This support was created by the Acceleration of Learning workgroup, which combined with two other workgroups, made up the DESE Task Force for Learning Acceleration. This tool was created to help guide instructional planning for the return to school in the fall of 2020. Educators will need to be prepared to support gaps in student understanding before introducing high-leverage grade-level priority standards. Accelerated learning ensures access to on-grade-level content by removing barriers to learning. Because many of our educators might have to migrate their instruction to remote delivery methods, in order to help them maintain ground they gain through accelerated instruction, the workgroup also included migration tips and suggestions.

Acceleration of Learning
Responding Quickly to Gaps in Readiness

Why is Acceleration of Learning Needed?

Students and teachers abruptly separated in March due to school closures caused by COVID-19. Because of this unexpected closure, students missed out on instruction of end-of-the-year standards and consolidation of material learned prior to the closure, and teachers missed out on important formative and summative assessment information needed to make plans for upcoming instruction and placement.

In April 2020, Northwest Evaluation Association (NWEA) released a white paper with projected impacts from this lost time: “Preliminary COVID slide estimates suggest students will return in fall 2020 with roughly 70% of the learning gains in reading relative to a typical school year. However, in mathematics, students are likely to show much smaller learning gains, returning with less than 50% of the learning gains and in some grades, nearly a full year behind what we would observe in normal conditions” (Kuhfeld & Tarasawa, 2020).

Now, Missouri teachers are faced with the challenge of how to balance maintaining focus on grade-level material, while also attending to gaps in prerequisite knowledge needed to master this new content. They might also have to accomplish the task remotely if our schools experience additional closures or need alternative delivery methods for students unable to attend because of health concerns.

As leaders plan for this instruction, the following resources and considerations can be very helpful when supporting educators in meeting this challenge.
What is Acceleration of Learning?
While the term “acceleration” connotes movement beyond, in the context of lost learning, it refers to ensuring “students consistently receive grade-level materials, tasks and assignments along with appropriate scaffolds that make the work accessible. More specifically, instead of sending students backward to fill in all the potential gaps in their learning, leaders and teachers should focus on filling in only the most critical gaps—and not in isolation, but at the moment they’re needed” (Learning, 2020, p. 8).

Trying to pre-assess and front load all missed or unmastered standards from the previous school year at the start of the 2020-21 school year would be a daunting task to respond to quickly. Instead, using smaller, guiding formative assessments to gather data on prerequisite learning needed to master grade-level content, shortly before the progressive new grade-level material is introduced, provides the most relevant and current information regarding student mastery. Responding to this data with “just in time” scaffolds and supports allows students to access the new grade-level content and accelerates student learning by removing barriers surrounding exposure, language and prior knowledge.

Isn’t this just remediation?
While designing information delivery strategically to fill gaps in prior knowledge is a component of remediation, acceleration differs from remediation in several ways.

<table>
<thead>
<tr>
<th>Acceleration</th>
<th>Remediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Self-confidence and engagement increase</td>
<td>● Perception of a “slow group”</td>
</tr>
<tr>
<td></td>
<td>● Backward movement leads to a sense of futility and lack of progress</td>
</tr>
<tr>
<td>● Skills are hand picked just in time for new concepts</td>
<td>● Attempts to reteach every missing skill</td>
</tr>
<tr>
<td>● Students apply skills immediately</td>
<td>● Skills are taught in isolation and not applied to current learning</td>
</tr>
<tr>
<td>● Key prior knowledge is provided ahead of time</td>
<td>● Typically does not introduce prior knowledge</td>
</tr>
<tr>
<td>● Treats relevance as critical to motivation and memory</td>
<td>● Relevance not seen as a priority</td>
</tr>
<tr>
<td>● Active, fast paced, hands on</td>
<td>● Passive (worksheets/basic software programs)</td>
</tr>
<tr>
<td>● Goal is for students to learn on time with peers</td>
<td>● Goal is to “catch up” with peers</td>
</tr>
</tbody>
</table>


Acceleration is proactive differentiation—removing barriers to learning before they get in the way. Teachers bring prior experience with the content to planning and can be prepared to support and scaffold at typical places in which students struggle.
What are the Key Components of Acceleration of Learning?

Key pieces of an accelerated lesson
Educators pre-assess to identify the missing pieces needed for an individual student to approach new grade-level learning.

**Piece 1: Generate thinking, purpose, relevance and curiosity**
Begin with connections to both upcoming new learning as well as real-world applications. Offering a hands-on exploratory activity helps build interest in the upcoming learning and engages the learner actively.

**Piece 2: Clearly articulate the learning goal and expectations**
Priming brains for new information helps learners determine relevance and connect with ideas within a learning progression. Students understand the place of the accelerated lesson within the larger standard.

