EMPACTS PROJECT:

Conquering the Benchmark with Confidence at Bernice Young Elementary in Springdale

Developed & Created By:
Sarah McHale and Tambra Knipe

Introduction to Education Community Project
A.J. Shirey, Instructor
Our purpose is to tutor students in math so they may become more proficient on the Benchmark Exam. Our goal will be to encourage students in the learning process, help them become more confident and have pride in their work.

Students will be able to understand math problems more clearly and will be able to approach them with confidence on the Benchmark Exam.

We will be working with small groups of students who are in need of supplemental help in areas of: determining the relationship between sets of numbers by selecting the rule; create new figures by combining and subdividing models; create a data collection plan, describe and interpret data; represent and interpret data using pictographs, bar graphs and line graphs; conduct simple probability experiments; and determine elapsed time.

Our project will benefit the community because we are working to make sure the students have improved their attitudes, as well as their strengths and weaknesses toward school work, and in turn the students will be productive members of society by ensuring their math and critical thinking skills are at a proficient level.
Our Main Objectives

- Build good rapport with students
- Help build confident learners
- Increase student’s knowledge
- Establish CAN DO attitudes with students
- Work student’s areas of weakness
- Provide helpful test taking skills
**PRE / POST TEST & RESULTS**

<table>
<thead>
<tr>
<th>Student's Name</th>
<th># Correct Pre-Test</th>
<th>Question (* if incorrect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td>*</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
<td>*</td>
</tr>
<tr>
<td>E</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>F</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>G</td>
<td>3</td>
<td>*</td>
</tr>
<tr>
<td>H</td>
<td>4</td>
<td>*</td>
</tr>
</tbody>
</table>

**Student # B**

What is the rule for the pattern below?

```
2 4 5 6 7 10 9...
```

A. Add 2, and then subtract 1.
B. Divide by 2, and then add 1.
C. Multiply by 2, and then add 1.
D. Multiply by 2, and then subtract 1.

8. Based on the data collection below, how many more fourth-grade students preferred chocolate chip than preferred vanilla?

<table>
<thead>
<tr>
<th>Flavor</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanilla</td>
<td>10</td>
</tr>
<tr>
<td>Strawberry</td>
<td>9</td>
</tr>
<tr>
<td>Chocolate Chip</td>
<td>11</td>
</tr>
<tr>
<td>Rocky Road</td>
<td>8</td>
</tr>
<tr>
<td>Cookies &amp; Creams</td>
<td>9</td>
</tr>
</tbody>
</table>

**People Who Visited the Museum**

<table>
<thead>
<tr>
<th>Month</th>
<th>Number of People</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td></td>
</tr>
<tr>
<td>July</td>
<td></td>
</tr>
<tr>
<td>August</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>100</td>
</tr>
</tbody>
</table>

- 25 people

31. Based on the data in the pictograph above, which of the following statements is true?

A. More people visited in June than in July.
B. More people visited in August than in June.
C. More people visited in September than in August.
D. More people visited in June and July combined than in the other three months combined.

33. Jury covered a hexagon pattern block using 3 triangles and 1 other shape. What is the other shape? You may use your pattern blocks to help you.

A. square
B. triangle
C. diamond
D. trapezoid

30. Karen’s crayon box contains 3 shades of green, 6 shades of blue, 4 shades of red, and 5 shades of brown. If she picks a crayon from the box without looking, which shade is she least likely to pick?

A. red
B. blue
C. green
D. brown

4/5
3. The frequency table below shows how students in Mr. Whiter's class voted to name their class pet.

<table>
<thead>
<tr>
<th>Votes for Our Hamster's Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Spike Fuzzy Squirmy Snowball Happy

How many more students voted for Spike than for Fuzzy and Squirmy combined?

A. 1
B. 3
C. 4
D. 7

8. Based on the data collection below, how many fourth-grade students preferred chocolate chip than preferred vanilla?

What is Your Favorite Ice Cream?

<table>
<thead>
<tr>
<th>Flavor</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanilla</td>
<td>91</td>
</tr>
<tr>
<td>Strawberry</td>
<td>69</td>
</tr>
<tr>
<td>Chocolate Chip</td>
<td>54</td>
</tr>
<tr>
<td>Rocky Road</td>
<td>31</td>
</tr>
<tr>
<td>Cookies and Cream</td>
<td>16</td>
</tr>
</tbody>
</table>

A. 4
B. 5
C. 19
D. 27

15. How many triangle pattern blocks are needed to cover the figure below? You may use your pattern blocks to help you.

A. 3
B. 4
C. 12
D. 13

14. If you covered a hexagon pattern block using 3 triangles and 1 other shape, what is the other shape? You may use your pattern blocks to help you.

