



# Addressing Unfinished Learning After COVID-19 School Closures

June 2020



## ABOUT THE COUNCIL

The Council of the Great City Schools is the only national organization exclusively representing the needs of urban public schools. Composed of 76 large-city school districts, its mission is to promote the cause of urban education and to advocate for inner-city students through legislation, research, and media relations. The organization also provides a network for school districts sharing common problems to exchange information and to collectively address new challenges as they emerge in order to deliver the best possible education for urban youth.

*Chair of the Board*

**Eric Gordon, CEO**

Cleveland Metropolitan School District

*Chair-Elect*

**Michael O'Neill, School Committee Member**

Boston Public Schools

*Secretary/Treasurer*

**Barbara Jenkins, Superintendent**

Orange County Public Schools

*Immediate Past Chair*

**Lawrence Feldman, Board Member**

Miami-Dade County Public Schools

*Executive Director*

**Michael Casserly**

Council of the Great City Schools

# Addressing Unfinished Learning After COVID-19 School Closures



June 2020

# Acknowledgements

We thank the following individuals for lending their considerable insight and expertise in the creation of this guide:

## Advisory Committee (bios provided in Appendix C)

**Harold Asturias**, The Lawrence Hall of Science, University of California, Berkeley

**Phil Daro**, National Education Consultant, Mathematics

**Judy Elliott**, National Education Consultant, Students with Disabilities and Multi-Tiered Systems of Support

**Lily Wong Fillmore**, National Education Consultant, English Language Learners

## Other Contributors and Reviewers

**Amy Briggs**, Student Achievement Partners

**Patrick Callahan**, Callahan Consulting

**Joanna Hawkins**, Vermont Writing Collaborative

**Diana Leddy**, Vermont Writing Collaborative

**Meredith Liben**, Student Achievement Partners

**Emma Trevino**, Mathematics Consultant

**Carmen Whitman**, Mathematics for All, Consultant

**Jason Zimba**, Student Achievement Partners

## Council Staff

**Amanda Corcoran**, Special Projects Manager

**Robin Hall**, Director of English Language Arts and Literacy

**Ray Hart**, Director of Research

**David Lai**, ELL Special Projects Manager

**Ricki Price Baugh**, Director of Academic Achievement

**Gabriela Uro**, Director of English Language Learner Policy and Research

**Denise Walston**, Director of Mathematics

**Julie Wright Halbert**, Legislative Counsel



# Table of Contents

- Purpose and Audience ..... 2
- Principles and Strategies for Addressing Unfinished Learning ..... 3
  - #1. Stick to grade-level content and instructional rigor ..... 3
  - #2. Focus on the depth of instruction, not on the pace..... 4
  - #3. Prioritize content and learning ..... 4
  - #4. Ensure inclusion of each and every learner..... 5
  - #5. Identify and address gaps in learning through instruction, avoiding the misuse of standardized testing ..... 7
  - #6. Capitalize on commonalities, not differences ..... 8
- Supporting Grade Transitions through Strategic Instruction ..... 9
  - How to identify essential learning..... 9
  - Instructional Priorities in Mathematics for Key Grade-Level Transitions ..... 10
    - Transition to Grade Three ..... 11
    - Transition to Grade Six ..... 13
    - Transition to Algebra I ..... 15
    - Transition from Algebra I to Geometry ..... 17
  - Instructional Priorities in English Language Arts for Key Grade-Level Transitions..... 20
    - Transition to Grade Three ..... 21
    - Transition to Grade Six ..... 27
    - Transition to Grade Nine ..... 33
- Appendix A: Additional Resources ..... 39
- Appendix B. Information on Universal Design for Learning (UDL) ..... 41
- Appendix C. Advisory Committee..... 42



This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/) (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).

This license allows noncommercial redistribution, as long as the document is shared unchanged and in whole with credit to the Council of the Great City Schools.

# Purpose and Audience

The current health crisis has caused an unprecedented disruption in the education of children throughout the world. In the first chaotic days of the crisis, schools across the United States organized to assemble and distribute instructional materials and to make a rapid transformation from school-based to home-based learning. Lesson plans were written and sent home with meals, thousands of electronic devices were purchased and distributed, hot spots were set up, and teachers were trained in how to teach from a distance. The energy, dedication, and sense of urgency that have gone into these efforts have been nothing short of extraordinary.

Nonetheless, the impact of this crisis on all students is significant. As districts resume instruction in the upcoming school year, they will not only need to address the significant social and emotional toll that the crisis has taken on children, but also widespread unfinished learning and learning losses sustained in the wake of school closures. In a companion document—[Addressing Mental Health and Social-Emotional Wellness in the COVID-19 Crisis](#)—we provide a collection of resources and guidance for creating learning environments that are physically and psychologically safe for students and staff. In particular, that document promotes a proactive and inclusive approach to communication, outreach, and intervention, as well as shared ownership of the mental health and social and emotional wellbeing of all students.

In this guide, we focus more directly on the instructional challenges posed by school closures. In particular, we present district curriculum leaders and staff with an instructional framework for addressing unfinished learning and learning losses, as well as a review of essential skills and content in English language arts and mathematics to support access to grade-level content in key grade transitions for all students. We also provide additional resources for districts to consult as they design and implement their curricular materials for the coming school year, including further information on Universal Design for Learning (UDL) to ensure that grade-level content is accessible for all students. While this guide touches on some of the specialized instructional needs of English language learners, a forthcoming Council guide will provide more detailed guidance and materials in this area.<sup>1</sup>

Finally, this guide is intended to complement resources being released by various other organizations, including Student Achievement Partners (SAP) and the Council of Chief State School Officers, that also address the challenges of [prioritizing instruction](#),<sup>2</sup> addressing unfinished learning, and meeting the social-emotional and mental health needs of students. The common messages found across these materials illustrate a consensus in the field around the importance of safeguarding equity and access in the wake of the COVID-19 crisis. We hope that the following guide contributes to that national conversation, and to the capacity of urban school districts to effectively support students and families.

---

<sup>1</sup> All of the Council's COVID-19 resources can be found at [cgcs.org](https://cgcs.org), or by clicking [here](#). This page is being updated with new information and materials regularly.

<sup>2</sup> See Student Achievement Partners' Resource, [2020-21 Priority Instructional Content in English Language Arts/Literacy and Mathematics](#).

# Principles and Strategies for Addressing Unfinished Learning

In many ways, the instructional challenges that school districts will be faced with in the 2020-21 school year will be unprecedented. Students will be returning to school with significant anxiety and likely trauma, as well as considerable unfinished learning from the past school year. However, while the scale of the challenge (owing to the shared nature of the educational disruption) may be novel, unfinished learning is nothing new. Addressing skill gaps, incomplete learning, and misconceptions is a necessary and natural part of the teaching (and learning) process, although it is one with which educators have traditionally struggled. All too often, unfinished learning leads to remediation or pull-out interventions that serve to further isolate students and impede their access to rigorous, engaging grade-level content—this is how something as natural as unfinished learning leads to intractable achievement and opportunity gaps. Addressing unfinished learning in a constructive manner is therefore essential not only to a district's short-term response to the current pandemic, but long-term commitment to educational equity and excellence.

In this section, we introduce six overarching principles for supporting students with unfinished learning. In planning instruction for the coming school years, districts should (1) **stick to grade-level content and instructional rigor**, and (2) **focus on the depth of instruction, rather than the pace**. To provide this grade-level instruction, districts will need to help teachers (3) **prioritize content and learning**. In order to continue to reflect a districts' instructional vision and commitment to equity, educators will also need to (4) **maintain the inclusion of each and every learner** and (5) **identify and address gaps in learning through instruction, avoiding the misuse of standardized testing to place kids into high or low ability groups or provide low levels of instructional rigor to lower performing students**. Finally, districts should consider (6) **focusing on the commonalities that students share in this time of crisis, not just on their differences**.

These principles reflect high-quality instruction in general, but they will be particularly crucial as schools reopen amidst the COVID-19 pandemic. At that time, schooling may look very different than it has in previous years, and a district's academic response will need to be closely integrated with its social emotional and mental health response. But regardless of what instructional delivery model a school district implements or what combination of in-person and virtual learning it employs in the coming months and years, adhering to these overarching principles will help ensure that all students have equal access to high-quality instruction and educational opportunity.

Here is a closer look at what these principles look like in practice.

## #1. Stick to grade-level content and instructional rigor.

---

Given the amount of time and learning loss since schools were shuttered, districts will face a strong temptation to test students immediately upon re-entry to school, identify their academic "deficits," and reteach or remediate. According to research, both are largely ineffective practices, resulting in student disengagement with school and greater inequities in access to grade-level instruction and educational opportunity.

Instead, school and district curriculum leaders should **keep the focus on grade-level content and rigor, addressing learning gaps as needed within the context of grade-level work**. In reading, for example, when students stumble over unfamiliar words or have difficulty understanding a text, don't retreat to less demanding or simplified texts, or assume that students who are having difficulty require remedial practice on basic reading skills. This is particularly important

for English Learners, whose struggle with reading may be a reflection of the process of second language development rather than a lack of literacy skills.

Instead, teachers should take the time to discuss the text, provide scaffolded support on how to discern the meaning of words in context, and allow opportunities for students to express their thinking and ideas with their peers. This will ensure that students continue to work with rigorous, engaging grade-level text and content. **This daily re-engagement of prior knowledge in the context of grade-level assignments will add up over time, resulting in more functional learning than if we resort to watered down instruction or try to reteach topics out of context.**

## #2. Focus on the depth of instruction, not on the pace.

---

Districts should also avoid the temptation to rush to cover all of the ‘gaps’ in learning from the last school year. The pace required to cover all of this content will mean rushing ahead of many students, leaving them abandoned and discouraged. It will also feed students a steady diet of curricular junk food: shallow engagement with the content, low standards for understanding, and low cognitive demand—all bad learning habits to acquire. Moreover, at a time when social emotional wellbeing, agency, and engagement are more important than ever, instructional haste may eclipse the patient work of building academic character and motivation.

As educators we need to remain focused on the learning that could and should be happening today, and not allow ourselves to be distracted by how we will catch students up. These distractions shift our attention from *just in time learning* to *just in case teaching*. “Just in case” teaching wastes time teaching content and skills from earlier grades just in case students need it for grade-level work. “Just in time” concentrates time expenditure on needs that actually come up during grade-level work. In other words, **taking the time to provide patient, in-depth instruction allows for issues related to unfinished learning to arise naturally when dealing with new content, allowing for just in time instruction and reengagement of students in the context of grade-level work.**



### Just in Time versus Just in Case Learning: An Example in Math

In math, don't reteach fractions to eighth grade students *just in case* they need it when learning slope. For slope, they only need the specific use of fractions to represent ratios. Use the slope ratio of rise to run as a context to teach what is needed about ratio.

## #3. Prioritize content and learning.

---

In order to allow sufficient time for the in-depth instruction and just in time learning described above, curriculum leaders will need to articulate the district's instructional priorities for schools and teachers—what is most important to teach within the major curricular domains at each grade level. It is important that teachers know where to invest their time and effort, what areas can be cut, and where they should teach only to awareness level to save time for priorities. What is most important deserves more time, and teachers need to be given the latitude to provide responsive feedback and allow time for constructive struggle—a very different proposition than merely offering a superficial ‘right’ or ‘wrong.’ This additional time has to come from somewhere. Further guidance on identifying essential learning at each grade level will be covered in the next section, and can be found in a complementary document from Student Achievement Partners, *2020–21 Priority Instructional Content in English Language Arts/Literacy and Mathematics*.



Prioritizing content and learning does not mean that students will be deprived of critical knowledge, or that their educations will be any less diverse or rich. Every topic in a district’s curriculum encompasses a collection of related ideas, skills and applications. Just because a topic is important doesn’t make every underlying or related skill or concept vital to a student’s ultimate understanding of that topic.

For example, what’s important about adding fractions with unlike denominators? This mathematical computation extends students’ developing ideas of addition from whole numbers to unit fractions. The purpose is to help students develop deeper insights into the number line, which will eventually provide a basis for coordinate graphs in algebra. So math teachers should focus their efforts on building this understanding, not on honing students’ ability to add fractions quickly or to handle particularly awkward numbers such as  $\frac{3}{17} + \frac{5}{12}$ .

English language arts textbooks, meanwhile, typically include six units per grade level for grades K-five, with texts and activities selected and organized around generic themes such as “culture and cultural identity,” “plants and the food we eat,” and “the war between the states.” The goal of such units is to provide students practice with working on different types of texts and to practice developing reading and writing skills, rather than to present a coherent treatment of the nominal topic. With this in mind, districts should consider the fact that students may get a lot more from working closely on 10 items in a unit than briefly on 18, and a class might profit more from spending a month and a half each on four units than a month each on six. This prioritization of content and learning not only promotes in-depth, rigorous instruction, but allows for the additional time teachers will need to address unfinished learning needs as they arise.

In reviewing district grade-level standards curriculum leaders need to be asking not “what are the topics that need to be covered in this grade?” but “what is the importance or purpose of this topic?” It is also an opportunity to clearly illustrate examples of the level of rigor the district intends as the target for student grade-level work, and the associated language demands. At the same time, it is necessary to keep in mind that standards describe outcomes, not inputs. It is up to teachers, with support and guidance from the district, to decide which inputs are most important for building student knowledge and skills and warrant the greatest time investments.

#### #4. Ensure inclusion of each and every learner.

---

While school closures have impacted all students, some students, such as ELLs, students with disabilities, students with learning or attention issues, economically disadvantaged students, foster children, and homeless youth, will be disproportionately affected by school closures and the unanticipated, rushed switch to distance learning. When schools are back in session, the temptation of education systems will be to pull these at-risk students out of classrooms to provide enhanced support and remedial coursework. But now more than ever, it is essential to ensure that *each and every* student has equitable access to engaging grade-level content and instructional rigor.

For example, the research shows that for students with disabilities, the level of inclusion is a strong predictor of academic growth—the greater the level of inclusion (particularly 80% or more of the day), the greater the rate of academic growth.<sup>3</sup> Removing students from core instruction in an attempt to remediate or catch them up is not only counter-productive, it significantly contributes to the widening of the opportunity gap and often results in students being tracked or grouped into lower grade-level and core content classes.

---

<sup>3</sup> Thomas Hehir & Associates (2014, August) Review of Special Education in the Commonwealth of Massachusetts: A Synthesis Report, Boston, Massachusetts, retrieved at <https://www.bostonpublicschools.org/cms/lib/MA01906464/Centricity/Domain/249/Hehir%20SynthesisReport.pdf>.