**Piece 3: Scaffold and practice essential prerequisite skills (can be taught with Piece 4 or reordered as needed)**
Teachers prepare to address gaps by completing the statement, “Students could be successful with this new grade-level content if they only knew....” They then work to ensure students have opportunities to fill in these gaps with strategic instruction.

**Piece 4: Dig into the new concept, introduce new vocabulary and review prior vocabulary**
Vocabulary is critical background knowledge for making sense of new learning as well as reading independently to continue learning.

**Piece 5: Conduct formative assessment frequently (can and should be used throughout all pieces)**
While this is just good practice, it is essential to move quickly through missing prerequisite skills to allow time for grade-level content. Formative assessment and feedback loops provide evidence of this progression toward mastery.

Is this a research-based approach?
Given the challenges facing students and educators to recoup lost learning and get back on track, being efficient with the time we have means being selective about the strategies and approaches we use in our instructional design. Careful design incorporates strategies shown to have positive learning impacts.

John Hattie’s findings in his meta-analyses of instructional research indicate several of the pieces of the acceleration framework have high positive effect sizes:
- Response to Intervention 1.29 ES
- Teacher Clarity 0.75 ES
- Strategy to Integrate Prior Knowledge 0.93 ES
- Scaffolding 0.82 ES
- Feedback 0.70 ES
- Spaced Practice 0.60 ES

(Strategies showing greater than a 0.40 ES are considered impactful.)

Hattie, J. (2018)
Example of an accelerated lesson

Acceleration can be accomplished within individual classrooms through differentiated homework, small-group instruction and co-teaching models one or two days before the teacher begins focused instruction on the topic needing scaffolding. Below is a sample of an accelerated Algebra I lesson, as well as ideas for delivering this lesson from a distance if needed (distance learning is discussed more in the next section). "Links are not active on this image."
How do Educational Leaders Support Teachers’ Use of Acceleration to Close Learning Gaps?

Many existing district processes will support the work needed for effective acceleration.

- Curriculum development cycles support a deep understanding of the Missouri Learning Standards (MLS).

- Professional Learning Communities (PLCs) support collective teacher efficacy and problem solving surrounding the selection and unpacking of priority standards and the monitoring and responding to student data on common assessments.

- Multi-Tiered Systems of Support (MTSS) and supplemental services, such as Title 1 and tutoring programs, afford opportunities for the delivering of acceleration lessons.

- Commitment to high-quality differentiated instruction, including personalized learning, gradual release, and proactive scaffolding, protects instructional time and offers efficient and impactful learning experiences.

Recommended Steps to Prepare for Accelerated Learning

- Select priority standards to focus the upcoming year’s curriculum on the most impactful, high-leverage learning and greatest student need. MO DESE offers several tools helpful in this process:
  - Power in the Process--The Why Behind Priority Standards
  - Missouri District Models
    - Ava R-1
    - Lindbergh
    - Pattonville
    - Park Hill
    - Republic
  - Identifying Instructional Gaps
    - K-5
    - 6-8
    - 9-12

- Unpack the priority standards to identify the most critical prerequisite skills and information needed to access grade-level learning.
  - Unpacking: From Priority Standard to Learning Target

- Create and administer short, formative assessments, close to the new grade-level learning, to identify students needing acceleration lessons on prerequisite skills.
  - “7 Smart, Fast Ways to Do Formative Assessment”
  - “Formative Assessment for Distance Learning”
  - “75 Digital Tools and Apps Teachers Use to Support Formative Assessment in the Classroom”
  - MO LEAP Blocks (Coming soon!)

- Partner students with acceleration instruction to fill gaps in background knowledge needed to access upcoming grade-level content, including vocabulary, historical context, and processes and procedures.
  - Algebra I Model Accelerated Lesson
  - Spanish Model Accelerated Lesson

- Use multiple, ongoing formative assessment and feedback cycles to monitor mastery of needed prerequisite skills, as well as the application of this background to new learning.
  - Effective Feedback
How do Educators Maintain Continuity of Learning in the Event of Another Closure?

In addition to facing the urgent need to accelerate lost learning, educators also face the possibility that another closure could compound this original learning loss. In order to maintain the ground gained during focused instruction and acceleration lessons, educators must prepare to continue instruction from a distance. While migrating instruction to alternative delivery models will be challenging by itself, issues with connectivity and learning environments not as conducive to learning as the classroom will require teachers to prepare for both virtual (online) and distance (unplugged) lessons and assessments.

It is not recommended to attempt to reproduce the physical classroom remotely. There are many deliberate instructional steps (teacher moves) educators use that are impactful in helping students maintain effective and rewarding working relationships with peers and adults, access and master content, receive needed supports and services, and demonstrate mastery of grade-level content for teachers to use toward future growth. Providing options and resources for educators to still use these moves and build capacity in using these moves remotely will support their creativity and problem solving when it is time to move quickly and flexibly to respond to learning needs at school and at home. By collecting and organizing resources already available, districts can maximize their professional development time.

