***Materials Review Rubric for Instructional Materials 6-12: Alaska Mathematics Standards***

At the center of Alaska Mathematics Standards the three key shifts are:

1. **Focus:** In each grade or course, focus deeply on 2-4 topics.
2. **Coherence**: Think across grades and link to major topics within a grade.
3. **Rigor**: In major topics, pursue conceptual understanding, procedural skills and fluency, and application with equal intensity.

High quality instructional material aligned with the Alaska Mathematics Standards will be rich and diverse in its instruction approach and fully aligned with these shifts.

**The information below is to be used to complete the evaluation form for each individual instructional material by combining the results from the following pages.**

Title:     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Grade/Course     \_\_\_\_\_\_\_\_\_\_\_\_\_Publisher:     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Copyright:     \_\_\_\_\_\_\_\_

| **STRONG** | **WEAK** |
| --- | --- |
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|  |  |

**Final Points:**

* **I.** Alignment to the AMS Mathematical

Content

* **II.** Alignment to the AMS Mathematical

Practices

* **III.** Instructional Supports
* **IV.** Assessments

**Total Points: \_\_\_\_\_\_\_\_\_\_\_**

**Documented Elements of Review**

**Rating Criteria**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Meets expectations** | **Partially meets expectations** | **Does not meet expectations** |
| 1. **Alignment to the AMS Mathematica Contentl** |  |  |  |
| 1. **Alignment to the AMS Mathematical Practices** |  |  |  |
| 1. **Instructional Supports** |  |  |  |
| **V. Assessment** |  |  |  |

**The following pages is the review process for the materials. Each sections has multiple components that must be evaluated. Each of the sections should have justifications/comments with examples to verify the rating. Each section is then totaled to calculate if it meets, partially meets, or does not meet the expectations by using the criteria from the total amount of that section. Use the following to rate each section.**

**Rating Guide:**

0 – No evidence of expectation

1 – Major gaps in expectations that may not be easily filled

2 – Gaps in expectations that may not be easily filled

3 – Few gaps in expectations that may be easily filled

4 – The content fully meets the expectation

| 1. **Alignment to the AMS Mathematical Content** | **Rating (0-4)** | **Justification/Comments with Examples** |
| --- | --- | --- |
| *The lesson/unit reflects evidence of key shifts that are reflected in the AMS:*  **FOCUS**   1. Lessons and units targeting the major work of the grade (at the standard and cluster level) provide an especially in-depth treatment, with especially high expectations. Lessons and units targeting supporting work of the grade and are sufficiently brief. Lessons and units do not hold students responsible for material from later grades. | 0 1  2 3 4 |  |
| **COHERENCE**   1. The content develops through reasoning about the new concepts on the basis of previous understandings. | 0 1  2 3 4 |  |
| **RIGOR**  *Requires students to engage with and demonstrate challenging mathematics with appropriate balance among the following:*   1. **Application:** Provides opportunities for students to independently apply mathematical concepts in real-world situations and problem solve with persistence, choosing and applying an appropriate model or strategy to new situations. | 0 1  2 3 4 |  |

| 1. **Alignment to the AMS Mathematical Content (cont.)** | **Rating (0-4)** | **Justification/Comments with Examples** |
| --- | --- | --- |
| 1. **Conceptual Understanding:** Develops understanding through brief conceptual problems and questions, multiple representations and opportunities for students to write and speak about their understanding. | 0 1  2 3 4 |  |
| 1. **Procedural Skill and Fluency**: Expects, supports and provides guidelines for procedural skill and fluency with core calculations and mathematical procedures (when called for in the standards of the grade) to be performed quickly and accurately. | 0 1  2 3 4 |  |

**Total the number of point in column 2. Check the box that corresponds to the total of earned points in column 2 that measures if the section meets expectations.**

**Earned:\_\_\_of 20 point**

**Meets expectations (18 -20 points)**

**Partially meets expectations (12 -18** **points)**

**Does not meet expectations (< 12 points)**

| 1. **Alignment to the AMS Mathematical Practices** | **Rating (0-4)** | **Justification/Comments with Examples** |
| --- | --- | --- |
| *The instructional materials identify and utilize the Standards for Mathematical Practice (MP)*:   1. The mathematical practices are explicit and central to the lessons, handled in a grade-appropriate way and well connected to the content being addressed. | 0 1  2 3 4 |  |
| 1. **Overarching habits of mind of a productive mathematical thinker**: Engages students in productive struggle through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking. (MP.1) Uses and encourages precise and accurate mathematics, academic language, terminology and concrete or abstract representations. (MP.6) | 0 1  2 3 4 |  |
| 1. **Reasoning and explaining:** Provides sufficient opportunities for students to reason mathematically and express reasoning through classroom discussion, written work and independent thinking. (MP.2 & MP.3) | 0 1  2 3 4 |  |

