Lesson Plan

Name of Teacher	**Math Primary**	Class	**6**
Term	**1**	Subject	**Math**
Date	**Week 7 Oct.10 –Oct .14**	Topic	**Displays of Quantitative Data**
Period	**3**	Chapter/ Section	**Ch2. Section 2.3**

| Learning Objectives (Points)/ Target concepts	Resources Required	Diary

• Recall: Check the old homework.
• Start with LP2: **Construct and use histograms for quantitative data set.**
  - **Ex.3 (p.40)**
  - **Act.3 (p.41)**
  - **Ex.4 (p.41)**
  - **Act4 (p.41)**
• Wrap Up
	• Diary
	• Tablet
	• Class copybook
	• Class book
	• Pencil
	• Yellow highlighter
	• IWB
	• ILS
		S: Math
		MC: S.2.3, LP2 on p. 40
		HA: Revise MC and assign HW Ex. 3,4 and 5 on p.30 from WB.
		DD: Next lesson (state specific)

Teaching Steps (intro, steps, wrap-up) & time needed for each point

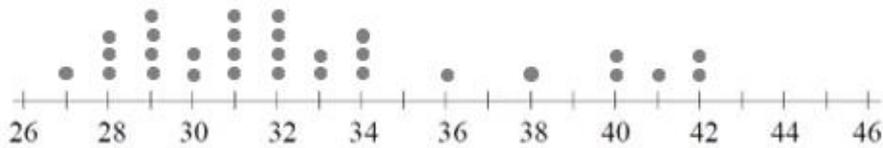**I. Recall: Check the old homework which is Ex.1 and 2 on p.30 (WB). (5 min.)**

Section 3: Displays of Quantitative Data

💡1. The ages of 30 people in a martial arts class are recorded below.

34	32	30	28	34	29	28	30	40	38
27	31	31	33	32	32	42	41	29	31
33	28	29	40	42	29	34	36	31	32
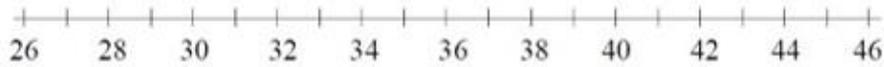
Copy the number line above and make a line plot of the data.

💡2. The number of siblings each of the 24 students in Grade 7 has is recorded below.

0	3	2	3	2	1	3	2	3	2	3	2
3	0	0	1	3	1	0	2	2	4	0	1

Copy the number line above and make a line plot of the data.
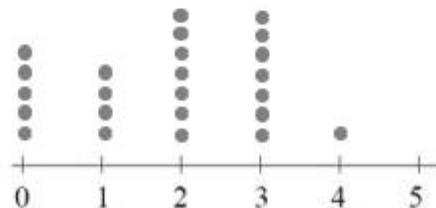
II. Start interactively explaining LP2:
Construct and use histograms for quantitative data set.   **(6/7 min.)**

Learning Point 2
Construct and use histograms for quantitative data sets.
Concepts 3 - 4

TEACH

Histogram

For large quantitative data sets and for data sets consisting of values not necessarily repeated, histograms are used to display the values reported.

- A histogram consists of vertical (or horizontal) rectangles each having a base width representing a range of values.
- When all rectangles have the same width, the height of each one of them represents the number of values within its range.

III. Do Ex. 3 on p.40 (6/7 min.)

Example 3

CLASS PRACTICE

The list below shows the number of football cards a group of fans collected.

| 12 | 24 | 32 | 22 | 47 | 36 | 48 | 28 | 18 | 56 |
| 48 | 38 | 35 | 14 | 26 | 18 | 24 | 39 | 42 | 38 |

By grouping the data values into intervals starting with a number of cards of 11 and using increments of 9 cards, construct a histogram to display the data listed above.

