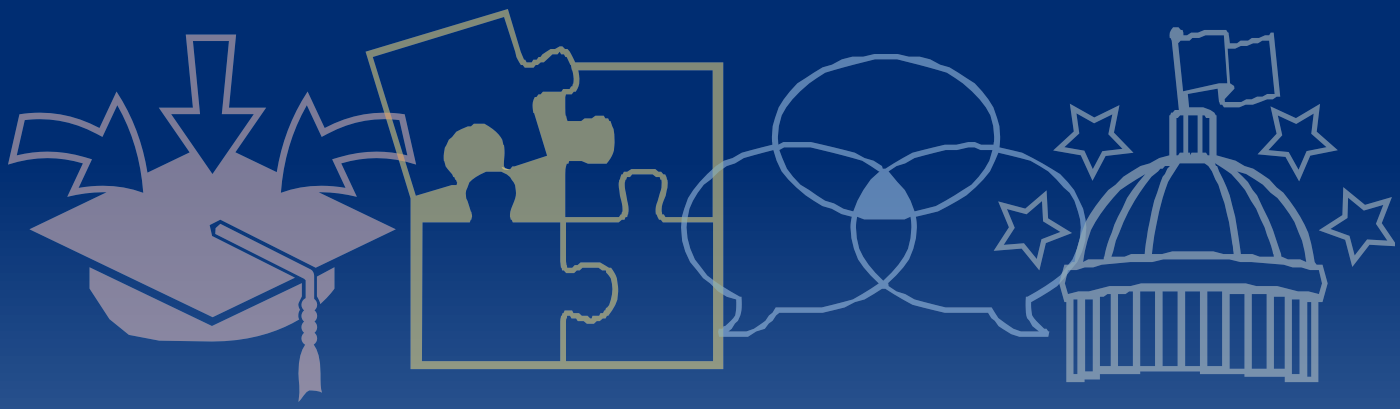
JOHNS HOPKINS
SCHOOL of EDUCATION
Institute for Education Policy



ELA Knowledge Map™

GREAT MINDS™

A unique analytic resource enabling policymakers, school leaders, and parents to better understand the strengths and weaknesses of Wit & Wisdom® ELA curriculum for Grades K-8 and Geodes® readable text for Levels K-2.

Winter 2022

The achievement gap is, in large part, a knowledge gap. Compelling research strongly affirms that students' reading levels – particularly from fifth grade onwards – relate deeply to their level of background content knowledge[i] Students in more affluent systems demonstrate more success in skill-based English language arts (ELA) assessments not only because they are better at "recognizing main ideas," but also because they are far more likely to know more about the subject matter discussed in any given text. Research from around the world shows the same: Most democracies around the world require all schools to teach a standard body of knowledge; and a comprehensive, content-rich curriculum is a signature feature of high-performing education systems. Despite the research record, a large number of the United States' ELA curricula treat texts not as a source of building knowledge, but merely as a site for attempting to hone abstract reading skills.

Determining whether a particular ELA curriculum is "standards aligned" is a helpful step, but it does not tell us about the knowledge-building capacity of that curriculum.[ii] For example: Instructional materials may use publisher-written texts that satisfy the standards-based requirement for "textual complexity," but if the materials fail to offer students a sequenced, knowledge-rich learning experience simultaneously, they miss a critical opportunity to build reading fluency. Merely drilling students on "finding the main idea" will never help them become better readers. Instead, they need to understand what the text is really about - something that can only be achieved by encountering the background knowledge that pertains.

The Johns Hopkins Institute for Education Policy (Institute) has developed the ELA Knowledge Map™, a tool with which to evaluate an ELA curriculum in terms of the knowledge it offers students, both about the world (mainly through nonfiction texts) and about psychology and the human condition (through both nonfiction and fiction texts). The Institute conducts this analysis by "mapping" the knowledge domains implicit in the selection of the documents to be read, while also evaluating each text's quality and the coherence of the unit in which is taught. To measure coherence, we assess the degree to

which supporting materials in a unit amplify and deepen the specific knowledge offered in the anchor text.

Each review generates two visual reports: *Knowledge Heat Maps* and *Unit Coherency Maps*.[1] The maps depict the fields of knowledge opened and those missed, in each grade and cumulatively, and with what quality of texts.

The Knowledge Map™ is a one-of-a-kind analytic resource that enables policymakers, school leaders, and parents to better understand the overall strengths and weaknesses of a given curriculum; instructional leaders to "fill in gaps" that might exist; and publishers to continuously improve the materials they offer the public.

For the following report, the Institute evaluated the *Wit & Wisdom*® ELA curriculum for Grades K-8 and *Geodes*® readable text for Levels K - 2. This analysis covers a representative sample based on provided materials, and does not account for specific variety in the selected texts.

METHODOLOGY

- The Institute maps all items in the evaluated grades on three initial dimensions and at different grain sizes of coverage. For example, a letter by abolitionist Thomas Garrett about Harriet Tubman would be categorized like so:
  - **Domain:** U.S. History to 1865
  - **Topic:** Slavery/Abolition
  - **Subtopics:** Harriet Tubman; Underground Railroad
- The Institute evaluates the quality of every student-facing resource both individually and in the broader context of the unit.
- The Institute constructs a vertical mapping of the knowledge domains at each level, first by grade and then across multiple grades.
- The Institute creates a coverage report that visually illustrates the depth of emphasis a given domain receives across the grades.

HIGH-LEVEL FINDINGS

Wit & Wisdom® curriculum and *Geodes*® demonstrate specific strengths and weaknesses in terms of knowledge-building and domain coverage. At the elementary level, Heat Map coverage is exemplary in many domains, indicating a robust curriculum with a wide variety of materials covering many subjects. In particular, artistic and literature domains perform extremely well in elementary grades, as well as the Social-Emotional domain. Domain-specific analysis will appear later in the report, but the elementary curriculum provides a strong example of what knowledge-building should look like across the entire curriculum.

At the secondary level, however, topic coverage appears more sporadically, and only minimally regarding certain domains. Outside of the sociological and psychological domains, most topics are only partially covered, and no texts address any topic pertaining to the Philosophy Proper domain. Additionally, several topics within the Diversity & Cultural Responsiveness domain receive poor

[1] Unit coherency maps will only be generated if the curriculum materials enable that form of analysis.

coverage at all grade levels, and no texts address the LGBTQIA+ Experience. This suggests that while some aspects of multicultural experience are addressed by the curriculum, others are not approached with similar attention.

Qualitatively, *Wit & Wisdom®* and *Geodes®* present high average quality scores, indicating that students receive instruction through strong, relevant materials. All evaluated grade levels met the 70% threshold for high quality, and scores ranged from seventy to eighty percent, suggesting that instruction is both well-designed and consistent through the entire curriculum. Grade 2 achieves the highest quality rating of all grade levels, with an average quality score of 80.60%.

Generally, quality scores are also high or adequate within units at individual grade levels, further contributing to consistent instruction in the *Wit & Wisdom®* curriculum and *Geodes®*. In many grade levels, the lowest-rated unit still meets the aforementioned 70% threshold for high quality, and specific grades typically have a small difference between the highest- and lowest-rated units. This reinforces the general consistency and high quality of the curriculum, and suggests that students in the system receive quality instruction throughout their entire education.

INSTITUTE RECOMMENDATIONS

The Great Minds *Wit & Wisdom®* K-8 curriculum for ELA and *Geodes®* readable text for Levels K – 2 provide a research-based curriculum intended to improve knowledge building, text quality, and usability for educators. The Knowledge Map™ analysis highlights the crucial areas of knowledge building and assesses associated strengths and weaknesses as well as text quality. Therefore, the Institute recommends that:

- Ensure proper coverage and quality in key knowledge domains.
- Increase the reinforcement of knowledge building within and between all grade levels.
- Improve the quality and coherence of unit texts, where low.

We turn in the first section to the specific findings of the Knowledge Map™ exercise, followed by quality and coherence findings in the second section.

WIT & WISDOM® QUALITY ASSESSMENT

The quality and coherence of the *Wit & Wisdom®* curriculum is strong across all evaluated grade levels, including those grades that incorporate *Geodes®* Levels K – 2, and varies slightly within individual grade bands. The first chart below demonstrates, by grade level, the percentage difference between the highest unit score and the lowest unit score per grade. Generally, these percentages are low; all of them demonstrate a difference of under fifteen percent, though five of the nine grade levels have a difference of over ten percent. These reasonably low numbers indicate that the grade-specific curricula are broadly consistent in the level of instruction they offer students. The highest performing grade by this metric is Kindergarten, with a unit quality difference of 4.25%.

All evaluated grades achieve scores above the 70% threshold for a high-quality curriculum. Furthermore, all grade levels except for Grade 4 demonstrate a quality score of over 70% for their lowest-rated unit. This is noteworthy because it demonstrates a high level of instruction across a

grade's curriculum. Overall, the curriculum performs extremely well in terms of source quality and provides a strong basis for any further improvements.

Nine grade levels were evaluated as part of the *Wit & Wisdom®* curriculum, and all nine achieved a high-quality rating of over 70%. The highest-rated grade level was Grade 2, with an average quality score of 80.60%, while the lowest was Grade K, with a score of 71.12%. Grade specific scores, as well as an overarching qualitative bar chart, can be seen in further detail below.

Grade	Overall Quality Score	Unit High Score	Unit Low Score	Difference (High-Low)
K	71.12%	74.40%	70.15%	4.25%
1	74.04%	76.41%	70.94%	5.47%
2	80.60%	86.18%	74.32%	11.86%
3	74.41%	81.53%	71.47%	10.06%
4	72.29%	77.27%	69.26%	8.01%
5	79.53%	86.67%	75.00%	11.67%
6	78.24%	87.60%	76.19%	11.41%
7	72.24%	78.00%	71.23%	6.77%
8	79.91%	89.51%	76.60%	12.91%

Figure 1. Summary of unit quality scores in Grades K-5.

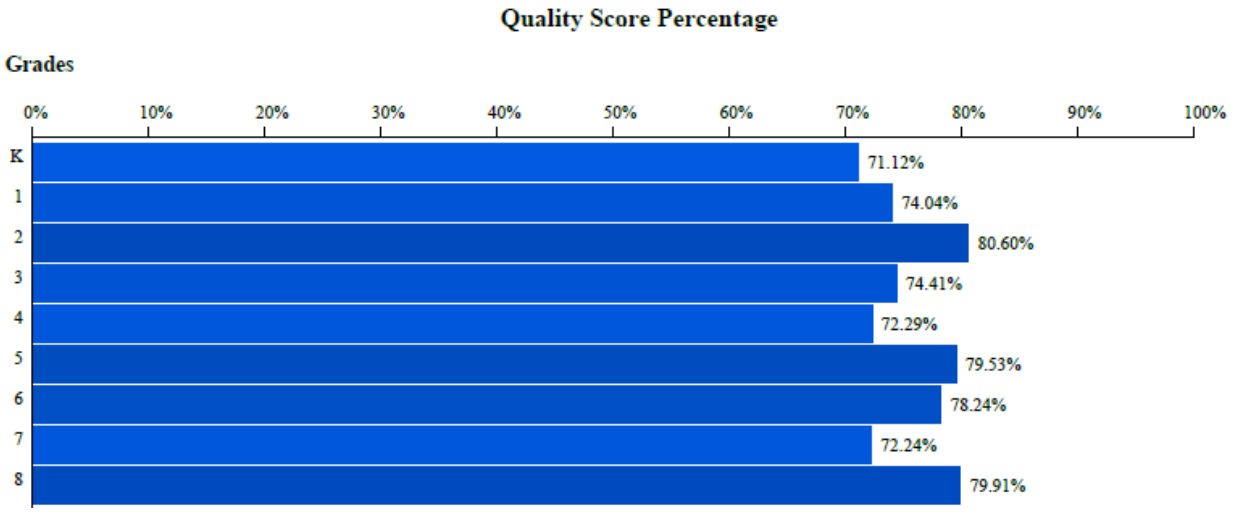


Figure 2. Qualitative bar chart demonstrating average quality scores for the Wit & Wisdom® curriculum by grade level.

WIT & WISDOM® KNOWKNOWLEDGE HEAT MAPS: GRADES K-5

A critical gateway question covers how much exposure children receive to each important domain of knowledge and to topics within those domains. Each Heat Map expresses the findings visually using a color-coding scheme, as shown in Figure 3 below. Lighter blue squares represent fewer knowledge-building texts, such as one or no text, while darker blue squares represent more knowledge-building texts, such as eight or more. The text analysis results for each of the eleven topical domains for Grades K-5 appear in Figures 4-13.

Figure 3. Heat map color-coded rating scheme of knowledge building, where lighter blue indicates fewer texts and darker blue indicates a larger number of texts.

Strong Knowledge-Building Domains

The curriculum presents robust knowledge building in several domains and additional topics (shown below alphabetically when similarly rated). Strong knowledge-building domains appear in the Heat Maps as dark blue, indicating many texts address the topic (for instance, the Heat Map categories of 8+ Texts or 5-7 Texts). Prevalence analysis divides the number of strong Heat Map ratings on a topic at a grade level (the number of darker blue squares) by the entire knowledge domain (the total number of squares).

Three knowledge domains stand out as strong performers when compared to the entire curriculum – American Literature (Figure 4), Social-Emotional (Figure 5), and Visual Arts (Figure 6). As demonstrated by the figures below, both present high levels of knowledge-building across topics and grade levels, indicating that students in the system experience solid instruction within these domains across their entire elementary education.

Additional knowledge domains exhibit patterns of strength in specific topics across grade bands. One pattern presents large numbers of texts on a particular topic across all grades. For instance, the Diversity & Cultural Responsiveness domain (Figure 8) is moderately rated overall, but topics such as World Cultures and African American Experience are covered strongly across all grade levels. A second pattern presents large numbers of texts across domain topics within an individual grade band. Within the moderately-rated Music & Performing Arts domain (Figure 10), for example, Kindergarten students receive high levels of instruction across most of the topics, indicating strong knowledge-building at that grade level. Both of these patterns demonstrate that students receive regular reinforcement of specific topics throughout their elementary education, even if they may not receive fully-developed reinforcement across the entire knowledge domain.

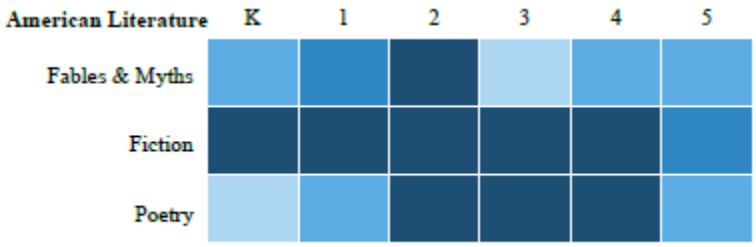


Figure 4. Heat map analysis of the American Literature knowledge domain in Grades K-5.

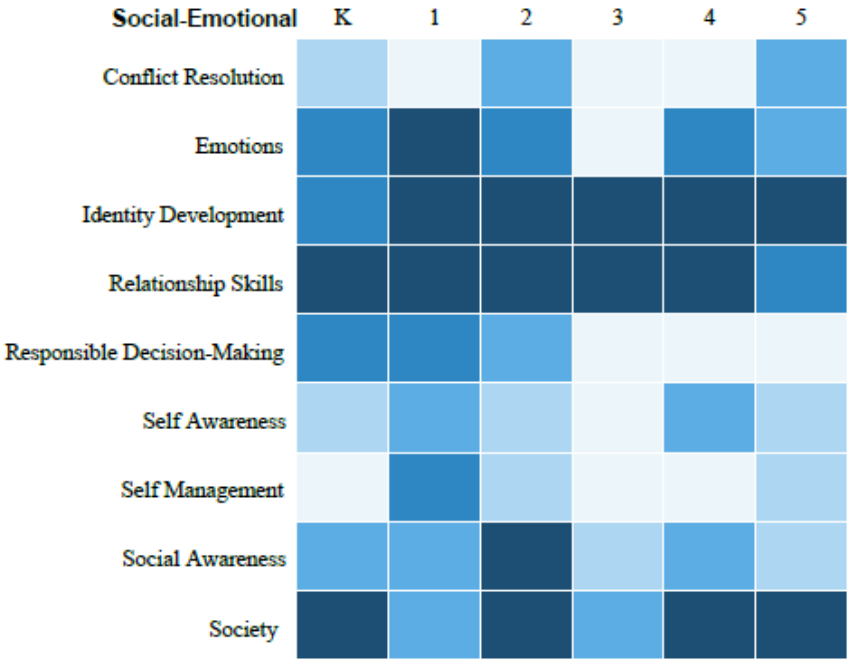


Figure 5. Heat map analysis of the Social-Emotional knowledge domain in Grades K-5.

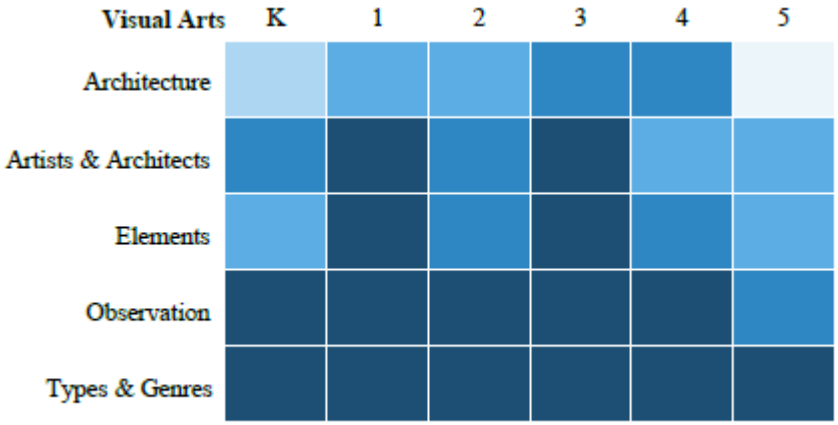


Figure 6. Heat map analysis of the Visual Arts knowledge domain in Grades K-5.

Moderate Knowledge-Building Domains

The curriculum presents several moderate knowledge-building domains and topics. Moderate knowledge-building domains appear in the Heat Map as mixed blue, indicating few or some texts addressing the topic (for example, the Heat Map category of 2-4 Texts). Prevalence analysis divides the number of moderate Heat Map ratings on a subject at a particular grade level (the number of medium blue squares) by the entire knowledge domain (the total number of squares).

Relative to the entire *Wit & Wisdom®* curriculum, five knowledge domains present generally moderate knowledge-building. Namely, these are the American History & Geography (Figure 7), Diversity & Cultural Responsiveness (Figure 8), Global Literature (Figure 9), Music & Performing Arts (Figure 10), and Science (Figure 11) domains. Compared to strong domains, these domains indicate more sporadic knowledge-building overall, and typically include gaps in instruction or fewer resources regarding particular topics.