Take an inventory of all of the agreed-upon, consistent tools and resources already available to your district. Layering in new programs and systems not familiar to students, families and educators can increase cognitive load, possibly negatively affecting the learner’s ability to master the content material and increasing stress to learners and families. Migration maps, like the sample to the right, help teachers determine which existing tools and practices can be translated to remote delivery methods and how. This can also be helpful in planning for professional development.

It will be important to outline the expectations for distance teaching to establish consistent and sustainable instructional practices which continue to align with district-established expectations for delivery. This not only ensures impactful learning opportunities but also protects students and staff by providing guidelines for appropriate interactions. Districts might need to review and revise board policies related to digital communication with students, staff conduct and staff performance expectations.
Supporting Students and Families in Learning at Home

Communication and preparation are critical when moving quickly among instructional delivery formats. To keep learning continuous throughout closures, students and families will need support to understand the expectations and methods of access. This proactive and frequent communication will also ensure continuity of learning and avoid stress and frustration for all involved. It will be important for districts to communicate the distance learning plan early and revisit it often so that students are ready to learn at home. Below is an example of a template that could be sent home from each individual teacher.
Structure of Learning During Remote (from a distance) Delivery

It is not recommended to try to replicate the physical classroom at home. Instead, this is a time to maximize the authentic learning environment and options for personalization. The amount of time students are able to engage in learning at home may differ based on the individual student’s home environment and duties. Therefore, it is essential to recognize appropriate amounts of time for students to engage in their learning while also valuing the needs of the student’s social, emotional and mental health.

<table>
<thead>
<tr>
<th>Learning should look <strong>less</strong> like...</th>
<th>Learning should look <strong>more</strong> like...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>An attempt to recreate school at home</strong></td>
<td><strong>Flexible goals and structures for learning</strong></td>
</tr>
<tr>
<td>• assuming a <strong>strict “school day” schedule</strong></td>
<td>• extended time for learning and reflection</td>
</tr>
<tr>
<td>• requiring special materials (e.g., lab or materials not commonly found at home)</td>
<td>• use of <strong>commonly available materials</strong></td>
</tr>
<tr>
<td>• pacing with the <strong>planned scope and sequence</strong></td>
<td>• <strong>purposeful selection of learning targets</strong></td>
</tr>
<tr>
<td>• assigning <strong>readings</strong> to stay “caught up”</td>
<td>• allowing students to <strong>explore their interests</strong></td>
</tr>
<tr>
<td>• packet of <strong>worksheets and busy-work</strong></td>
<td>• <strong>meaningful, manageable tasks and projects</strong></td>
</tr>
<tr>
<td>• all learning experiences happen <strong>virtually</strong></td>
<td>• opportunities to learn without the use of devices or the internet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Teacher-centered instruction</strong></th>
<th><strong>Purposeful teacher-student interactions</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• virtual lectures/classes that all students <strong>synchronously</strong> attend</td>
<td>• <strong>optional</strong> opportunities to connect with teachers and peers <strong>virtually and at a variety of times</strong></td>
</tr>
<tr>
<td>• teachers <strong>delivering information and assignments</strong></td>
<td>• teachers providing <strong>coaching, feedback and encouragement</strong></td>
</tr>
<tr>
<td>• teacher instruction and feedback as the <strong>primary mode</strong> of facilitating learning</td>
<td>• encouraging <strong>students to engage in learning and reflection with their families and communities</strong></td>
</tr>
<tr>
<td></td>
<td>• encouraging <strong>self-reflection</strong> on what students learn and how they learn it</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Assignments to “get through” content</strong></th>
<th><strong>Authentic learning in the home setting</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• emphasizing memorizing content or “checking off” tasks on lists</td>
<td>• connecting questions and problems to household activities, like cooking, fixing things or gardening</td>
</tr>
<tr>
<td>• asking students to <strong>solve contrived or hypothetical problems</strong>, or complete design projects that <strong>value form over function</strong></td>
<td>• asking students to <strong>identify relevant problems</strong> in their lives and engage in <strong>design cycles</strong> to address them</td>
</tr>
<tr>
<td>• trying to cover content through a volume of activities or skipping from topic to topic</td>
<td>• allowing students to <strong>deeply explore phenomena or problems of interest</strong> through investigation to build understanding and practice over time</td>
</tr>
</tbody>
</table>
Planning Appropriate Amounts of Distance Instruction

As developers of this content, the workgroup recognizes that teachers may not adhere to these guidelines due to the variance in technology and access for students. However, the workgroup felt this was an appropriate piece to value student-led learning, as well as the social, emotional, and mental health of the student.

