3. Communication
4. Application

Number Sense & Numeration

- Place Value
- Multiplication & Division
- Fractions & Decimals
- Addition & Subtraction
- Money

Measurement

- Time
- Mass, Capacity & Volume
- Linear Measurement, Area & Perimeter

Geometry & Spatial Sense

- 2D & 3D Shapes & Angles

Patterning & Algebra

- Patterning
- Expressions & Equality

Data Management & Probability

- Data Management

Grade 4 Assessment: Data Management

Name: _____



	Level 1	Level 2	Level 3	Level 4
Part A Understanding	Demonstrates a limited understanding of concepts – major errors.	Demonstrates some understanding of concepts – several errors.	Demonstrates an understanding of concepts – few errors.	Demonstrates a thorough understanding of concepts – no errors.
Part B Problem Solving	Demonstrates limited problem solving skills – major errors.	Demonstrates some problem solving skills but has several errors.	Demonstrates problem solving skills – few errors / some information missing.	Demonstrates effective problem solving skills – no errors.
Part C Communication	Student has difficulty explaining mathematical thinking.	Student, with some difficulty, can describe their mathematical thinking. Some information may be missing or unclear.	Student can describe their mathematical thinking. Some information may be missing or unclear.	Student effectively describes his / her mathematical thinking.
Part D Application	Student applies limited knowledge and skills learned – major errors.	Student applies some knowledge and skills learned – several errors.	Student applies knowledge and skills learned – few errors.	Student effectively applies knowledge and skills learned – no errors.

Name: _____

Part A – Understanding

1. Use the data in the table to answer the questions below.

How Long Animals Sleep in a Day

Animal	Hours
Squirrel	15
Lion	14
Ferret	15
Cow	4
Chimpanzee	10
Brown Bat	20
African Elephant	3

a) Which animal sleeps the most hours? _____

b) Which animal sleeps the least? _____

c) How many more hours does a lion sleep than a cow?

d) How many hours in a day is the cow awake? _____

e) Which animals spend more than half of the day sleeping? _____

2. Use the stem-and-leaf plot to answer the questions on the following page.

Number of Minutes Spent Playing Outside

Stem	Leaf
2	0 5 5
3	0 5 7 9
4	0 5 5 5 6
5	
6	0 5 6 8
7	0 5

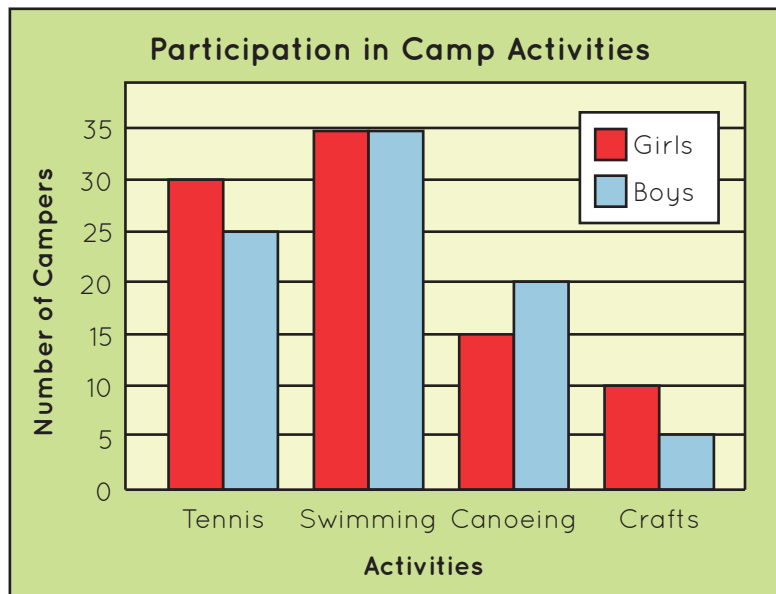
a) How many students spent 45 minutes playing outside?