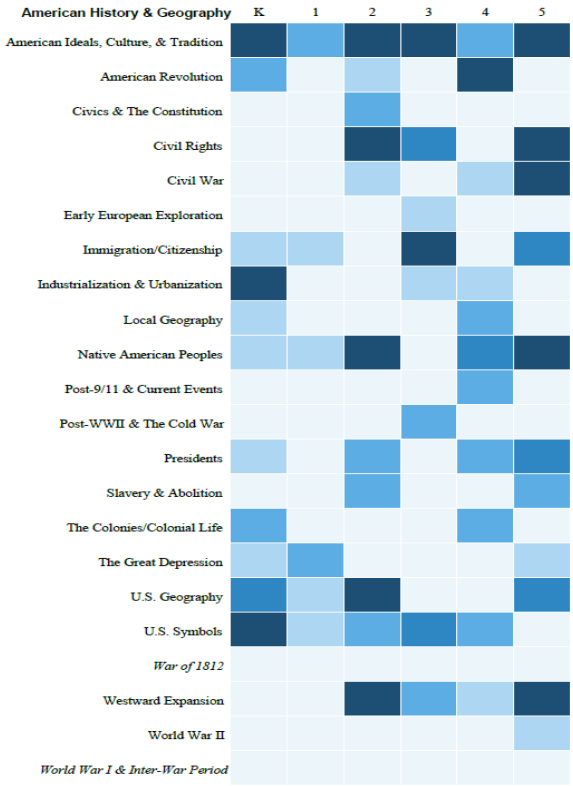


Figure 7. Heat map analysis of the American History & Geography knowledge domain in Grades K-5.

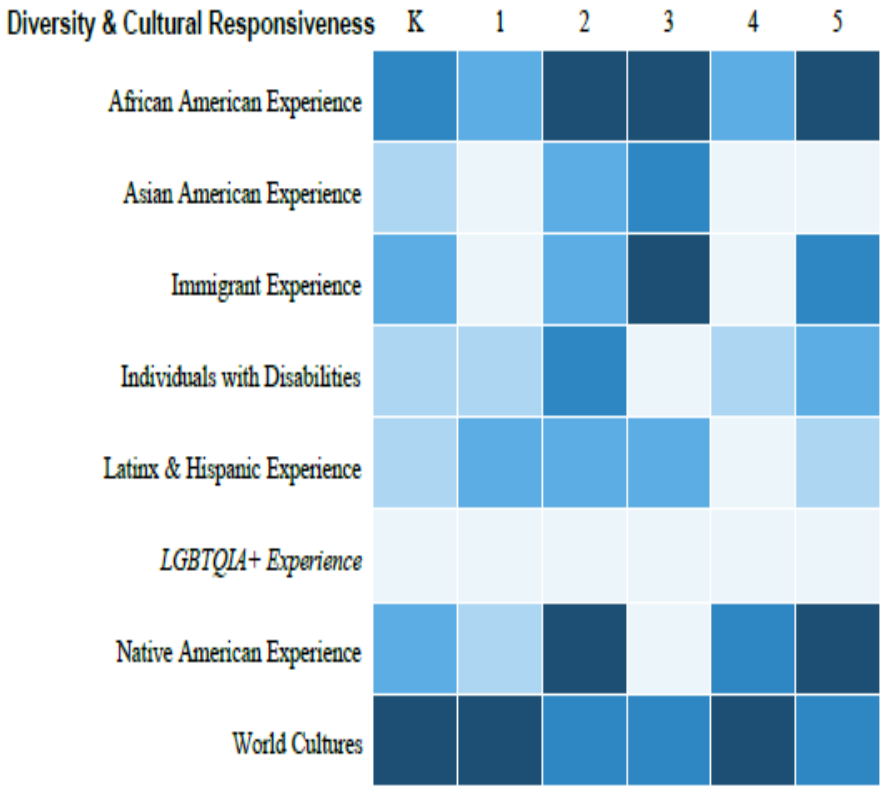


Figure 8. Heat map analysis of the Diversity & Cultural Responsiveness knowledge domain in Grades K-5.

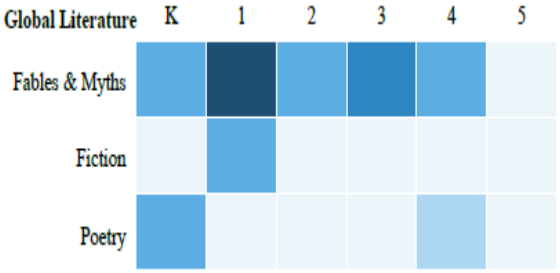


Figure 9. Heat map analysis of the Global Literature knowledge domain in Grades K-5.

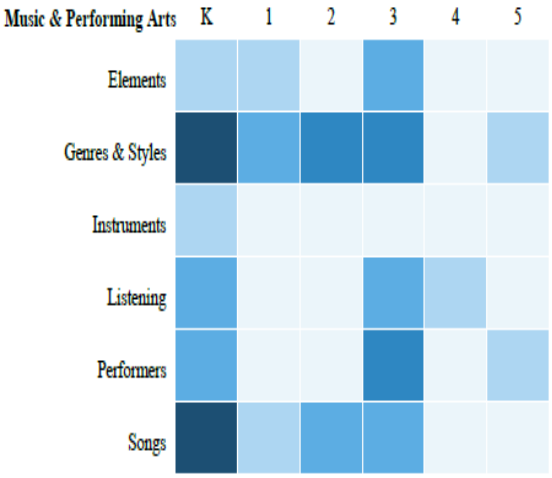


Figure 10. Heat map analysis of the Music & Performing Arts knowledge domain in Grades K-5.

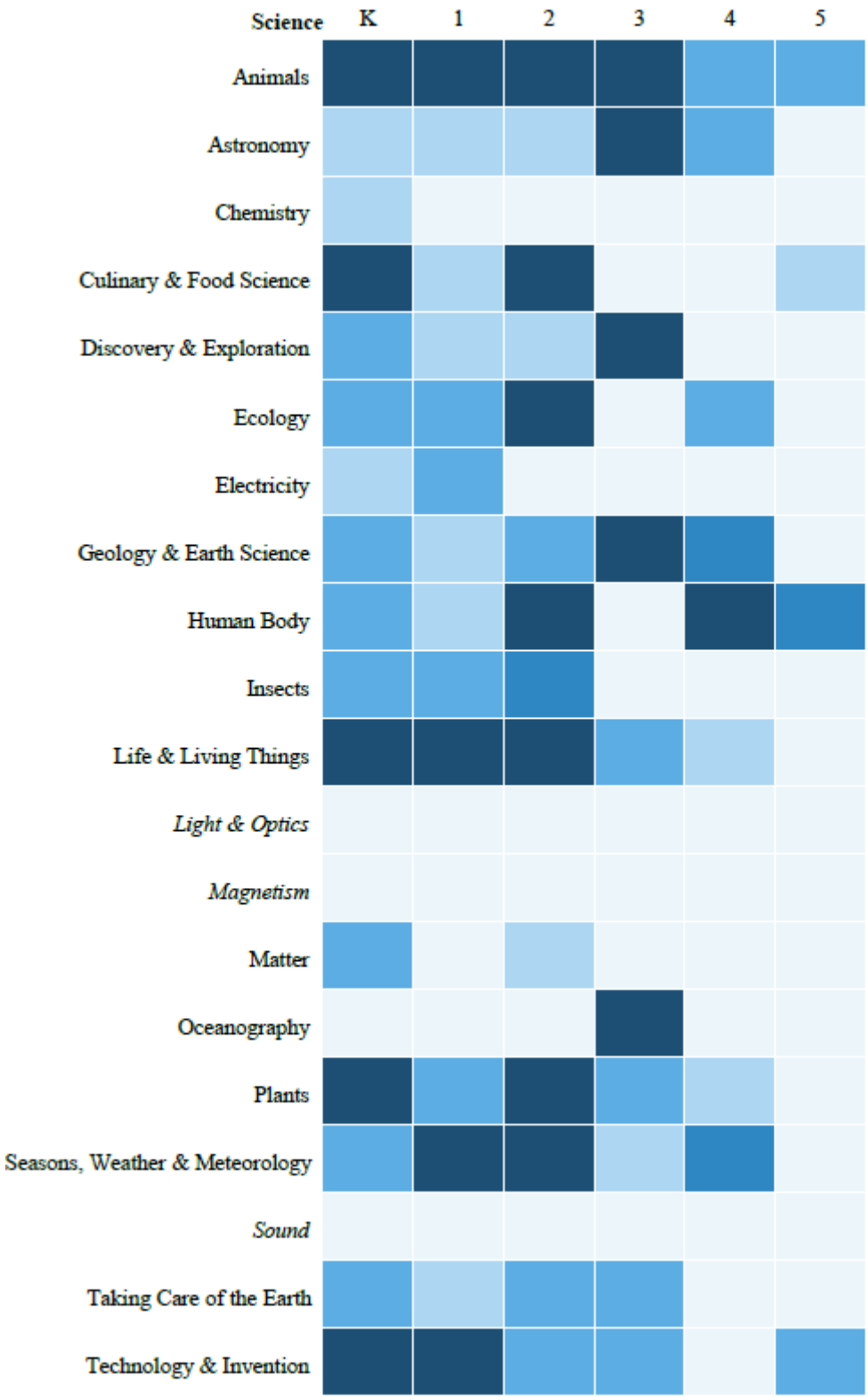


Figure 11. Heat map analysis of the Science knowledge domain in Grades K-5.

Weaker Knowledge-Building Domains

Weaker knowledge-building domains appear in Heat Maps as light blue or gray, indicating one or no texts address the topic. The Institute does not perform prevalence analysis on weak domains, as there is not enough data to be meaningful. However, domains where 60% or more of the topics show either one or no text are designated as weak.

Two knowledge domains present generally weak knowledge-building across all topics –Public Institutions (Figure 12) and World History & Geography (Figure 13).

Besides these overall weak domains, all other knowledge domains present specific weaknesses. One pattern of weakness appears as an absence of texts across grade levels. Within the Music & Performing Arts domain, which overall presents knowledge-building, the topic of Instruments appears particularly weak, with minimal texts addressing the topic at only one grade level.

An additional pattern of weakness presents as a lack of domain coverage within a grade band. Visually, this appears in the Knowledge Map™ as empty columns beneath individual grade levels. For example, the Science domain achieves moderate knowledge-building overall, but topic coverage drops off considerably at the Grade 5 level. Similarly, the American History & Geography domain demonstrates notable gaps at Grade 1, with few or no texts regarding most of the topics within the domain. Such absences may reflect curricular progression decisions and other factors, but significant gaps may still be worth examining.

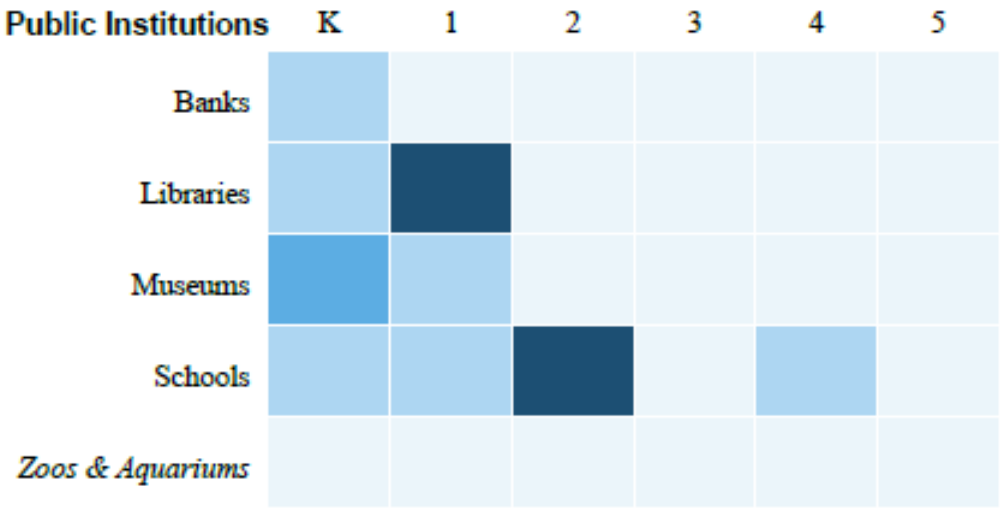


Figure 12. Heat map analysis of the Public Institutions knowledge domain in Grades K-5.

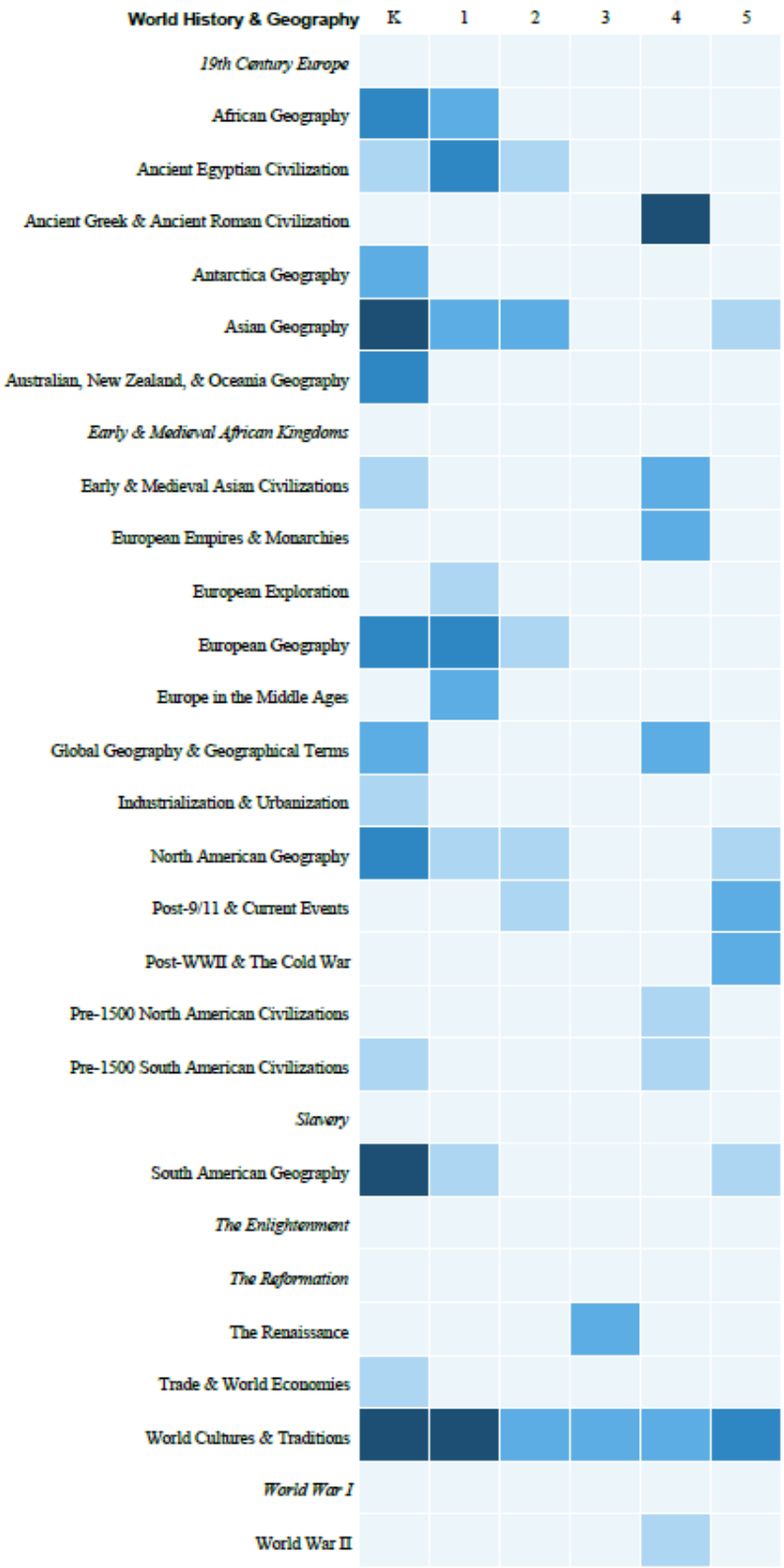


Figure 13. Heat map analysis of the World History & Geography knowledge domain in Grades K-5.

WIT & WISDOM® KNOWLEDGE HEAT MAPS: GRADES 6-8

Heat Map analysis on the curriculum continued for the secondary grade levels, using the same standards and metrics as the elementary grades. As previously mentioned, the Heat Maps express the findings visually using a color-coding scheme where lighter blue squares represent fewer knowledge-building texts and darker blue squares represent more knowledge-building texts. The text analysis results for each of the twenty-one topical domains for Grades 6-8 appear in Figures 14-33.

Strong Knowledge-Building Domains

The curriculum presents robust knowledge building in several domains and additional topics (shown below alphabetically when similarly rated). Strong knowledge-building domains appear in the Heat Maps as dark blue, indicating many texts address the topic (for instance, the Heat Map categories of 8+ Texts or 5-7 Texts). Prevalence analysis divides the number of strong Heat Map ratings on a topic at a grade level (the number of darker blue squares) by the entire knowledge domain (the total number of squares).

At this level, two knowledge domains present strong knowledge-building – Emotions, Being, & Personal Psychology (Figure 14), and Social Sciences (Figure 15). As demonstrated by the figures below, both present high levels of knowledge-building across topics and grade levels, indicating that students in the system experience solid instruction within these domains across their entire secondary education.

Additional knowledge domains exhibit patterns of strength in specific topics across grade bands. One pattern presents large numbers of texts on a particular topic across all grades. For instance, the Diversity & Cultural Responsiveness domain (Figure 16) is moderately rated overall, but the topic of African American Experience is covered significantly across all grade levels. A second pattern presents large numbers of texts across domain topics within an individual grade band. In the visual Heat Maps, this trend presents as an individual column full of darker blue squares. Both of these patterns indicate that students receive regular reinforcement of specific topics and ideas throughout their secondary education, even if they may not receive fully-developed reinforcement across the entire domain.

