APPENDIX A: EXEMPLARY TEST ITEMS AT EACH DOK LEVEL

Math DOK1 (Grade 4)

Look at the length of nails A and B.

![Image of nails A and B]

How much longer is nail A than nail B?

- A. $\frac{1}{2}$ inch
- B. $1 \frac{1}{2}$ inches
- C. $3 \frac{1}{2}$ inches

NOTE: This item asks students to measure the difference in the length of two nails. It is a one-step task and requires students to recognize the length of the difference on a ruler.
Math DOK2 (Grade 4)

These cards are placed in a bag.

What is the probability Lauren will pick a card with a sum greater than 15?

\[
\begin{align*}
\frac{1}{6} & \quad \frac{1}{5} & \quad \frac{3}{5} & \quad \frac{2}{4} \\
& \quad \text{A} & \quad \text{B} & \quad \text{C} & \quad \text{D}
\end{align*}
\]


NOTE: This task requires two steps: (1) calculating the total for each card and (2) calculating the probability of picking a card with a sum greater than 15. It involves more than one step and the application of the probability formula.
Math DOK 3 (Grade 4)

Mr. Brown puts colored straws in a bag. He puts 2 red straws and 1 white straw in the bag.

**Step A**

How many colored straws does Mr. Brown need to add to the bag so that red, white, and blue straws each have a \( \frac{2}{6} \) probability of being picked?

**Step B**

Explain why your answer is correct.
Use what you know about probability in your explanation.
Use words, numbers, and/or symbols in your explanation.

NOTE: This item requires students to explain their thinking process; the thinking process used to solve the probability question is abstract and requires multiple steps.
Math DOK4 (Grade 4, adapted from an existing test item)

Pick a Phone Plan

This month, Mrs. Smith’s telephone bill included information about a new long-distance plan being offered. The plans are listed below.

<table>
<thead>
<tr>
<th>Plan</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Plan</td>
<td>Monthly service fee of $4.75 plus $0.08 a minute for each call anytime of the day.</td>
</tr>
<tr>
<td>New Flat Rate Plan</td>
<td>No monthly service fee, pay $0.20 a minute for each call anytime of the day.</td>
</tr>
<tr>
<td>New Variable Rate Plan</td>
<td>Monthly service fee of $2.50, pay $0.12 for each call between 8 AM and 5 PM on weekdays, pay $0.14 for each call after 5 PM on weekdays, and pay $0.16 anytime on weekends.</td>
</tr>
</tbody>
</table>

Mrs. Smith would like to speak to her grandchildren as much as possible but would also like to make the calls during times that fit her schedule. Each of her calls lasts for 10 minutes. She can reach her grandchildren at anytime of the day on the weekends, but only between 3 PM and 7 PM on weekdays. If she allots $30 a month to spend on her telephone bill, which plan should she choose and why?

Show all your work. Explain in words which plan you chose and why. Also tell why you took the steps you did to solve the problems and explain the advantages and disadvantages of the chosen plan.

SOURCE: Rockford Public Schools (undated).

NOTE: This item requires students to choose between three alternative plans, describe their thinking processes and their assumptions, and justify their choice. There can be multiple answers, depending on the assumptions and trade-offs.
Hamburger Me at the Car!
by Unknown

Watson sat on the edge of his bed and looked out his bedroom window. He glanced at his watch. It was 9:59 a.m. A moment later, at exactly 10:00, he saw Ross Bailey leave his house. Ross strolled down the sidewalk with an empty white sack slung over his shoulder.

Watson felt like a detective on his first case. He raced down the steps to follow Ross. Every Saturday at exactly 10:00 a.m., Ross Bailey left with that empty sack. He always returned later with his friend Buddy and a full sack. Just where were they going, and what did they put in that sack? Watson meant to find out!

The front door slammed behind Watson as he left to follow Ross down the street.

Watson raced to the end of the street and looked both ways, but Ross had disappeared.

For the rest of the week, Watson watched Ross on the school bus and in the classroom. He followed him home. But nothing happened.
“Getting the money!”

For a moment, Ross and Buddy looked confused. Then Ross began to laugh.

“You must have read my note!” he said.

Buddy laughed too. “But we haven’t gotten the money yet,” he said as he turned the sack upside down. Aluminum cans spilled to the ground.

Watson looked at the cans, then at the boys.

“We get the money when we take the cans to the recycling center,” Buddy explained. “You can help us if you want to.”

Watson was quiet for a moment. “Thanks,” he said finally, “but I still have some work to do.”

Already, Watson was planning his next case. Just who is dropping empty cans in the park? And why? Watson meant to find out!
Reading DOK1 (Grade 4)

In the beginning of the selection, what makes Watson race down the stairs and out the front door?