b) How many students spent **more than** one hour playing outside? _____

c) How many students spent **less than** 30 minutes playing outside? _____

d) What is the median of this set of data? _____

3. Use the graph below to answer the questions.



a) What activity did girls enjoy the most? _____

b) What activity did boys enjoy the least? _____

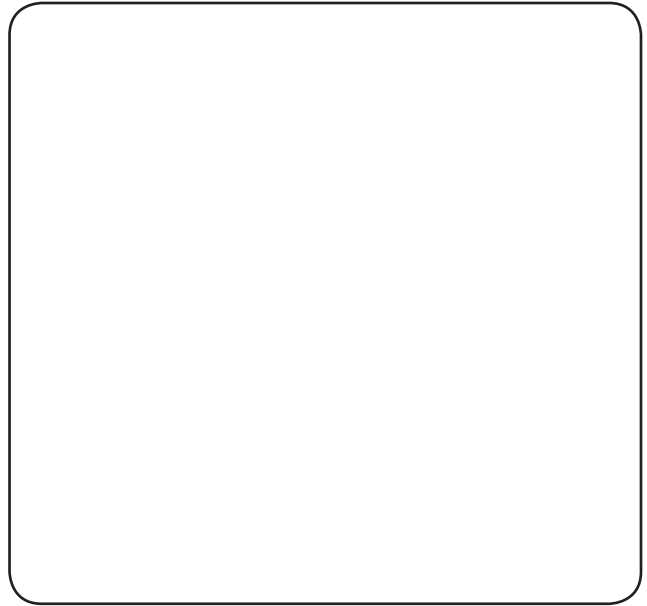
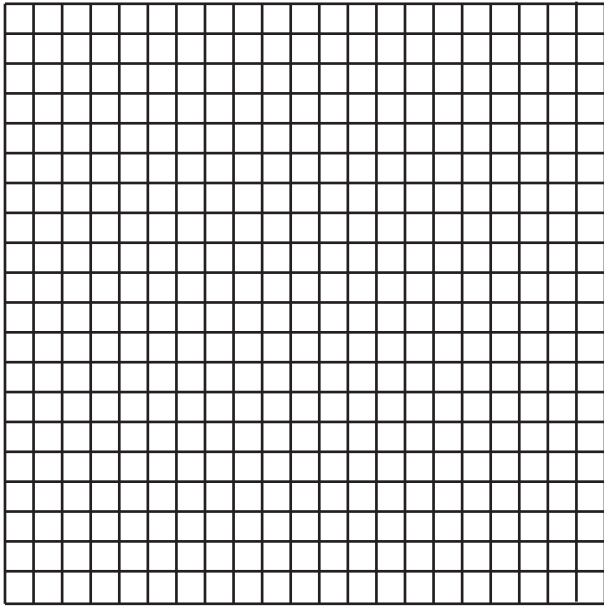
c) How many boys and girls preferred swimming? _____

d) How many more girls preferred tennis than boys? _____

e) How many more boys preferred canoeing than girls? _____

Part B – Problem Solving

1. Your grid paper has 20 squares along one side. The greatest value you have to display on the graph is 150. What scale will you use? Explain. Use the picture to help you explain if needed.



2. Suppose you were surveying your classmates about their favourite movie. What would you do if some students gave answers not listed on your tally chart?

3. Complete the tally chart following the clues. 100 students were surveyed.

Favourite Ice Cream Flavour

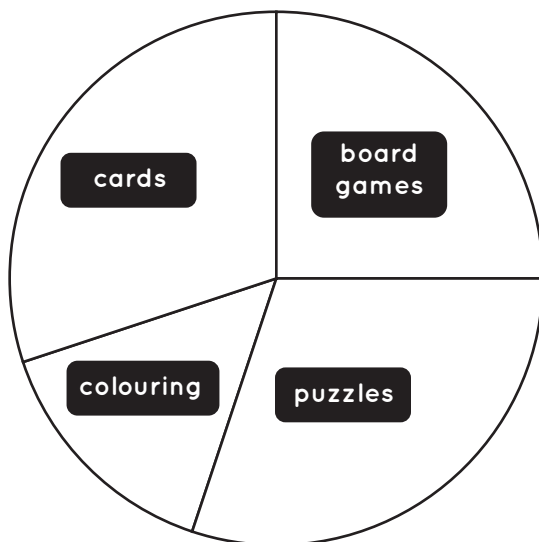
Flavour	# of Students
Chocolate	
Vanilla	
Strawberry	
Neopolitan	

Clues:

- a) $\frac{1}{4}$ of the students selected vanilla as their favourite flavour.
- b) 20 more students liked chocolate better than vanilla.
- c) the same number of students liked strawberry and neopolitan.