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Daily Instructional Time*</th>
<th>Daily Distance Learning Could Include...</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-1</td>
<td>• Approximately 45 minutes • 5- to 10-minute time spans</td>
<td>• Content-based activities that encourage reading, writing, and problem-solving • Learning activities including handouts or online work • Physical education, health, art, music, world language, etc. • Social-emotional learning</td>
</tr>
<tr>
<td>2-3</td>
<td>• Approximately 60-75 minutes • 10- to 15-minute time spans</td>
<td>• Content-based activities that encourage reading, writing, and problem-solving • Learning activities including handouts or online work • Physical education, health, art, music, world language, etc. • Social-emotional learning</td>
</tr>
<tr>
<td>4-5</td>
<td>• Approximately 90 minutes • 20-minute time spans</td>
<td>• Content-based activities that encourage reading, writing, and problem-solving • Learning activities including handouts or online work • Physical education, health, art, music, world language, etc. • Social-emotional learning</td>
</tr>
<tr>
<td>6-12</td>
<td>• Approximately 3 hours for all classes • 30 minutes for each class • After 15 minutes, strongly recommend students get up to move</td>
<td>• Content-based activities that encourage reading, writing, reflection, and problem-solving • Learning activities including handouts or online work • Discussion boards • Recorded lectures • Physical education, health, art, music, world language, etc.</td>
</tr>
</tbody>
</table>

(*These are approximations. Learning is measured by the level of engagement with the content and a student’s understanding, not necessarily the time spent learning.)

Unified Arts and Humanities (Specials/Electives)

| Visual Arts, Music, Physical Education, Health, World Languages, etc. | The time allotted for specials/electives will vary greatly by the district and grade level. **Suggested time frames for specials/electives should be considered part of the total daily learning time mentioned above.** Consideration should be given for the fraction of the school day/year this class might normally represent. Encouraging daily student physical activity will be critical while also providing opportunities for meaningful activities in other specials/electives. Students are accustomed to daily, structured movement (such as physical education), as well as unstructured movement (such as recess). |

Adapted for use by the Missouri Department of Elementary and Secondary Education from the Continuous Learning Task Force Guidance for Kansas School Districts (March 2020)
Supporting Families During Distance Learning Opportunities

It will also be important to remember that the adults supporting our learners at home will need our support. This support may come in helping to identify the roles in which each member of a system may play, as well as assisting with those members who might not be familiar with the technology or tools educators are using. Frequent communication combined with tutorials can help bridge the gap between classroom-based and home-based learning.

Roles family members or other learning partners can play in students’ learning experiences:

<table>
<thead>
<tr>
<th>Encourager: provide positive feedback and support to students</th>
<th>Resource Connector: work with students to find materials and resources they need for an investigation or challenge</th>
<th>Collaborator and Learner: collaboratively work with student(s) on an investigation or challenge; make their learning process visible to students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Supporter: talk to student(s) about their interests and how to pursue them</td>
<td>Storyteller: show how an idea or practice relates to another situation (e.g., a shared family experience)</td>
<td>Organizer of Collaboration: help coordinate the group learning process within the family</td>
</tr>
<tr>
<td>Knowledge Holder: communicate what they know about a topic or idea in ways that support students “figuring out” phenomena or problems</td>
<td>Audience Member: friendly critic engaging with student products or presentations of an investigation or challenge</td>
<td>Learning Broker: connect learners to follow-on learning experiences that make sense, building on student interests and curiosities</td>
</tr>
</tbody>
</table>

This is adapted from work by Brigid Barron (Stanford University) and Nichole Pinkard (Northwestern University) by Bell, 2015, 2020.

Family Technology Tutorials

Syncing Google Docs, Sheets, and Slides Offline
Students can use Google apps while offline and not lose their If they set up offline sync first. When they get back to online access, Google will sync their offline work. Here is how to set up that offline syncing:
https://support.google.com/drive/answer/2375812

Navigating Google Classroom
If you haven’t used Google Classroom much, or still feel like you are struggling with getting around efficiently, this short tutorial is just for students!
https://youtu.be/GSP7nVb0WJc

All Things Google
Google offers quick, concise tutorials on many of their products here.
https://support.google.com/a/answer/1631886

Changing Google Accessibility Features
Read on a screen isn’t for everyone, and many of our students require assistive settings. This short video shows how to change these settings.
https://www.youtube.com/watch?v=GBazCnv7FU

For Students: How to Write a Good Email to Teachers
Some students will be using email to communicate with teachers for the first or at least more frequently. Here are some good tips for communicating using email.

Type With Your Voice
This is a helpful tool for students who have a lot to say but struggle with typing. Just speak and let Docs help.
https://support.google.com/docs/answer/4492276
References:


Photo by fauxels from Pexels