

HANDFUL OF CUBES

Performance Standard 6A.A

Count two handfuls of cubes separately, determine if the number of blocks is even or odd, and describe the relationship between the two handfuls of cubes accordingly:

- *Mathematical knowledge*: know how to count with understanding, determine correctly for each handful “how many in a set?” and describe the numeric relationship between the two sets using correct vocabulary.
- *Strategic knowledge*: determine if each set of cubes is odd or even and describe the relationship between the two sets using manipulatives.
- *Explanation*: explain what was done using correct mathematical vocabulary and why it was done.

Procedures

1. *In order to demonstrate knowledge and use of numbers and their many representations in a broad range of theoretical and practical settings (6A)*, students should experience sufficient learning opportunities to develop the following:
 - Count with understanding.
 - Recognize ‘how many’ in a set of objects.
 - Demonstrate the concept of odd and even using manipulatives.
 - Describe numeric relationships using appropriate vocabulary.
2. Have students review and discuss the assessment task and how the rubric will be used to evaluate their work. Assessment may be videotaped to evaluate and document student performance.
3. Ask students to ‘grab’ two handfuls of Unifix Cubes from an appropriate container.
4. Have students count the Unifix Cubes aloud to determine the quantity in each handful.
5. Ask students to use the cubes to demonstrate whether the number is odd or even. Ask students to explain their thinking aloud.
6. Ask students to repeat procedures 1 – 3 and describe the relationships between the quantities in both handfuls.
7. Evaluate each student’s performance using all three components of the rubric and determine the performance level using the guide on the rubric accordingly:
 - 4 = answer was correct, strategy to complete the task was appropriate, and explanation and justification was clear and complete including appropriate vocabulary usage.
 - 3 = either count may have been incorrect but assigned the correct even or odd designation, appropriate strategy may have been applied uncertainly, explanation and justification was correct but unclear or incomplete using appropriate, but not all, required vocabulary.
 - 2 = counting had minor errors and an incorrect even or odd designation, cubes used incorrectly to solve the problem and recording had minor mistakes, and explanation and justification was either unclear or incomplete with some appropriate vocabulary used to describe relationships.
 - 1 = counting had major errors and the incorrect designation of even or odd, an appropriate strategy was not used and recording had major errors, and explanation and justification was unclear and incomplete with no mathematical vocabulary used to describe relationships.
 - 0 = task was not attempted or responses were either incorrect or absent.

Examples of Student Work not available

Resources

- Containers of loose Unifix Cubes
- Mathematics Rubric

Time Requirements

- 20 - 30 minutes