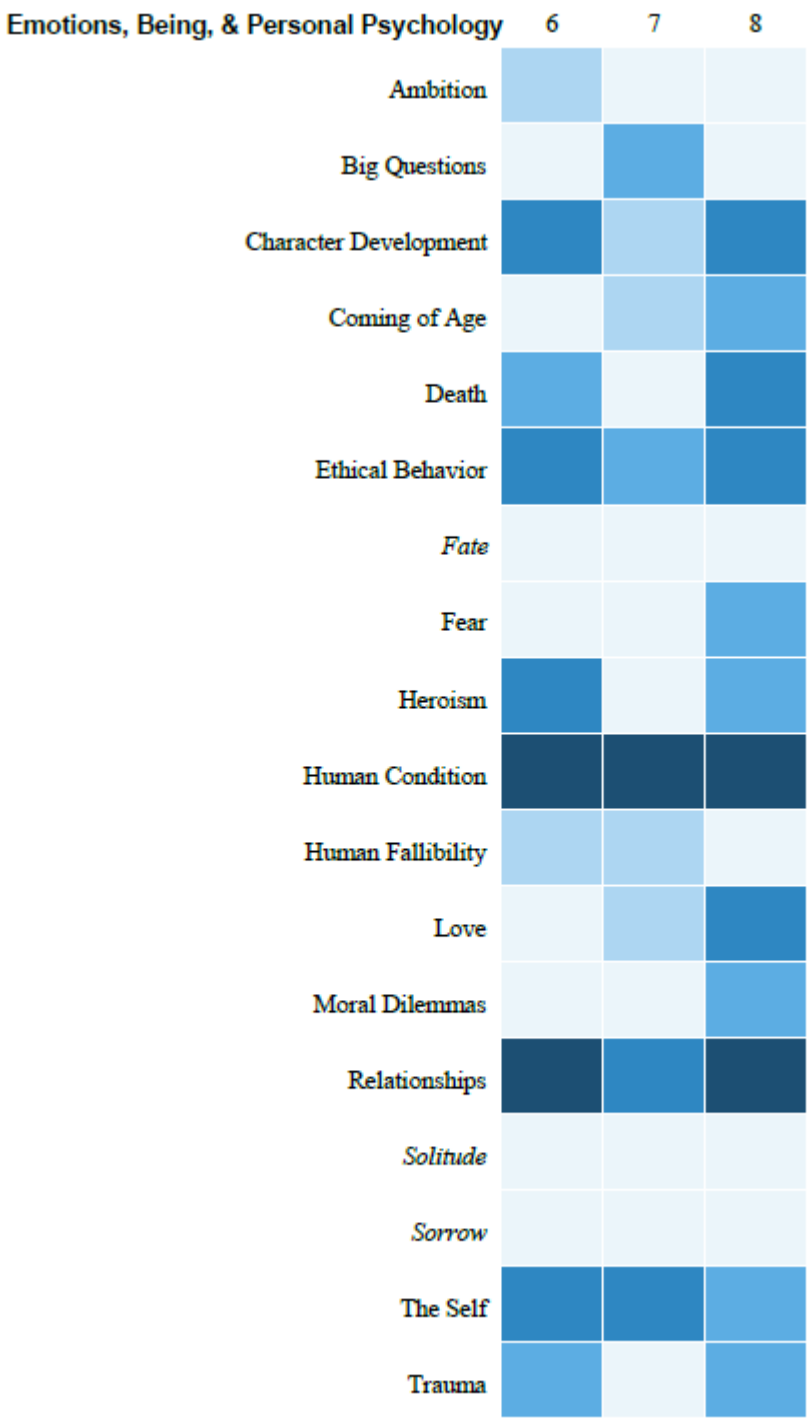


Figure 14. Heat map analysis of the Emotions, Being, & Personal Psychology knowledge domain in Grades 6-8.

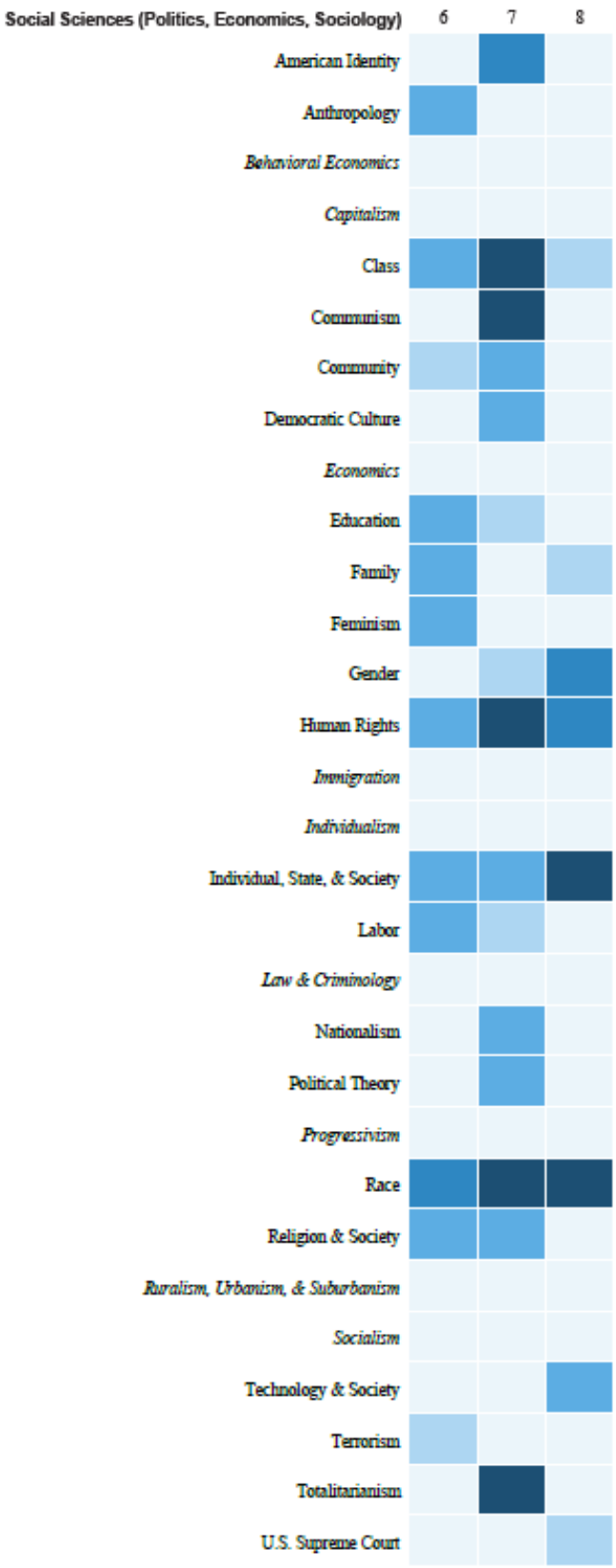


Figure 15. Heat map analysis of the Social Sciences knowledge domain in Grades 6-8.

Moderate Knowledge-Building Domains

The curriculum presents several moderate knowledge-building domains and topics. Moderate knowledge-building domains appear in the Heat Maps as mixed blue, indicating few or some texts addressing the topic (for example, the Heat Map category of 2-4 Texts). Prevalence analysis divides the number of moderate Heat Map ratings on a subject at a particular grade level (the number of medium blue squares) by the entire knowledge domain (the total number of squares).

Three knowledge domains present moderate prevalence of knowledge-building texts in all domain topics, relative to the entire curriculum. Namely, these are the Diversity & Cultural Responsiveness (Figure 16), Music, Art & Architecture (Figure 17), and World History Since 1600 (Figure 18) domains. Compared to strong domains, these domains appear more sporadic in their overall knowledge-building, and typically include gaps in instruction or fewer resources regarding particular topics.

Additionally, specific patterns of moderate knowledge-building arise within specific topics across grade bands. One pattern presents moderate coverage in topics across grade levels. For example, the previously mentioned Social Sciences domain scores strongly overall, but moderate knowledge-building exists within the topic of Religion & Society, among others. A second pattern presents moderate numbers of texts across a domain's topics at individual grade levels. Though the domain of Emotions, Being, & Personal Psychology provides enough depth to receive a strong rating overall, knowledge-building appears more moderate at the Grade 7 level, indicating more gaps in instruction there. Both of these patterns indicate that moderate knowledge building arises in many topics both within and across grade levels, even if the domains as a whole do not receive moderate knowledge-building scores.

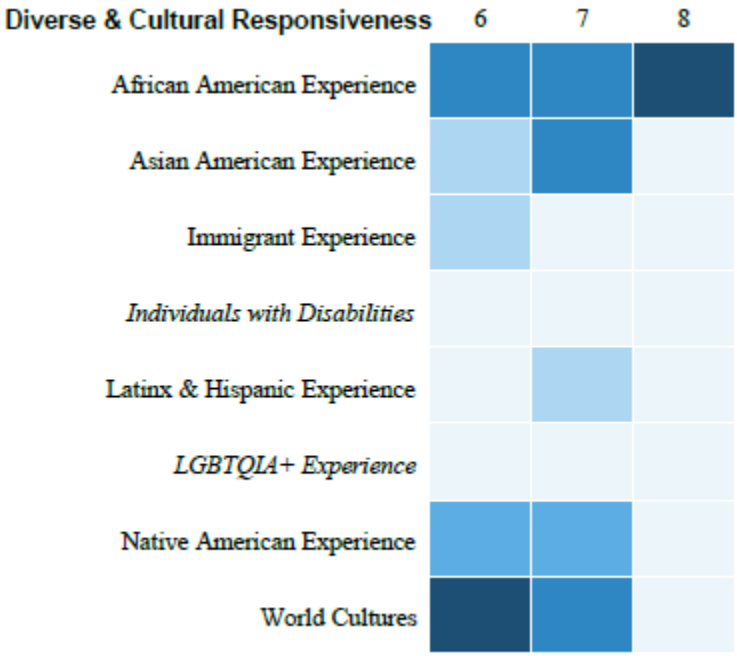


Figure 16. Heat map analysis of the Diversity & Cultural Responsiveness knowledge domain in Grades 6-8.

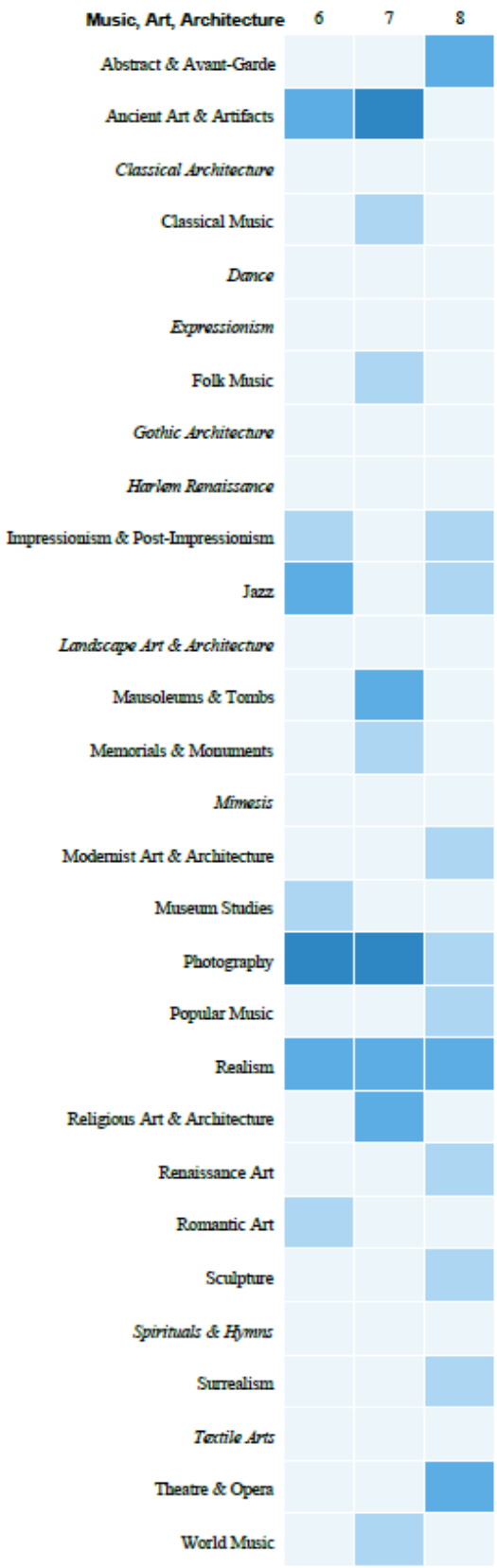


Figure 17. Heat map analysis of the Music, Art, & Architecture knowledge domain in Grades 6-8.

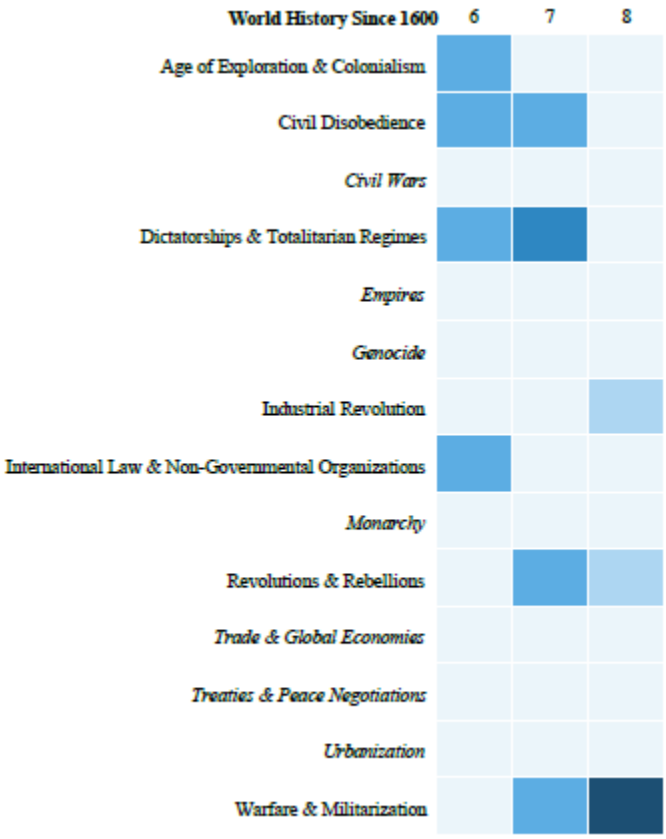


Figure 18. Heat map analysis of the World History Since 1600 knowledge domain in Grades 6-8.

Weaker Knowledge-Building Domains

The curriculum presents weaker knowledge-building in multiple knowledge domains and topics. Weaker knowledge-building domains appear in Heat Maps as light blue or gray, indicating one or no texts address the topic. The Institute does not perform prevalence analysis on weak domains, as there is not enough data to be meaningful. However, domains where 60% or more of the topics show either one or no text are designated as weak.

All domains not previously mentioned scored as weak by the Institute's evaluation standards. Namely, these domains are: American Literature (Figure 19); British Literature (Figure 20); Earth, Life, & Medical Sciences (Figure 21); Global Literature (Figure 22); Literary Genres (Figure 23); Media (Figure 24); Philosophy Proper (Figure 25); Physical Sciences (Figure 26); Religion (Figure 27); Technology (Figure 28); U.S. Geography (Figure 29); U.S. History Since 1865 (Figure 30); U.S. History To 1865 (Figure 31); World Geography (Figure 32); and World History to 1600 (Figure 33). One domain, Philosophy Proper, is not represented at all by any of the curriculum's materials.

Besides these overall weak domains, all other knowledge domains present specific patterns of weakness. One pattern of weakness appears as an absence of texts across grade levels. The Music, Art, & Architecture knowledge domain indicates moderate knowledge-building overall, but several topics are not addressed across all secondary grade levels. An additional pattern of weakness presents

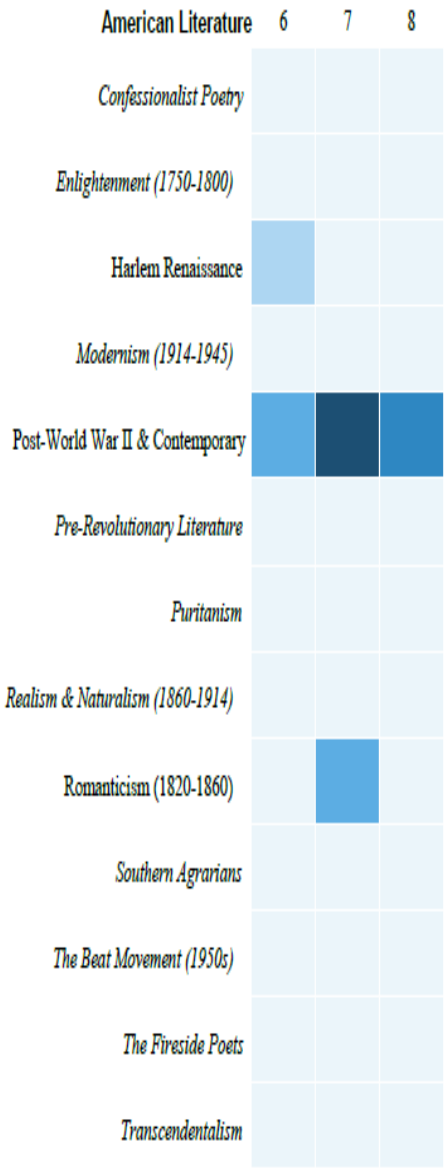


Figure 19. Heat map analysis of the American Literature knowledge domain in Grades 6-8.

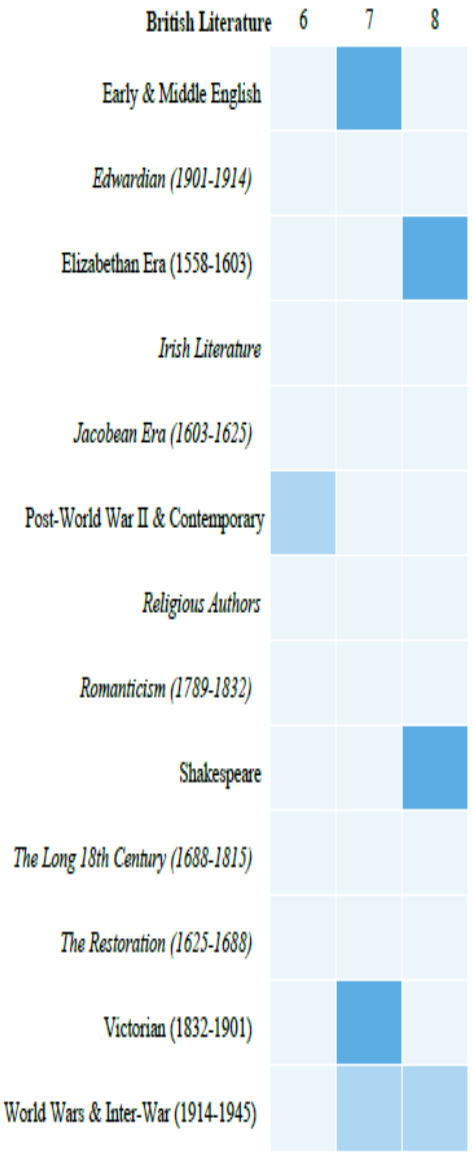


Figure 20. Heat map analysis of the British Literature knowledge domain in Grades 6-8.

