LESSON MAKER PRO

Picture Data Power

Build clear pictographs from data.

GRADE 3 · 3.PS.1.c

3.PS.1.c "Organize and represent a data set using pictographs that include an appropriate title, labeled axes, and key. Each pictograph symbol should represent 1, 2, 5 or 10 data points."

NAME _____ DATE _____

PART 1: PRACTICE

A pictograph uses pictures or symbols to show data. Give it a title, label both axes, and write a key that tells what each symbol means.

WORKED EXAMPLE

Make a pictograph titled Flag Colors. Red has 8 flags. Blue has 12 flags. Use ● = 2 flags.

1. 8 ÷ 2 = 4 symbols for Red.
2. 12 ÷ 2 = 6 symbols for Blue.
3. Label the vertical axis Flag Color and the horizontal axis Number of Flags.

Answer: Title: Flag Colors Vertical axis: Flag Color Horizontal axis: Number of Flags Key: ● = 2 flags Red: ●●●● Blue: ●●●●●●

PRACTICE 5 problems

1 Make a pictograph titled Book Choices. Comic books have 3 votes. Puzzle books have 5 votes. Use ■ = 1 vote.

ANSWER _____

2 Make a pictograph titled Fruit Snack. Apples have 10 votes. Oranges have 20 votes. Use ▲ = 5 votes.

ANSWER _____

3 Make a pictograph titled After-School Sports. Soccer has 15 votes. Basketball has 25 votes. Use ● = 5 votes.

ANSWER _____

4 Make a pictograph titled Recess Games. Tag has 30 votes. Four Square has 50 votes. Use ■ = 10 votes.

ANSWER _____

5 Make a pictograph titled Pet Votes. Dogs have 7 votes. Cats have 11 votes. Use ▲ = 1 vote.

ANSWER _____

APPLY IT Show your work

1 Part 2: Apply. A class collects 10 cans on Monday, 20 cans on Tuesday, and 35 cans on Wednesday. Make a pictograph titled Can Collection. Use ● = 5 cans.

WORK SPACE

ANSWER _____

2 A game club has 20 players who like racing games, 40 who like puzzle games, and 60 who like sports games. Make a pictograph titled Game Club Favorites. Use ■ = 10 players.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Part 3: Challenge. A survey shows 15 students chose drawing, 25 chose music, and 35 chose coding. Choose a key of 5 or 10. Make a pictograph titled Club Choices. Explain why your key works.

_____

_____

ANSWER KEY

Picture Data Power

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Make a pictograph titled Book Choices. Comic books have 3 votes. Puzzle books have 5 votes. Use ■ = 1 vote.	**Title: Book Choices Vertical axis: Book Type Horizontal axis: Number of Votes Key: ■ = 1 vote Comic books: ■■■ Puzzle books: ■■■■■**
2	Make a pictograph titled Fruit Snack. Apples have 10 votes. Oranges have 20 votes. Use ▲ = 5 votes.	**Title: Fruit Snack Vertical axis: Fruit Horizontal axis: Number of Votes Key: ▲ = 5 votes Apples: ▲▲ Oranges: ▲▲▲▲**
3	Make a pictograph titled After-School Sports. Soccer has 15 votes. Basketball has 25 votes. Use ● = 5 votes.	**Title: After-School Sports Vertical axis: Sport Horizontal axis: Number of Votes Key: ● = 5 votes Soccer: ●●● Basketball: ●●●●●**
4	Make a pictograph titled Recess Games. Tag has 30 votes. Four Square has 50 votes. Use ■ = 10 votes.	**Title: Recess Games Vertical axis: Game Horizontal axis: Number of Votes Key: ■ = 10 votes Tag: ■■■ Four Square: ■■■■■**
5	Make a pictograph titled Pet Votes. Dogs have 7 votes. Cats have 11 votes. Use ▲ = 1 vote.	**Title: Pet Votes Vertical axis: Pet Horizontal axis: Number of Votes Key: ▲ = 1 vote Dogs: ▲▲▲▲▲▲▲ Cats: ▲▲▲▲▲▲▲▲▲▲▲**

PART 2 · APPLY IT

1. **Title: Can Collection Vertical axis: Day Horizontal axis: Number of Cans Key: ● = 5 cans Monday: ●● Tuesday: ●●●● Wednesday: ●●●●●●●** Divide each number of cans by 5. The days need 2, 4, and 7 symbols.
2. **Title: Game Club Favorites Vertical axis: Game Type Horizontal axis: Number of Players Key: ■ = 10 players Racing games: ■■ Puzzle games: ■■■■ Sports games: ■■■■■■** Divide each number of players by 10. The game types need 2, 4, and 6 symbols.

CHALLENGE

Title: Club Choices Vertical axis: Club Horizontal axis: Number of Students Key: ● = 5 students Drawing: ●●● Music: ●●●●● Coding: ●●●●●●● Explanation: A key of 5 works because 15, 25, and 35 can each be divided by 5. A key of 10 does not work for all three numbers.

Accept equivalent pictographs with the required title, both axis labels, and the stated key. Symbols may be different shapes if each row has the correct number of symbols.