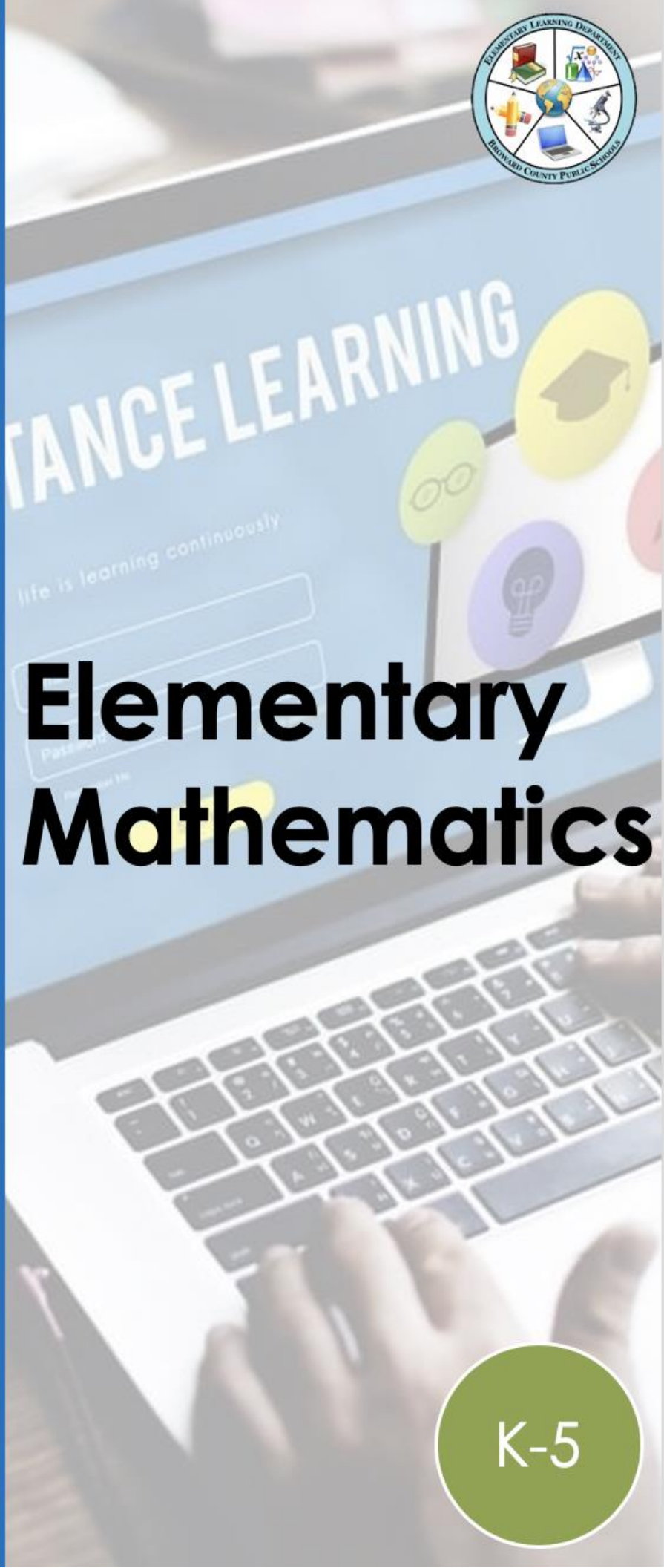
2020 - 2021

Instructional Guidelines for eLearning



Elementary Mathematics

K-5

Established 1915
BROWARD
County Public Schools

Elementary Learning Department
Math Guidelines for eLearning

This resource describes adjustments teachers can make to their content and pedagogy to advance and preserve student learning during distance learning. It can be used to guide teacher training, planning, and coaching.