4. The circle graph below shows the favourite indoor activities of students in Sam's class. There are 24 students in Sam's class. About how many of them chose board games as their favourite indoor activity? Show your work.

Favourite Indoor Activities



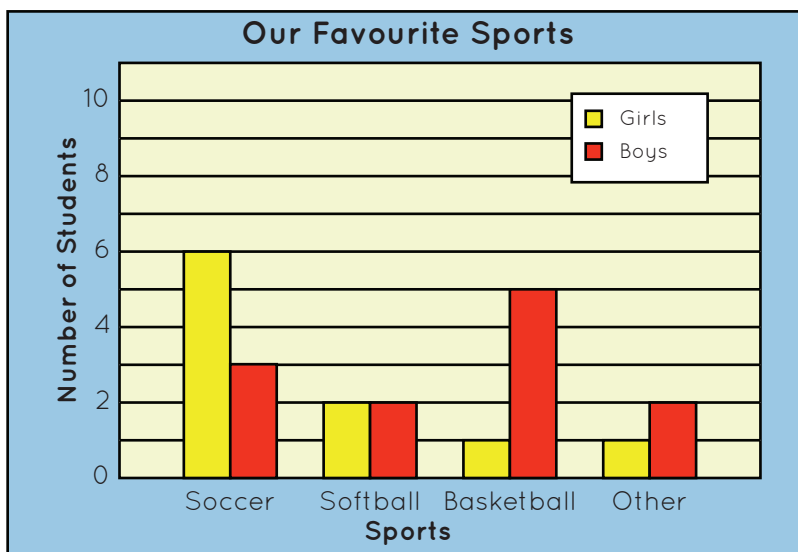
5. The students decided to plant trees to make their playground nicer. The pictograph below shows how many trees were planted each day. Each picture represents 7 trees. How many trees did the students plant altogether? Show your work.

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Name: _____

Part C - Communication

1. Write five things you know from looking at the graph below.



2. Write 2 survey questions you would ask and then display results in a double bar graph:

i) _____

ii) _____

3. Write 5 things you know from looking at the stem-and-leaf plot below.

Time Spent Studying for Math Test (minutes)