| 1. **Alignment to the AMS Mathematical Content (cont.)** | **Rating (0-4)** | **Justification/Comments with Examples** |
| --- | --- | --- |
| 1. **Modeling and using tools:** Encourages the strategic use of concrete and abstract representations (e.g. pictures, symbols, expressions, equations, graphics, models, and technology based tools) in the discipline. (MP.4 & MP.5) | 0 1  2 3 4 |  |
| 1. **Seeing structure and generalizing:** Requires students to look for and make use of structure and look for and express regularity in repeated reasoning. (MP.7 & MP.8) | 0 1  2 3 4 |  |

**Total the number of point in column 2. Check the box that corresponds to the total of earned points in column 2 that measures if the section meets expectations.**

**Earned:\_\_\_of 20 point**

**Meets expectations (18 -20 points)**

**Partially meets expectations (12 -18** **points)**

**Does not meet expectations (< 12 points)**

| 1. **Instructional Supports** | **Rating (0-4)** | **Justification/Comments with Examples** |
| --- | --- | --- |
| *Includes clear, sufficient and easy to use guidance to*   1. Support teaching, learning of the targeted standards and vocabulary, including, when appropriate, the use of technology and media. | 0 1  2 3 4 |  |
| 1. Provides a discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit. | 0 1  2 3 4 |  |
| 1. Recommend and facilitate a mix of instructional approaches, such as using multiple representations (e.g., including models, using a range of questions, checking for understanding, flexible grouping, and pair-share). | 0 1  2 3 4 |  |
| 1. Modeling isn’t the only method of instructional delivery. Instructional delivery needs to include the inquiry process (effective questioning) and problem solving as an entry point. | 0 1  2 3 4 |  |
| 1. **Instructional Supports (cont.)** | **Rating (0-4)** | **Justification/Comments with Examples** |
| 1. Teacher materials are organized and easy to use. | 0 1  2 3 4 |  |
| *The materials are responsive to varied student learning needs:*   1. Support for English Learners (ELs) and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which the problems are posed is carefully considered. | 0 1  2 3 4 |  |
| 1. Allow teacher/student access through digital media to deepen understanding. Publisher will support media with updates. | 0 1  2 3 4 |  |
| 1. . Supports diverse cultural and linguistic backgrounds, interests and styles. | 0 1  2 3 4 |  |
| 1. Provides appropriate level and type of scaffolding, differentiation, intervention and support for a broad range of learners. Intervention should follow the pattern concrete to pictorial to abstract. | 0 1  2 3 4 |  |
| *A unit or longer lesson should:*   1. Demonstrate an effective sequence and a progression of learning where the concepts or skills advance and deepen over time. | 0 1  2 3 4 |  |

**Total the number of point in column 2. Check the box that corresponds to the total of earned points in column 2 that measures if the section meets expectations.**

**Earned:\_\_\_of 40 point**

**Meets expectations (35 -40 points)**

**Partially meets expectations (24 -34** **points)**

**Does not meet expectations (< 24 points)**

| 1. **Assessment** | **Rating (0-4)** | **Justification/Comments with Examples** |
| --- | --- | --- |
| *The lesson/unit regularly assesses whether students are mastering standards-based content and skills:*   1. Assessment is designed at the appropriate Depth of knowledge (DOK) levels for each standard being addressed. | 0 1  2 3 4 |  |
| 1. Assessments are fully integrated throughout the instructional program. | 0 1  2 3 4 |  |
| 1. Includes multiple types of assessments (performance tasks, multiple choice, short answer, and free response). | 0 1  2 3 4 |  |
| 1. Multiple measurements of individual student progress occur at regular intervals ensuring success for all students. | 0 1  2 3 4 |  |
| 1. Includes aligned rubrics, answer keys and scoring guidelines that provide sufficient guidance for interpreting student performance. | 0 1  2 3 4 |  |
| 1. Provides extensions for students with high interest or working above grade level. | 0 1  2 3 4 |  |
| *Digital Assessment materials*:   1. Are easy to manipulate and customize. | 0 1  2 3 4 |  |

**Total the number of point in column 2. Check the box that corresponds to the total of earned points in column 2 that measures if the section meets expectations.**

**Earned:\_\_\_of 28 point**

**Meets expectations (24 -28 points)**

**Partially meets expectations (17 -23** **points)**

**Does not meet expectations (< 17 points)**