- A. He wants to catch the school bus.
- B. He wants to follow Buddy.
- C. He wants to meet Ross at the park.
- D. He wants to follow Ross.

SOURCE: Ohio Department of Education (undated).
NOTE: This item asks students to support ideas by referencing details in the text.
Reading DOK2 (Grade 4) Ohio Grade 4 2005

Watson raced to the end of the street and looked both ways, but Ross had disappeared.

What does the prefix dis- do to the word appear?

O A. The prefix dis- changes the meaning to often appears.
O B. The prefix dis- changes the meaning to appears again.
O C. The prefix dis- changes the meaning to does not appear.
O D. The prefix dis- changes the meaning to will appear once.

SOURCE: Ohio Department of Education (undated).
NOTE: This item requires students to use contextual cues to identify the meaning of unfamiliar words.
Reading DOK3 (Grade 4)

Complete the web with things Watson does to solve the case.

Things Watson Does to Solve the Case

SOURCE: Ohio Department of Education (undated).
NOTE: This item asks students to summarize information from different parts of the passage to address a specific topic.
**Reading DOK4 (Grade 4)**

How do you think Watson feels when the boys spill aluminum cans on the ground?

Explain your answer.

SOURCE: Ohio Department of Education (undated).

NOTE: Students are asked to develop their own opinion and justify their answer. This requires analyzing and synthesizing information from all sections of the passage and supporting their answers with evidence from the text.

**Writing DOK1 (Grade 4)**

**Row, Row, Row Your Pumpkin!**

(1) Around the beginning of October, you probably start to notice that pumpkins are everywhere. (2) They’re piled high outside markets. (3) People set them in their front yards. (4) Businesses are decorated with them and schools, too. (5) The festive orange fruits they are a familiar symbol of the fall season.

(6) Pumpkins come in different shapes and sizes. (7) Some are small enough to fit in your hand. (8) Others, however, is enormous. (9) These giant pumpkins can weigh more than 1,000 pounds. (10) What can you do with a pumpkin that large? (11) Believe it or not, some people choose to go pumpkin boating.

(12) Wayne Hackney, of New Milford, Connecticut, was the first person to make a boat out of a pumpkin. (13) He wears an orange tuxedo on special occasions. (14) In 1996 he attached a small motor to the back of a large, hollowed-out pumpkin. (15) He then climbed inside he made his way across a lake. (16) Their clever idea gained the attention of several reporters. (17) Before long, pumpkin-boat races were popping up in places all over the country.

What change, if any, should be made in sentence 5?

A Delete they
B Change are to were
C Change season to Season
D Make no change


Note: Students are asked to identify standard English grammatical structures.
**Writing DOK2 (Grade 4)**

What revision, if any, is needed in sentence 15?

A He then climbed inside and made his way. Across a lake.

B He then climbed inside. And made his way across a lake.

C He then climbed inside and made his way across a lake.

D No revision is needed.

NOTE: Students are asked to construct compound sentences.

**Writing DOK3 (Grade 8)**

Some people think that it is the responsibility of schools to teach students to save and manage money. Do you think there should be a class at school that teaches students how to save and manage money? Write a paragraph that develops one strong argument supporting your position.

NOTE: Students are asked to support their stance with supporting details and examples from the passage.
Writing DOK4 (Grade 8)

A student wrote this fact sheet about writing in ancient Rome. As you read the fact sheet, think about what a person from ancient Rome would find familiar and/or different about writing today. Then write a response to the prompt that follows.

Writing in Ancient Rome
- Romans used sticks to write rough drafts on wax-covered boards and rubbed the words away afterward
- made pens by cutting the end of a bamboo or reed stem into a point and filling the point with ink
- papyrus (pf pi rfss): a paper-like material made from the papyrus plant and used for writing
- before books, Romans used scrolls, sheets of papyrus sewn together and rolled out to read
- writing tools affected the shape of Roman letters:
  - hammer and chisel made angular letters
  - reed or bamboo pen made flowing letters
- invented books from sheets of papyrus sewn together to replace scrolls
- first Romans to use writing were the upper classes; eventually, most Romans were taught to read and write
- three types of Roman handwriting:
  - squared letters for inscribing monuments and buildings
  - flowing letters for writing official documents
  - plain letters for writing first drafts
- government, business, and legal documents were written in ink on papyrus so they would be permanent
- no lowercase letters; writing tools were not useful for making detailed letters
- used inks made of combinations of
  - berries, plants, and minerals
  - soot, resin, wine, and octopus ink

What would a person from ancient Rome find familiar and/or different about writing today? Select information from the fact sheet and use your own knowledge to write a report.

NOTE: Students are asked to compare and contrast and to synthesize ideas across both passages.