The tables below are organized by the following learning aspirations:

All Students Access Grade Level Content	
Content-Specific Learning	**Adjustments for eLearning**
Content should focus on the grade-level cluster(s), grade-level content standard(s), or part(s) thereof. ● Although some instruction might not be focused on current grade-level standards, the learning goal of each lesson should reflect grade-level standards. ● If instructional time is reduced, the percentage of remaining time spent on major work of the grade should be increased.	● Maintain focus on grade-level content. All students access the same problems across the unit whether they are at-home or in-person. ○ Provide print or digital materials for every student including textbooks, workbooks, assessments, and reference sheets with visual anchors and other information aligned to the unit. ● Ensure students across scenarios have the opportunity to answer the same question sequences. ○ Identify priority problems and tasks to avoid having students complete a large number of problems without feedback and to prevent repeated incorrect practice. • Maintain a balance of rigor. ○ Consider the aspects of rigor when determining face-to-face versus at-home lessons (e.g., prioritizing conceptual lessons for in-person instruction and procedural lessons for at-home instruction and introducing new content in synchronous environments when possible). • Remove lessons and/or units as needed to alleviate pacing constraints. Maintain priority on the major work of the grade. ○ Use District guidance to adjust Tier 1 pacing calendars. • Plan how to use virtual tools such as virtual manipulatives, videos, and online tools available. ○ If possible, provide appropriate concrete manipulatives such as base ten blocks, linking cubes, algebra tiles, etc. in at-home

	kits. ○ Align synchronous, digital visuals to at-home resources and asynchronous visuals like pictorial representations in curricula. ○ Provide additional support with concrete and pictorial tools/representations for students who are instructionally vulnerable. • Provide access to at-home curricular resources for students and families. Introduce resources through multiple and varied family communications/access points including online open houses, conferences, phone calls, school websites, social media, and office hours. ○ Prioritize follow-up conferences and support for students who are instructionally vulnerable and adjust resources in response to feedback and need. ○ Provide translated resources for families who need them. • Organize asynchronous digital resources for families. ○ Record narration of the analysis of exemplars and meaningful misconceptions referencing success criteria. ○ PowerPoint has a feature that will record your voice on slides using your computer's microphone. ○ Share transcripts of videos and audio recordings. ○ When possible use platforms like YouTube/ SafeYouTube that are format-friendly for smartphones.

Address Unfinished Learning in Grade Level Content	
Content-Specific Learning	**Adjustments for eLearning**
• Link new content and thinking within and across grades. • Maintain the intent of grade-level tasks. Consider decreasing magnitude as an access point so that students can practice the grade-level strategies and representations. • Plan "just in time" content to address immediate unfinished learning and provide access to grade-level material, not as a blanket review.	• Prioritize instructionally vulnerable students for small group and one-on-one time with the teacher, either face-to-face or via a computer platform or phone app. ○ Meet with small groups of students or one-on-one outside of the whole group setting to support learning using chat rooms, phone calls, and other break-out options. • Plan "just in time" lessons to address immediate unfinished learning and provide access to grade-level material, not as a blanket review. ○ Use District guidance adjust Tier 1 pacing

	calendars. • Consider tasks conducive to the scenario, including replacing school-based tasks with tasks reflective of distance learning context (e.g., providing a choice menu of at home explorations aligned to a standard).

Teacher Checks for Understanding and Misconceptions	
Content-Specific Learning	**Adjustments for eLearning**

• The teacher deliberately checks for understanding to identify misconceptions and provide opportunities for growth.
• The teacher adapts lessons based on checks for understanding with questions and scaffolds to support students' pursuit of the lesson's learning goal.
• The teacher poses questions and problems that prompt students to explain their thinking about the content of the lesson.
	• Students share their work formally or informally on strategically selected problems across scenarios to ensure teachers have access to common, high leverage data points to assess student understanding.
	  ○ Emphasize opportunities for 100% of students to participate in answering questions both synchronously and asynchronously to allow gathering of data about the understanding for all students.
	  ○ Ask students to submit work on key problems prior to synchronous lessons to enable the teacher to facilitate an intentional classroom discussion.
	  ○ Provide opportunities for students to respond to the teacher and to other students in the chat. Students can "raise their hands" digitally and respond out loud or via polling tools.
	  ○ Plan for visual prompting of questions in formats accessible to all students, such as slides and digital visual anchors, to continue small group discussions in breakout rooms.
	  ○ Prompt students to write on the digital whiteboard, submit recordings, or upload images of work to check for understanding.
	• Leverage small formative assessments often and use daily formative data such as exit tickets to inform future lessons.
	• Use check for understanding data to guide classroom discussions. Allow students to share their understanding and thinking with each other asynchronously across multiple formats.
	  ○ Plan and record a variety of key points and examples on slides to prompt reflection. Include student work when possible.
	• Establish norms for participation in whole group synchronous digital platforms grounded in

	universal design principles (e.g., “fist to five,” thumbs up/down, multiple-choice response via quiz tools) to gather frequent and fast information. • Dedicate asynchronous time and small group time to more complex tasks and longer explanations.