It is also important, when addressing the disproportionate impact of the sudden change of the learning environment for English language learners, to maintain an asset-based view of these students. This view recognizes that English learners bring to the classroom their multi-competence—their capacity to see two or more languages as part of one overall system, and to use language as a thinking tool. Moreover, students from other cultural backgrounds bring new ideas and ways to think about content that will strengthen their learning, as well as the learning of their peers. Teachers should therefore resist the inclination to “water down” instruction and assignments for ELL students—and other students with specialized learning needs. These students require the same challenging work and cognitive demands as their peers in order to develop academic skills and grow as scholars. These students also need a deliberate and sound pedagogical approach to developing their academic language to enable them to engage with grade-level content.

One way to make grade-level content accessible for all students is through the use of the principles of Universal Design for Learning (UDL). Universal Design for Learning principles are based on the understanding that students differ in the ways they are motivated to learn, and that students with language and/or cultural difference, sensory disabilities (e.g., blindness or deafness), and learning disabilities all require a different way of approaching content. For example, students may learn more efficiently or mitigate the impact of a disability in classroom environments that make ample use of multiple modes of communication (speaking, listening, reading, writing) and multiple representations (ways of presenting instruction, such as pictures, diagrams, tables, graphs, visual displays), allowing students to make connections within and between concepts and facilitate the transfer of learning. Moreover, providing students with different ways to engage in and process learning (working with a peer or in small groups, conducting interviews, critiquing the reasoning of others), and to express their learning (making presentations, sharing written explanations, making a collage) helps to reduce or eliminate barriers to showing what they know and can do.

All of these classroom practices help to increase active student engagement, which is key to improving the rate of growth for all learners. Teachers should ensure that all students, therefore, have the opportunity to engage in productive struggle with Tier 1 instruction, allowing them sufficient time to make sense of a task or problem before intervening. Some students, of course, will need more time and engagement strategies (through additional opportunities to practice, review, preview, mathematics language development, routines, and just-in time vocabulary development, for example) to show growth (Tier II). And there will be students that may need even more intensified instruction to address skill deficits (Tier III). But these additional layers of support should not come at the cost of core content instruction.<sup>4</sup> Instead, the scaffolds that teachers employ to meet specialized student needs should be specifically targeted to an individual student’s academic difficulties or language development needs and should serve to expand—not limit—their access to rigorous content and their development of higher order conceptual understanding and the corresponding academic language to convey their understanding. For more information on UDL, see [Appendix B](#).

Finally, ensuring inclusion during this time of school closures and distance learning will require districts to fundamentally rethink their approach to family engagement. As families are increasingly expected to assist in ensuring that kids are learning from home, they have moved from being stakeholders to being critical partners in the central work of teaching and learning. Moving forward, districts will therefore need to provide parents with more detailed and timely information on instructional approaches and learning expectations—not only as a matter of good policy and public relations, but in order to ensure that learning continues in whatever circumstances the next few years bring.

---

4 For more information on using Multi-tiered Systems of Support, see [Common Core State Standards and Diverse Urban Students: Using Multi-Tiered Systems of Support](#).

## #5. Identify and address gaps in learning through instruction, avoiding the misuse of standardized testing.

---

The first instinct of many districts will be to immediately test students upon their return to school in order to gauge their academic level and needs. This would be a mistake for many reasons. To begin with, districts should focus on creating learning environments that feel both physically and psychologically safe for students (and adults). Educators need to work to reengage students in school, emphasizing the importance of the school community and the joy of learning. Administering tests too soon undermines both of these objectives. Moreover, testing appears to put the onus of learning losses on the students themselves—the resulting label of “deficient” or academically behind may very well further alienate and isolate the students who most need our support.

Districts also need to ensure that assessment data are not misinterpreted or misused by teachers or administrators. Computer adaptive and standardized assessments should not be considered broad diagnostic assessments. While assessment companies tend to sell their products as providing “diagnostic” information for every child, this is not how they are structured or designed. What they do provide is a way to measure growth over time, allowing us to monitor trends in the learning gaps between student groups (lower and higher performing students) and cohorts of students (e.g., last year’s fourth graders and this year’s fourth graders).

Teachers and administrators far too often end up confusing scale scores with a student’s capacity to learn. Based on standardized assessment data, teachers place kids into high or low ability groups or provide low levels of instructional rigor to lower performing students. This is not an effective strategy for addressing unfinished learning, and not an appropriate use of assessment data. A large number of assessments also fall short in terms of accurately assessing the learning needs of diverse learners such as ELLs, as unfinished learning for English learners goes beyond content-area expectations to include language acquisition and development. Moreover, the all-too-common exclusion of some diverse learners from benchmark administrations results in a lack of baseline data to measure potential learning loss.

In contrast, each of the principles covered thus far concern maintaining the integrity and rigor of instruction even amidst widespread disruption in schooling. It is only through strong, grade-level instruction—for all students—that districts will be able to effectively and equitably identify and address unfinished learning.

In other words, districts should approach assessments as temperature checks. A thermometer can identify when someone has a fever, but it takes a doctor, armed with this data, to probe further and identify what is causing the fever and how to restore a patient to health. Similarly, teachers should use assessment results to alert them to the fact that students have unfinished learning. But it is ultimately up to the teacher to identify where the gaps in essential learning exist, and what additional scaffolding and support is required. Strong, attentive instruction, with embedded formative assessment, thus enables teachers to respond to student needs in real-time, and in the context of grade-level standards, rather than defaulting to wholesale remediation. Moreover, this type of attention and responsiveness, particularly among teams of different types of teachers (such as special education teachers, bilingual education teachers, etc.) working together, provides a more complete picture of the educational needs of diverse learners. For English learners in particular, educators working to address unfinished learning while delivering grade-level instruction need to discern whether learning challenges are due to gaps in the understanding of content, language acquisition, or both.

It is therefore entirely appropriate to employ assessments as a broad temperature check a few weeks into the school year—which is when they are typically administered in a normal school year. But it is more important than ever to ensure that students have had an initial period of a few weeks to reacclimate to the school setting, and that teachers are given careful guidance on what the data means—and what it doesn’t—and how the results should drive instruction.

## #6. Capitalize on commonalities, not differences.

---

It is important to recognize that the prolonged interruption in schooling will have affected some children more than others. For example, the hiatus will likely have a greater adverse impact on students with disabilities (SWDs), English learners, students who are homeless or in transitional living situations, or students from low income backgrounds who receive free or reduced-price meals through school and/or may not have easy access to computers to engage in distance learning. Other students may be dealing with issues of psychological stress, abuse, domestic violence, suicide, or parental job loss. Those issues must be recognized, and schools will need to attend to the emotional wellbeing of students as they re-engage them in academic content.

However, whatever differences exist in the experiences and resulting academic needs of children during this crisis must not be the starting point for instruction in the coming school year. Rather, as educators we should capitalize on the shared experience of living through a pandemic, as well as the more recent social justice protest movement, as a learning opportunity. The virus, school closures, social distancing, and nationwide protests have created new common experiences that can serve as the basis for work across subjects in the first weeks of school. The assignments associated with this real-world learning opportunity should emphasize improving the quality of what students produce using collaborative (and perhaps digital) feedback and revision cycles. Grading, moreover, should be based largely on validating revised student work rather than on “measuring” the student. This will allow schools and teachers to reengage students, directly address student and adult hardship, stress, or trauma, and resume instruction in a way that feels contextualized and responsive, helping students comprehend the world around them. This will also provide educators with a way to focus on grade-level texts and content that are less dependent on prior learning and are engaging and topical enough to reaffirm students’ understanding of themselves as members of a learning community.

The most immediate applications are in the realm of science education. The COVID-19 pandemic offers a unique opportunity for students to learn about how science works and to reaffirm the place of science in an informed society. The present situation has highlighted a major division across the American public in its belief and trust in science and its understanding of what constitutes scientific evidence. Scientific literacy is a critical need in a world in which the future depends on collective action based on science rather than on political ideology or self-interest.

A third-grade unit, for example, might focus on personal and community health: the human body, growth, health practices, roles played by health care professionals in the prevention of disease and the maintenance of good health. A fifth-grade unit might focus on scientists as detectives solving mysteries in medical, geological, and ecological research. An eighth-grade unit might have an epidemiology CSI focus<sup>5</sup>: What are causes and patterns of health and disease events? What questions do scientists ask when there is evidence of unexplained illness in a community? What clues do they look for? What is a hypothesis? How do they arrive at hypotheses to test?

There is also ample opportunity to cover the current crisis in the context of English language arts, mathematics, and social studies. In mathematics, for example, this suggests a unit on Data Science—a study of the graphs and tables featured in the news and analysis of linear versus exponential growth, or an exploration of the mathematics of social distancing. In other classes students may read nonfiction texts or literature about past epidemics and the impact of disease outbreaks on history, or be asked, in writing or classroom discussions or presentations, to grapple with issues related to our health care system, the manner in which different countries and forms of government respond, the definition and importance of eliminating xenophobia and racial discrimination, and ensuring social justice.

---

<sup>5</sup> Montclair State University has a program that promotes epidemiology education for middle and high school students with teaching materials for grades 6-12 in English and in Spanish. <http://www.epiedmovement.org/detectives.html>.



# Supporting Grade Transitions through Strategic Instruction

## How to identify essential learning

---

As discussed earlier, to effectively address unfinished learning curriculum leaders will need to provide guidance to teachers on what is most important to teach within the major curricular domains at each grade level, and where teachers should invest their time, resources, and effort. Moreover, because it is inadvisable (and impossible) to try to teach every missed concept all at once, it is necessary to prioritize the concepts and skills that are of immediate importance in helping students access grade-level work.

In making these determinations, curriculum leaders should start by asking a series of questions to determine the significance of a given unit or lesson:

1. Does the content extend work from earlier units and grade levels?
2. Does the content extend into future content?
3. Does the unit help students deepen conceptual understanding and subject area expertise, such as expertise with mathematical practices or reading comprehension?
4. Is this content that students need to know right now in order to continue learning grade-level subject matter?

At the same time, in order to prioritize units and lessons, there are a number of features or qualities that mark content as inherently lower in priority. For example, in mathematics there may be units that cover specific answer-getting tricks or methods that do not build expertise in deeper mathematical principles and concepts, or time spent devoted to enhancing a student's speed in producing a calculation. There are also topics that make a cameo appearance for two to three days and then disappear for years, or topics that are only ever introduced once, and don't lead to further or deeper mathematics—academic curios and cul-de-sacs. These are the areas that can and should be cut out in the name of maintaining in-depth instruction that builds true conceptual knowledge, rather than a superficial survey of topics.

In English language arts, instruction is often organized around strategy-based instruction. That is, teachers provide direct instruction on comprehension strategies and have students practice and focus on them in isolation instead of teaching students how to use these strategies in service of gaining meaning, developing vocabulary, and building knowledge from the text. Instead of taking students through a litany of practice activities and thematic units, teachers should focus on topic texts that build knowledge and employ text-dependent questions that engage students deeply with the text and build understanding. Ultimately, the learning goal across all grade levels is to cultivate every student's ability to read with understanding and to gain knowledge and skills through the careful study of grade-level texts not only in English language arts, but across all content areas. Moreover, students should develop the ability to consolidate and evaluate what they have heard or read, and to clearly express this understanding orally and in writing.

In the following sections, we apply this process to identify instructional priorities in mathematics and English language arts for a set of key grade-level transitions.

## Instructional Priorities in Mathematics for Key Grade-Level Transitions

---

Grade-level work in mathematics makes extensive use of knowledge and skills taught in prior grades. The priorities below identify knowledge and skills from prior grade spans most needed—and most likely to show up as unfinished learning—as students engage in grade-level work.

We illustrate this relationship through a series of conceptual maps. The map of each grade band identifies the priorities for re-engaging students with the conceptual knowledge that constitutes the understanding of that grade. They show this for crucial transition grades—grade three, grade six, Algebra I, and Geometry. For example, the ‘K-two into grade three’ map illustrates how Kindergarten through grade two knowledge develops into grade three to five knowledge. It is to help third graders re-organize, revise, and solidify this prior knowledge into their current learning. The third-grade teacher’s job is to re-engage what is mapped as it emerges in student responses to grade-level math. This is how the past learning shows up in the present. The same is true for the sixth-grade teacher, as it is for Algebra I and Geometry teachers.

Each cluster of circles represents a coherent system of related ideas, smaller conceptual knowledge areas that together converge in the larger, most general, understanding that students take with them from the earlier grade span into their new grade-level work. This is the what plugs into the new grade level. The learning is normally uneven and unsettled, often insecure and dependent on the contexts in which it was learned. The work of the new grade level is to take this uncertain learning or under-developed learning, incorporate it into new, closely related ideas to deepen and secure the prior learning.

- Orange: Major domain of conceptual understanding strongly interactive with new grade-level concepts
- Green: Important component concepts of the major domain to be further developed in new grade level
- Blue: Critical correspondences across the mathematical representations used in the major domain
- Lines: Proficiencies with mathematical language, representation, techniques and tools to be developed during work in major domains. Development of these proficiencies is distributed across grades, units and lessons... not confined to the study of one topic.

The key to prioritizing learning is to move beyond grade-level check lists and instead think of progressions of important learning that cut across grade levels. Kindergarten teachers can see the priorities for them to focus on the foundations of the grade two span, while first grade teachers build on the unfinished learning from Kindergarten and solidify. Grade two and grade three teachers span critical transition points, so it is important that they look both back at Kindergarten through grade two and forward to grades three through five priorities.