A. square
B. triangle
C. rhombus
D. trapezoid

25. When the shapes above are combined with no empty spaces left over, what new shape is formed? (You may use your pattern blocks to help you.)
25. Toby recorded the height of a plant for four weeks. He noticed a pattern.

<table>
<thead>
<tr>
<th>Week</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 inches</td>
</tr>
<tr>
<td>2</td>
<td>3 inches</td>
</tr>
<tr>
<td>3</td>
<td>4 inches</td>
</tr>
<tr>
<td>4</td>
<td>3 inches</td>
</tr>
</tbody>
</table>

What is the rule for the changes in height?
A. Add 3.
B. Add 12.
C. Double each number.
D. Multiply each number by 2 and add 1.

What did Toby do to create the pattern?
A. Add 4 to the x-value, then subtract 1.
B. Multiply the x-value by 2, then subtract 1.
C. Add 2 to the x-value, then subtract 1.
D. Multiply the x-value by 2, then subtract 1.

30. Mr. Tecue wrote the sets of numbers below on the board.

(5, 9) (6, 12) (7, 13) (8, 18)

What rule did Mr. Tecue use to determine the value of the second number in each set?
A. Add 4 to the first number.
B. Multiply the first number by 2.
C. Multiply the first number by 1, then add 1.
D. Subtract 3 from the first number, and then multiply by 3.

What is the rule for the pattern below?
2 4 3 5 10 9...
A. Add 2, and then subtract 1.
B. Divide by 3, and then add 1.
C. Multiply by 3, and then add 1.
D. Multiply by 2, and then subtract 1.

21. Jim and his friends made the table below to show how many seashells they have in their collection.

<table>
<thead>
<tr>
<th>Students</th>
<th>Number of Seashells</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jim</td>
<td>4</td>
</tr>
<tr>
<td>Fawn</td>
<td>3</td>
</tr>
<tr>
<td>Bob</td>
<td>2</td>
</tr>
<tr>
<td>Harrison</td>
<td>4</td>
</tr>
</tbody>
</table>

How many seashells do they have in all?
A. 13
B. 14
C. 32
D. 54

25. According to the table above, which of the following is a true statement about the population of Pulaski County, Arkansas?
A. It has increased every ten years.
B. It has remained the same.
C. It has increased every five years.
D. It has decreased every ten years.

The Population of Pulaski County, Arkansas 1960–2000

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>225,000</td>
</tr>
<tr>
<td>1970</td>
<td>287,189</td>
</tr>
<tr>
<td>1980</td>
<td>346,613</td>
</tr>
<tr>
<td>1990</td>
<td>369,600</td>
</tr>
<tr>
<td>2000</td>
<td>361,874</td>
</tr>
</tbody>
</table>

26. Use the chart below to answer question 25.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>225,000</td>
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25. According to the table above, which of the following is a true statement about the population of Pulaski County, Arkansas?
A. It has remained the same.
B. It has increased every ten years.
C. It has increased every five years.
D. It has decreased every ten years.

Use the table below to answer question 6.

<table>
<thead>
<tr>
<th>State Park</th>
<th>Approx. Miles From Little Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pinnacle Mountains</td>
<td>10</td>
</tr>
<tr>
<td>Wooly Hollow</td>
<td>40</td>
</tr>
<tr>
<td>Village Creek</td>
<td>90</td>
</tr>
<tr>
<td>Center of Diamonds</td>
<td>100</td>
</tr>
<tr>
<td>Bull Shoals</td>
<td>120</td>
</tr>
</tbody>
</table>

6. Hector made the table above for his family to compare the approximate distance from their home in Little Rock to several state parks. How many more miles is it to Village Creek State Park than to Wooly Hollow State Park?
A. 40
B. 50
C. 80
D. 90

A. More people visited in June than in July.
B. More people visited in September than in August.
C. More people visited in September and October combined than in the other three months combined.
D. More people visited in June and July combined than in the other three months combined.
Lesson 4-3

1. Elliot’s 30-minute trumpet lesson began at 10:15 A.M. What time will it end?
   A. 10:30 A.M.
   B. 10:45 A.M.
   C. 10:30 P.M.
   D. 10:45 P.M.

2. Josie left the house at 4:00 P.M. She returned at 5:05 P.M. How much time passed?
   A. 5 minutes
   B. 105 minutes
   C. 1 hour
   D. 1 hour 5 minutes

3. The school play lasted 1 hour 35 minutes. It was over at 8:30 P.M. What time did the play start?
   A. 6:35 P.M.
   B. 7:05 P.M.
   C. 7:15 P.M.
   D. 7:35 P.M.