Students Receive Feedback on Their Work	
Content-Specific Learning	**Adjustments for eLearning**
• The teacher provides supportive, specific, and timely feedback on the student’s thinking to move them forward in their mathematical understanding. • Students share their thinking about the content of the lesson beyond just stating answers orally or in writing. • All students are asked to do work that allows the teacher to check for understanding and provide feedback.	• Identify trends from previous touchpoints (remote and in-person) and strategically share student responses and/or solution methods to provide feedback, elevate different learning pathways, and address misconceptions. ○ Use formal and informal assessment examples. ○ Sequence student work using slides during synchronous learning time. ○ Include student work samples from students who are instructionally vulnerable to promote a growth mindset and confront bias. • Adjust feedback cycles and tools to provide individual feedback on daily practice in real-time or through supplementary structures. ○ Engage in written and oral discussions using tools such as shared collaborative documents, chats, and digital message/discussion boards. ○ Monitor student collaboration and provide feedback on common ideas. ○ Monitor participation to promote equity of voice in synchronous and asynchronous settings.

Students Own Their Learning	
Content-Specific Learning	**Adjustments for eLearning**
• Students understand the objectives of their work and how the work fits within their broader mathematical understanding. • Students participate actively and persevere through struggle and challenge so that they can continue to drive their learning across	• Implement student-owned accountability systems for reflecting on work completion, work quality, and progress to goals. ○ Provide clearly written or verbalized directions for what is expected for every activity and assignment including differentiation between

instructional scenarios. • Students synthesize their daily learning through intentional summaries that connect new knowledge to prior understandings.	synchronous and asynchronous work. Accommodate individual needs so that all students understand and own their learning and work. ○ Publish student-facing pacing calendars that include learning goals. Explicitly set pacing expectations on assignments for students and provide direct instruction on how to transition between activities. ○ Provide at-home resources such as reference sheets as a substitute for visual anchors in classroom buildings. Enhance at-home resources to meet individual needs, including language translation, supplementary information, large print, graphics, etc. • Communicate between teacher and student about the expectations for engagement and success criteria specific to their learning model. ○ Establish norms for participation in digital platforms that honor think time and equity of voice before providing feedback. Manage participation to include all students, with a priority on students who are instructionally vulnerable. ○ Provide feedback to students on scholarly habits specific to context (e.g., participation in the chat or break out rooms, organization of at-home materials, submission of asynchronous work). • Students participate actively and persevere through struggles and challenges via computer, phone, or face-to-face instruction. ○ Teachers build systems for students to submit questions and other reflections during asynchronous work time. ○ Increase touchpoints for students who are instructionally vulnerable. • Provide resources for students to revisit lessons and objectives. ○ Storyboard the lesson during planning, and post materials for student reference during synchronous and asynchronous distance learning.

Tier 2 Supports Tier 1 Instruction	
Content-Specific Learning	**Adjustments for eLearning**
• Focus Tier 2 supports on building procedural	• Maintain the same focus on building procedural

fluency through conceptual understanding, targeting concepts with which the student is engaging in Tier 1. • Attend to rigor by teaching math in a way that balances students' conceptual understanding, procedural skill and fluency, and ability to apply what they know and are able to do to real-world, problem-solving situations. • Use a concrete to abstract approach when building understanding and access to content.	fluency through conceptual understanding and targeting concepts with which the student is engaging in Tier 1. • When face-to-face Tier 1 instruction time is limited, be especially careful to prioritize Tier 1 instruction over Tier 2. • Prioritize students who need the most instructional support and face the greatest access challenges for additional touchpoints during the week. • Consider using wellness touchpoints as opportunities for one-on-one discussion of work.

References and Resources:

- **Council of Great City Schools:** *Unfinished Learning*
- **Instruction Partners:** *Reentry Toolkit*
- **National Institute on Effective Student Teaching:** *Instructional Strategies for Virtual Learning: A Companion Tool to the NIET Teaching Standards Rubric - What effective teaching looks and sounds like in a virtual setting*
- **Student Achievement Partners:** *Priority Instructional Content in ELA/Literacy and Mathematics*