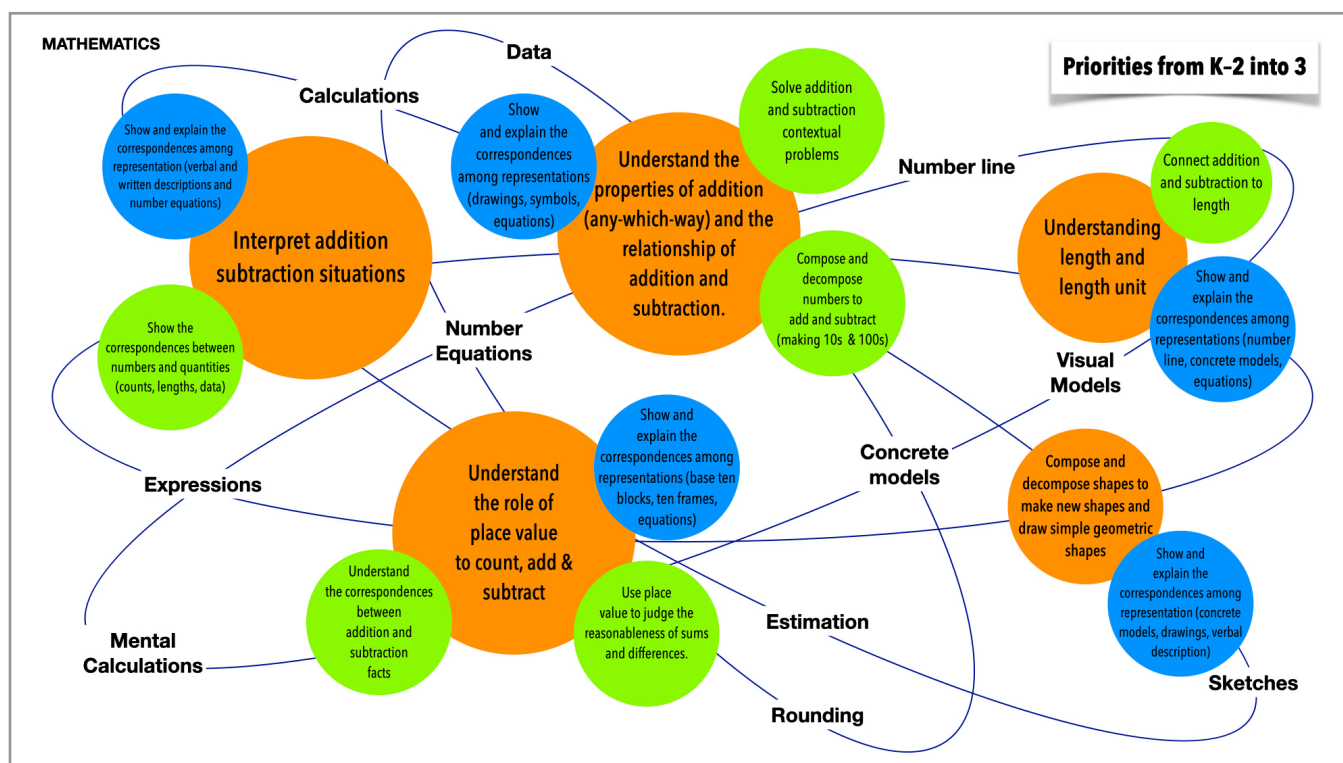
It is also important to keep in mind that as we interact with students while introducing grade-level content, we want to give them a chance to productively struggle and to demonstrate what they know and are able to do. This means not making assumptions about what students can or cannot do. Instead, we need to provide the support they need just in time when we try to teach them grade-level concepts. We must assume and expect variety of ways of thinking and respond accordingly. The four levels of support described below are intended to help teachers respond to students’ attempts to work on grade-level tasks.

- For students whose struggle with grade-level assignments and language demands becomes unproductive:
  - Provide extra feedback on student work and pose questions that push students to articulate their thinking and to compare solutions and strategies. Teachers should also include explicit summaries in the classroom while working on grade-level tasks. These approaches require that teachers use discussions and questioning to informally determine the need for additional just-in time support.

- For students who need specific prior knowledge and language demands for a grade-level assignment:
  - Provide just-in-time instruction that does not disrupt the flow of each lesson. This requires that teachers understand how mathematical concepts and skills progress over time so that lessons include time for re-engagement without significantly interrupting the flow of classroom instruction.
- For students who need a more significant chunk of specific prior knowledge and language support for a grade-level unit:
  - Provide extra teaching of underlying mathematical concepts and skills connected to the grade-level unit using mini-lessons or centers, and spend extra time with students providing explicit feedback on their thinking and tutoring (including peer-to-peer tutoring) during each lesson. This requires that teachers engage in prior planning to provide additional just-in time instruction.
- For students who need sustained conceptual understanding and language support to stay engaged in grade-level work:
  - Provide supplemental instruction beyond the regular class that will support student’s success with grade-level work. This requires that teachers engage in prior planning to understand how concepts and skills progress over time so that the supplemental instruction explicitly strengthens the foundational concepts and interconnected language functions needed to access grade-level work in mathematics.

## Transition to Grade Three

The following conceptual map illustrates how students develop expertise with the eight **Mathematical Practices** and proficiency with the mathematical language, representations, techniques, and tools in the transition from Kindergarten through grade two into grade three.



In the transition to grade three, students will be expected to:

- Understand the properties of addition (any-which-way) and the relationship between addition and subtraction
  - Apply the properties of addition, the relationship to subtraction and interpretation of addition and subtraction situations to solve contextual problems
  - Compose and decompose numbers to add and subtract, making 10s and later, making 100s. Express mental calculations with number equations.
  - Show and explain the correspondences among representations (drawings, symbols, equations)
- Interpret addition subtraction situations (add to, take from, put together and take apart, compare), and express the corresponding additions and subtractions as number equations
  - Show the correspondences between *numbers* (and *sums* and *differences*) to quantities of objects, measurement units and data
  - Show the correspondences among calculations, number equations and expressions, concrete and visual models for addition and subtraction.
  - Show and explain the correspondences among representations (verbal and written descriptions, concrete and visual models, and number equations)
- Understand the role of place value in counting, addition and subtraction;
  - Know single digit addition facts and corresponding subtraction facts.
  - Use place value understanding to estimate, round, calculate and judge the reasonableness sums and differences.
  - Show and explain the correspondences among representations (base ten blocks, ten frames, equations)
- Understanding length and the idea of a length unit
  - Connect addition and subtraction to length, both in context and on a number line
  - Show and explain the correspondences among representations (number line, concrete models, equations)
- Compose and decompose shapes to make new shapes, draw simple geometric shapes.
  - Show and explain the correspondences among representation (concrete models, drawings, verbal description)

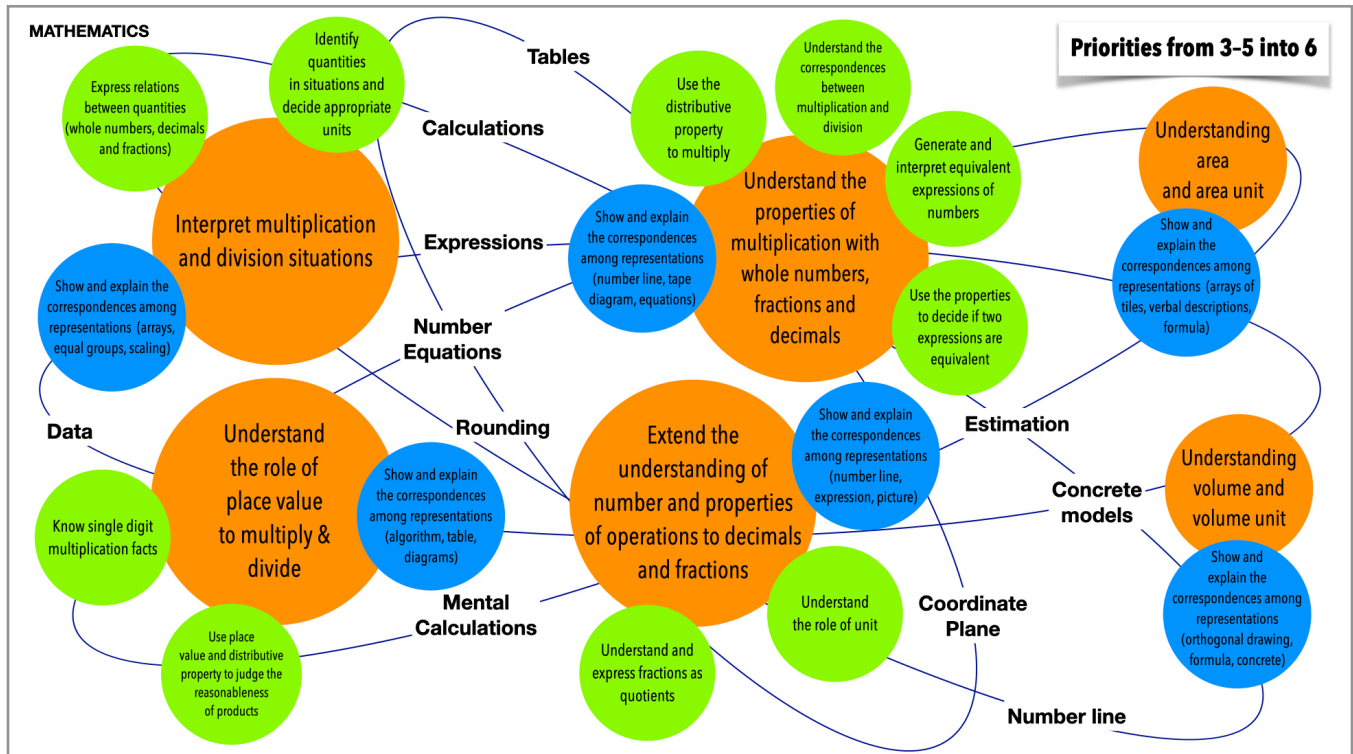
### Examples of Instructional Strategies for Supporting Unfinished Learning

- When teaching adding fractions on the number line, it is worth the time to re-engage adding whole numbers on the number line. Re-engage the knowledge that the numbers on the line refer to unit lengths, knowledge that surely will be unfinished or insecure for most third graders. The fractions on the number lines are numbers, so they, too, refer to lengths, and students will wonder what the units are that denominate these lengths. Teachers should help them see how and why adding unit fraction lengths works the same as adding whole numbers on the number line.
- When multiplying whole numbers in grade three, teachers should introduce the area model. The product is the number of equal unit areas in the area defined by the side lengths (the factors). Students will wonder how this area model of multiplication works when the factors, i.e. the side lengths are less than 1, the side length of the unit area, and this will help further their conceptual understanding.



## Transition to Grade Six

The following conceptual map illustrates how students develop expertise with the eight **Mathematical Practices** and proficiency with the mathematical language, representations, techniques, and tools in the transition from grades three through five into grade six.



In the transition to grade six, students will be expected to:

- Extend whole number arithmetic, the properties of operations and number lines to decimal numbers and fractions.
  - Understand the role of units (what is being counted or measured: what the number 1 refers to) on the number line (3 means 3 of the unit length from 0 to 1), in place value units (digits in each place show how many of the place value unit, e.g. 30 means 3 of 10 where 10 is the place value unit,...), and in unit fractions ( $\frac{3}{4}$  means 3 of  $\frac{1}{4}$  where  $\frac{1}{4}$  is the unit)
  - Understand a fraction as a quotient, and express quotients as mixed numbers rather than with remainders
  - Show and explain the correspondences among representations (number line, expressions, picture)
- Understand the properties of multiplication, with whole numbers, fractions and decimals.
  - Understand the relationship between multiplication and division
  - Generate and interpret equivalent expressions of numbers: equivalent fractions, decimal equivalents of fractions
  - Use the properties to decide if two expressions are equivalent, e.g., is  $6 \times 7$  equivalent to  $(6 \times 5) + (6 \times 2)$ ?
  - Use the properties and equivalent expressions to make multiplications and divisions easier to calculate and to compare solution methods

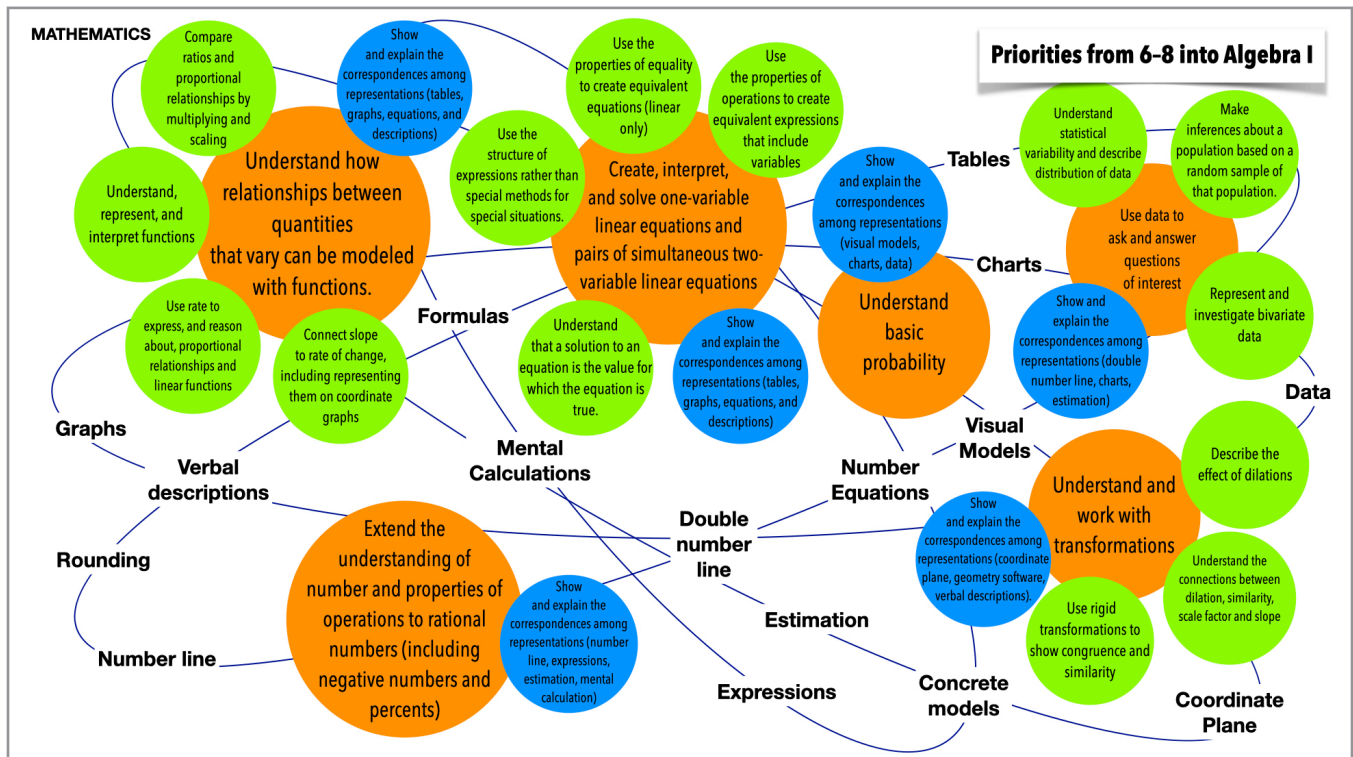
- Compose and decompose numbers used with the distributive property to multiply including mental calculations
- Show and explain the correspondences among representations (number line, tape diagram, equations)
- Understand the role of place value in multiplication and division
  - Know single digit multiplication facts
  - Understand and calculate products of “very round numbers,” like  $50 \cdot 700$ , and apply this knowledge with the distributive property to estimate, judge reasonableness of solutions and calculate multi-digit products
  - Show and explain the correspondences among representations (algorithm, table, diagrams)
- Interpret multiplication and division situations (sharing and equal groups, area and array, compare)
  - Express relations between quantities in situations in number equations. Initially, with whole numbers, then decimals and fractions
  - Identify quantities in situations and decide appropriate units, use number line to represent quantities with appropriate units, use units to scale number lines, manage units in calculations
  - Show the correspondences among visual diagram, table, graph and formula or equation for a given problem. Show how questions can be answered using different representations.
  - Show and explain the correspondences among representations (arrays, equal groups, scaling)
- Understand area and the idea of an area unit; use multiplication to determine areas in contextual problems, and use areas to represent products in reasoning about the distributive property
  - Show and explain the correspondences among representations (arrays of tiles, verbal descriptions, formula)
- Understand volume and the idea of a volume unit; use multiplication to determine volumes in contextual problems
  - Show and explain the correspondences among representations (orthogonal drawing, formula, concrete models)

### Examples of Instructional Strategies for Supporting Unfinished Learning

- While teaching proportionality in grades six and seven, tables of paired values can be used for quantities in a proportional relationship. The paired values show equivalent ratios. It is a good occasion to re-engage equivalent fractions, which also pair values—the numerator and denominator—that are equivalent in that each fraction has the same quotient; that is, it represents the same number.
- Going more deeply into multiplication, teachers should re-engage the multiplication table by having students explore and articulate in oral or written form why any two rows in the table have the same pattern as equivalent ratios and equivalent fractions.
- The underlying conceptual relationship with multiplication of scaling and scale factor (grades six through eight) with multiples and generating fractions with common denominators (grades three and four) is well worth the time for all students: some will benefit from revising and upgrading unfinished learning, some will deepen insights into the underlying coherence of mathematics.