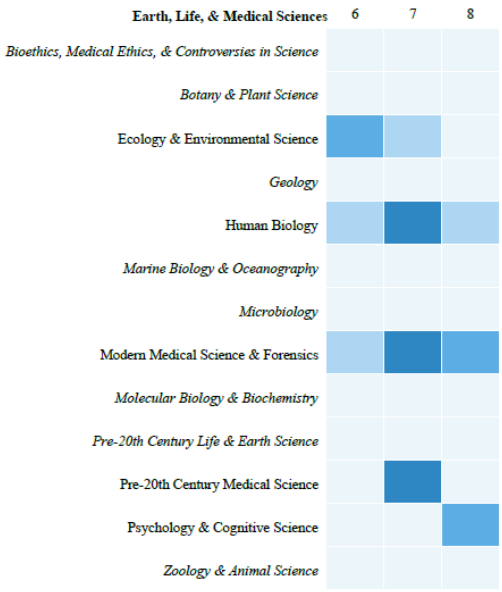


Figure 21. Heat map analysis of the Earth, Life, & Medical Sciences knowledge domain in Grades 6-8.

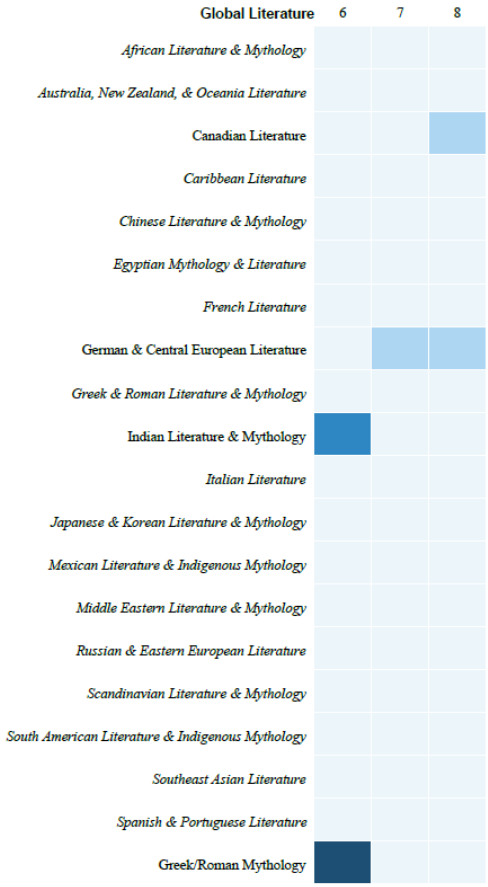


Figure 22. Heat map analysis of the Global Literature knowledge domain in Grades 6-8.

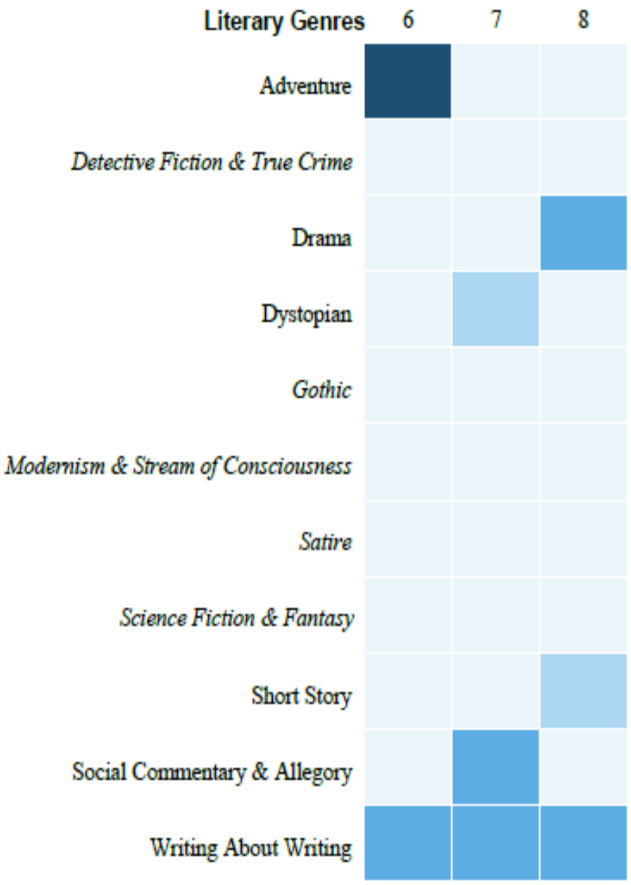


Figure 23. Heat map analysis of the Literary Genres knowledge domain in Grades 6-8.

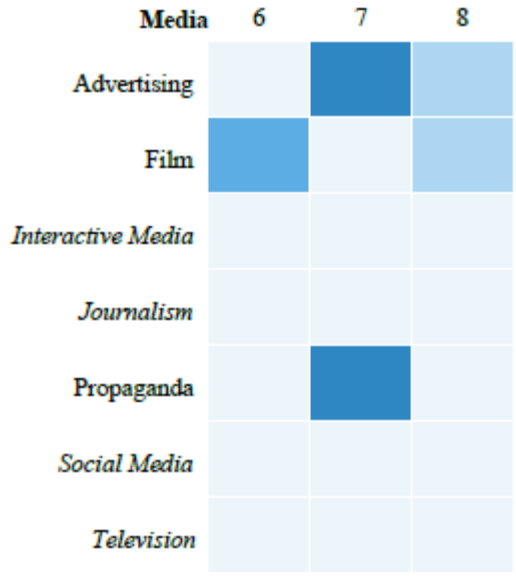


Figure 24. Heat map analysis of the Media knowledge domain in Grades 6-8.

Figure 25. Heat map analysis of the Philosophy Proper knowledge domain in Grades 6-8.

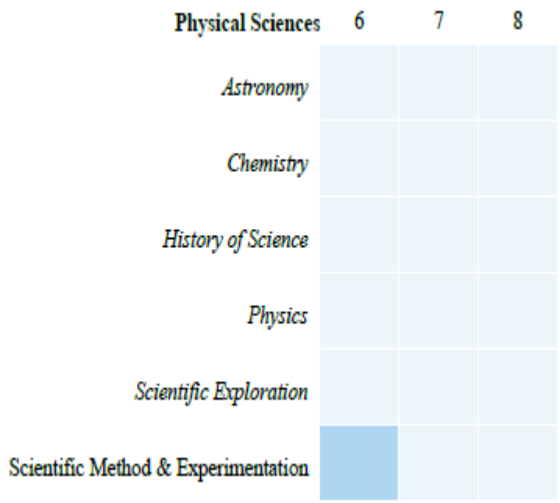


Figure 26. Heat map analysis of the Physical Sciences knowledge domain in Grades 6-8.

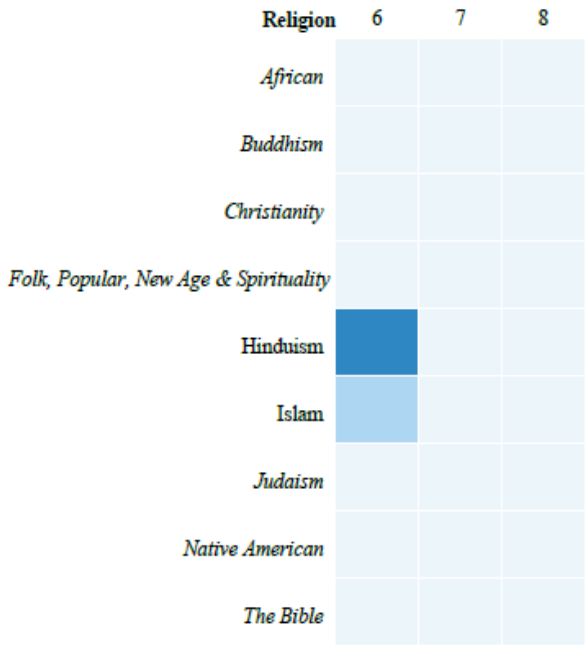


Figure 27. Heat map analysis of the Religion knowledge domain in Grades 6-8.

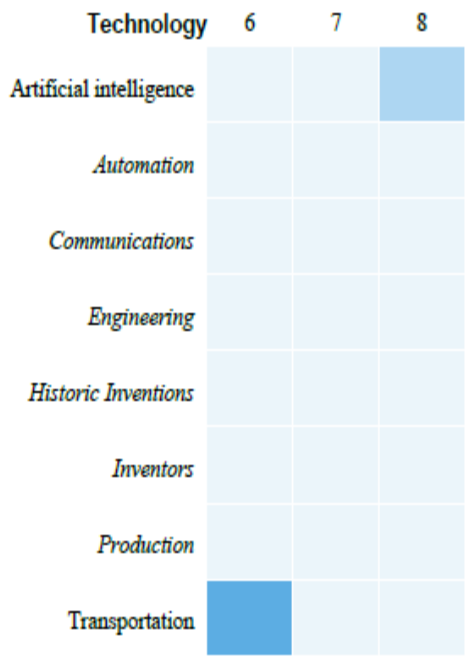


Figure 28. Heat map analysis of the Technology knowledge domain in Grades 6-8.

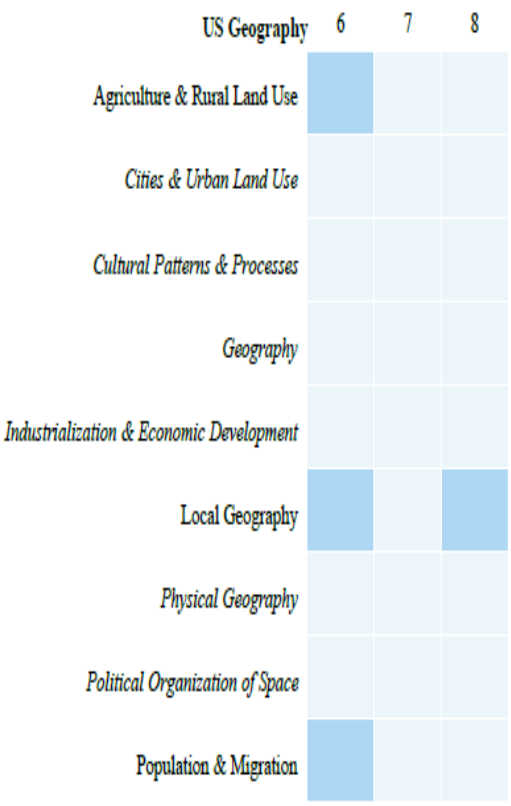


Figure 29. Heat map analysis of the US Geography knowledge domain in Grades 6-8.

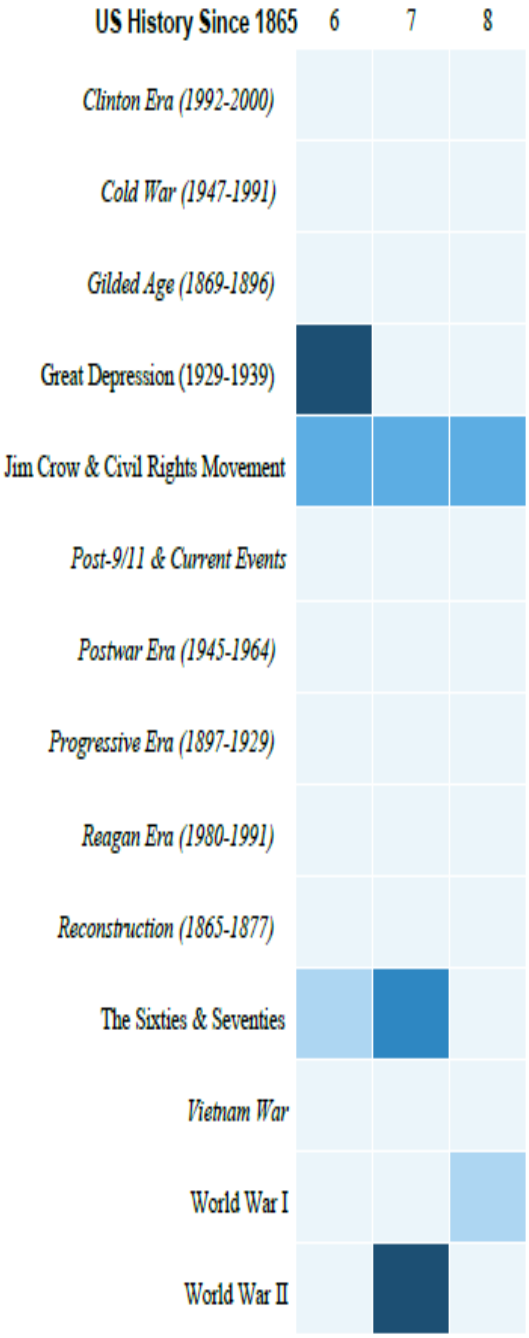


Figure 30. Heat map analysis of the US History Since 1865 knowledge domain in Grades 6-8.

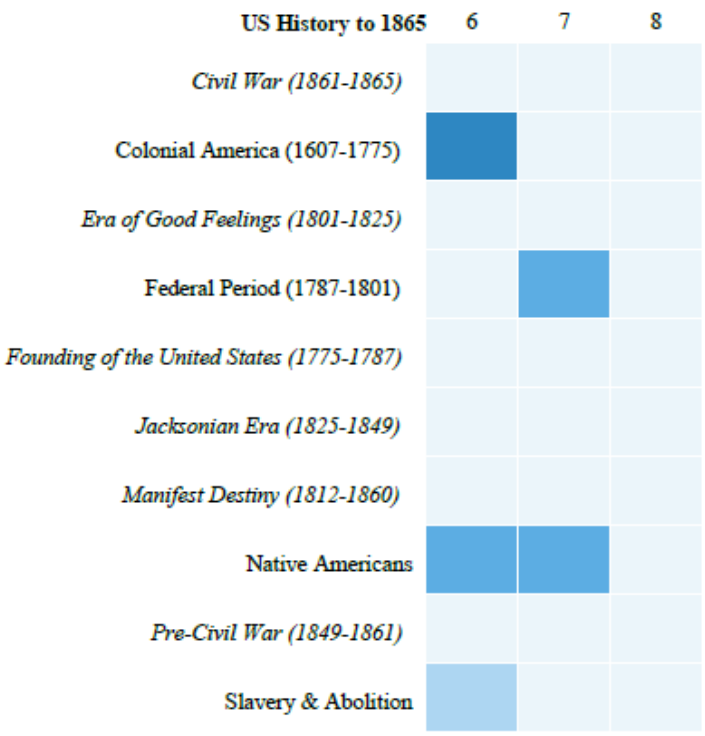


Figure 31. Heat map analysis of the US History to 1865 knowledge domain in Grades 6-8.

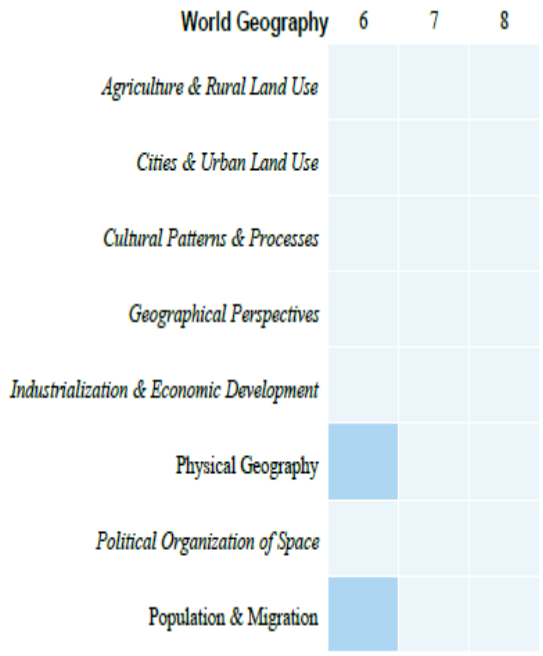


Figure 32. Heat map analysis of the World Geography knowledge domain in Grades 6-8.

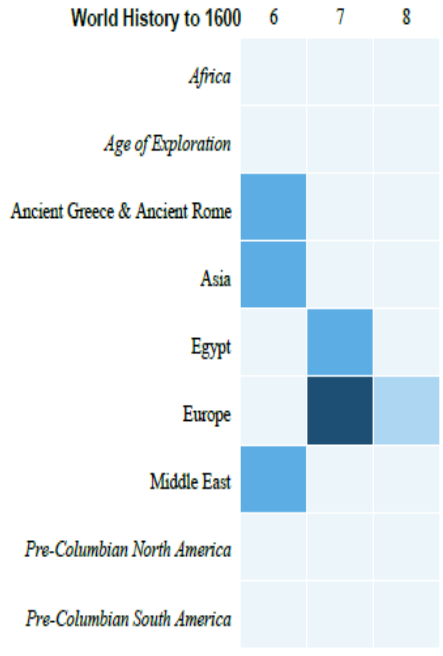


Figure 33. Heat map analysis of the World History to 1600 knowledge domain in Grades 6-8.

Culturally Relevant Domains

Culturally relevant texts represent a spectrum of positive, neutral, and negative aspects of a cultural group's experience in the United States. Texts rated highly for Diversity, Equity, & Inclusion illustrate both strengths and challenges relevant to the history and experience of each cultural group. Many academic materials rate as culturally relevant, ranging from picture books to documentary films. The Institute reviewed *Wit & Wisdom*'s materials for cultural responsiveness across the evaluated grade levels.

Within the *Wit & Wisdom®* curriculum, the largest share of culturally relevant materials relate to the African American Experience and World Cultures; at the elementary level, the Native American Experience is also addressed considerably. Within the secondary grades, the Immigrant Experience and Individuals with Disabilities are the least-represented topics; across the entire curriculum, the LGBTQIA+ Experience is not addressed at any point.

The prevalence and distribution of culturally relevant materials vary across the *Wit & Wisdom®* curriculum. All grades include some culturally responsive texts, as demonstrated in the figures below. Grade 8 contains the fewest culturally relevant texts, with only one topic addressed at all. With the exception of Grade 4, the elementary grades present solid knowledge-building throughout the domain, utilizing multiple texts to address a variety of topics.

Figure 8. Heat map analysis of the Diversity & Cultural Responsiveness knowledge domain in Grades K-5.

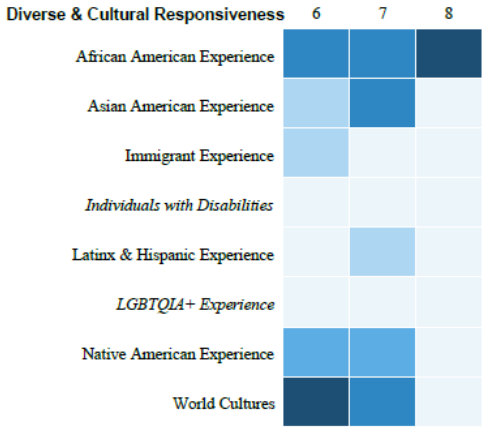


Figure 16. Heat map analysis of the Diversity & Cultural Responsiveness knowledge domain in Grades 6-8.

