

Grade 3, Indicator 1e

From the review: Material related to future, grade-level content is not clearly identified or related to grade-level work. The third grade materials have some instances where future, grade-level content is present and not identified as such. Lessons with future, grade-level content include the following:

- Lesson 1-3, which is focused on 2.MD.C.7, tells and writes time to the nearest 5 minutes, yet it is labeled with 3.MD.A.
- Lesson 4-4 is focused on 2.G.A.1, recognizing and drawing shapes having specified attributes, yet it is labeled with 3.G.1.
- Lessons 8-3 and 8-5 focus on 4.OA.B.4, finding all factors for a whole number.
- Lesson 8-6 focuses on 4.OA.A.3, solving multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.

Everyday Mathematics Response

Of the 4 instances that are called out, 2 reference prior grade-level work and 2 reference future grade-level work.

- The activity in Lesson 1-3 (the third lesson in Unit 1) that involves telling time is titled “Reviewing Telling Time,” which suggests that the content (telling time to the nearest 5 minutes) is from the prior grade. Prior to instruction on telling time to the nearest minute in Lesson 1-5, teachers need to have a sense of children’s time telling capabilities to the nearest 5 minutes.
- In the Unit 4 Mathematical Background: Content (TLG p. 320), there is explicit reference to work in earlier grades, which the reviewer says is missing. “Children have been sorting shapes into categories since Kindergarten, developing increasingly sophisticated classification systems as their understanding of geometry and their mathematical vocabulary grow. In this unit, children review the geometric properties of polygons and identify and sketch common polygons. Children also explore attributes of quadrilaterals, using mathematical language such as parallel sides and right angles, and classify quadrilaterals into categories and subcategories based on their properties. They extend this reasoning to explore the relationships between categories of quadrilaterals.” 3.G.1 expects children to “understand that shapes in different categories may share attributes and that the shared attributes can define a larger category.” Lesson 4-4 involves children reviewing attributes of polygons, sorting polygons by their attributes, and using descriptions of polygons to represent them. This work is within the scope for Grade 3.
- It is not the case that children are to find all factors for a whole number in Lessons 8-3 and 8-5. Rather, children are to find at least one factor or a factor pair for products in these lessons using their knowledge of fact families, equal grouping, and patterns. There is also a margin note in Lesson 8-3 that specifically reads “Do not expect children to find all counting-number factors in Grade 3.” Lesson 8-3 involves children finding factor pairs of counting numbers to solve number stories such as “How could you pack 10 bottles of juice into cartons so that each carton has an equal number of

bottles with none left over?” The work in this lesson is designed to support 3.OA.2, 3.OA.3, 3.OA.4, 3.OA.6, and 3.OA.7. Lesson 8-5 introduces a game titled “Factor Bingo.” This game involves children turning over a number card 2-10. Players then look at their gameboards to find a product that has the card number as a factor. The mathematics in this game supports 3.OA.4, 3.OA.6, and 3.OA.7. The work in both lessons is within the scope of Grade 3.

- Lesson 8-6 focuses on children modeling equal-sharing situations with \$10 and \$1 bills. The majority of the number stories in the lesson result in whole-number quotients, which support 3.OA.2, 3.OA.3, and 3.OA.7. However, to support real-world applications, there is a short activity about interpreting remainders in the context of money amounts. This skill is not intended for children to master, nor are they assessed in Grade 3 on this skill.

From the review: The content does not always meet the full depth of standards. This mainly occurs because of a lack of lessons addressing the full depth. For example, there are fifteen lessons which address 3.OA.1; however, they only ever specifically address multiplication of 0, 1, 2, 5, and 10.

Everyday Mathematics Grade 3 materials provide some examples of extensive work with grade-level standards. For example, the instructional materials do not provide extensive work with the following standards:

- 3.OA.A.1: Lesson 1-10 develops multiplication for 2, 5 and 10, and Lesson 2-6 develops multiplication for 0 and 1. The remaining 13 lessons present strategies for multiplication; however, multiplication for 3, 4, 6, 7 and 8 are never addressed specifically.
- 3.OA.B.5: There are 13 lessons aligned to this standard; however, only one lesson has students understanding the relationship between multiplication and division, lesson 6-3. Cluster heading 3.OA.B “Understand the properties of operations and the relationship between multiplication and division.”
- 3.OA.C.8: There are 18 lessons aligned to this standard; however, only four lessons, 2-4, 2-5, 3-2 and 5-10, have students doing two-step problems within the focus section of the lesson. There are other places including practice pages and math boxes where students are practicing.