## Transition to Algebra I

The following conceptual map illustrates how students develop expertise with the eight **Mathematical Practices** and proficiency with the mathematical language, representations, techniques, and tools in the transition from grades six through eight into Algebra I.



In the transition to Algebra I, students will be expected to:

- Understand how relationships between quantities that vary can be modeled with functions:
  - Show and explain the correspondences across representations of functions: equation, table, graph, diagram and “real-world” situation. Show how questions can be answered using different representations.
  - Extend understanding of number line and units to create coordinate graphs
  - Understand the slope of a line and how it relates to rate of change
  - Extend comparison by multiplication and scaling to ratios and proportionality
  - Use rate in expressing proportional relationships. Extend understanding of rate and proportionality to linear functions.
  - Understand how functions determine only one output for each allowable input
  - Show and explain the correspondences among representations (tables, graphs, equations, and descriptions)

- Use the properties of operations, properties of equality and general principles of algebra rather than specialized techniques for specialized problems to create, interpret, and solve one-variable linear equations and pairs of simultaneous two-variable linear equations.
  - Use the properties of operations to create equivalent expressions that include variables
  - Use the properties of equality to create equivalent equations (linear only)
  - Use the structure of expressions rather than special methods for special situations
  - Understand that a solution to an equation is the value for which the equation is true. Emphasize what the solutions refers to in the problem context.
  - Represent the relationships among quantities in a problem
  - Show and explain the correspondences among representations (tables, graphs, equations, and verbal descriptions)

At the amusement park adult tickets cost \$6 each. Child tickets cost \$4 each. At the end of the day 100 tickets were purchased. The total amount paid for these tickets was \$470.

1. What are the quantities in this situation? Which quantities vary and which ones stay constant?
2. Create a system of equations that describe the relationships between these quantities.
3. Graph your equations to describe the relationships of the quantities
4. What is the meaning of the solution to your system of equations?

- Use percent to make sense of quantitative situations and solve problems with percent
- Extend understanding of numbers, the properties of operations, and the number line to include rational numbers including negative numbers
  - Show and explain the correspondences among representations (number line, expressions, estimation, mental calculation)
- Understand and work with transformations
  - Use rigid transformations to show understanding of congruence and similarity
  - Describe the effect of dilations
  - Understand the connections between dilation, similarity, scale factor and slope
  - Show and explain the correspondences among representations (coordinate plane, geometry software, visual models, verbal descriptions)
- Develop the concept of probability, sample space and subset of sample space. Connect probability to proportionality.
  - Show and explain the correspondences among representations (visual models, charts, data)
- Use data to ask and answer questions of interest
  - Understand statistical variability and describe distributions of data
  - Draw random samples and understand how a random sample enable inferences about the sampled population. Informally compare populations.



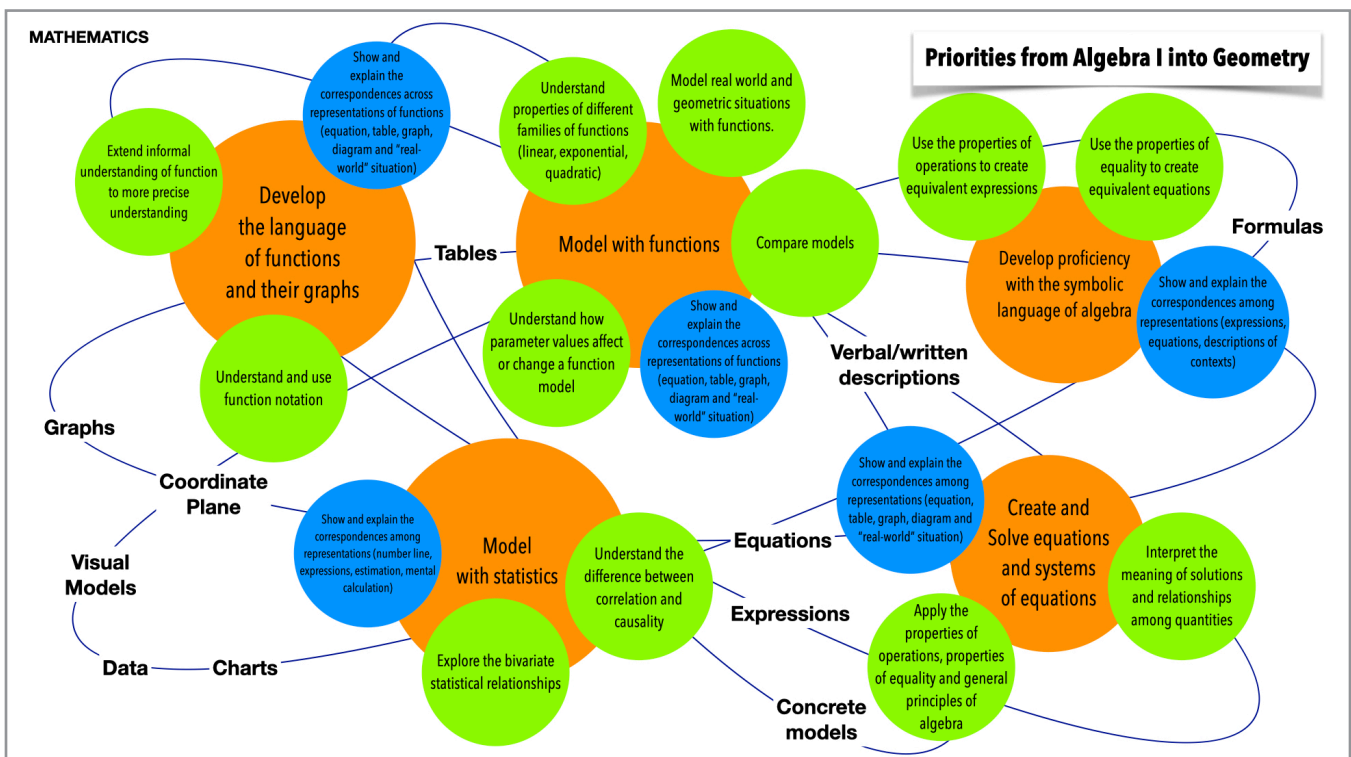
- Represent bivariate data in tables and graphs and investigate associations in bivariate data including informal linear models
- Interpret and represent data in tables, graphs and charts
- Show and explain the correspondences among representations (double number line, charts, estimation)

### Examples of Instructional Strategies for Supporting Unfinished Learning

- Expressions and equations are built from adding, subtracting, multiplying, dividing, using exponentiation and radicals to create other expressions and equations. Teachers can revisit this idea by having students explore this transition from arithmetic expressions to algebraic expressions. Students will re-engage the properties of operations and equality with number expressions and equations while investigating algebraic expressions and equations. Given that the distributive property is a major source of bugs in student work with algebraic expressions, teachers should illustrate this concept using numbers.
- While teaching systems of equations prior to Algebra, teachers should re-engage prior knowledge of how a graph represents the relationship between two quantities: *How do the two axes relate to the two quantities in an equation? What does the graph of each equation represent?* The graph shows points. Each point refers to one value on the horizontal axis and one value on the vertical. These pairs of values are the solutions to the equation. A line shows infinite solutions. *How does the intersection of the lines for the two equations relate to the solution of the system of equations?*

## Transition from Algebra I to Geometry

The following conceptual map illustrates how students develop expertise with the eight [Mathematical Practices](#) and proficiency with the mathematical language, representations, techniques, and tools in the transition from Algebra I into Geometry.



In the transition to Geometry, students will be expected to:

- Develop the language of functions and their graphs
  - Extend informal understanding of function to more precise understanding, including exactly one output for each input that belongs to the defined domain
  - Understand and use function notation
  - Show and explain the correspondences across representations of functions: equation, table, graph, diagram and “real-world” situation. Show how the mathematical representations can illuminate the real-world situation being modeled by the function.
- Model with functions
  - Understand properties of different families of functions and how they can be used to model different kinds of phenomena
    - linear
    - exponential, especially for modeling exponential growth
    - quadratic
  - Understand how parameter values in a function model correspond to features of the real-world situation, and how changing the value of the parameters change the graph of the function and the fit to the situation being modeled.
  - Model real world and geometric situations with functions. Relate features of the function to features of real-world quantities and their relationship such as intercepts, shape, minima and maxima.
  - Compare models
  - Show and explain the correspondences across representations of functions (equation, table, graph, diagram and “real-world” situation)
- Model with statistics
  - Explore the bivariate statistical relationships. Model the data with functions and find lines of best fit using technology.
  - Understand the difference between correlation and causality
  - Show and explain the correspondences across representations (using two-way tables, scatterplots, lines of best fit)
- Create and solve equations and systems of linear equations
  - Interpret the meaning of solutions and relationships among quantities
  - Apply the properties of operations, properties of equality and general principles of algebra rather than specialized techniques for specialized problems
  - Show and explain the correspondences across representations (equation, table, graph, diagram and “real-world” situation)

- Develop proficiency with the symbolic language of algebra. Become comfortable with simple cases such as  $2(x+5) = 2x+10$  or  $2n - n + 5 = 3n + 2$  is equivalent to  $3 = 2n$ . Develop the habit of working thoughtfully, with purpose and without haste. Avoid technically complicated tasks such as: Simplify  $x/(1-xy) + 2xy = 1/(1-1/x)$ , Factor  $19x^2-7x + 39$ , Expand  $(x+2)(y^2-3x+x^3)(2y-x)$ 
  - Use the properties of operations to create equivalent expressions (e.g., to gather like terms, distribute and factor expressions with variables, reorganize expressions to reveal structure or facilitate solutions)
  - Use the properties of equality to create equivalent equations in the solution of equations
  - Show and explain the correspondences across representations (expressions, equations, descriptions of contexts)

### Examples of Instructional Strategies for Supporting Unfinished Learning

- When re-engaging prior work with graphs during Algebra, it is important for teachers to look ahead as well as back to earlier courses. Student work with graphs in the coordinate plane during Algebra I will be critical support for work with transformations in Geometry. The shape and location of the graph of a function can reveal important properties of the relationship between quantities that vary in a problem situation. As students interpret the graph by explaining how their thinking makes sense in a problem while referring to the quantities in the problem, teachers can use this opportunity to focus the discussion on the scales that form the coordinates of the graph as extensions of number line concepts.
  - Later, while working with transformations in Geometry, students will re-engage with the coordinate system from a fresh perspective. This re-engagement is a good opportunity to develop unfinished learning as well as deepen insights that will be important in future course work studying the graphs of functions.
- Formulas for area, perimeter, circumference and other geometric measures share an important property with functions: formulas give a unique output for a given input. To be functions, they need to also specify a domain. The formula  $A = \pi r^2$ , gives A, the area of a circle, as a function of r, the radius when the domain for r is defined. Students' familiarity with the use of geometric formulas from elementary and middle grades can help support their understanding of functions in grade eight and Algebra. This work with functions in Algebra will then support more advanced use of formulas in Geometry.
  - In Geometry, relationships among geometric measures can often be defined as functions. This is a good opportunity for teachers to make these connections explicit to strengthen student understanding of functions.

## Instructional Priorities in English Language Arts for Key Grade-Level Transitions

---

In ELA/literacy, the question of unfinished learning calls for a somewhat different course of action from mathematics. Competencies in speaking, listening, language use, reading, and writing are fundamentally interrelated, and are the sustained focus of teaching and learning across all grade levels. Moreover, the foundational skills that are regarded as the cornerstone of literacy (print concepts, phonological awareness, phonics, word recognition, and fluency) must be systematically taught and robustly practiced, unit after unit and year after year, in a research-grounded sequence supported by complex text. While it is the major focus of instruction during the years of primary school (Kindergarten through grade three) when students are being taught to read, teaching foundational skills—no matter the grade—should be done in tandem with addressing the rest of English Language Arts until reading is automatic and fluent.

Intentional redundancy is threaded throughout these strands and across grade levels—and throughout this section—for that reason. In light of the interconnected design of the ELA/literacy standards, our delineation of the instructional priorities in the transition grades will be framed and addressed using the repeated categories of **Foundational Skills**, **Reading/Listening**, and **Writing/Speaking**.

We will be addressing areas of possible unfinished learning and the essential skills and concepts in these categories at three key transition periods: from grade two to grade three, from grade five to grade six, and from grade eight to grade nine.<sup>6</sup> These grade-level demarcations represent the culmination of a series of iterative learning experiences that signal a milestone in student readiness to read, understand and respond to more complex ideas and concepts as they encounter increasingly more complex, rich literary and informational text and increased sophistication of tasks.

In identifying student behaviors or indicators that signal incomplete or unfinished learning, it is worth underscoring the principles presented in the first section of this report. Unfinished learning does not mean a lack of aptitude or capacity to learn. It is not a deficiency at all, but rather an opportunity for teachers to take students from where they are through targeted, just-in-time instruction rather than resorting to wholesale remediation. In this section we therefore provide not only the indicators of unfinished learning, but a sampling of the instructional strategies teachers can employ to both **reinforce** the knowledge and skills students bring with them to the classroom, and to **develop** those skills and concepts they have yet to master.

We begin our discussion of foundational skills, reading/listening, and writing/speaking with a brief summary of essential skills that can be expected at each major transition point in schooling. Next, we describe ways that unfinished learning can be detected in student work or behavior, and finally we offer suggestions for possible responses at four levels of instructional need:

- For students who exhibit momentary hesitancy or uncertainty, we recommend just-in-time scaffolding, support, or corrective feedback to help students overcome this uncertainty within the context of a grade-level lesson.
- When it appears that students are having difficulty handling grade-level materials because they are out of practice in reading or writing, and it is more than can be handled in the flow of a lesson, we recommend strategies such as shortening the grade-level focus text so it is more manageable, and planning mini-refresher lessons to help students get back on track (e.g., preview, review, opportunities to practice, contextualized front loading of strategically selected academic vocabulary, and linguistic structures).

