MeTEOR Performance Task Third Grade

Mathematics
Favorite Baseball Team

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Performance Task Item: Who is the favorite baseball team?
Grade Level: Third Grade

Focus Area: Operations and Algebraic Thinking; Measurement and Data
Essential Question: How does using accurate data impact the results of a given question?
Core Ideas:
- Understands the need to collect accurate data and use computation to determine the answer to the big question.
- Understands how to collect, display and summarize data.
- Understands how to use data, personal perspective and additional resources to justify an answer.

Learning Targets:
- Students will use addition, subtraction, multiplication and division to solve problems and compile accurate data.
- Students will complete a tally survey.
- Students will compile, compare and summarize data.
- Students will create a scaled bar graph.
- Students will explain data.
- Students will write an opinion letter to the principal.
- Students will work collaboratively with others.

STANDARDS
Domain: Operations and Algebraic Thinking and Measurement and Data
Content Standards:
- Interpret products of whole numbers.
- Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.
- Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one and two step "how many more" and "how many less" problems using information presented in scaled bar graph.

Supporting Standards:
Speaking and Listening:
- Engage effectively in a range of collaborative discussions (one on one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

Writing:
- Write opinion pieces on topics or text, supporting a point of view with reasons.
- Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.
- Provide reasons that support the opinion.

- Use linking words and phrases.
- Provide a concluding statement or section.

Math Practice Standards:

MP 1: Make sense of problems and persevere in solving them.
MP 3: Construct a viable argument and critique the reasoning of others.
MP 4: Model with mathematics.
MP 6: Attend to precision.

Materials:

- Performance task
- Student Survey Recording Sheet
- Pencil

Scenario: People all over are talking about baseball and the upcoming World Series. Baseball is on the news, in the newspaper, on television and in the digital world.   Your school is planning to have a Major League Baseball player and the team mascot be a guest at your school. This will be a big day for the students, the baseball team, the community, parents and even local media. Should the school pick the baseball team closest to your school or the most popular team voted by the student body?

Task/Question 1:

DOK Level 1: Recall & Reproduction

Math Practice Standards:
- MP 1: Make sense of problems and persevere in solving them.
- MP 6: Attend to precision.

Your third grade class will be placed into groups of five or six students to conduct a tally survey to determine the favorite Major League Baseball Team for the entire school. Each group will survey the same number of students using the **Student Survey Recording sheet**.

    A. How many students are in the 3rd grade?

    B. How many groups will there be to complete the school survey?

    C. What is the difference if there are five students per group or six students per group?

    D. How many students will each team survey?

Scaffolding Suggestion: Provide an example school scenario (33 third grade students, 201 students K-5) and work through example together. Draw a visual representation

Task/Question 2:

DOK Level 2: Basic Application of Skills and Concepts

Math Practice Standards:
- MP 4: Model with Mathematics.
- MP 6: Attend to precision.

    A. Using the student survey recording sheet from Task 1, survey the assigned classroom(s) and use tally marks to record findings.

    B. After completing the survey, teams will discuss and summarize the collected data on the **Student Survey Recording Sheet**.

Scaffolding Suggestion: Look at the tally data in smaller sets. Make a model to represent the data collected (showing less teams).

Task/Question 3:

DOK Level 3: Strategic Thinking and Reasoning

Math Practice Standards:
- MP 4: Model with Mathematics.
- MP 6: Attend to precision.

    A. Each group will join another group to compare, analyze and discuss the survey data collected by each group to determine who they think is the favorite baseball team.

    B. Combine the collected data.

    C. Create a scaled bar graph. Be prepared to explain the data during whole group discussion.

Scaffolding Suggestion: Use gradual release and compare one baseball team for the learners and record new results; compare one baseball team together with the learners and record new results; then allow learners to compare data and record new results without support.

Task/Question 4:

DOK Level 3: Strategic Thinking and Reasoning

Math Practice Standards:
- MP 1: Make sense of problems and persevere in solving them.
- MP 4: Model with Mathematics.
- MP 6: Attend to precision.

In this task students will pull the survey results onto one graph to find out who is the favorite baseball team! With teacher support, the class will create a class graph.

A. Your teacher decided to limit the number of teams on the graph to ten teams. Identify your ten teams to make the graph?

B. Discuss various ways to create and show the data.

C. Explain what the data reveals – who is the favorite team? Who is the least favorite team? What is the difference between the top two teams?

D. Is the favorite team located closest to your school? If not, how many miles is the school from the favorite Major League Baseball Team.

Scaffolding Suggestion: Analyzing the collected data together will allow for great opportunities for questioning and student mathematical thinking.

Task/Question 5:

DOK Level 4: Extended Thinking

Math Practice Standard:
- MP 3: Construct a viable argument and critique the reasoning of others.

A. Should your school pick the baseball team closest to your school or the most popular team voted by the student body? Write a letter to the Principal about which Major League Baseball Team and Mascot you think should visit your school? Be sure to include school survey data, personal perspective and other pieces of evidence to back up your request.

Scaffolding Suggestion: Provide a letter example or writing prompt.

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Complete Performance Task Scoring Rubric
Who is the favorite baseball team?

