Statistics

Activity 4 Assessment

Interpreting Data

Data Collection		
Differentiates between open-ended and closed-list questions What is your favourite fruit? "This is an open-ended question because respondents can answer in their own words."	Collects data using closed-list questions and categories "What is your favourite fruit: orange, apple, banana, grapes, or other?" Orange, apple, apple, grapes, other, banana, orange, …, orange, apple	Categorizes collected data **Fruit** / **Tally** Orange / 𝍸 ||| Apple / 𝍸 𝍸 Banana / |||| Grapes / 𝍸 | Other / | "I marked a tally each time a student chose a particular fruit."
Observations/Documentation		

Statistics

Activity 4 Assessment
Interpreting Data

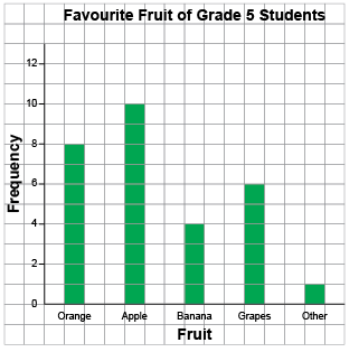
Data Collection (cont'd)

Organizes categorized data in frequency tables

Fruit	Frequency
Orange	8
Apple	10
Banana	4
Grapes	6
Other	1

"I organized the data in a frequency table so I can see and compare the numbers of students who chose each fruit."

Represents data using bar graphs and dot plots



"I showed the data on a bar graph."

Flexibly represents data based on frequency (including stem-and-leaf plots)

Masses of Dogs Seen in One Day

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

Key: 1 \| 2 means 12 kg

"I see the same number of dogs had a mass between 20 kg and 29 kg as between 30 and 39 kg."

Observations/Documentation

Statistics

Activity 4 Assessment

Interpreting Data

Frequency and Mode

Notices changes in frequency across categories in tables and graphs

Age	Number of Students
9	𝍸
10	𝍸 𝍸 𝍸
11	||||
12	|

"I see more students are 10 years old than 9 years old."

Counts individual data points to determine frequency

Age	Number of Students	Frequency
9	𝍸	5
10	𝍸 𝍸 𝍸	15
11	||||	4
12	|	1

"Five students are 9 years old and 15 students are 10 years old."

Identifies mode as a measure of frequency

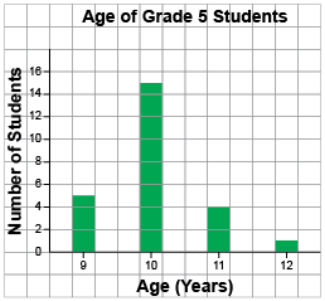
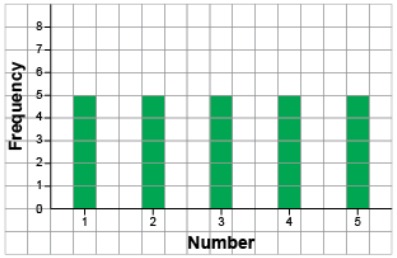
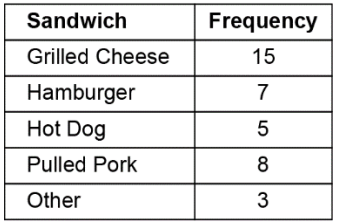
Age	Number of Students	Frequency
9	𝍸	5
10	𝍸 𝍸 𝍸	15
11	||||	4
12	|	1

"The mode is 10 years old because it has the highest frequency, 15."

Observations/Documentation

Activity 4 Assessment
Interpreting Data

Frequency and Mode (cont'd)

Identifies the mode in various representations of data	Recognizes data sets with no mode, one mode, or multiple modes	Uses the mode to justify possible answers
 "The mode is 10 years old because it is the category with the tallest bar."	 "The data set has no mode because all the bars are the same height."	 "The mode is grilled cheese sandwich, so I am going to focus on selling different types of grilled cheese sandwiches on my food truck."

Sandwich	Frequency
Grilled Cheese	15
Hamburger	7
Hot Dog	5
Pulled Pork	8
Other	3

Observations/Documentation