---

<sup>6</sup> Hernandez 2011—Students who are not proficient in third grade are 4 times less likely to graduate on time. Lesnick et al 2010—third grade scores are predictive of 8th grade scores, high school, & college enrollment. Fletcher and Lyon 1998—74% of third graders who read poorly will still be struggling in ninth grade.

- When students appear to have serious gaps in crucial skills and practices in reading and writing that make it difficult to access grade-level instruction, teachers should plan for explicit instruction that is designed to teach those skills using grade-level complex text as the source of the ‘just in time’ learning whenever possible. Teachers can collect and use data to check for rate of progress. This instruction should be standards-aligned and carefully targeted to prepare students for tackling grade-level reading or writing classwork.
- For students who exhibit the need for instructional attention in reading or writing beyond that which teachers can provide in the context of grade-level instruction, a master school schedule needs to be built that allows for additional support beyond ELA classroom time to address these needs. For example, a double block of ELA that provides intensified and targeted instruction for students; or a WIN block (What I Need) where students get additional support **in addition** to core instruction. Students should never be removed from core instruction to be provided intensified support. A multi-tiered system of support ensures that all students are included in core instruction—grade-level content and work while providing addition time and opportunities to intensify instruction in targeted areas. Effective collaboration between EL teachers and general education teachers can focus the designated English language development instruction on specific language acquisition needs. Addressing instructional needs should never come at the cost of equitable access to age- and grade-appropriate educational opportunity and growth.

## Transition to Grade Three

---

### Foundational skills

By grade three the expectation is that students will have developed automaticity in decoding and word-recognition, and will have learned and had sufficient practice using foundational phonics skills to be able to independently read stories and short informational texts with enough understanding to be able to recount stories and to ask and answer who, what, when, where, and how questions to demonstrate their understanding of details from the text. English Learners, regardless of the grade they first enroll in the district, will need to acquire the foundational phonics skills specific to English, building on the phonemic inventories of their home language(s). They may therefore be on a different trajectory in mastering English phonetic patterns.

Specifically, at the beginning of the third grade, students should be able to:

- Read third-grade text fluently: with accuracy, at the appropriate rate for the nature of the text, and with prosody—that is, with intonation, rhythm, pitch, and inflections that indicate the child grasps the meaning of what he or she is reading
- Recognize and read words that contain taught phonetic patterns automatically at first sight. High frequency words should be memorized to the extent that they are recognized on sight and are read with automaticity.
- Read words with common suffixes and prefixes, as well as irregular sound and spelling patterns and should begin to read words with greater automaticity



In third grade reading, unfinished learning may be manifested in various ways. Teachers should expect to spend more time working on quality texts and providing instructional support in the following ways:

- If students have difficulty reading short texts at the beginning of the third grade, teachers can provide a quick reminder of how to read or approach the specific words or morphological features students are finding difficult. Teachers should plan on spending more time working with texts in class to allow for this just-in-time support for students whose skills may be a little rusty at the beginning of the school year. The teacher should also take note of repeated problems with particular words or morphological features that keep appearing and address these in subsequent lessons. For students who are new to English, this additional support should be bifurcated into the unfinished learning relative to the grade-level content and the required instruction to build the student's English proficiency from the current stage of language acquisition.
- If students appear to have difficulty recognizing words they should know by sight and need more help than can be provided without interrupting the flow of the lesson, teachers should plan refresher lessons on those skills for a later time. If the teacher is aware of particular areas of unfinished learning, they should review and plan for upcoming classroom reading to be sure to include practice on those areas just in time for the classroom work.
- Students who exhibit more trouble with reading and word recognition, such as students who read very fast, blurring words, or those who read word by word without expression or attention to punctuation, may need some systematic instruction and practice on those skills. Teachers will need to work with these students on understanding the relationship of words, phrases, and other meaningful units. For example, emphasize how reading with expression and the function of punctuation in reading helps convey meaning to the listener. Show how the same phrase read with different intonation can change the meaning of text. Since decoding with automaticity is prioritized in second grade, it is important for students to get continuous opportunities for practice in areas such as phonics, high-frequency words, sounds, and spelling patterns. Teachers should provide reading instruction that connects foundational skills to meaning-making and provide ample opportunities for student practice with high frequency words, long and short vowel sounds, and decoding.
- Students who have difficulty sounding words out or recognizing words out of context or have few or no strategies for dealing with single or multiple syllable word will need additional support and instruction, in addition to core, that addresses these foundational reading skills. These opportunities can be presented through small group instruction or learning centers. Collaborating with EL teachers in the planning or in the delivery of instruction for English learners would help address the specific foundational reading skills that students need to map the English phonemes onto their existing linguistic knowledge. For English Learners, learning new sounds will be occurring at the same time they are learning new words, requiring a close connection of both instructional activities. In other words, sounds would be taught within the context of words and words within the context of meaning.

### Reading/listening:

Third grade students are expected to independently read relatively more complex texts than they do in the second grade. At the beginning of the third grade they should be able to:

- read stories, poems, and informational texts from the lower end of the grade two to three complexity band with relative ease and understanding
- read beginning grade-three-level texts orally with fluency, accuracy and expression
- listen to read-alouds and actively participate in discussions about the text
- ask and answer questions about key details in a text they have read or listened to as a read-aloud
- describe how key points are supported by details in a text
- express thoughts or ideas about a text in small or group discussions

- keep track of events, activities or ideas discussed in a text and be able to recall them in order
- visualize the events described in a text

In reading activities, teachers can spot issues related to unfinished learning when children have difficulty following a read-aloud or understanding the texts they are reading themselves. When teachers ask children questions about the texts, they can both determine student strengths and identify places where students may need some extra instructional attention or practice. Different levels of instructional support may be called for depending on the circumstances and evidence of student need:

- If students appear to have difficulty responding to questions regarding details in a story or text they have been reading, teachers should try to reframe the question to prompt the student to take a different approach. For example:
  - When students respond with one word or short phrasal answers to questions, provide linguistic frames to support students in expressing their responses. Additional support would be for the teacher to provide an expanded rephrasing of their response, which would provide them useful modeling of the response called for in writing. Both the linguistic frames as well as the expanded rephrasing are modeling strategies that are particularly useful for struggling learners, students with disabilities, and English learners.
  - If students have difficulty following a sequence of ideas or illustrating how a specific sequence comes together to produce a final outcome, teachers can use text-dependent questioning frames to support them: What is the author describing in a text? In what order does the author provide the information? What signal words tell you what the particular order is? What do you think the author is trying to get you to understand by presenting the information in this way? Why do you think that? Can you read the parts in the text that shaped your thinking in this way?
- If students have difficulty making inferences about the text they have been reading, keeping track of who did what, keeping track of events in the order in which they occurred according to information given in the text, or making predictions as to what is likely to happen next without prompting, they may need a refresher on text interpretation, which would take longer to do than is possible during a lesson. In such cases, teachers should consider additional instruction they can offer students at another time. Specifically:
  - Students may need explicit instruction in how to read texts for information or follow a storyline. For example, teachers can show students to identify signal words that convey passage of time or a sequence, and how to take notes or use graphic organizers to keep track of information from texts or suggest rereading and summarizing, stop and jot, as strategies for remembering details from texts. Also consider adopting an instructional strategy that helps students focus on syntax to see the meaning a rich sentence can contain (for example, the “[juicy sentence approach](#)”)<sup>7</sup> to help students learn the language of complex texts.<sup>8</sup>

---

7 See [Juicy sentence play](#), from the Council of the Great City Schools, and [Juicy sentence guidance](#), from Achieve the Core.

8 See [Choosing “juicy” complex excerpts and sentences](#), Council of the Great City Schools.

- Diverse learners (e.g., English learners, students with disabilities, struggling learners) who have difficulty keeping track of what is going on in a text may need an additional scoop of instruction/guidance (e.g., mini-lessons) in which they are shown how to identify language that may not be transparent in meaning, and or places in texts that invite inferences—i.e., guidance on reading between the lines. For example, in a text, “Joe walked into the classroom and thought to himself: “Where is everyone? Where did they go?” the reader is invited to infer that Joe has entered an empty room: no one is in the room Joe has entered. Difficulty in making such an inference when provided language supports to aid with communication (e.g., linguistic frames) would suggest that students need help in visualizing the situation described in the text.<sup>9</sup> For that, teachers can offer scaffolding questions to help students visualize what is happening in the text. (For more examples, see this [Sentence Play resource](#))

Text	Teacher questions
Joe walked into the classroom/ and thought to himself/ “Where is everyone? Where did they go?”	Who is asking these questions? What did he notice when he entered the room? Why does he think that? What do you think that means?

- The following are signs of unfinished learning in text understanding that call for more structured, deliberate, and focused instruction:
  - Students who cannot keep track of what is happening in a text, have difficulty answering recall questions about the text, or struggle to state the main idea in the text or offer a summary of what a text was about are displaying the need for instruction on text understanding. Such indicators would call for informal assessments to determine the kind of focused instruction or specific support students need.
    - Are they having difficulty remembering because they are just reading words and not processing them? Do students have trouble knowing that they must go beyond just decoding the words, and they have to turn the words into sentences that communicate information? In that case, try breaking the text into smaller chunks, stopping and asking students to engage with the text, to connect sentences to the meaning of the text.
    - Have teachers examined the language and modeled how to attend to the text? For ELLs and other students who might be struggling with the language demands of a text, it is important to provide mini-lessons and support that identifies and explains the nature of signal words that convey order and the sequence of events.
  - Do students appear to need more practice and support in decoding and word recognition? In that case, teachers can provide instruction on foundational skills (for example by pointing out the proper pronunciation of a pattern a student is struggling with or showing how to break a longer word into syllables to make decoding possible); provide ample opportunities for student practice with high frequency words, decoding long and short vowel patterns within longer words, or even at the single syllable level as needed sounds, and teaching common syllable patterns and decoding; provide continuous practice and homework with phonics as needed, third-grade-level and high-frequency words, sound and spelling patterns encountered in text, etc. Teachers of English learners can leverage contrastive analysis, cognates, and the transfer of decoding skills from students first language to help English Learners understand how to decode words in English.

<sup>9</sup> Care must be taken to not assume that an inability to communicate understanding through an expected mode signals a challenge in grasping the content. For example, English learners who have difficulty answering probing questions orally may be invited to communicate their understanding via other means, such as visuals or gestures, to be sure that a difficulty with a skill, such as making inferences, is actually an area of struggle.



- Do students understand the vocabulary they are reading? Recognize that some vocabulary can be taught just in time as students encounter it, and some might require more extensive attention—particularly if it is a word that will be critical in the unit or is particularly valuable in understanding the reading or for using it in writing, such as the words “therefore” or “however.” For English Learners, teachers will need to gauge which words may require more explanation because of their multiple meanings depending on the context. Teachers can provide students clarity about the vocabulary while remaining anchored in texts and the content of the lesson. This strategy is particularly powerful for students with disabilities and English learners.
- Teachers can also model metacognitive strategies, such as providing think-alouds while reading a text to teach students so that they understand the connection between self-talk and self-questioning in understanding the knowledge, concepts, and ideas that are presented in a text. If the problem is that students are having difficulty with text complexity, teachers may want to break complex texts down into manageable chunks (phrases and clauses) and ask students to paraphrase the meaning of each chunk as a proposition (a short simple sentence). Calling attention to the connections between parts of a sentence can help students discover how complex language work helps all students but is essential for English learners to access academic content.
- Students who exhibit further need for instructional attention—those who struggle to read, appear to have few or no strategies for reading unknown single or multisyllable words, or have limited sight word vocabularies—will need extra “scoops” of instruction (Tier II) in addition to the core, as well as additional time for intensified, individualized or small group instruction (Tier III) that is narrowly focused and provides ample opportunity to practice and explicit corrective feedback. As stated previously, students should never be removed from core instruction to be provided intensified support. A multi-tiered system of support ensures that all students are included in core instruction and grade-level content and work while providing additional time and opportunities to intensify instruction in targeted areas. It is therefore critical that both Tier II and Tier III instruction is grounded in standards-aligned, grade-level materials to ensure that this ‘just-in-time’ learning is related to and supports general classroom instruction resulting in greater student success.

### Writing/speaking

In the third grade, students are expected to be proficient enough with the basic sub-skills involved in writing to put their thoughts onto paper, using their knowledge of words, spelling, syntax, and writing conventions such as capitalization and punctuation to produce a written text. Among the skills and understandings that can be expected of children at the beginning of the school year are these:

- proper letter formation and legibility in writing
- correct spelling of high frequency words that are used in written texts
- become more proficient in capitalization and end punctuation in their writing
- write an opinion piece that introduces the topic, state an opinion, supply a reason to support the opinion and provide a sense of closure
- use the more precise and formal language of written language writing
- provide text evidence whenever they are writing about what they have read
- recognize and correct sentence fragments into full sentences orally and in writing
- use more complex sentences in their writing
- provide reasons for their opinions and to discuss cause and effect relationships in their writing

During an extended break from the classroom, many students will have written less often. Particularly for younger students, this lack of practice is likely to result in problems in writing fluency. Since writing is one of the most complex and demanding areas of school learning and because it is called for in numerous learning tasks in the third grade (quizzes, note-taking, essays, journals, and homework assignments), unfinished learning is likely to be manifested in many ways. Moreover, unfinished learning for English Learners and other diverse learners in writing and speaking may present differently and at different stages than for native English speakers. Addressing unfinished learning requires teacher-led instruction to attend to the specific student needs to build their capacity to formulate their ideas in writing. Different levels of support will be needed, depending on the kinds of challenges students exhibit in writing, and the amount of time and planning it would take to carry it out.