Everyday Mathematics Response

There are actually 102 exposures to 3.OA.1, 31 of which occur in the focus portion of lessons. In addition to work with foundational facts (0, 1, 2, 5, and 10), extensive work is provided with square products, near squares, and the development of multiplication fact strategies for products of one-digit numbers. There are 4 sets of Fact Triangles: 2s, 5s, and 10; multiplication squares; 3s and 9s; and remaining facts. By strategically presenting the multiplication facts along with appropriate strategies, children are given the opportunity to develop fluency with foundational facts (2s, 5s, 10s, and squares) and use those facts to derive the other facts using strategies such as adding a group, subtracting a group, doubling, and breaking apart. The full depth of 3.OA.1 and 3.OA.7 is met with this coverage.

The cluster heading for 3.OA.5 and 3.OA.6 is “Understand properties of multiplication and the relationship between multiplication and division.” 3.OA.5 expects children to “Apply properties of operations as strategies to multiply and divide.” 3.OA.6 expects children to “Understand division as an unknown-factor problem.” EM lessons tagged to 3.OA.5 involve activities where properties of operations are used to support multiplication and/or division. EM lessons tagged to 3.OA.6 involve activities where the relationship between multiplication and division is highlighted. To say that only 1 lesson has students understanding the relationship between multiplication and division is very inaccurate – the following lessons tagged to 3.OA.6 involve children understanding the relationship between multiplication and division: 1-9, 1-10, 5-8, 6-6, 8-2, 8-3, 8-5, 8-7, and 9-2.

To say that of the 18 lessons aligned to 3.OA.C.8, only four lessons have students doing two-step problems is inaccurate. There are multiple practice pages and Math Boxes problems that involve two-step problems. For example, see Lessons 2-10 (Part 3 Solving More Multistep Number Stories, Math Boxes #2), Lesson 2-12 (Math Boxes #2), Lesson 3-1 (Math Boxes #1), Lesson 3-3 (Math Boxes #1), Lesson 3-5 (Math Boxes #3), Lesson 3-7 (Math Boxes #3), Lesson 3-8 (Part 3 Making Sense of Number Stories), and so on. The practice portions of lessons are vital to the EM4 distributed practice design feature. Also 3.OA.8 is not limited to work with two-step problems. 3.OA.8 also expects children to determine whether their answers are reasonable, which can be applied to all computation and number story work.

From the review: In lessons where prior knowledge is needed, the instructional materials do not state that prior knowledge is being used. When future, grade-level concepts are introduced, there is no mention that the concept will be used in future grades. If the teacher uses the spiral trace at the beginning of the lesson or unit, the teacher will know where prior knowledge is used based on the spiral trace and when the student will use the skill/concept again in the future. The spiral tracker is listed by lessons and not connecting standards. At the beginning of each unit, the spiral trace provides an explanation of what will occur by the end of the unit, but the spiral trace does not explain any further and does not connect to the next standard.

Everyday Mathematics Response

Lesson text, margin notes, or a mention in the Mathematical Background: Content portion of the Unit Organizer often indicates the presence of prior knowledge and concepts that are addressed in future grades. For a few examples, see Lessons 1-1, 1-3, 1-5, 1-10, and Units 3 and 5 Mathematical Background: Content.

Note that Grade 3 Everyday Mathematics does not introduce future grade-level content.

The reviewer writes that the spiral trace does not connect “to the next standard.” It is unclear what “the next standard” is.

The Spiral Snapshot that appears in the lesson is intended to help teacher connect each lesson's content to previous and upcoming lessons. The Spiral Trace in each Unit Organizer outlines instructional trajectories for key standards in that unit, highlighting focus activities, practice, and assessment opportunities for each standard and describing the degree of mastery – as measured against the entire standard – that is expected at that point in the year. The Spiral Tracker provides an exhaustive tracking for every standard, including every activity and assessment linked to that standard.