4. It takes Stanley 35 minutes to walk to the playground in Malvern. What time should he begin walking if he wants to get to the playground at 2:30 P.M.?
   A. 1:55 P.M.
   B. 2:30 P.M.
   C. 2:45 P.M.
   D. 3:05 P.M.

5. Tamika went to bed at 8:30 P.M., slept for 11 hours. What time did she wake up?
   A. 7:30 A.M.
   B. 9:30 A.M.
   C. 7:30 P.M.
   D. 9:30 P.M.

Use the clocks below to answer question 6.

Class Starts | Class Ends

[Clocks with times 12:30 and 2:05]

6. The clocks above show the starting and ending times for Greg’s Social Studies class. How long does the class last?
   A. 1 hour 5 minutes
   B. 1 hour 35 minutes
   C. 2 hours 5 minutes
   D. 10 hours 25 minutes

7. It takes Edie 15 minutes to walk to school. School begins at 9:15 A.M. If Edie wants to be on time, what time should she leave her house?
   A. 7:30 A.M.
   B. 8:00 A.M.
   C. 9:05 A.M.
   D. 9:30 A.M.

16. Carl has a bag of fruit-flavored candy that contains the following pieces:
   - 3 grape
   - 5 strawberry
   - 1 cherry
   - 2 watermelon

   Carl pulls a piece of candy from the bag without looking. What is the probability that he picks a watermelon-flavored piece?
   A. 1 out of 11
   B. 2 out of 11
   C. 3 out of 11
   D. 5 out of 11

18. Party is playing a spin game with the spinner below.

   What is the probability that the pointer will land on a hexagon on the next spin?
   A. 1 out of 10
   B. 2 out of 10
   C. 3 out of 10
   D. 1 out of 10

20. Karen’s crayon box contains 3 shades of green, 6 shades of blue, 4 shades of red, and 2 shades of brown. If she picks a crayon from the box without looking, which shade is she least likely to pick?
   A. red
   B. blue
   C. green
   D. brown
MANIPULATIVES USED
Tutoring Tomorrow’s Leaders
Young Minds At Work...
Teaching Helpful Test Taking Skills
Building Rapport with Students
On Friday before the Benchmark Exam, Good Luck Goody Bags were distributed to each 4th grade classroom. The goody bags were used to motivate and encourage each of the students involved in the tutoring program, and to also give encouragement to their fellow classmates who were not involved in this tutoring program.
Goody Bags Under Construction...
Goody Bag Good Luck Treats!!

Prescription for Testing Success

Patient Name: ________________________________

Use the following Test Taking First-Aid Kit to help you get yourself into tip-top test taking shape.

Ingredients:

One pack of Smarties Candy – to boost your test taking brain power.
One pencil – to help you record all you’ve learned.
One piece of gum – to help you stick to your work.
One Band-Aid – to come to your aid if you get stuck on a question.
One eraser – to use when you check over your work.
One Hershey’s Kiss – for all the hard work you put into the test.

For best results, combine this prescription with one night of restful sleep and one nutritious breakfast.

Possible side effects: Improved test-taking skills and good grades.

USE ONLY AS DIRECTED

Contents of Goody Bags
For the technology portion of this project, we were given worksheets from previous Benchmark Exams. The student’s focused on the word problems, critical thinking, elapsed time, using pictographs and interpreting data from those exams to better prepare themselves for this year's exam.
EAST LAB TECHNOLOGY

Microsoft Office Suite
- Word
- Power Point
- Publisher
WHAT WE LEARNED

- We learned how to interact with students effectively.
- We learned how to teach students to be more confident in taking tests.
- We improved our understanding of being a future teacher, and learned what it takes to become an effective teacher.
- It has been shown to us in this Empacts Project that Domains A and D are very important for success in our teaching careers.
RESOURCES

- Debbie Flora, Principal at Young Elementary
- Kaci Phipps, Literacy Coach at Young Elementary
ACKNOWLEDGMENTS

- 4th grade students at Bernice Young Elementary School in Springdale
- 4th grade faculty at Bernice Young Elementary School in Springdale
- Debbie Flora, Principal Bernice Young Elementary
- Dr. AJ Shirey, Intro to Ed Instructor
- Kaci Phipps, Literacy Coach at Bernice Young Elementary in Springdale
- C. Dianne Phillips, EAST/EMPACTS Facilitator