- Teachers should, more than ever, have students write using evidence from texts all members of the class have had access to. If students have difficulty getting started writing or knowing what to say, teachers might begin by drawing them into a discussion of the text and providing ‘note-catchers’ or sentence starters to help them gather the evidence from the text. Students will also benefit from being assigned to groups where they can work together on the writing assignment. Moreover, teachers should routinely encourage students to practice verbalizing orally before they write, and to read aloud what they have written once they have done so. Oral discussions of ideas can be carried out in English Learners’ home language to facilitate the idea formation. Students with disabilities, too, will benefit from vocalizing their thoughts prior to putting pen to paper.
- Teachers can offer supports for recalling letter-sound relationships and high frequency irregular words with quick reviews and with charts for students to consult. Visual aids such as alphabet strips, word walls, personal dictionaries, and lists of high frequency words can increase writing fluency and remind students of what they have learned the prior year.
- If students are having difficulty knowing how to structure their writing or having difficulty with fluency in their writing, teachers can plan some pre-writing instructional activities in which they go over a model or exemplar and point out its characteristics to the students. By asking students to read the model aloud together, and discuss its parts and contents, teachers can help students gain some clarity as to how they might structure their own pieces. Students would also be helped by pre-writing activities in which writing is modeled in a think-aloud and a jointly-constructed piece of writing that is produced with suggestions solicited from the students. Such demonstrations are especially helpful to diverse learners because they make instruction concrete in a way that verbal instructions seldom are.
- If students are struggling to write complete sentences, or express complete ideas in writing, teachers might plan some instructional activities to help them learn how written language works. Students at the juncture between grades two and three are learning how to use more precise and formal written language, which differs in expression and structure from both the spoken register used in classroom interaction and the simpler structures used in school texts.
  - For example, when students participate in classroom discussions or respond to questions, full sentences are not required in face-to-face conversations where the context makes what is left out redundant. In face-to-face conversation, “doesn’t matter,” is a perfectly good response to the question, “How many reasons do I have to give?” In writing, the answer would be expected to be given in a full sentence: “It doesn’t matter as long as you say why you hold that opinion.”
  - If students need practice forming full sentences in writing, teachers can go over how to tell the difference between a sentence and a sentence fragment, and provide practice turning fragments into full sentences orally—e.g., “What they said”—“What did they say? Can you turn that into a full sentence?”
  - Students may need practice with how language changes depending on the point that students want to get across. For example, the text and structures differ when students are comparing, describing, or expressing an opinion. Tools, such as linguistic frames and grouping of signal words by their language function, can help support students in using such vocabulary and structures in both spoken and written forms.

- English learners whose first languages do not require subject pronouns when context make them unnecessary (e.g., Spanish, Japanese, Korean, and Slavic languages) sometimes leave them off when writing in English. They would be helped with occasional reminders for including them when writing in English, and by charts showing English subject pronoun forms for consultation.
- If students are struggling in more fundamental ways with writing and have significant spelling errors, they may be in need of additional instruction, guidance, and support with basic foundational writing skills in addition to the regularly provided ELA instruction. No student, however, should be immediately placed in Tier III interventions because of spelling errors or unfamiliarity with sight words, for example. For English learners in particular, the teacher must be cognizant of the natural progression of English language acquisition of their students based on the languages spoken, and the need to be explicit about spelling conventions in English.

## Transition to Grade Six

---

Grade six marks the transition into middle school where students sharpen and further develop language and literacy skills for learning across the curriculum. For students, however, the transition into middle school represents more than just higher expectations and greater challenges in learning. It is a socially and emotionally stressful change for students even under the best of conditions. Middle school often means a different kind of school setting with multiple classes and teachers and more complex peer group social dynamics. Students know how to navigate the social order of the elementary school by the end of the fifth grade, but on entering the sixth grade they have to reestablish their place in the more complex social order of the middle school. For students entering school in the United States for the first time, acculturation to the ways of American life and schooling will also occur, perhaps on top of acquiring a new language. This is a tough task in the best of times, but when that transition takes place following a prolonged absence from school, it can be a quite daunting and formidable experience. Students are likely to show signs, not only of unfinished learning from school closures, but also of anxiety and the loss of confidence in their ability to participate and perform in either in-person or virtual classroom settings.

### Foundational skills

At the end of grade five, students who have been enrolled since elementary school and educated primarily in English should have learned the foundational skills for reading and writing and have a solid knowledge of the principles underlying the writing system. In reading, students should be able to:

- recognize most grade-level words automatically, read grade-level text fluently, and be able to vary reading rate to match the demands of the type of text they are reading
- know how to use contextual clues for making educated guesses about the meaning of unfamiliar words
- know enough about prefixes, suffixes, and word roots to take complex words apart and figure out the meaning of the whole from the parts
- read a grade five text accurately, fluently, and with appropriate expression
- understand the basic conventions of spelling and grammar

Unfinished learning in foundational literacy skills may crop up during instructional activities across the curriculum and not just during English language arts activities. Among students still in the process of acquiring English, what may appear to be unfinished learning could also be part of the language learning process or limited past engagement with a particular skill. General examples of unfinished learning include:

- When students falter or hesitate while reading, teachers might offer some “just in time” support by asking students to take a look at the unfamiliar word in a phrase and helping them look at the parts of the unknown word and how they provide clues in determining the meaning. Anchor charts to remind students of the strategies (for in-school instruction) or reference sheets can be sent home for students engaged in distance learning. Such supports are helpful for all students, and particularly for ELLs.

- Another manifestation of unfinished learning are students stumbling through a text while reading, with little attention to punctuation. Students may also race through reading without hesitation so that words blur together, which is a sign that they are not attending to the meaning of words or monitoring their understanding of the text. Again, these should not be interpreted as signs that a student is not capable of handling grade-level work, but rather that they are in need of some targeted, ‘just in time’ support from teachers. In such cases, teachers may well want to plan a refresher lesson on foundational skills in which they provide students with a review and the opportunity to practice the skills involved in reading for meaning, paying attention to meaningful units in sentences and to punctuation used to separate sentences, to clarify meaning, and indicate relationships between structures. Anchor charts to remind students of the structure of sentences and the purposeful use of punctuation (for in-school instruction) or reference sheets can be sent home for students engaged in distance learning. Such supports are helpful for all students, and particularly for ELLs.
- A different level of unfinished learning is evident in students at the beginning of grade six who have difficulty understanding or recalling information from the texts they read even if they can sound out and read the words in a text. Teachers can explicitly demonstrate how to use particular strategies to figure out words, word meanings, or text meanings. Students, especially English learners, can be supported through chunking of text, the use of graphic organizers or note-taking strategies, and instruction on research-based cognitive strategies for reading (i.e., self-monitoring, questioning the text, making connections, summarizing while reading and visualizing, etc.).
- Students at the beginning of the sixth grade who read haltingly, one word at a time, or who have a difficult time sounding out words are manifesting unfinished learning that requires more intensified and targeted instruction that may be provided within a multi-tiered system of support. Individualized instruction based on results from additional reading diagnostic assessments may be needed for some students (Tier III). English Learner results from diagnostic assessments should be examined in concert with information about the student’s English proficiency.

### Reading/listening

Students at the beginning of the sixth grade should be able to:

- read grade-level text independently and have the strategies to make sense of relatively difficult texts requiring a productive struggle to get through
- provide the theme or central ideas of the texts they read, and provide supporting details when summarizing a text
- provide explanations for events or ideas presented in a text, and provide evidence drawn from the text in support of their findings
- relate and extend ideas presented in a text to prior experiences to inform their understanding of the text
- understand an author’s point of view, and detect when there is a shift in the point of view represented in a text
- identify characters’ beliefs, personalities, and motivations and their relationships to one another from information provided in the text and from inferences drawn from the text
- cite evidence from texts to compare and contrast ideas, and to examine claims presented by an author

Although reading comprehension problems are often related to unfinished learning in foundational skills, students may also encounter difficulty or confusion while reading and listening for other reasons. For example:

- Students may not be as engaged with texts as they need to be to get much meaning from them. For example, they may have difficulty focusing on key characters, events, and settings in a book they have read to engage in discussion about them, or they may be unable to discuss its content or to compare and contrast aspects of different books read in class. Teachers can help students build their capacity to engage with texts in meaningful ways and recapture their love of reading by designing lessons that:
  - Provide motivation or interest in the topic by linking it to previous readings and learning activities and to the curricular questions they address;
  - Elicit from students what they already know about the topic and give them a heads up about what they will discover about the topic in the text they are going to read.
  - For texts that deal with topics on which some students have little background knowledge, build some by the use videos, photographs, illustrations, maps, or physical objects to stimulate discussion and interest in the topic before a reading. For example, in a text about the jet stream and how it affects global weather patterns, a teacher might download [video clips and materials](#) from the National Oceanic and Atmospheric Administration (NOAA) to use in discussions on the topic before the lesson. During such discussions, a teacher would want to draw attention to technical terms, vocabulary, and language structures that students will need to understand and draw meaning from the text while maintaining a focus on the core content. This is a particularly helpful approach for diverse learners including English learners and students with disabilities.
  - Activate interest in the topic of the text by discussing its relevance to student concerns, their lives, or current events. For online learning, create virtual breakout rooms by area of interest where students can discuss their interest in the topic.
- Unfinished learning may also be evident if students consistently miss clues provided in signal words (i.e., sequence words, restatement and contrast words) and connective phrases and clauses necessary for accurately reading and understanding grade-level text.
  - Teachers can provide an explicit list of such words so students all have access to the work these words do in sentences in a transparent way.
  - Teachers can provide a mini-lesson on how paying attention to these words will help them to follow and explain ideas presented in text.
  - Teachers can guide students in slowing down to attend to phrasing and the meaning of the parts of sentences, as well as sentences as a whole.
  - Teachers might want to do a quick parsing of complex sentences to get students to attend to meaningful parts: e.g., “Many different skills/ went into making a clock/, and new tools and methods /were constantly being invented/ to make/ ever smaller, more complicated mechanisms/ that worked with greater precision.”<sup>10</sup>
  - Teachers can go over the language used in text and identify signal words that may present difficulty to ELLs and students with disabilities because they are new, unusual, or not transparent in meaning.

---

10 From Koscielniak, Bruce. *About Time: A First Look at Time and Clocks*. Orlando: Houghton Mifflin, 2004.



- Teachers can provide sentence starters and frames to support students in expressing their understanding of the text using the linguistic structures necessary for the task at hand (comparing and contrasting, providing evidence from the text, etc.) Linguistic frames used for oral expression can also support students in their written responses.
- Teachers can provide anchor charts to remind students of the strategies (for in-school instruction), or reference sheets can be sent home for students engaged in distance learning. Such supports are helpful for all students, and particularly for ELLs.
- If students do not comprehend what they read and do not know what to do to improve their understanding, they may need more support in addition to core instruction (Tier II). Teachers can help students recapture the purpose for reading by:
  - Prompting students to do a ‘first read’ to get an overall picture of what the text is saying. If students have difficulty doing this first read independently, teachers can do it as a read aloud, think aloud, or in partner reads. Engage students in a discussion of the ideas and details to see what they understood.
  - Selecting a portion of the text that includes key details or elements for students to re-read closely to gain a deeper understanding of the text. Students can then discuss their understanding with partners, in small groups, or possibly in virtual break-out sessions. Teachers should provide students with suggestions of words, text features, or details that can lead to a deeper understanding of the whole text.
  - Asking students to go deeper in their third reading of the text, this time focusing on efforts to integrate their understanding of the text.
- When students are unable to explain what they don’t understand about the text, retell what is going on in a text they have read, or paraphrase what is going on in a story they have listened to as a read-aloud, this indicates that students are either not making much sense of the texts because they find them too complex to follow, or they are unfamiliar with the language structures and forms that are used in the text. Teachers should under no circumstances set aside the grade-level texts that students might find too difficult to work with on their own. Instead, teachers should employ instructional activities that help students work with the language of complex grade-level texts in the following ways:
  - Consider adopting an instructional strategy that helps students focus on syntax to see the meaning a rich sentence can contain (for example, the “[juicy sentence approach](#)”)<sup>11</sup> to help students learn the language of complex texts.<sup>12</sup>
    - Break complex texts down into manageable chunks (phrases and clauses) and ask students to paraphrase the meaning of each chunk as a proposition (a short simple sentence), calling attention to connectives between parts in order to help students discover how written English works.
    - Provide visuals by writing sentences from the text that are especially complex on strips of paper, and guide students in seeing where phrasal and clausal boundaries are. Ask students to help you figure out what each segment means. Divide the strips of paper up by phrases and ask students to put them back together again into the sentence. Some parts (especially time adverbials) are movable, and some parts are not.

11 See [Juicy sentence play](#), from the Council of the Great City Schools, and [Juicy sentence guidance](#), from Achieve the Core.

12 See [Choosing “juicy” complex excerpts and sentences](#), Council of the Great City Schools.

- Model and think aloud about a text (e.g., “What main ideas do we find in this text?”) and ask students to raise their own questions about it (“What do you think it is telling us?”).
- Ask students to make connections to other ideas and texts (“Does this remind you of another story we have read? What does this make you think of?” “Can you think of other stories like this that we have already read?”). Have students practice these same skills on their own and in small groups or virtual break-out sessions. When you begin shifting this responsibility primarily to students, stay alert to those who may need more support and attention.
- For English learners, ask students to list the points that are made in a text and the specific language that supports each point; they may need this additional teacher-led support and modeling, especially in identifying points when they must be inferred from the context. (See [Sentence Play resource](#) for examples.)
- Provide graphic organizers and other note-taking structures to assist students in keeping track of important points, details, characters, concepts from the text.

### Writing/speaking

Students at the beginning of the sixth grade should be ready to:

- write essays in response to prompts for opinion and informational pieces
- demonstrate their understanding and engagement with the materials they are learning in writing and in speech
- make use of the more robust language of academic discourse as they further develop their skills in argumentation, explanation, and narration, and to provide evidence for claims and assertions
- provide oral and written summaries of literary text that include story elements such as characters, setting, and conflict
- write written responses in quizzes

Unfinished learning in writing can manifest in various ways. The following are various types of difficulties that students may exhibit in their efforts to produce written products or to participate in classroom discussions:

- Students may appear to lack confidence in expressing their thoughts in discussions or in writing, they may respond to questions with “I don’t know,” or they may have trouble responding to follow-up or probing questions. When students require a lot of urging to start writing, or to participate in a discussion, teachers can help students regain their voice by designing learning experiences that call for whole-group or class oral or written responses, a powerful strategy that is sometimes used when there are diverse learning needs in a class. For example, teachers can pose questions that call for whole-group responses, and students respond verbally in unison with a choral response. Written responses can be elicited by having students work together in groups to come up with responses, or having students write responses in a virtual chat-box.
- Another way teachers can help students get started writing is to model their own writing process, and the inner dialogue that writers engage in as they write: “Ok, so I’ve got to state clearly what it is I am writing about first! When and where did this event happen, and who was involved? How did it happen? What was unusual about it? Why do I think so? What do I make of it? What’s my conclusion about the event?” By engaging students as participants in the co-construction of a text, teachers model the way the students might proceed as they try writing their own such essays. Later, teachers should model the next step in the writing process: editing and revising.