Solution

The values are highlighted in different colors based on the range of values defined.

| 12 | 24 | 32 | 22 | 47 | 36 | 48 | 28 | 18 | 56 |
| 48 | 38 | 35 | 14 | 26 | 18 | 24 | 39 | 42 | 38 |

- Between 11 and 20, there are 4 values highlighted in grey.
- Between 21 and 30, there are 5 values highlighted in yellow.
- Between 31 and 40, there are 6 values highlighted in green.
  - Between 41 and 50, there are 4 values highlighted in blue.
 - Only one value lies between 51 and 60.

Solution

Each of the intervals listed above is represented by a rectangle with the height representing the corresponding frequency to produce the histogram below.

- The histogram shows properties of the distribution of the cards among the 20 fans.
- The largest group is the one with number of cards between 31 and 40.
- There is only one fan who has a number of cards between 51 and 60.

Cards Collected by a Group of Fans
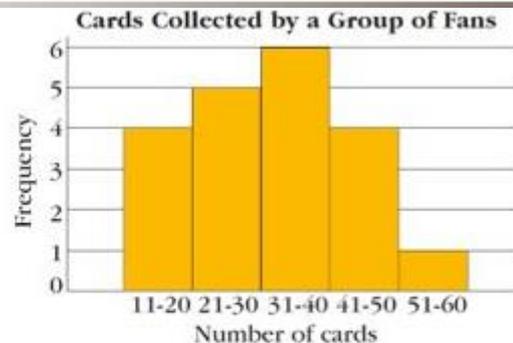
IV. Do Act. 3 on p.40 which is watching a video and solve interactively the other part of the activity on p.41. (10 min.)

Activity ③

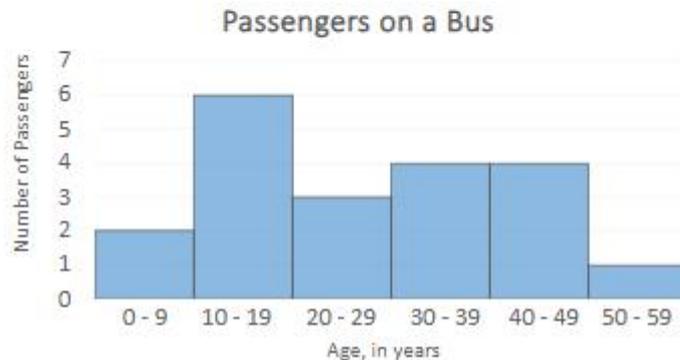Below is a list of the ages, in years, of 20 passengers on a bus.

6	12	22	18	47	36	48	15	18	58
48	28	35	8	16	10	24	39	42	38

b) Construct a histogram to display the grouped data in part a).

b) There are 6 columns with appropriate heights from the table from a).

Passengers on a Bus

V.   Do Ex. 4 on p.41   (5 min.)
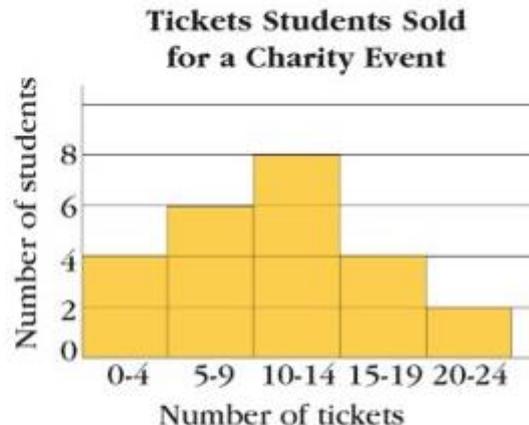
Example ④

The histogram to the right displays the number of tickets a group of students sold for a charity event.

a) What is the number of students in this group?

b) How many students sold less than 10 tickets?

c) What fraction of the students sold 15 or more tickets?

d) What is the largest number of tickets a student could have sold?

Tickets Students Sold for a Charity Event

Solution

a) The total number of students is $4 + 6 + 8 + 4 + 2 = 24$.

b) The number of students who sold less than 10 tickets is $4 + 6 = 10$.

c) The number of students who sold 15 or more tickets is $4 + 2 = 6$.