WIT AND WISDOM® QUALITY AND COHERENCE

As mentioned previously, the Institute's analysis includes tagging each text for the knowledge domains, topics, and subtopics that it reinforces. The Institute expanded upon the Heat Map analysis and evaluated each text for quality, according to the rubrics below. In addition, the Institute also applies a Coherency Score that rate how well the materials within a unit reinforce the knowledge builds, described in more detail below.

The findings of quality and coherence vary and are not linked. For instance, a unit may score high in overall quality, shown as a percentage, and have a low Coherence Score in terms of how well the texts reinforce the knowledge built in the unit. In other words, units with high overall quality scores may perform weakly on reinforcing central themes through additional materials. The converse is also possible, where a unit scoring low in overall quality may have moderate or strong reinforcement of unit topic.

Rubrics for Quality

The Institute applied three rubrics for analysis of text quality: a fiction rubric, a nonfiction rubric, and a literary nonfiction rubric. All three rubrics consider content knowledge and language. Fiction and literary nonfiction (nonfiction material presented in a book-length format) include additional factors relevant to the genres, such as emotion, prominence of the work, and eternal questions. Nonfiction does not consider these factors, instead focusing on the accuracy and quality of the source. Within the literary nonfiction rubric, these factors reside within the 'prominence' category.

Fiction and Literary Nonfiction (Total of 15 possible Points)

Emotion: The degree to which the text is memorable due to its impact upon the reader's affect. Works that may achieve high emotion scores include Shakespeare's *Romeo & Juliet* and Morrison's *The Bluest Eye*.

Language: The degree to which the text contains outstanding language and derives effect from several factors, including:

- Clarity (Hemingway's *Old Man and The Sea*, Austen's *Emma*)
- Appeal to the imagination (Tolkien's *The Lord of the Rings*)
- Sophisticated capacity at multiple levels, including cultural, social, metaphorical, and/or theological (Kafka's *The Trial*, Dante's *The Divine Comedy*, de Cervantes' *Don Quixote*).

Eternal Questions: The degree to which a text addresses perpetual issues of the human condition, such as private or public ethics, obedience to the state, family allegiance, meaning, and purpose. Works that may achieve high scores on this metric include Sophocles' *Antigone* and Camus's *The Stranger*.

Content Knowledge: The degree to which text builds students' background knowledge about the world. Strong examples on this metric include Erdrich's *Birchbark House* for elementary students or Austen's *Pride & Prejudice* for secondary students.

Prominence: The degree to which a text is widely known. Several factors determine a text's prominence, including:

- Longevity: The degree to which the text has entered the American literary canon, meaning that the text remains widely read for at least fifty years since its publication (Steinbeck's *The Grapes of Wrath*, Thoreau's *Walden*).
- Current prominence: The degree to which the text is a contemporary classic, meaning that it appears widely in American schools in recent years (Cisneros's *Last House on Mango Street*, Satrapi's *Persepolis*).
- Awards: The degree to which the text has been recognized as outstanding by critics or through awards. Notable literary awards include the Nobel Prize in Literature, Booker Prize, John Newberry, Man Booker Award, PEN/Faulkner Award for Fiction, Pulitzer Prize, the Coretta Scott King Awards, or Pura Belpre Awards. More examples of critical literary acclaim appear here.
- Accuracy & Source (literary nonfiction only): The verifiable factual basis for the information and the bias profile of the source.

Nonfiction (Total of 12 Possible Points)

Accuracy: The degree to which the text is empirically accurate.

Source Quality: The degree to which the text comes from a high-caliber source. The Institute assigned an initial numerical value to news sources and added quality scores upon encountering new sources. Relevant links can be found here.

Language: The degree to which the text is well written and presents its subject matter effectively.

Content Knowledge: The degree to which the text effectively builds background knowledge of the topic or subtopic at hand.

Coherence Analysis

Finally, the Institute generates *Unit Coherence Maps* that illustrate the extent to which the materials reinforce the knowledge built within that unit, measured through shared topical tags.

The *Unit Coherence Map* utilizes a hub and spoke visual, where the unit name appears in the central square and the surrounding squares represent the materials within that unit. The percent shown on each outer square represents the percentage of shared topics weighted against the total number of shared topics within a unit. This means the more a topic is shared within a unit, the higher the percentage for each text that includes that topic; likewise, less-shared topics within a unit will result in a lower percentage for each text. The proximity of each spoke to the central unit square visually represents this relationship. In addition, there is an overall unit Coherence Score in the upper right corner in blue. The Coherence Score averages the coherency percentages of all texts within a given unit but also includes a .5% penalty for each domain that is not shared in any texts.

WIT & WISDOM® UNIT COHERENCE FINDINGS: GRADES K-5

The quality and coherence findings for each grade level follow in the sections below. This report highlights the highest- and lowest-quality units for each grade and provides a discussion of knowledge reinforcement within those units. The caption below each graph provides an average quality score for all texts within that unit. The Institute considers a unit or text high-quality if it scores 70% or above.

The Institute judges a unit or text rated below 60% of poor quality. The caption also includes the Coherency Score for that unit. Because the Coherency Score is dependent on the number of shared within a unit, what constitute a strong Coherency Score will vary from unit to unit.

Kindergarten

Kindergarten receives an overall quality score of 71.12%, placing it in the high-quality band.

Highest-Rated Unit

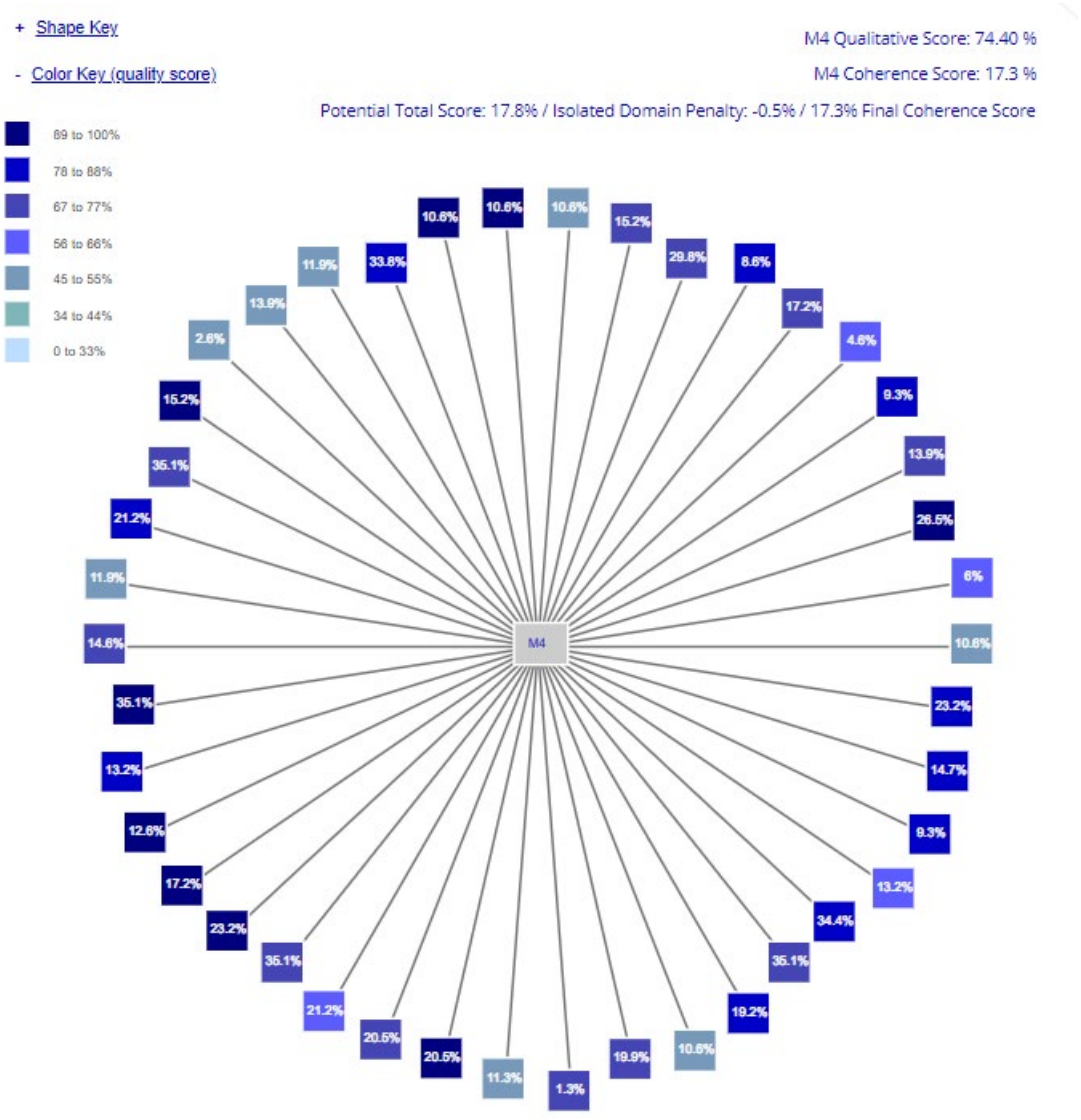


Figure 34. Proximity map of Grade K, Unit M4. The average unit score for text quality is 74.40%. The final coherence score is 17.3%.

Lowest-Rated Unit

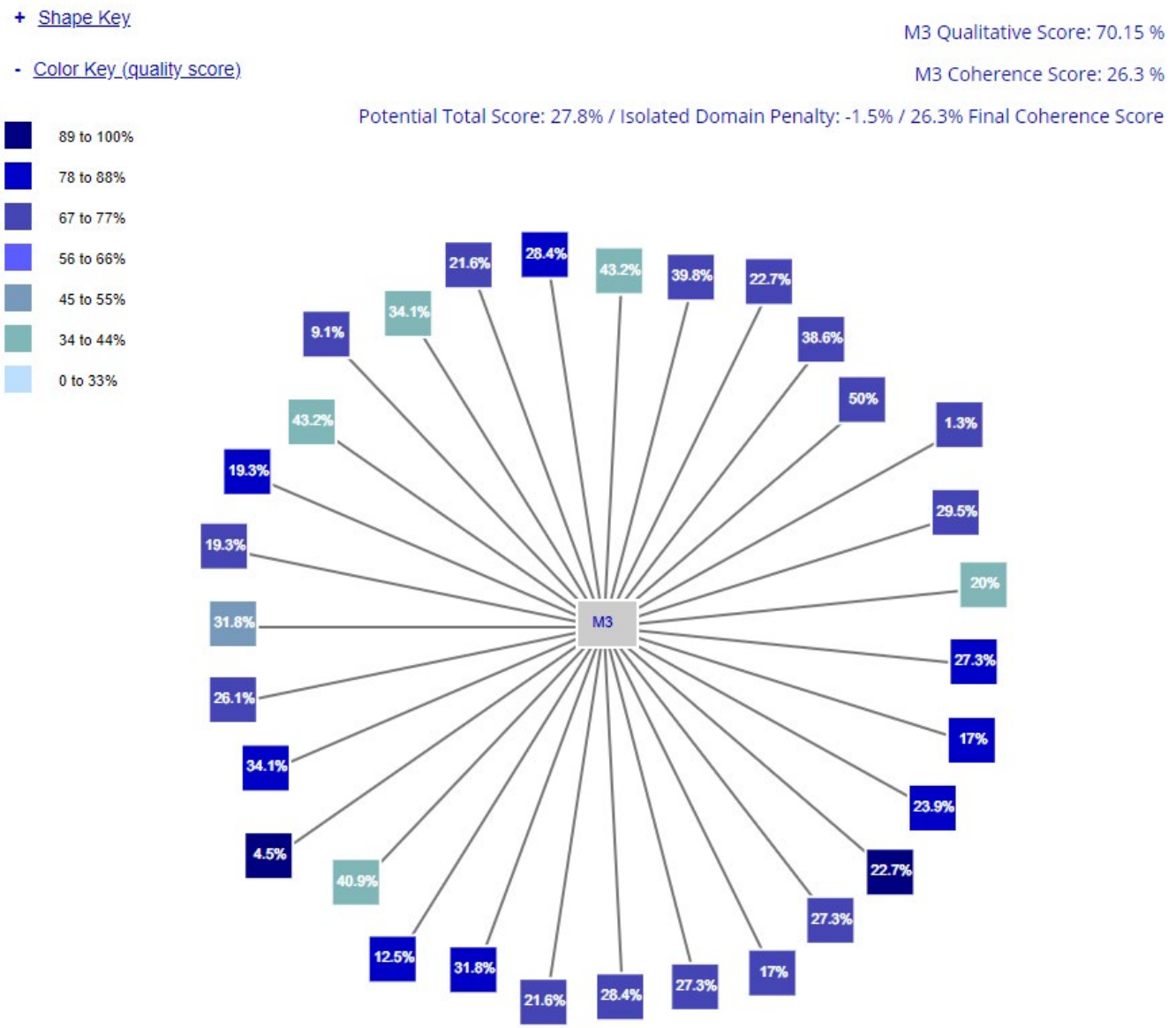


Figure 35. Proximity map of Grade K, Unit M3. The average score for text quality is 70.15%. The final coherence score is 26.3%.

Grade 1

Grade 1 receives an overall quality score of 74.04%, placing it in the high-quality band.

Highest-Rated Unit

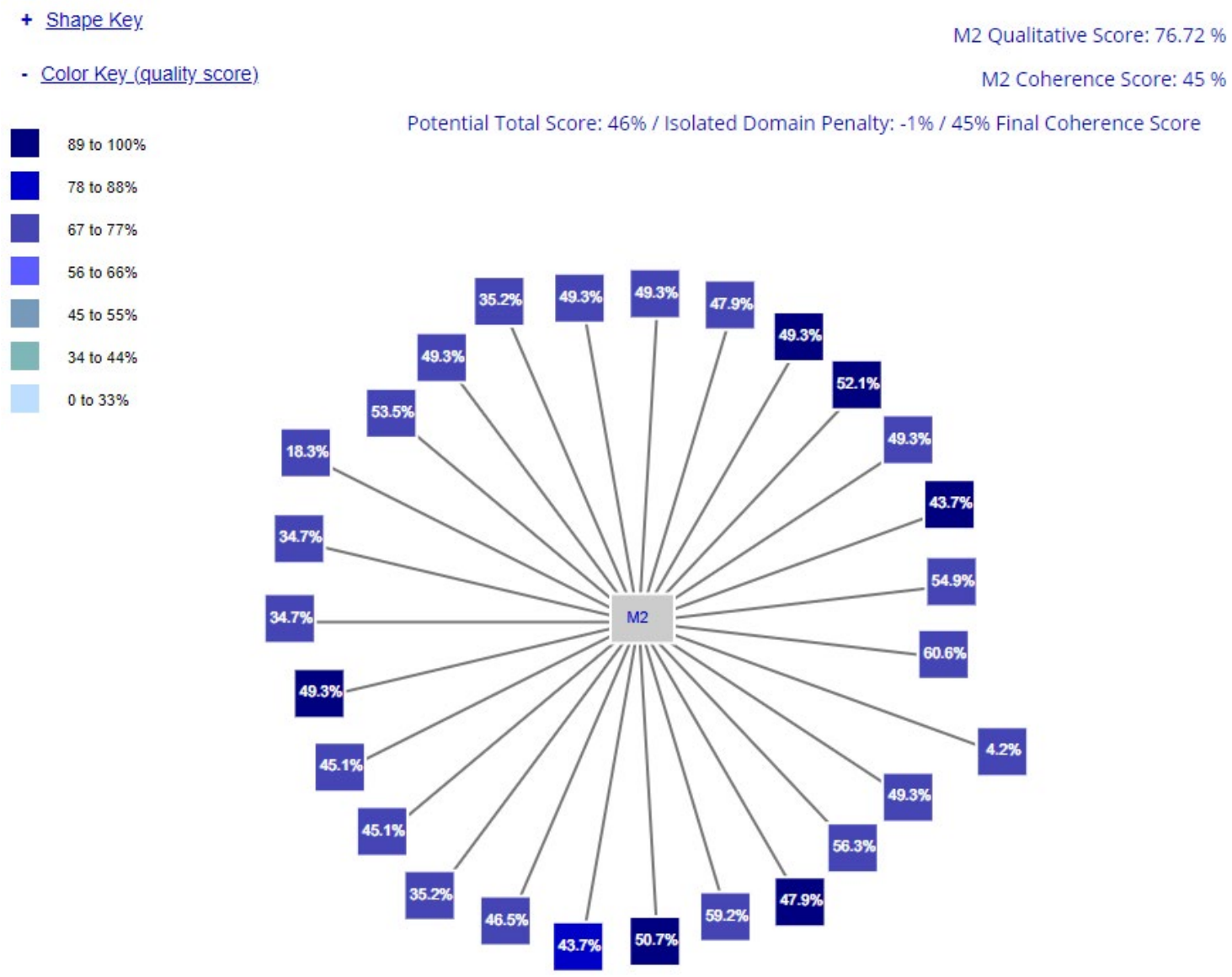


Figure 36. Proximity map of Grade 1, Unit M2. The average score for text quality is 76.41%. The final coherence score is 45%.

Lowest-Rated Unit

Unit M1 is the lowest-quality unit at this grade level, with an average text quality score of 70.94%. The range in coherency scores suggests a moderate knowledge-build, covering the topics of Fiction, Animals, and Libraries most commonly. Materials with lower coherency scores generally did not support any of the aforementioned topics.