- Another manifestation of unfinished learning in writing can be recognized when students have difficulty responding to writing prompts. In middle school, students are asked to write narratives that take the form of accounts or stories, expository reports of research they are doing, persuasive writing on a problem or issue, and responses to stories they have read. Each of these types of writing has a characteristic structure that students are expected to follow. Teachers can help students understand how to appropriately respond to writing prompts by:
  - Selecting texts that are good examples of each of the modes of writing, and guiding students to identify the parts. Go over several examples with students, discussing the structure, the kinds of language used, the organization of the information.
  - Providing students with enough information on the topics you are asking them to write about: a book they have read, a topic they have been studying, or an expository piece about something the class is working on.
  - Facilitating whole-class writing experiences where students and the teacher collaborate in brainstorming a topic to use in planning and organizing their own writing.
  - Modeling for students how to identify the parts of a writing prompt that show the purpose, topic, context, audience, and format for the writing task.
  - Engaging students in whole-class writing of a prompt where the teacher and students write a prompt together as the teacher models each step in the writing process: brainstorming, drafting, revising, and proofreading. This process would be done over the course of multiple class periods.
  - Offering graphic organizers with brief descriptions of what might be included in each section. This is particularly useful in helping ELLs and students with disabilities plan their writing.
  - Providing anchor charts to remind students of the strategies (for in-school instruction) or reference sheets sent home for students engaged in distance learning is helpful for all students, and particularly for ELLs.
- Student writing may reveal inconsistent use of standard English language such as sentence fragments and run-on sentences, errors in subject verb agreement, and punctuation, to name a few. Once student writing is ready to be edited, teachers should note the common errors that are arising in student writing and address them to varying degrees according to the frequency with which the errors are occurring:
  - For errors that are made by only a few students, teachers can provide “just in time” feedback within the writing assignment itself with quick guided practice showing students how to correct the error, or through additional writing opportunities to practice honing that skill independently.
  - For errors that are common among a large number of students, teachers can provide a mini-lesson for the class that will provide the direct instruction needed to correct those common errors.
- For English learners, the manifestations described above may be the result of the student’s place in his or her trajectory towards English proficiency. Providing opportunities to write and speak in the home language helps the student understand the contrasting linguistic features with English, supporting more sophisticated language development in both the home language and English.



## Transition to Grade Nine

---

As with the transition to middle school, the transition from middle into high school is typically marked by mixed feelings of excitement and anxiety. Not only must students take on greater responsibility for their own learning and deal with higher academic expectations, they also have to find their way in new social and physical environments that are initially intimidating and confusing. Such a transition is a big challenge in ordinary times,<sup>14</sup> and will likely prove even more challenging after extended and unexpected school closures. This transition and the unfinished learning students will have from grade eight may take a toll on students' academic agency and self-confidence. Students will require not only instructional support, but social-emotional support from teachers, parents, and peers.<sup>15</sup> At the same time, students will also enter high school with newfound knowledge and skills from having to navigate a difficult time during the pandemic, as well as new ways of engaging with school.

### Foundational expectations

By the time students enter high school,<sup>16</sup> they are expected to have mastered foundational skills for reading, writing, speaking, and listening. They should be able to read grade-level text, recognizing words rapidly and accurately with appropriate intonation and pace, without having to consciously decode words. They should be able to express themselves in writing and speech and effectively participate in high school work, assignments, and classroom discussions.

However, there are students who enter high school with an uncertain grasp and command of necessary foundational literacy skills. For example,

- Students may read slowly, with many pauses, making frequent mistakes, ignoring punctuation, and often in a monotone
- Students may repeat words and phrases, skip words, lose their place, or miss lines during reading
- Students may stumble over multisyllabic words or mispronounce words

In such situations, teachers should first identify the source or cause of the difficulty: Has the student struggled with literacy skills in the past? Does the problem stem from the approach used to teach reading during the students' early years in school? Have previous interventions been ineffective, or lacked fidelity and progress monitoring? Has regular school attendance been an issue? Are there indicators that suggest that the student might have an undiagnosed learning disability such as dyslexia that makes reading difficult? Is it related to language differences or problems? Is the student a newcomer to English? English learners at grade nine include relative newcomers (defined as being enrolled in U. S. schools for less than three years), as well as students who have been in U. S. schools for longer but have not yet been reclassified. The kind of support needed can vary considerably, so teachers should consider individual student circumstances and identify the kind of help that is most appropriate. For example, create a school master schedule that provides additional opportunities, time, and intensity of instruction for students that may need foundational skills (e.g., double block ELA, reading classes). If your high school has students who struggle with reading or cannot read, you must create the opportunity for students to receive targeted reading instruction—not only in ELA but across all content courses.

---

14 Lester, L. & Cross, D. (2015) The relationship between school climate and mental and emotional wellbeing over the transition between primary to secondary school. *Psychology of Well-Being*. 2015; 5(1): 9. Published online 2015 Oct 22. doi: [10.1186/s13612-015-0037-8](https://doi.org/10.1186/s13612-015-0037-8).

Cohen, J. S., & Smerdon, B. A. (2009). Tightening the dropout tourniquet: Easing the transition from middle to high school. *Preventing School Failure*, 53(3), 177-184.

15 Johnson, V. L., Simon, P. & Mun, E-Y. (2014). A Peer-led high school transition program increases graduation rates among Latino males. *J Educ Res*. 2014; 107(3): 186-196. Published online 2013 Nov 26. doi: [10.1080/00220671.2013.788991](https://doi.org/10.1080/00220671.2013.788991).

16 Assuming students have been enrolled in US schools since elementary school and educated primarily in English.

Depending on the source or cause of incomplete mastery of foundational skills, students may need different kinds of instructional support. The following, however, are ways that teachers can include students with such needs in grade-level appropriate instructional activities. Teachers can:

- Seize opportunities to improve fluency while fulfilling other learning tasks connected to grade-level content standards. For example, integrate public speaking opportunities into classroom routines.
- Identify high-value sections of text or literacy tasks (i.e., complex linguistic structures, chunks particularly relevant to content or authors' purpose) for students to spend more time on, and on which to work closely and come to know well.
- Improve fluency by engaging in activities such as choral reading of short texts, especially when phrasal boundaries are marked so students can practice reading in units that are larger than single words to improve and build fluency.
- Have students read aloud with peer reading-buddies, making careful pairings so that more fluent students are working with and supporting ones who are less fluent. Peer reading-buddies are not a substitute for read-alouds led by the academic English expert in the classroom—the teacher, but they can assist with improving fluency.
- Remind students how longer words break into syllables, including prefixes and suffixes, and encourage students to use that knowledge to support their decoding of unfamiliar words. Model this frequently for them while being careful to not diverge from grade-level content for extended phonics instruction.

### Reading/listening

In grade nine students are expected to:

- expand their ability to read literary and informational texts independently and to access academic content from those texts across the high school curriculum
- fully understand and apply the content of written materials, including using evidence from texts to support their inferences
- make connections about how complex ideas interact and develop within (and across) books, essays, articles, or multi-media sources
- Demonstrate their ability to respond to literature by discussing in writing an author's style, purpose, and use of symbolism or figurative language, and compare works by the same or different authors
- understand precisely what an author or speaker is saying, and how to question an author's or speaker's assumptions and assess the accuracy of his or her claims

Unfinished learning in these areas may be manifested in various ways. Students may be able to read a text but unable to make meaning from what they have read. The effects of extended time away from school or unfinished learning may also exacerbate certain typical, unproductive behaviors of students in early high school years. They may be present in class but inattentive, not participating in instructional activities, or going through the motions. Books may be open more or less to the right page, but little effort is made to read. Students may skip homework assignments or turn in very little to review. Or they may exhibit other problematic or non-productive behaviors in class. To address these instructional and engagement issues, teachers can—

- Provide students with explicit instruction and strategies for constructing meaning as they read (e.g., deciding where to pause during reading to figure out what the text is saying, and then summarizing what is known so far).
- Provide additional support within the flow of a lesson by doing read-alouds of stories and asking students to work on excerpts of the text on their own or with peers. This can help students overcome their initial reluctance to participate.

- Plan activities early in the school year to counter the anxiety students may feel at being unprepared for high school. For example, before getting into books and literary works in the ninth-grade curriculum, teachers might put together a set of short stories that students can read and respond to. Teachers can also have students work in small groups to read these stories and to create presentations of the story, characters, and the plot using infographic software such as PowerPoint or free software such as Google Presentation,<sup>17</sup> or Edu.Glogster.<sup>18</sup> Working together with their new classmates on a literacy project such as this may give students the confidence and encouragement they need to tackle longer-form literary and informational texts. Teamwork gives students a chance not only to connect with peers socially but also to reconnect with themselves as learners.

When students have difficulty with the complex texts they are expected to read and to learn from in history, science, or other subjects, or have trouble remembering what they have read, they may need some ‘just in time’ instruction in close reading from the subject area teacher who is expert in the essential content. Students may need some help in dealing with the language of complex texts and the content words specific to that subject. Depending on what appears to be the problem—lack of concentration, lack of background information on the topics covered in the texts, or difficulty with the language of the text—teachers may want to plan a series of refresher lessons or mini-units. Some examples are:

- A refresher unit on strategies for learning from texts: Using bridging techniques to help students understand new knowledge/concepts, including annotations of text, summarizing while reading, questioning the text in various ways by underlining, circling, and making marginal notes.
- Modeling aloud for students how mature readers think while reading a text: what alerts them to the main ideas in the text, the text-dependent questions they ask while reading a text, the connections they make to other ideas and texts, can also be helpful. Following such a demonstration, teachers can guide students to try this kind of attentive reading on their own, in pairs, or in small groups. Such modeling and coached practice sessions can build students’ capacity to better understand and summarize the ideas presented in complex text.

If students appear to be having difficulty dealing with the complexity of the language used in the texts they are reading, teachers may want to plan a mini-lesson in how to read such texts, and how to deal with the complexity they encounter. Many students need help dealing with text complexity in the materials they read for high school classes, and students with disabilities and English learners, in particular, benefit from guidance in how the language, vocabulary and nuances in such texts works, and how to make sense of it:

- Informational density makes for complex texts that are difficult to understand for many students, but especially for English learners. Teachers can help ELLs to make sense of such language and writing by highlighting parts of sentences, and asking: *What does this part tell us? And what about this next phrase? What do you think the writer means by that?* Breaking up a sentence by phrases and clauses helps students discover the structural relationship between parts of a sentence, and even sentences within a paragraph to see how meaning is conveyed.
- Students may find strategic prereading and discussions of texts to be especially helpful. By discussing the topic of the text, teachers can activate the background knowledge students bring to the text, or help to build it when the topic is new for students.

---

<sup>17</sup> Google Presentation suite of apps for education: GAPE, <https://www.google.com/slides/about/>

<sup>18</sup> <https://edu.glogster.com/>

- Placing the topic of a text in historical, cultural or social perspective, and using visuals such as artwork, photographs, diagrams, websites, and video clips may help provide students with the background needed to make sense of the text. Giving students a list of text-dependent questions may also help to guide their reading of texts. This helps focus student attention on details of a text—an important aspect of close reading.
- English learners and students with disabilities, in particular, will benefit from glossaries of academic or subject-area words and expressions that might be unfamiliar to them. Encourage ELLs to look words up in online bilingual dictionaries, or to ask about their meaning if they do not make sense in a given context.

### Writing/speaking

In the ninth grade, students are expected to produce written texts and to give oral presentations in many of their classes. These writing assignments will be longer than in previous grades, and are expected to exhibit the features and structures of various specialized forms of writing and presentation. For example, research and book reports, journals and records of work over a semester, narrative or expository essays, lab reports of experiments, term papers, and persuasive essays each call for a particular structure and should contain specific sorts of information, and all require the use of complex language and thinking.

In grade nine students are expected to:

- extract information from complex literary and informational texts, and to provide evidence in spoken or written language their understanding of those texts
- use relevant evidence when supporting their own points in writing and speaking, making their reasoning clear to readers or listeners or constructively evaluating others' use of evidence
- develop the flexibility, concentration, and fluency necessary for accomplishing complex tasks that require them to produce logical, well-reasoned writings that are supported by evidence
- produce more writing and participate in a variety of conversations
- exhibit greater care and judgment in making claims in their writing, be ready to defend their assertions, and to express what they know about a subject using appropriate examples and evidence

During the extended break from the classroom, many students will have had less practice writing, presenting in front of a class, and using the language of academic discourse. Teachers can expect to see various manifestations of this lack of practice and unfinished learning in speaking and writing fluency. Moreover, the natural uncertainty that students face in their first year of high school will likely exacerbate these issues. Students may be hesitant or lack confidence in their ability to express what they know in speech and in writing because they worry about revealing that they do not fully understand the content and materials they are working on in school, or that they do not know as much as they believe everyone else does. How are teachers to separate student needs stemming from unfinished learning, natural progressions in academic language acquisition, and the many insecurities that are endemic to young teenage students?

- When students have difficulty getting started with a writing assignment or organizing their thoughts about a topic before writing, teachers can provide students with models of the type of writing or presentation they would like students to produce, lead the class in a study of the model, lead a think-aloud as they look at the model, invite students to help create an outline together, and finally, draft a sample text following the model. This may sound like a time-intensive approach, but if it helps students overcome their “fear of the blank page” or uncertainty in how to get started with their own writing, it is worth the effort.

- Students may need a review on the different types of writing called for in various curricular areas. In middle school, the types of writing that should have been covered included narrative, expository, and persuasive writing. A few refresher sessions on writing genre, their usual structures, rhetorical devices and organizational features, and the language that typifies such writing may help them get started writing. For example, teachers can:
  - Analyze models of expository or explanatory writing. Work together as a class, in small groups, or online breakout sessions to annotate or color code models or benchmark pieces. Identify the key characteristics of an exemplar and discuss how the parts of the piece work together to communicate ideas effectively.
  - Provide think-aloud demonstrations of how to proceed in analyzing and understanding the nature of the prompt, posing the questions a more skilled writer might ask, and modeling the process of planning and organizing what to say, thinking about the intended audience and what objections or questions they might have regarding the arguments a writer is going to make, and how to address those points.
  - Provide guidance and practice in supporting a point or idea with evidence. This practice can be done orally, as well as in writing. Evidence can be drawn from the text, from multimedia, online resources, or even from shared experiences.
- If students struggle with the skills required to produce expository or explanatory essays and reports — reading source materials, citing relevant points and evidence, and ultimately pulling together the information they have collected in support of or against positions on a topic—teachers might want to plan some sessions to help restore or teach these important aspects of writing. For example, the problem may well be that students need help developing arguments and analyzing information, propositions and positions as writers must do in developing the kind of reasoned discourse found in written argumentation and writing. Thus, it would be useful to:
  - Design lessons on critical thinking, which is foundational to any kind of expository or argument writing.<sup>19</sup> In such a unit, the skills to be taught might include asking critical questions when discussing or reading about a problem, gathering and assessing information that addresses a problem, evaluating the sources of information used, critiquing arguments and raising counter-arguments, recognizing different points of views in arguments, and assessing the role played by circumstances or context in evaluating arguments and positions.
  - Students will also need help in structuring and communicating problem/solution frames and formal arguments in writing. Such writing calls for a different kind of organization than narrative writing or the compare and contrast type of writing that students may have done in middle school. Expository and argument writing calls for a different “voice,” or the attitude or tone the writer takes towards the message: students have to learn about taking a rhetorical stance in relation to the problem being discussed,<sup>20</sup> and teachers can help students discover that by guiding them in looking at examples of texts that differ in tone.

