

Spiralling Math Language and Content Throughout the Year

GRADES 9-12

ELA	Math
<p style="text-align: center;">AREA OF FOCUS</p> <p>II Sustained Language and Content Support</p>	<p style="text-align: center;">AREA OF FOCUS</p> <p>I Interdependence of Mathematical Content, Practices, and Language</p>
<p style="text-align: center;">GUIDELINES</p> <p>4 Materials gradually advance the level of language practices, analytical skills, and conceptual understandings as a unit progresses</p> <p>5 Materials provide teacher guidance for consistent formative assessment and feedback strategies that support students' language proficiencies and content understandings.</p> <p>6 Materials provide scaffolds and create tasks that lead students to build increasing understanding of an appropriately complex text for the grade level over time.</p>	<p style="text-align: center;">GUIDELINES</p> <p>1 Strategic opportunities to use and refine both language and mathematics over time</p> <p style="text-align: center;">SPECIFICATIONS</p> <p>1a Strategies to help students make connections between current language, new language, and mathematical concepts</p> <p>1b Repeated opportunities to develop, refine, and extend language for mathematical purposes over time</p>

Description of resource and intended audience:

The concept of “spiralling” refers to the practice of providing multiple opportunities for students to encounter and develop disciplinary language, concepts, and skills in increasingly sophisticated ways over time. Teachers using spiralling practices should be responsive to students’ current stage of language development and understanding of concepts and skills, should build upon what has been previously taught, and should seek to deepen understandings of content, skills/practices, and the language needed to express them progressively throughout the curriculum. Rather than primarily focusing on vocabulary, spiralling disciplinary practices (argumentation, explanation, justifying responses, etc.) should be the main emphasis.

- Spiraling in math has long been established as a way to help students acquire important concepts and skills. It is also important, though, because it helps our English Learners to see concepts, language, and skills more than once in a school year, while simultaneously connecting the language, math skills and concepts to the English Language when we discuss the material.



- Another important thing to consider with spiraling is that the language, concepts and skills that should be revisited often are dependent upon the students in the classroom and their specific needs.
- One way to help with spiraling language, concepts and skills is to create a chart of important concepts with the date that you teach and then review them and the accompanying language goals.
- Some language, concepts and skills may take longer for students to “master” than others, and teachers should consistently formatively assess students’ progress and respond to students’ needs as appropriate.
- Generally, teachers should provide opportunities for students to apprentice to language skill(s) and concept(s) and then provide opportunities to revisit them one week out, then every 3 – 4 weeks so that critical language, skills and concepts are revisited 5 – 7 times throughout a school year. In addition to deepening student understanding, revisits help students appropriate increasingly complex math language and practices. The curriculum can also indicate when a skill should be introduced, revisited and then mastered (because the content and language are connected to grade level standards).

The Basics:

- Begin the year with language, concepts and skills that are connected to grade level standards/expectations and that you believe are important for students to learn to master the content.
- What kinds of questions/tasks will help you determine if your students have mastered the concepts, skills and the language used to express them? How will you assess their understanding?
- One way to incorporate spiral review is to use similar content Monday thru Thursday, and check your students’ progress/understanding on Friday.
- If your formative assessment indicates that your students understand the language, concepts, begin introducing the next language concept(s)/skill(s). If your students still need more time with language, concept(s)/skill(s), keep similar types of questions or different type of questions with the same language concept(s)/skill(s) for the next week.
- The same language, concepts, and skills can be revisited and built upon throughout the year, encouraging student appropriation, and deepening understanding and use of them. Spiraling should also encourage instructional responsiveness to students’ needs, in that when materials are consistently revisited, teachers can address areas in which students still struggle.
- The goal of this time is to spend a few minutes (10–15 max) reviewing each day to help keep the language, skill(s)/concept(s) fresh and to support students’ emerging understanding and agency.
- If you find that there are too many concepts/skills in the template, or the review is taking too long, reduce the number of concepts/skills you are working on each day.



Spiral Review Plan Year-long planning template

Standard/ disciplinary practice/ Concept	Date Taught	Week Reviewed	Week Reviewe	Week Reviewed	Week Reviewed	Week Reviewed	Week Reviewed



Spiraling – Daily Math Review Template – Monday

Number of the Day (Rewrite this number in three different ways): _____

Domain - i.e. Counting and Cardinality

Domain - i.e. Operations and Algebraic Thinking

Domain - i.e. Number and Operations in Base Ten

Domain - i.e. Number and Operations - Fractions

Domain - i.e. Measurement and Data

Domain - i.e. Geometry

Language Goal/Disciplinary practice/Important Math vocabulary/Writing Connection



Spiraling – Daily Math Review Template – Tuesday

Number of the Day (Rewrite this number in three different ways): _____

Domain - i.e. Counting and Cardinality

Domain - i.e. Operations and Algebraic Thinking

Domain - i.e. Number and Operations in Base Ten

Domain - i.e. Number and Operations - Fractions

Domain - i.e. Measurement and Data

Domain - i.e. Geometry

Language Goal/Disciplinary practice/Important Math vocabulary/Writing Connection



Spiraling – Daily Math Review Template – Wednesday

Number of the Day (Rewrite this number in three different ways): _____

<p>Domain - i.e. Counting and Cardinality</p>	<p>Domain - i.e. Operations and Algebraic Thinking</p>	<p>Domain - i.e. Number and Operations in Base Ten</p>
<p>Domain - i.e. Number and Operations - Fractions</p>	<p>Domain - i.e. Measurement and Data</p>	<p>Domain - i.e. Geometry</p>
<p>Language Goal/Disciplinary practice/Important Math vocabulary/Writing Connection</p>		



Spiraling – Daily Math Review Template – Thursday

Number of the Day (Rewrite this number in three different ways): _____

Domain - i.e. Counting and Cardinality

Domain - i.e. Operations and Algebraic Thinking

Domain - i.e. Number and Operations in Base Ten

Domain - i.e. Number and Operations - Fractions

Domain - i.e. Measurement and Data

Domain - i.e. Geometry

Language Goal/Disciplinary practice/Important Math vocabulary/Writing Connection



Spiraling – Daily Math Review Template – Friday (Check-in on students' progress for next week's skills/concepts)

Number of the Day (Rewrite this number in three different ways): _____

Domain - i.e. Counting and Cardinality

Domain - i.e. Operations and Algebraic Thinking

Domain - i.e. Number and Operations in Base Ten

Domain - i.e. Number and Operations - Fractions

Domain - i.e. Measurement and Data

Domain - i.e. Geometry

Language Goal/Disciplinary practice/Important Math vocabulary/Writing Connection