Answers will vary for each Task/Question based on the number of third grade students, students surveyed and school survey results.
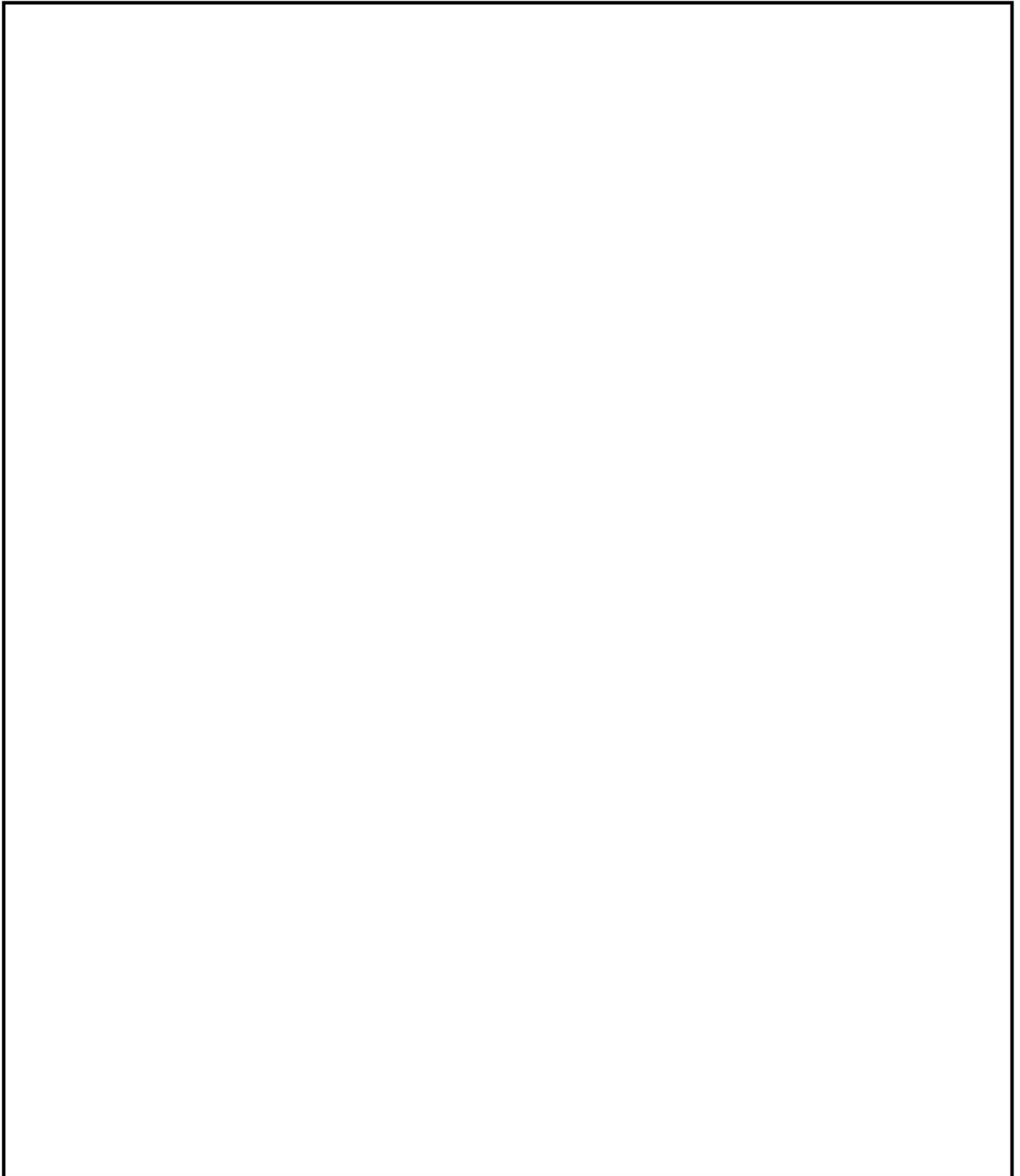
	Depth of Knowledge Level	Points	Total Possible Points for Task	Total Points Earned by Student
Task 1: (Answers will vary) ☐ I found the correct answer to how many teams there will be in the 3rd grade? **5 Points** ☐ I found the correct answer to how many students my team will survey. **5 Points** ☐ I showed my work. **2 Points**	**1**	**Varies**	**12**	
Task 2: (Answers will vary) ☐ I worked well with my team to survey the assigned classroom. **1 Point** ☐ I discussed with my team the results of our survey using speaking and listening rules. **1 Point** ☐ I gave input for our team summary. **1 Point**	**2**	**Varies**	**3**	
Task 3: (Answers will vary) ☐ I compared our survey data. **2 Points** ☐ I contributed to creating a group graph with correct scale, correct labels, and correct data. **3 Points** ☐ I was prepared to share our group data. **1 Point**	**3**	**Varies**	**6**	

Task 4: (Answers will vary)	1 - 3	Varies	4	
☐ I shared ideas for creating a scaled bar graph. **1 Point** ☐ I used the data on the graph to identify the favorite team, least favorite team and the difference in votes between the first and second place team. **3 Points**				
Task 5: (Answers will vary)	4	Varies	25	
☐ I wrote a letter to the Principal stating my opinion of what Major League Baseball Team and mascot should visit my school. **15 Points** ☐ I used information from our class graph. **5 Points** ☐ I used additional pieces of evidence in my letter. **5 Points**				
			TOTAL POINTS:	

Student Survey Recording Form

Baltimore Orioles		Arizona Diamond Backs	
Boston Red Sox		Atlanta Braves	
Chicago White Sox		Chicago Cubs	
Cleveland Indians		Cincinnati Reds	
Detroit Tigers		Colorado Rockies	
Houston Astros		Los Angeles Dodgers	
Kansas City Royals		Miami Marlins	
Los Angeles Angels		Milwaukee Brewers	
Minnesota Twins		New York Mets	
New York Yankees		Philadelphia Phillies	
Oakland Athletics		Pittsburg Pirates	
Seattle Mariners		San Diego Padres	
Texas Rangers		San Francisco Giants	
Toronto Blue Jays		St. Louis Cardinals	
		Washington Nationals	

Data Summary

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