Stem	Leaf
1	2 5 5 6 6 7 8
2	0 0 0 0 2 5 6
3	0 1 1 1 3 5 5 8
4	8 8 9

4. Write 2 survey questions you would ask and then display results in a stem-and-leaf plot.

i) _____

ii) _____

Part D – Application

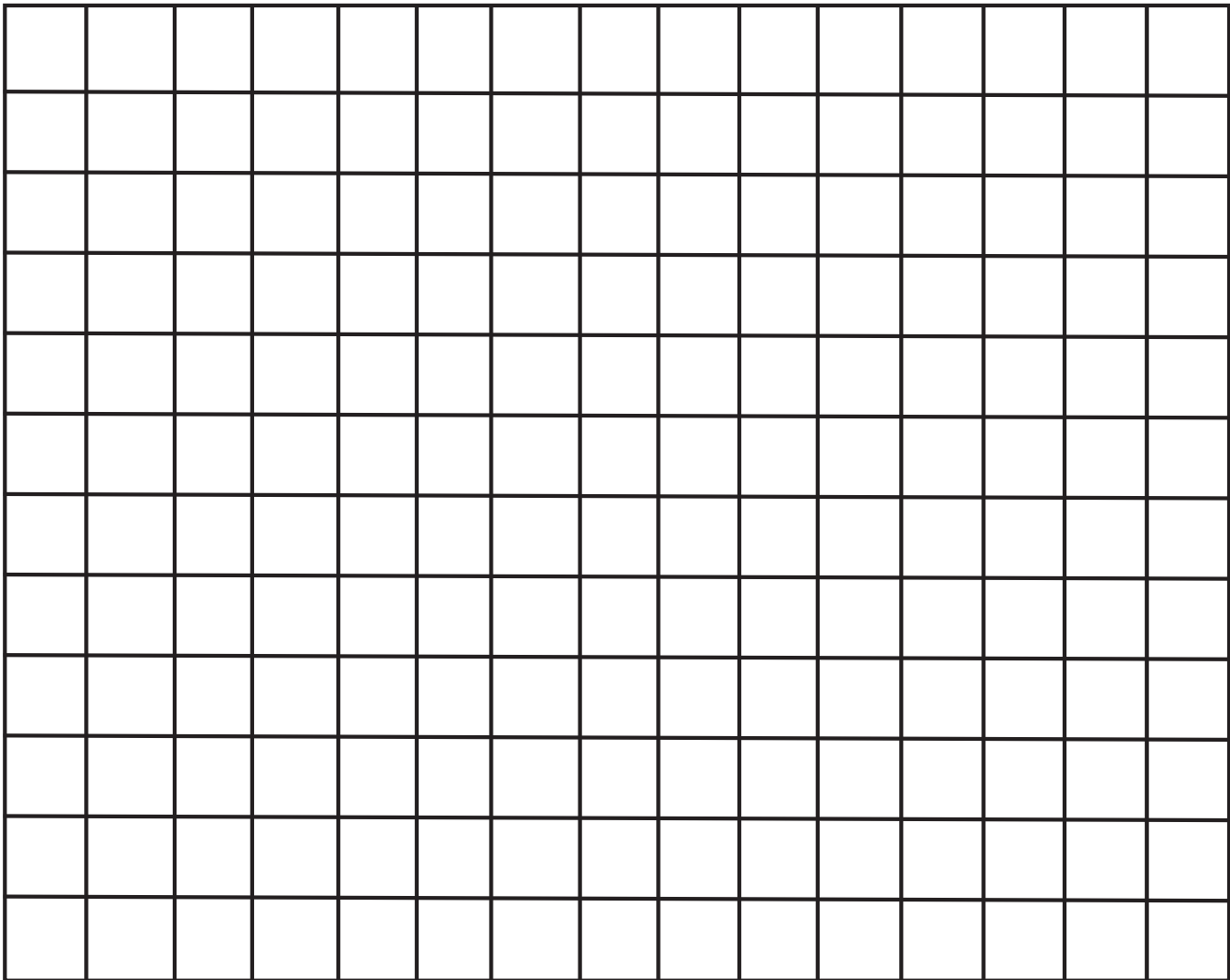
1. Below are the test scores from the last math test. In the space provided, create a stem-and-leaf plot to display the data. Do not forget to include all appropriate titles and labels!

Math Test Scores (%)

52	75	72	70	58
76	76	65	85	82
89	74	65	75	87
93	77	68	72	90
67	78	79	85	68

2. Students voted for their favourite type of music. The results are displayed in the table below. Draw a double bar graph to display these data. Be sure to include all appropriate titles and labels!

Type of Music	Rock	Rap	Country	Pop
# of Boys	65	70	20	35
# of Girls	40	25	60	75



Data Management & Probability Assessment

DATA MANAGEMENT ASSESSMENT

PART A

1. a) brown bat b) African elephant c) 10 d) 20
e) brown bat, ferret, lion, squirrel
2. a) 3 b) 5 c) 3 d) 45
3. a) swimming b) crafts c) 70 d) 5 e) 5

PART B

1. Answers would vary.
2. Students could add a category 'other'.
3. Chocolate – 45 Vanilla – 25 Strawberry – 15
Neopolitan – 15
4. Approximately 6 students.
5. 210 trees.

PART C

Answers will vary.

PART D

1.

Math Test Scores %	
9	0 3
8	2 5 5 7 9
7	0 2 2 4 5 5 6 6 7 8 9
6	5 5 7 8 8
5	2 8

2. Scale is counting by five.