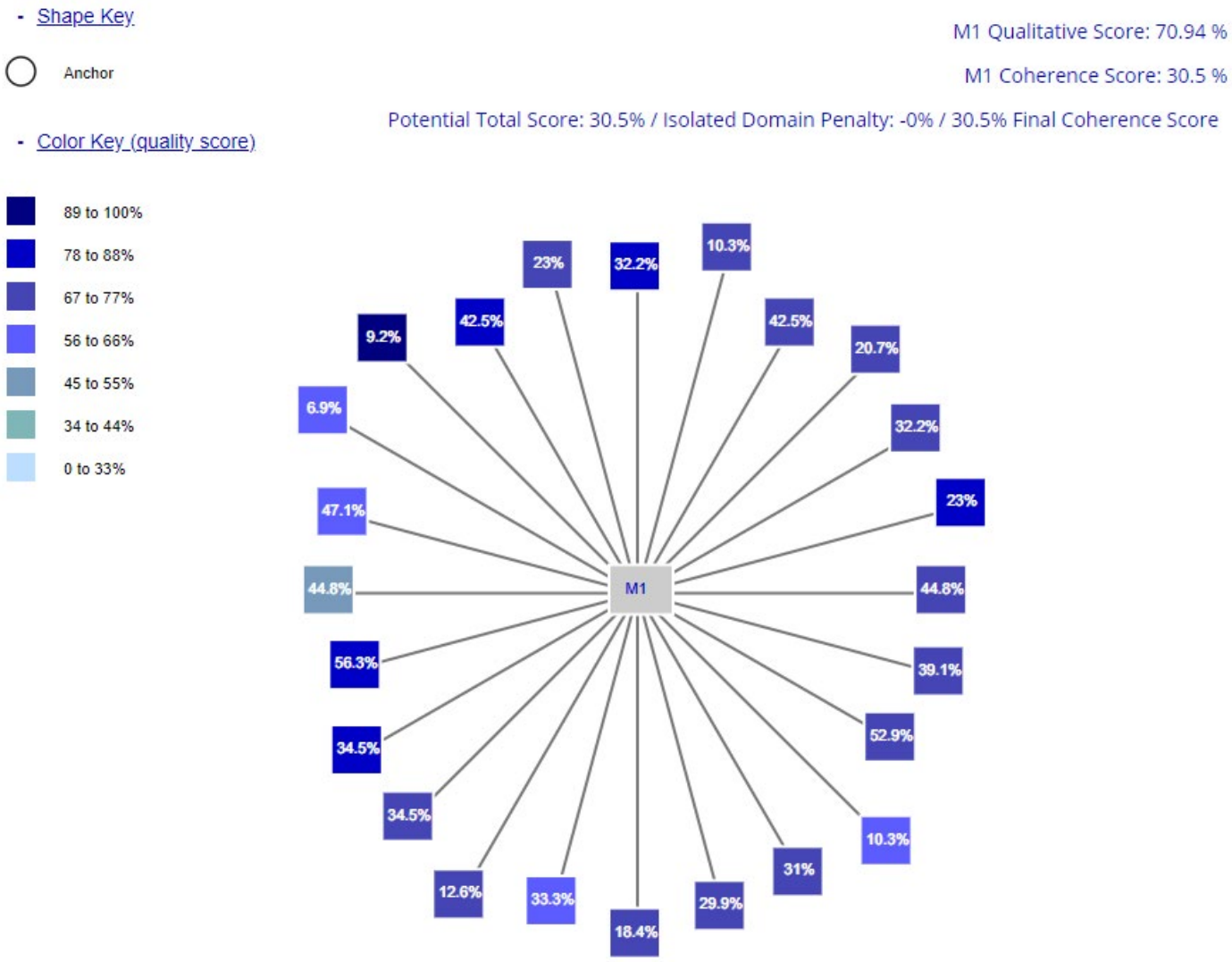


Figure 37. Proximity map of Grade 1, Unit M1. The average score for text quality is 70.94%. The final coherence score is 30.5%.

Grade 2

Grade 2 receives an overall quality score of 80.60%, placing it in the high-quality band.

Highest-Rated Unit

Unit M3 is the highest quality unit at this grade level, with an average text quality score of 86.18%. Coherence analysis indicated a strong knowledge build, especially in the Civil Rights & Splinter Movements, African American Experience, Social Awareness, and Society topics. Overall, this unit provides a solid base for instruction.

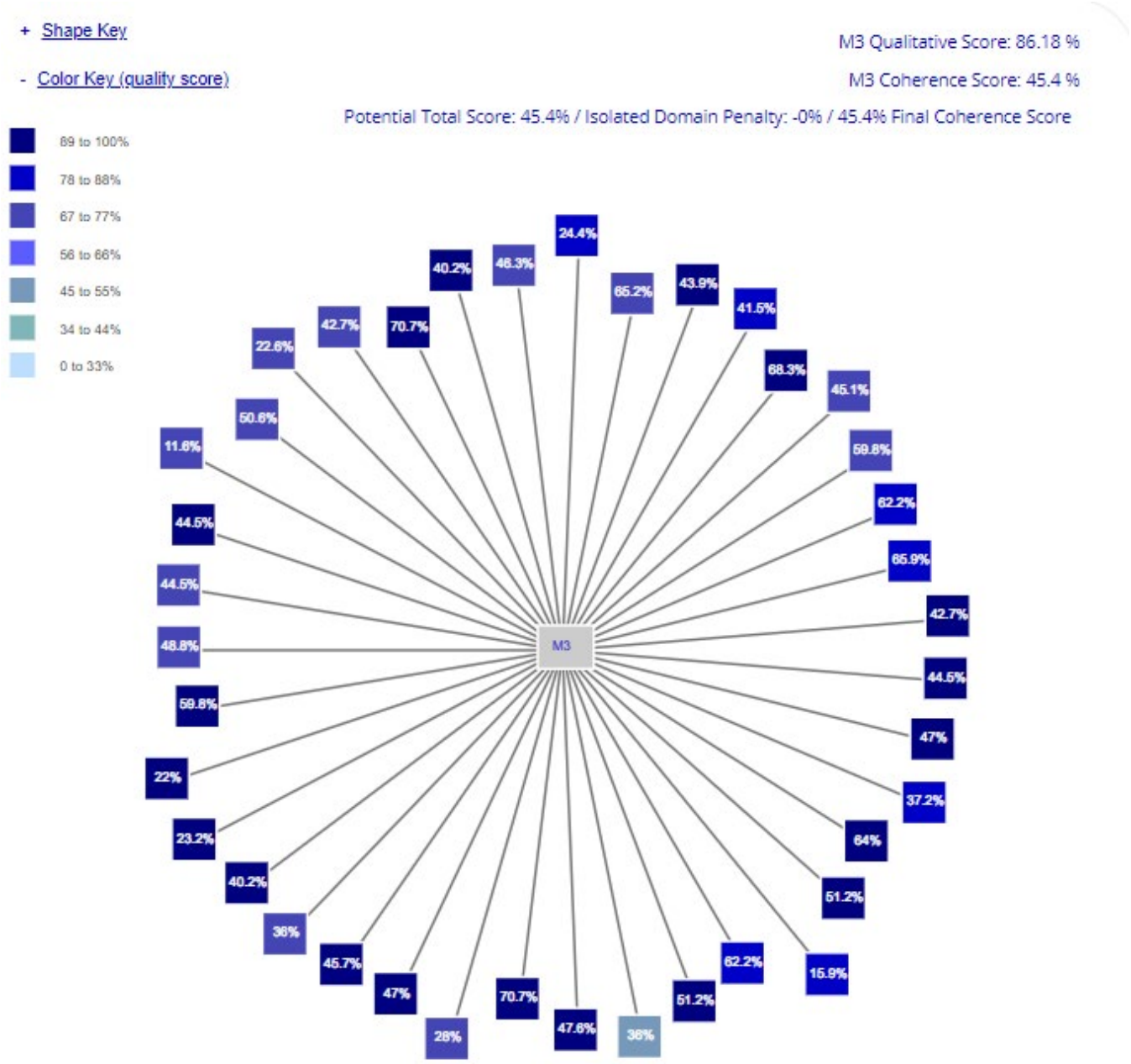


Figure 38. Proximity map of Grade 2, Unit M3. The average unit score for text quality is 86.18%. The final coherence score is 45.4%.

Lowest-Rated Unit

Unit M4 is the lowest-quality unit at this grade level, with an average text quality score of 74.32%. The small range in coherency scores suggests a strong knowledge build, focusing mainly on the topics of Life & Living Things, Human Body, and Culinary & Food Science.

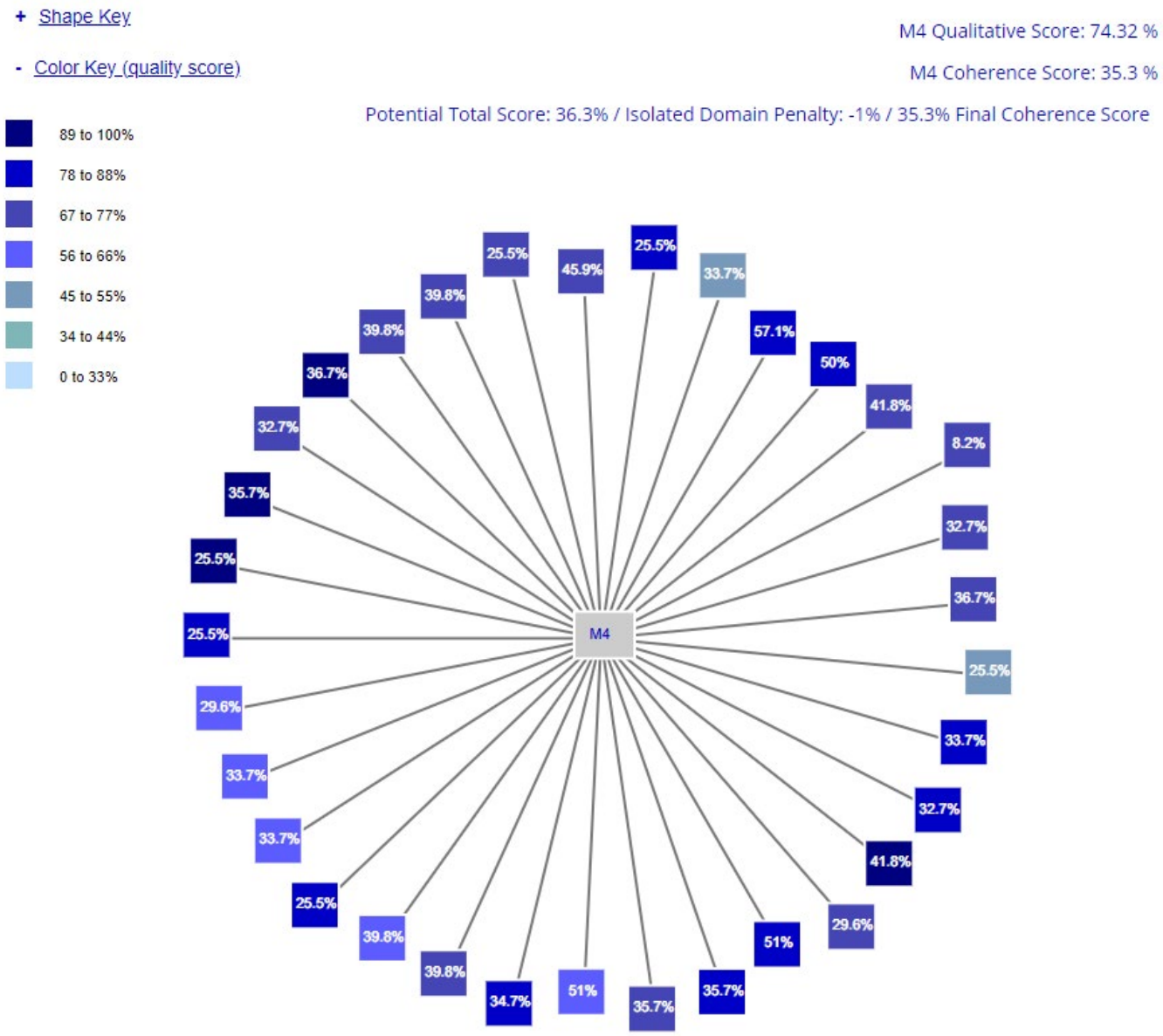


Figure 39. Proximity map of Grade 2, Unit M4. The average unit score for text quality is 74.32%. The final coherence score is 35.3%.

Grade 3

Grade 3 receives an overall quality score of 74.41%, placing it in the high-quality band.

Highest-Rated Unit

Unit M4 is the highest-quality unit at this grade level, with an average text quality score of 81.53%. This Module presents another strong knowledge build in the Artists & Architectures, Art Forms & Genres, and Elements topics within the Visual Arts domain. This Module also includes some material on

Performers in the Music & Performing Art domain. Material with lower coherency scores tapped into the topic of Poetry which falls under the American Literature or Global Literature domains.

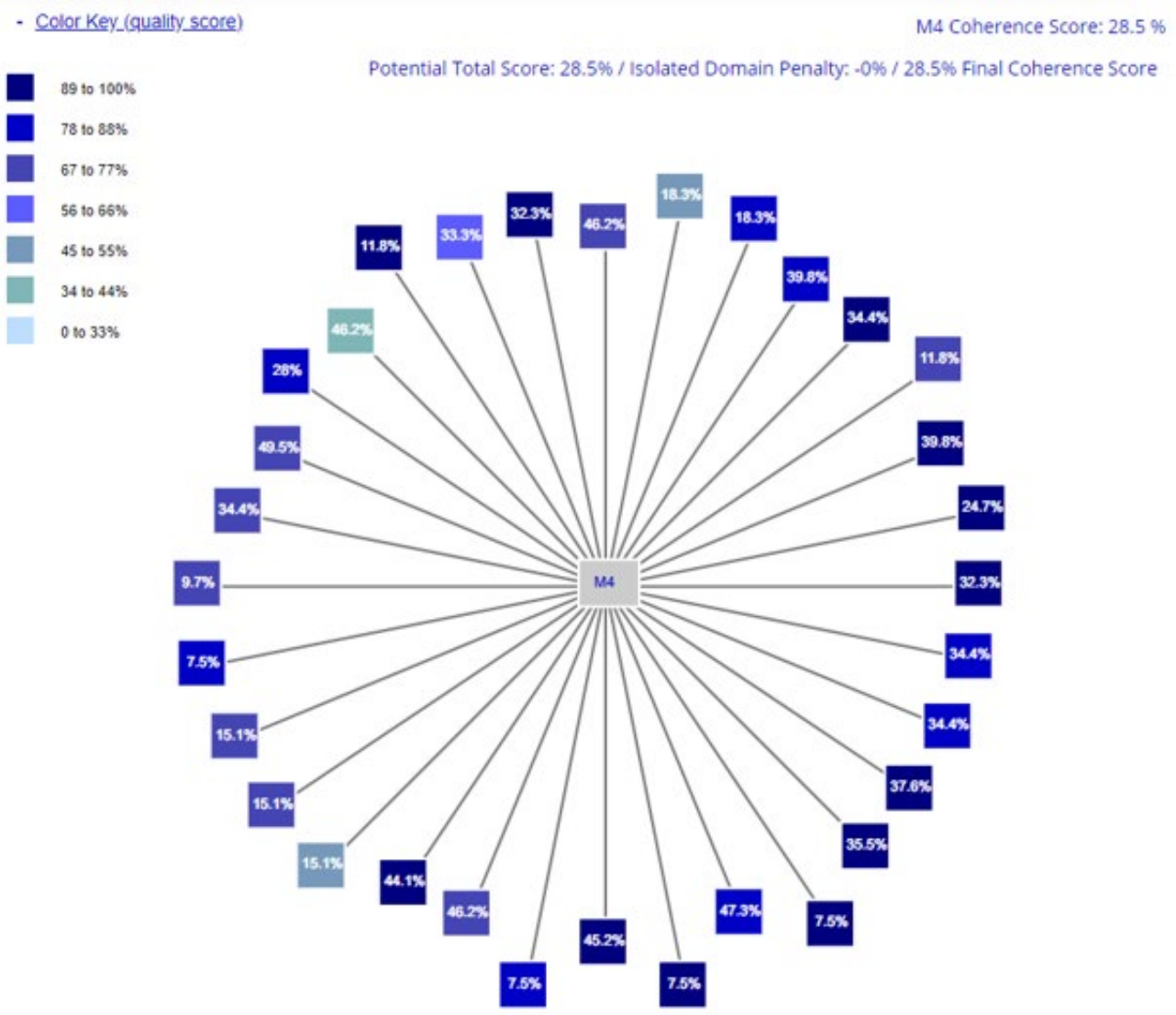


Figure 40. Proximity map of Grade 3, Unit M4. The average unit score for text quality is 81.53%. The final coherence score is 28.5%.

Lowest-Rated Unit

Unit M2 is the lowest-quality unit at this grade level, with an average text quality score of 71.47%. The Institute's coherency analysis presents a strong knowledge build in Module 2 with a focus on Astronomy. Given the close range in coherency scores with most texts, *Greek Myths* and *Artist Julie Niskanen on the Process of Making a Mezzotint,* stand out with a coherency score of 8%.

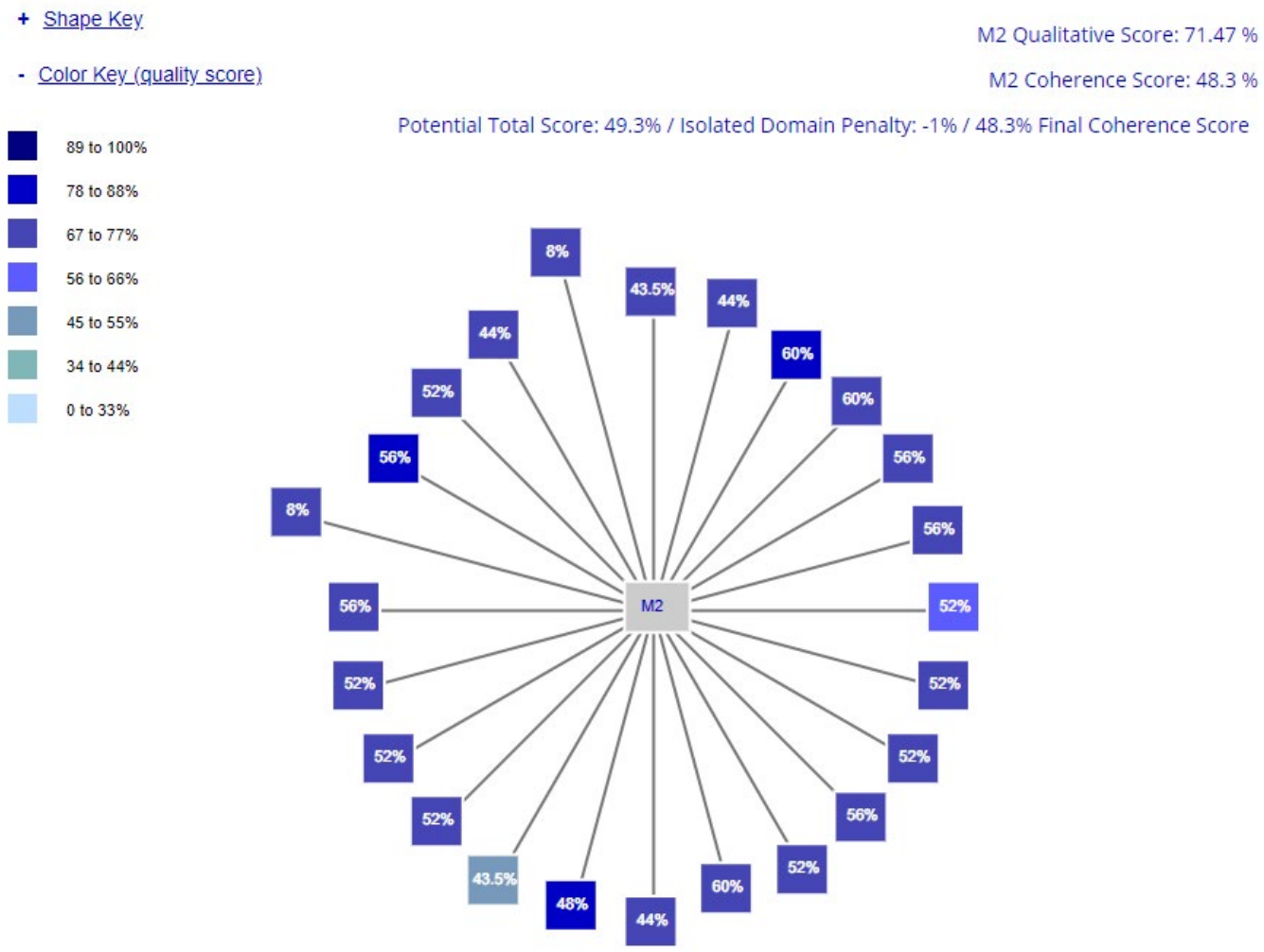


Figure 41. Proximity map of Grade 3, Unit M2. The average unit score for text quality is 71.47%. The final coherence score is 48.3%.