19 See for example: Fisher, Alec. (2011). *Critical Thinking: An Introduction* (second edition). Cambridge, UK, Cambridge University Press.  
Paul, R. W., Martin, D., Adamson, K. (1989). *Critical thinking handbook: High School*. Foundation for Critical Thinking. <https://www.criticalthinking.org/store/products/critical-thinking-handbook-high-school/153>.

20 Nordquist, Richard. “Definition and Examples of Rhetorical Stance.” ThoughtCo, Feb. 11, 2020, <http://www.thoughtco.com/rhetorical-stance-1692056>.



- If students continue to have difficulty writing or what they do write is too rudimentary for the ninth grade (e.g., they do not vary sentence beginnings in their writing; they use simple sentences primarily in their writing; they do not use appropriate grade-level academic vocabulary in writing tasks; they make many spelling errors throughout writing assignment; or they do not use appropriate paragraph structure in their writing), teachers may have to plan some work on developing both their language and their writing skills. When students have this level of problem with writing, they may also have similar difficulties in reading. This may include:
  - Mini-lessons for individual students or groups of students. For example, if half of the class continues to make the same grammatical errors in their informal and formal writing tasks, it may help to review grammar rules and lead a discussion about the differences in spoken and written language forms.
  - Activities aimed at expanding students’ vocabularies and encouraging them to use words that more precisely express their intentions in their stories, reports, and essays
  - Teaching the use of multiple strategies to clarify the meaning of unknown words and phrases (e.g., context clues, affixes and roots, etc.)
  - Teaching students about derivational processes, namely changing the function of words by the adding suffixes: e.g., analyze (verb), analysis (noun), analytical (adjective)
  - Teaching students how to use dictionaries, thesauruses, and apps such as WordWeb to check on usage
  - Guidance on the accurate use of grade-appropriate general academic and domain-specific words and phrases

## Appendix A

# Additional Resources

Here is a list of additional resources to support districts with prioritizing content and addressing unfinished learning:

Student Achievement Partners, *2020-21 Priority Instructional Content*, [https://www.achievethecore.org/2020-21\\_PriorityInstructionalContent](https://www.achievethecore.org/2020-21_PriorityInstructionalContent)

### Mathematics: Materials for K-12

---

Common Core Standards Writing Team. (2013). *Progressions for the Common Core State Standards in Mathematics*. Tucson, AZ: Institute for Mathematics and Education, University of Arizona. <http://ime.math.arizona.edu/progressions/>

Student Achievement Partners. (n.d.). *Mathematics: Focus by grade level*. <https://achievethecore.org/category/774/mathematics-focus-by-grade-level>

### Mathematics: Materials for K-8

---

Kobett, B., & Karp, K.S. (2020). *Strengths-based teaching and learning in mathematics: 5 teaching turnarounds for grades K–6*. Thousand Oaks, CA: Corwin; Reston, VA: National Council of Teachers of Mathematics.

National Council of Teachers of Mathematics. (2020a). *Catalyzing change in early childhood and elementary school mathematics: Initiating critical conversations*. Reston, VA: Author.

National Council of Teachers of Mathematics. (2020b). *Catalyzing change in middle school mathematics: Initiating critical conversations*. Reston, VA: Author.

Gray, K., & Liner, K. (2020) Looking to the Fall, Part I: Welcoming and Supporting Students. *Illustrativemathematics.blog*, <https://illustrativemathematics.blog/2020/05/07/>

Gray, K., & Liner, K. (2020) Looking to the Fall, Part 2: Creating a Supportive Resource for K-5 teachers. *Illustrativemathematics.blog*, <https://illustrativemathematics.blog/2020/05/20/>

Petersen, D., & Nowak, K. (2020) Looking Ahead to 2020-21 in IM 6-8 Math and IM Algebra 1, Geometry, and Algebra 2. *Illustrativemathematics.blog*, <https://illustrativemathematics.blog/2020/05/14/>

### Mathematics: Materials for High School

---

Charles A. Dana Center at the University of Texas at Austin. (2019). *Launch years: Reimagining mathematics education*. <https://www.utdanacenter.org/our-work/k-12-education/launch-years>

Daro, P., & Asturias, H. (2019). *Branching out: Designing high school mathematics pathways for equity*. <https://tinyurl.com/yagfutsx>

National Council of Teachers of Mathematics. (2018). *Catalyzing change in high school mathematics: Initiating critical conversations*. Reston, VA: Author.

## English Language Art/Literacy: Materials for K-12

---

Student Achievement Partners. (n.d.). Text Complexity. <https://achievethecore.org/category/1206/ela-literacy-foundational-skills>

Student Achievement Partners. (n.d.). Text Dependent Questions. <https://achievethecore.org/category/1158/ela-literacy-text-dependent-questions>

Student Achievement Partners. Foundational Skills. <https://achievethecore.org/category/1206/ela-literacy-foundational-skills>

Vermont Writing Collaborative. Writing for Understanding. <https://www.vermontwritingcollaborative.org/WPDEV>

Adams, M. J. (2011). Advancing our students' language and literacy: The challenge of complex texts. *American Educator*, 34(4), 3.

Beers, K. (2003). *When Kids Can't Read: What teachers can do*. Portsmouth, NH: Heinemann

Burkins, J. & Yaris, K. (2016). *Who's Doing the Work?* Portland, Maine: Stenhouse Publishers

Cucchiara, M., (2019) "Language of learning: Content rich texts build knowledge and skills." *The Learning Professional*, April 2019 (Vol. 40, No2)

Fisher, D., Frey, N., and Hattie, J. (2016). *Visible Learning for Literacy*. Thousand Oaks, CA: Corwin

Hochman, J. and Wexler, N. (2017). *The Writing Revolution: A guide to advancing thinking through writing in all subjects and grades*. San Francisco, CA: Jossey-Bass.

Hawkins, J., Ginty, E., Kurzman, K. L., Leddy, D., & Miller, J. (2008). *Writing for Understanding: Using backward design to help all students write effectively*. South Strafford, VT: Vermont Writing Collaborative.

Lehman, C. & Roberts, K. (2014). *Falling in Love with Close Reading: Lessons for analyzing texts—and life*. Portsmouth, NH: Heinemann.

Liben, D., & Liben, M. (2019). *Know Better, Do Better: Teaching the foundations so every child can read*. West Palm Beach, FL: Literacy Solutions.

Shanahan, T., Fisher, D., & Frey, N. (2012). The challenge of challenging text. *Educational Leadership*, 69(6), 58–62. Retrieved from <http://www.ascd.org/publications/educational-leadership/mar12/vol69/num06/The-Challenge-of-Challenging-Text.aspx>

Willingham, D. T. (2006). How knowledge helps. *American Educator*, 30(1), 30-37.

Wong Fillmore, L. and Fillmore, C.J. (2012). What does text complexity mean for English learners and language minority students? In *Understanding Language: Language, Literacy, and Learning in the Content Areas* (pp. 64-74). Stanford, CA: Stanford University.

## Appendix B

# Information on Universal Design for Learning (UDL)

For further information on Universal Design for Learning (UDL), please consult the following resources—

Critical Elements of UDL Implementation: Beliefs, Instruction, Planning Process, Blueprint.  
<https://udl-irn.org/home/udl-resources/>

CAST Professional Resources.  
<http://castprofessionallearning.org/free-udl-resources-and-tips/>

Remote Learning Resources.  
<http://www.cast.org/whats-new/remote-learning-resources.html#.XsMrZC-ZOIZ>

## Appendix C

# Advisory Committee

**Harold Asturias** is the director of the Center for Mathematics Excellence and Equity (CeMEE) at the Lawrence Hall of Science; a science center located at the University of California, Berkeley. Before that, he was the Deputy Director of the Mathematics and Science Professional Development at the University of California Office of the President. He provided oversight to the English Language Development Professional Development Institutes (ELD-PDI). Previously, he served as the Director of the New Standards Portfolio Assessment Project and the Mathematics Unit for New Standards—a national project to develop national standards and assessments. In that capacity, he led the development team of experts whose efforts, involving many states and over a thousand teachers, resulted in the successful production of two assessment systems: the New Standards Portfolio and the Reference Examination. In addition, he was part of the team that produced the New Standards Performance Standards. Mr. Asturias was a member of the writing group for the National Council of Teachers of Mathematics (NCTM) Assessment Standards for School Mathematics. He has extensive experience providing professional development in the areas of standards and assessment in mathematics for teachers in large urban districts (Chicago, Los Angeles, New York City) and smaller and rural districts. Over the past few years, he has focused in the area of designing and implementing professional development for K-12 mathematics teachers who teach English Language Learners. Also, he has collaborated with the Council of Great City Schools in the design and implementation of online resources for understanding the interconnectedness of mathematics content and language.

**Phil Daro** was a lead writer of the Common Core State Standards for Mathematics, and continues to work to advance the design and use of leadership tools for improving mathematics instruction and assessment at every level of the educational system. Daro serves on the Board of the Education Development Center, the Board of the Strategic Education Research Partnership, and the Board of Shell Centre Publications at the University of Nottingham. He has formerly served on Board of Open Up Resources and the Board of the Noyce Foundation. He is on the Executive Committee of the International Society for Design and Development in Education, is a Member of the NAEP Validity Studies Panel, and the Advisory Boards for the Algebra for All initiative in New York City schools; Illustrative Mathematics; and Making Mathematics.

In 2012, he received the Walter Denham Award from the California Mathematics Council for his leadership, and in 2014, the Ross Taylor/Glenn Gilbert National Leadership Award from the National Council of Supervisors of Mathematics in recognition of his unique and dedicated contributions to mathematics education.

Phil currently serves on the National Assessment for Educational Progress (NAEP) Validity Studies Panel. NAEP is the national assessment for the United States. He is Principal Investigator for a study comparing depth and complexity of test items in use on the national tests with items in use on state level tests. This study follows earlier studies of the relationship of test items to standards.

As Director of Mathematics for the Strategic Education Research Partnership, he organized partnerships between the University of California, Stanford, and other universities with the Oakland and San Francisco Unified School Districts. Recent consultation clients in mathematics curriculum and instruction include Japan, Brazil, New York City, Cambridge Mathematics, San Francisco, Oakland and other districts. He was the design lead for a tablet-based K-12 mathematics curriculum.



During sixteen years at the University of California, he directed several large-scale teacher professional development programs, including the California Mathematics Project. He also directed the National Center for Education and the Economy's New Standards Project and was a Senior Fellow for Mathematics for America's Choice. He has held leadership positions with the California Department of Education and served on numerous national committees addressing central issues in mathematics assessment, standards, and instruction.

**Judy Elliott** is the former Chief Academic Officer of the Los Angeles Unified School District where she was responsible for curriculum and instruction from early childhood through adult, professional development, innovation, accountability, assessment, afterschool programs, state and federal programs, health and human services, magnet programs language acquisition for both English and Standard English learners, parent outreach, and intervention programs for all students. Before that she was the Chief of Teaching and Learning in the Portland Oregon Public Schools and prior to that an Assistant Superintendent of Student Support Services in the Long Beach Unified School District in CA. Judy also worked as a Senior Researcher at the National Center on Educational Outcomes at the University of Minnesota. She started her career as a special education classroom teacher and then a school psychologist. During this time, she was an adjunct professor at the State University College at Buffalo New York, where she taught graduate courses in curriculum and instruction and applied behavior analysis in the Department of Exceptional Education. She earned her Ph.D. in Educational Psychology from the State University of New York in Buffalo, NY.

In 2012, she was appointed by Commissioner John King as the first ever New York State "Distinguished Educator" to help support and oversee the Buffalo City School District Priority Schools. Judy continues to assist districts, cooperatives, schools, national organizations, state and federal departments of education in their efforts to update and realign systems and infrastructures around curriculum, instruction, assessment, data use, leadership, and accountability that includes all students and renders a return on investment.

Her research interests focus on systems change and leadership, equitable and accessible effective instruction for all students, data-based decision making, and accelerated student achievement. She has trained thousands of staff, teachers, and administrators in the U.S. and abroad in areas of integrated service delivery systems, multi-tiered system of supports, effective use of data, linking assessment to district and classroom instruction and intervention, strategies and tactics for effective instruction, curriculum adaptation, collaborative teaching and behavior management. She has published over 51 articles, book chapters, technical/research reports and books. She sits on editorial boards for professional journals and is active in many professional organizations.

Judy is nationally known for her work in Multi-Tiered System of Supports/Response to Instruction and Intervention. She has led many successful projects in this area and actively continues to support school districts and national organizations in this work.

**Lily Wong Fillmore** is a linguist whose research and professional endeavors have focused on language learning and development in linguistic minority children in school settings. She was the Jerome Hutto Professor of Education at the University of California at Berkeley.

Much of her research, teaching and writing over the past four and a half decades have focused on issues related to the education of language minority students: on social and cognitive processes in language learning, on cultural differences in language learning behavior, on sources of variation in learning, the loss of family languages by immigrant and indigenous students as they acquire English in school, language revitalization efforts in indigenous communities, and the role played by literacy in language development in school age students. She has conducted studies of second language learners in school settings on Latino, Asian, American Indian and Alaskan Native children.

Since her retirement from the Berkeley faculty in 2004, she has worked with educators in urban school districts (Denver, Boston, NYC, San Francisco, Oakland, Albuquerque and Fresno) and with the Council of Great City Schools to improve academic language and literacy instruction for English learners and other language minority students.

## Council Member Districts

Albuquerque, Anchorage, Arlington (Texas), Atlanta, Aurora (Colorado), Austin, Baltimore, Birmingham, Boston, Bridgeport, Broward County (Ft. Lauderdale), Buffalo, Charleston County, Charlotte-Mecklenburg, Chicago, Cincinnati, Clark County (Las Vegas), Cleveland, Columbus, Dallas, Dayton, Denver, Des Moines, Detroit, Duval County (Jacksonville), El Paso, Fort Worth, Fresno, Guilford County (Greensboro, N.C.), Hawaii, Hillsborough County (Tampa), Houston, Indianapolis, Jackson, Jefferson County (Louisville), Kansas City, Long Beach, Los Angeles, Manchester, Miami-Dade County, Milwaukee, Minneapolis, Nashville, New Orleans, New York City, Newark, Norfolk, Oakland, Oklahoma City, Omaha, Orange County (Orlando), Palm Beach County, Philadelphia, Pinellas County, Pittsburgh, Portland, Providence, Puerto Rico, Richmond, Rochester, Sacramento, San Antonio, San Diego, San Francisco, Santa Ana, Seattle, Shelby County, St. Louis, St. Paul, Stockton, Toledo, Toronto, Tulsa, Washington, D.C., Washoe, and Wichita



Council of the Great City Schools  
1331 Pennsylvania Ave. N.W.  
Suite 1100N  
Washington, D.C. 20004