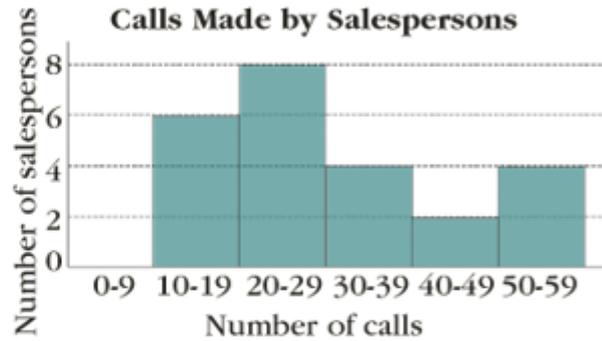The fraction that represents these students is $\frac{6}{24} = \frac{1}{4}$.

d) Note that 2 students sold a number of tickets between 20 and 24.
Therefore, the maximum possible number of tickets a student could have sold is 24.

VI.   Do Act. 4 on p.41   (5 min.)

Activity ④

The adjacent histogram displays the number of phone calls a group of salespersons made on a certain day.

💡a) What is the least number of calls a salesperson could have made?

a) 6 salespersons made 10 – 19 calls, so the least number of calls a salesperson could have made is 10.

Calls Made by Salespersons

💡b) How many salespersons made less than 30 calls?

b) The number of salespersons who made less than 30 calls is $6 + 8 = 14$.

💡c) What fraction of the salespersons made 40 or more calls?

c) The total number of salespersons is $6 + 8 + 4 + 2 + 4 = 24$.

The number of salespersons who made 40 or more calls is $2 + 4 = 6$.

The fraction that represents these salespersons is $\dfrac{6}{24} = \dfrac{1}{4}$.

VII. **Wrap up and assign HW Ex. 3, 4 and 5 on p.30 from WB.** **(5 min.)**

Questions (Please try to use open-ended, critical thinking questions)

(43) **12.** Below is a list of the ages, in years, of 20 passengers on a bus.

| 6 | 12 | 22 | 18 | 47 | 36 | 48 | 15 | 18 | 58 |
| 48 | 28 | 35 | 8 | 16 | 10 | 24 | 39 | 42 | 38 |

a) Construct a table with the data grouped into intervals starting with age 0 years and using increments of 9 years.

b) Construct a histogram to display the grouped data in part a).

12. a.

Age (in years)	Number of passengers
0 - 9	2
10 - 19	6
20 - 29	3
30 - 39	4
40 - 49	4
50 - 59	1

b.

Age of Passengers on a Bus
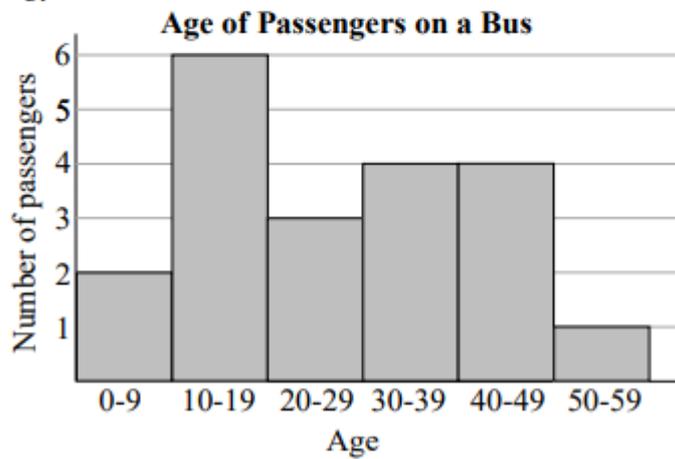
Note: Add part c) If the increments of 11 years are used, will the histogram displaying the data get affected?

Real life examples/ Link to UAE

If 6B will vote for class president, the candidates are Amir, Michael and Paris.
Vote by raising hands and draw a dot plot.

Misconceptions/ Poorly answered concepts

Additional Comments e.g. steps not covered