Grade 4

Grade 4 receives an overall quality score of 72.29%, placing it in the high-quality band.

Highest-Rated Unit

Unit M4 is the highest-quality unit at this grade level, with an average text quality of 77.27%. Analysis for unit coherency indicates several common topics which include Ancient Greek and Ancient Roman Civilizations along with Native American Peoples. Material outside of these topics show a coherency score of less than 10%.

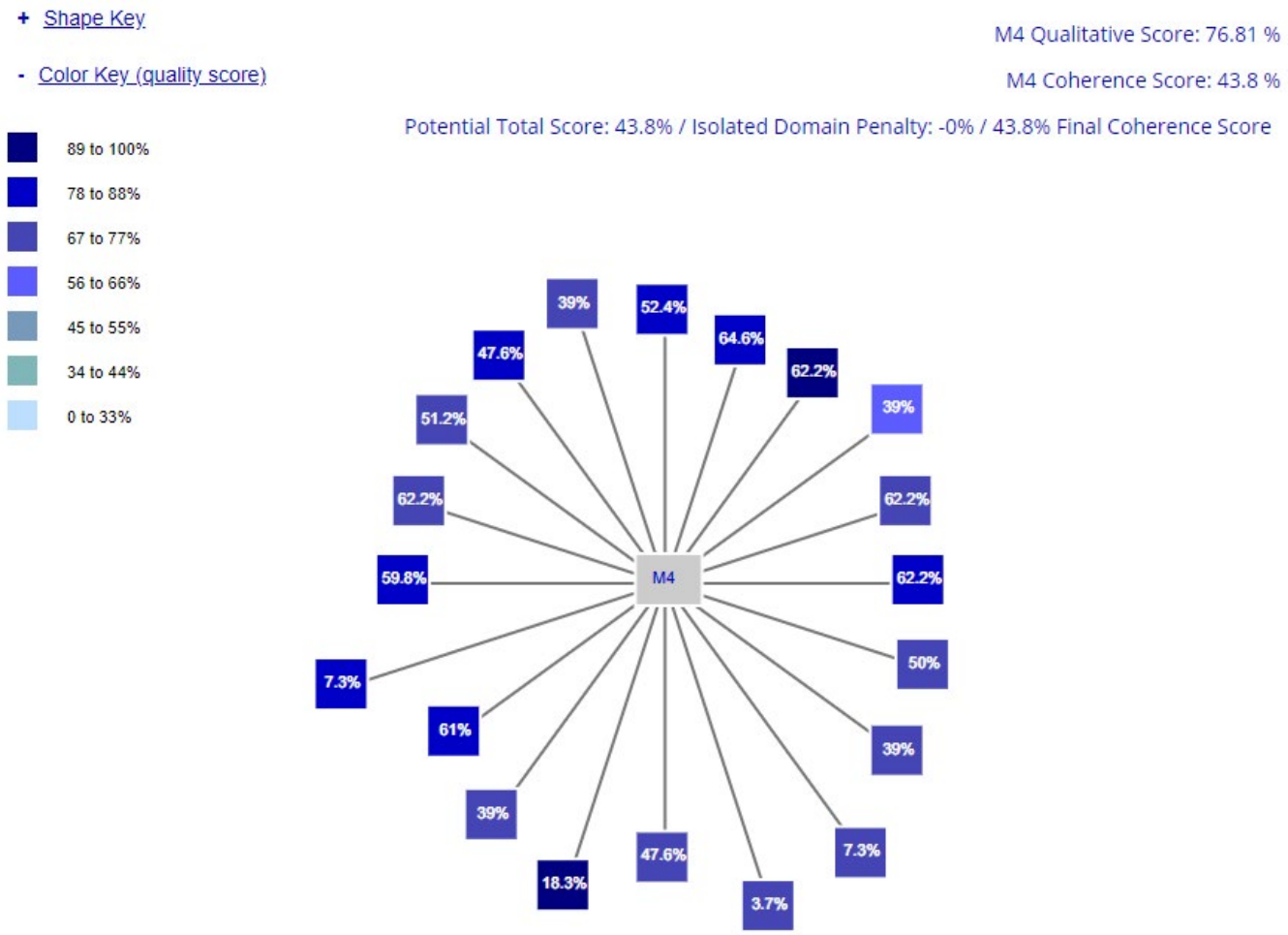


Figure 42. Proximity map of Grade 4, Unit M4. The average unit score for text quality is 77.27%. The final coherence score is 43.8%.

Lowest-Rated Unit

Unit M1 is the lowest-quality unit at this grade level, with an average text quality score of 69.26%. The Human Body and Poetry were the two most commonly shared topics in Module 1. While most material addresses one or both of these topics, there are materials that do not, or they include topics from other domains. While the overall quality is acceptable, individual texts with lower quality ratings should be reevaluated.

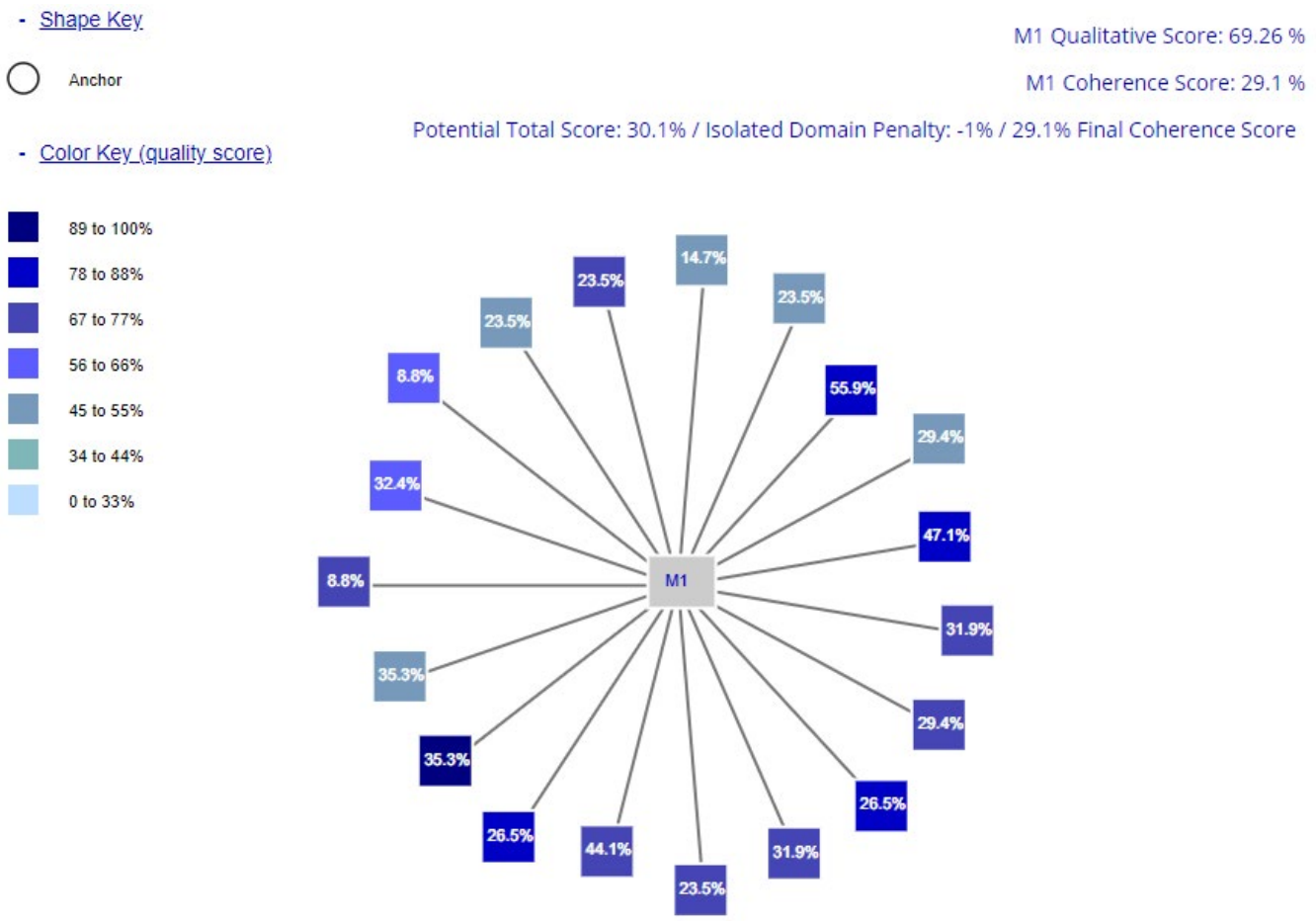


Figure 43. Proximity map of Grade 4, Unit M1. The average unit score for text quality is 69.26%. The final coherence score is 29.1%.

Grade 5

Grade 5 receives an overall quality score of 79.53%, placing it in the high-quality band.

Highest-Rated Unit

Unit M2 is the highest-quality unit at this grade level, with an average text quality score of 86.67%. The Institute's coherence analysis indicates strong levels of reinforcement regarding the topics of Conflict Resolution and Relationship Skills. The materials that scored below 55% focused on Art Forms & Genres, but they did not reinforce the Conflict Resolution or Relationship Skill topics.

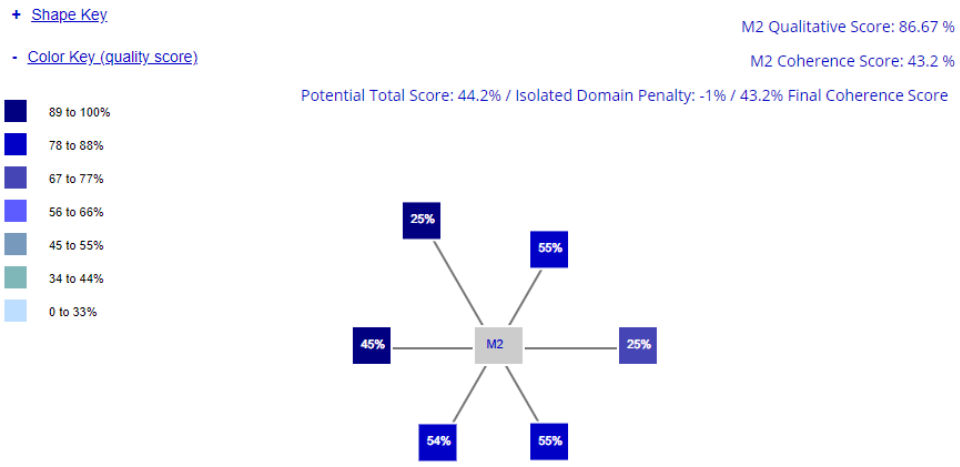


Figure 44. Proximity map of Grade 5, Unit M2. The average unit score for text quality is 86.67%. The final coherence score is 43.2%.

Unit M4 is the lowest-quality unit at this grade level, with an average text quality score of 75%. Given the larger range in Coherency Scores, this unit demonstrates a weak knowledge build in any given topic. While Diversity, Equity, & Inclusion domain is addressed within most of the material of this Module, the topics vary. Moreover, there are materials with lower Coherency Scores that do not reinforce the Diversity, Equity, & Inclusion domain at all.

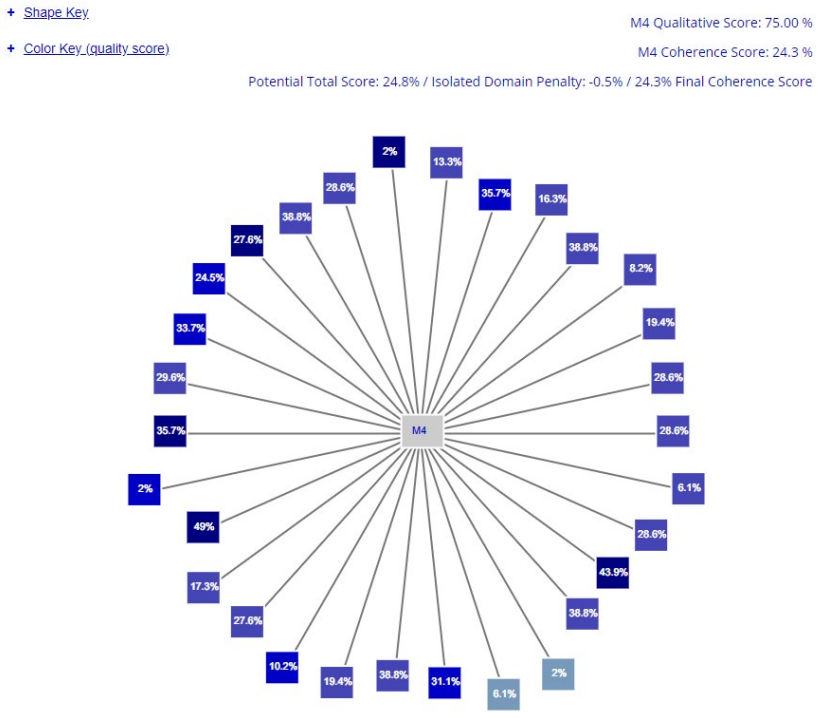


Figure 45. Proximity map of Grade 5, Unit M4. The average unit score for text quality is 75.00%. The final coherence score is 24.3%.

WIT & WISDOM® UNIT COHERENCE FINDINGS: GRADES 6-8

Grade 6

Grade 6 receives an overall text quality score of 78.24%, placing it in the high-quality band.

Unit M4 is the highest-quality unit at this grade level, with an average text quality score of 87.60%. Global Histories, Culture, & Literature and Human Rights were two strong topics threaded through this unit. Almost all the texts shared one of these topics, indicating a strong coherency among materials. There was one text, *Snow Storm: Steam Boat off a Harbour's Mouth*, which did not support either topic and ended with a Coherency Score of 4.7%.

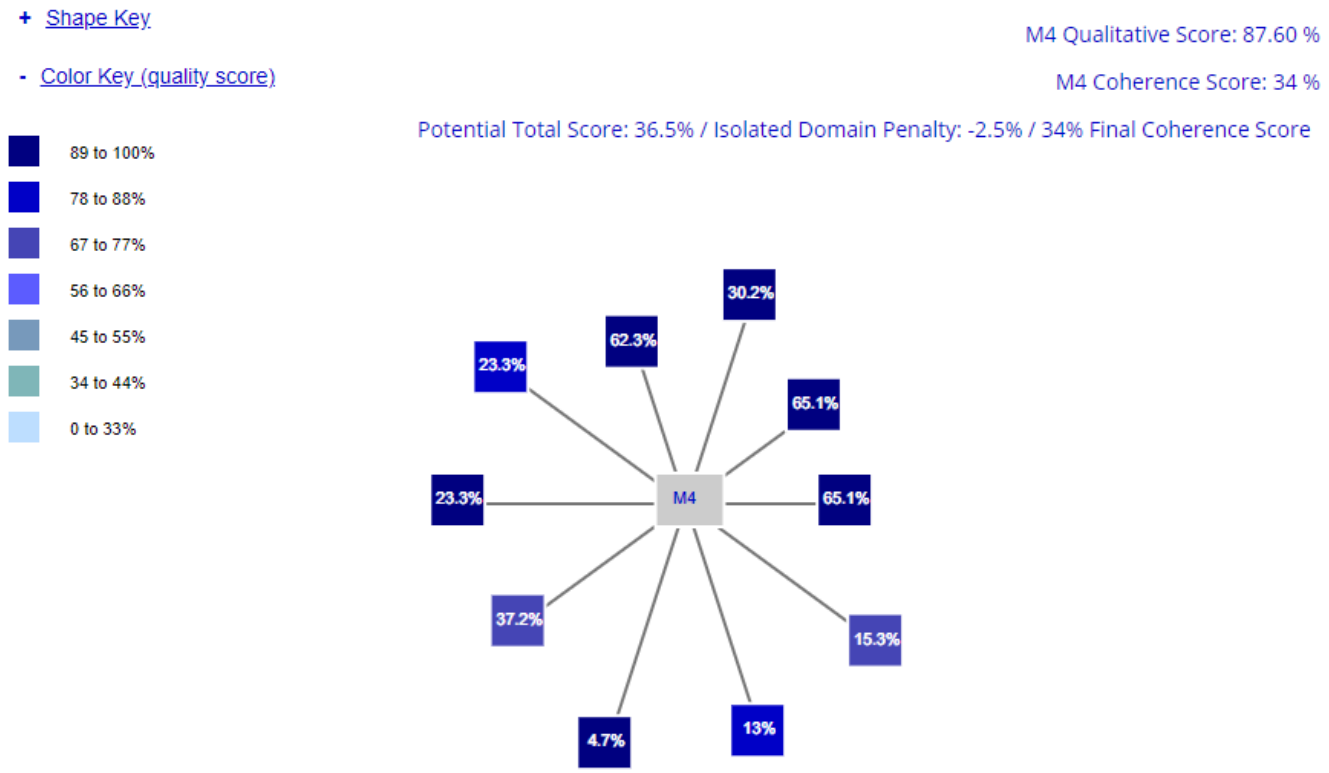


Figure 46. Proximity map of Grade 6, Unit M4. The average unit score for text quality is 87.60%. The final coherence score is 34%.

Lowest-Rated Unit

Unit M3 is the lowest-quality unit at this grade level, with an average text quality score of 76.19%. The mode and range of coherency scores suggests that in order to create meaningful knowledge reinforcement, a greater focus should be placed on addressing the core ideas across all materials. While Native Americans and Colonial America topics are represented in most materials, the texts below 10% do not share either topic.

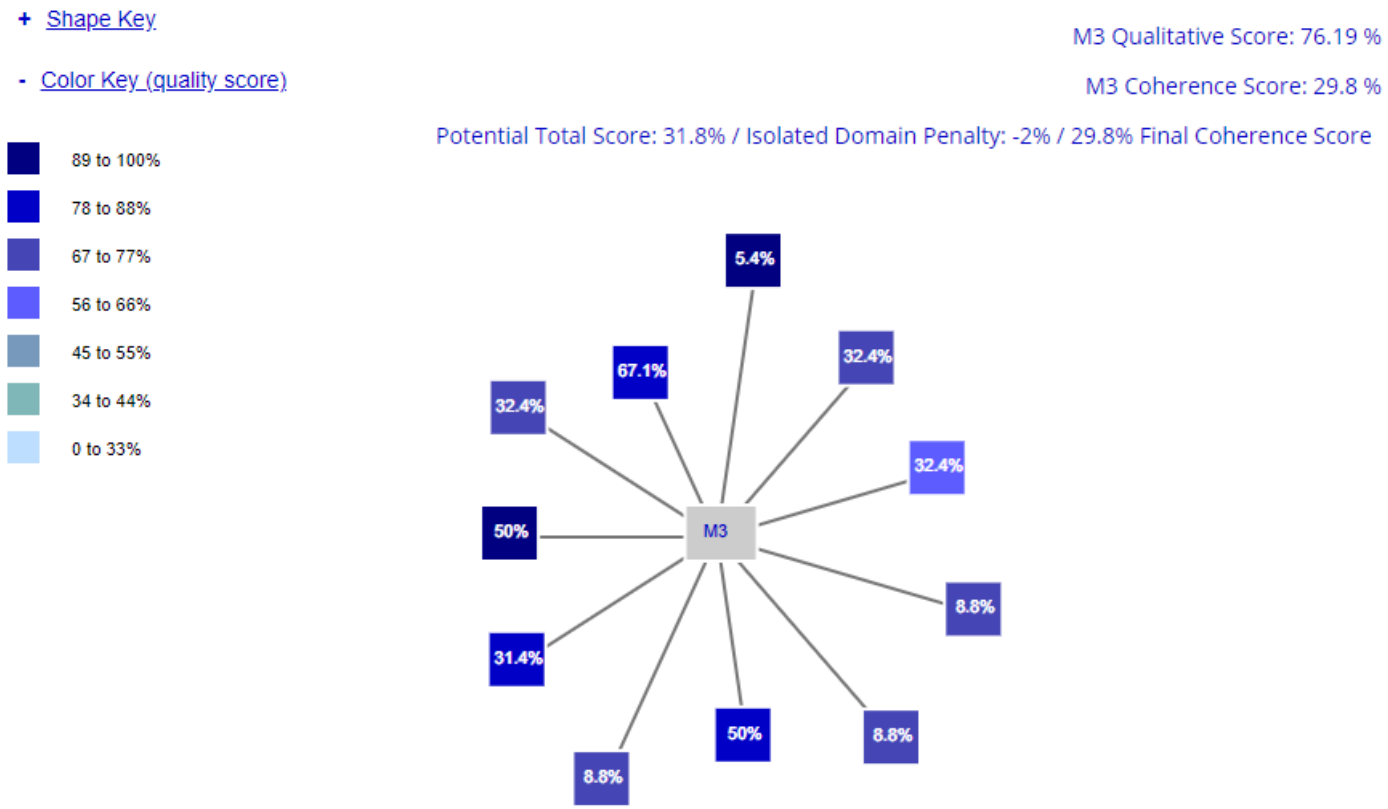


Figure 47. Proximity map of Grade 6, Unit M3. The average unit score for text quality is 76.19%. The final coherence score is 29.8%.

Grade 7

Grade 7 receives an overall quality score of 72.24%, placing it in the high-quality band.

Highest-Rated Unit

Unit M4 is the highest-quality unit at this grade level, with an average text quality score of 78% even. Coherence analysis reveals a strong knowledge build on the topics of Human Biology and Modern Medical Science & Forensics. Some materials, for example *The Long Room, Interior of Front Room in Peale's Museum* and *The Artist in His Museum*, do not support these topics and address a different domain all together; they are indicated with their low coherency scores.

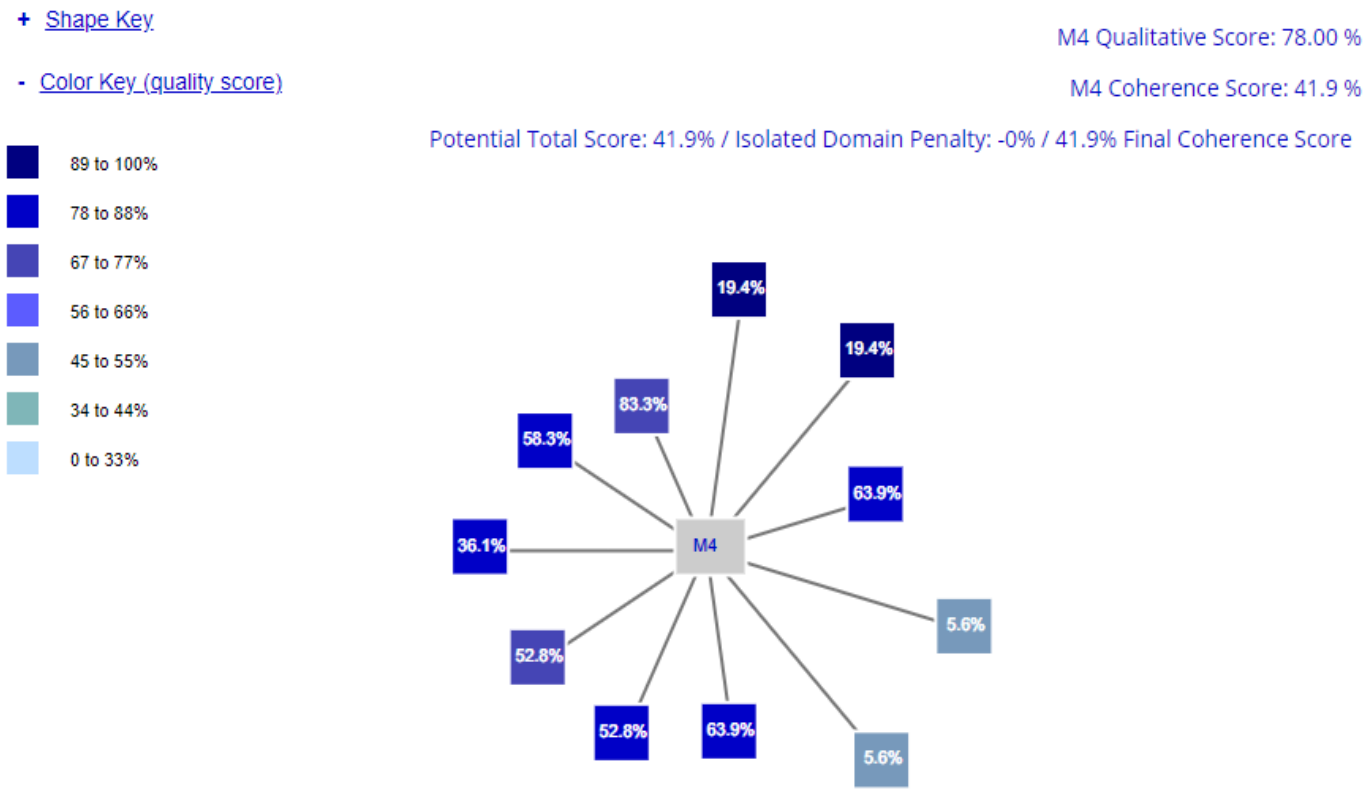


Figure 48. Proximity map of Grade 7, Unit M4. The average unit score for text quality is 78.00%. The final coherence score is 41.9%.

Lowest-Rated Unit

Unit M1 is the lowest-quality unit at this grade level, with an average text quality score of 71.23%. This score reflects a mild range in quality between individual texts; most texts are similarly strong in quality, though a few of them present as weaker in the figure below. Coherence analysis indicates a strong knowledge reinforcement among materials, especially on the topics of Class and European history.

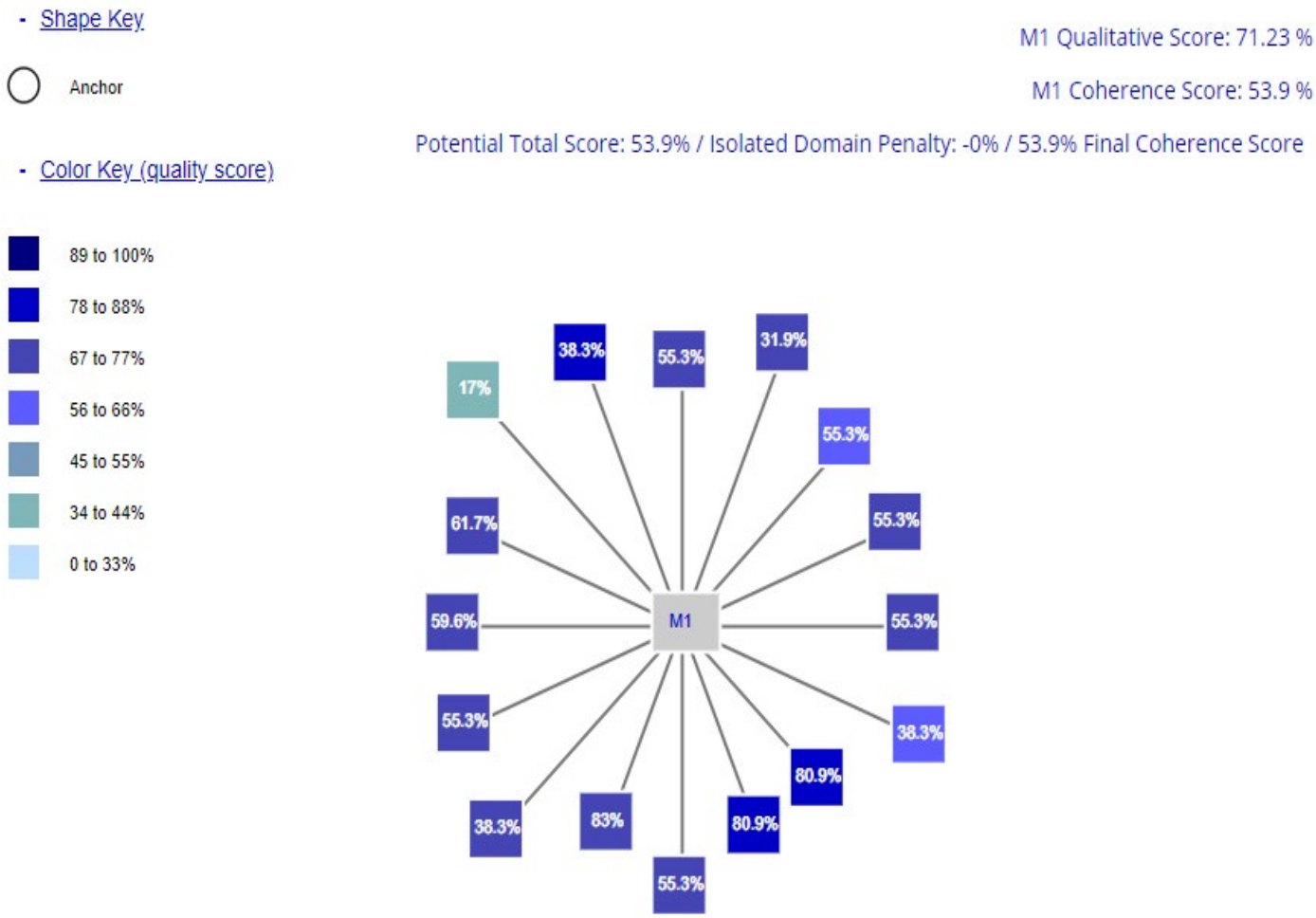


Figure 49. Proximity map of Grade 7, Unit M1. The average unit score for text quality is 71.23% The final coherence score is 53.9%

Grade 8

Grade 8 receives an overall quality score of 79.91%, placing it in the high-quality band.

Highest-Rated Unit

Unit M2 is the highest-quality unit at this grade level, with an average text quality score of 89.51%. The final coherency score suggests a strong knowledge build. All of the materials within this unit support the Warfare, Civil War, and Revolts topic.

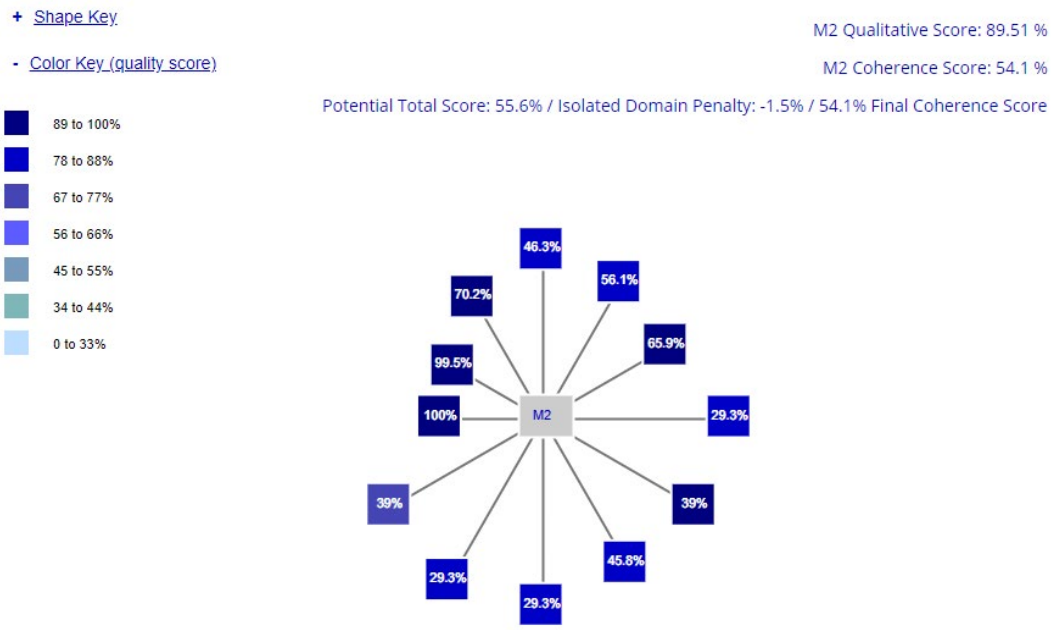


Figure 50. Proximity map of Grade 8, Unit M2. The average unit score for text quality is 89.51%. The final coherence score is 54.1%.

Unit M3 is the lowest-quality unit at this grade level, with an average text quality score of 76.60%. This Module also shows a strong knowledge build, most commonly on the topic of Love which is shared among all the materials. *EPICAC* does introduce new domains including Technology and American Literature.

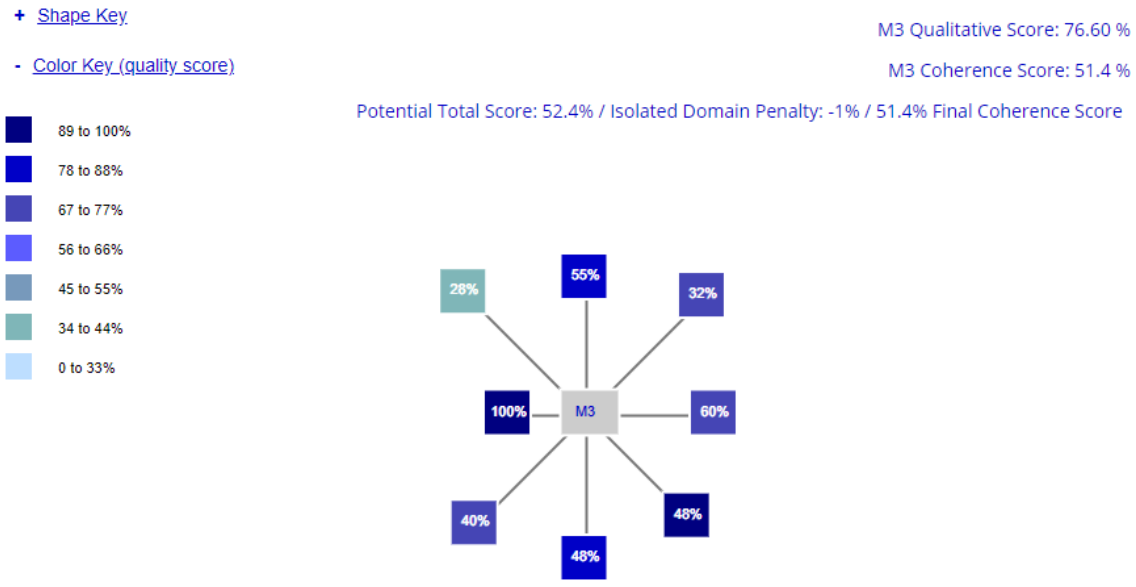


Figure 51. Proximity map of Grade 8, Unit M3. The average unit score of text quality is 76.60%. The final coherence score is 51.4%.

LEARN MORE

This report is one of twelve ELA Knowledge Map™ reports released in Winter 2022 by the Johns Hopkins Institute for Education Policy. The release of these reports was accompanied by a Findings Summary, outlining the overarching themes across all ELA curricula analyzed. View the other ELA Knowledge Map™ reports and learn more about the importance of high-quality curriculum at edpolicy.education.jhu.edu.

About the Institute

The Johns Hopkins University Institute for Education Policy is dedicated to integrating research, policy, and practice to achieve educational excellence for all of America's students. Specifically, we connect research to the policies and practices that will ensure all children have access to intellectually challenging curricula, highly-effective educators, and school models that meet students' diverse needs. By delivering the strongest evidence to the policymakers who set the course and the practitioners who teach and lead, we hope to serve the American children who enter our classrooms every day.

About Wit & Wisdom®

Wit & Wisdom® is a comprehensive K–8 curriculum that has transformed English language arts (ELA) instruction in classrooms across the nation. Great Minds® believes that classrooms are places where students and teachers encounter wit, wisdom, wonder, rigor, and knowledge, and that literature, history, art, and science all have a place in ELA instruction.

By providing a framework for inquiry, *Wit & Wisdom* helps students build rich layers of knowledge. It inspires teachers and students to experience complex tests and ideas on a deeper level by fostering the questioning spirit that will shape the next generation of great writers, thinkers, and leaders.

[i] Reid Smith et al., "The Role of Background Knowledge in Reading Comprehension: A Critical Review," *Reading Psychology* 42, no. 3 (April 3, 2021): 214–40). Sonia Q. Cabell and Hyejin Hwang, "Building Content Knowledge to Boost Comprehension in the Primary Grades," *Reading Research Quarterly* 55, no. S1 (2020): S99–107, https://ila.onlinelibrary.wiley.com/doi/full/10.1002/rrq.338 and also Kathryn S. McCarthy and Danielle S. McNamara, "The Multidimensional Knowledge in Text Comprehension Framework," *Educational Psychologist* 56, no. 3 (July 3, 2021): 196–214, https://doi.org/10.1080/00461520.2021.1872379).

[ii] "Standards aligned" generally refers to the Common Core State Standards.

JOHNS HOPKINS
SCHOOL of EDUCATION

Institute for Education Policy

edpolicy.education.jhu.edu