Considerations in Adapting or Adopting Math Curriculum

Module 3: July 31, 2020

In partnership with

Where to find materials

You can find the recording of today's webinar on the Strong Start page on **TEA's website**.

INSTRUCTION PARTNERS

Meet the team!

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Senior Director,
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+

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Senior Lead, Math

+

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Managing Director,
Instructional Support

Module 1: Designing for Instructional Quality, Coherence, and Continuity

Module 2: Adapting or Adopting Pre-K Curriculum for Remote Settings	**Module 3: Adapting or Adopting Math Curriculum for Remote Settings**	Module 4: Adapting or Adopting Reading Language Arts Curriculum for Remote Settings	Module 5: Adapting or Adopting Science & Social Studies Curriculum for Remote Settings

Module 6: Implementing Texas Home Learning 3.0

Agenda and outcomes

Agenda

- Opening
- Framework Overview
- Case Study Deep Dive
- Application
- Q&A
- THL 3.0 Overview
- Q&A

Outcomes

- Identify quality considerations for adoption of curricula for ***math***
- Prioritize considerations for adaptation of curricula for ***math***
- Engage in an example adaptation for distance learning and identify next steps to operationalize adaptations for ***math***

Two essential questions

How do I make sure all of my students experience high-quality, TEKS-aligned instruction, regardless of their learning environment, level of connectivity, etc.?

How do I accomplish that without seeing all or some of my students in-person every day?

Imagine you're a 5th-grade math student . . .

Arrange the numbers in decreasing order.			
76.342	76.332	76.232	76.343

What do students need to know to solve this problem?

- Compare decimals to the thousandths
- Order decimals to the thousandths
- Arrange numbers in decreasing order

What research tells us about great math instruction

is…

- A network of nodes
- Active sense-making
- Balance of concepts, procedures, and application

is not…

- A linear path of learning
- Input of knowledge
- A checklist of discrete skills

a place where:

- ALL students will access grade-level content
- Unfinished learning is addressed in service of grade-level content
- Teachers check for understanding and misconceptions
- Students receive feedback on their work
- Students own their learning
- Tier 2 supports Tier 1 instruction

KEY CONSIDERATIONS FOR QUALITY MATH MATERIALS ADOPTION

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In Module 1, you were asked:

Can I adapt my current materials to meet the definition of high-quality instructional materials (HQIM) and the needs of remote settings?

Should I adopt new HQIM to meet the needs of remote settings?

High-quality instructional materials (HQIM) and COVID-19

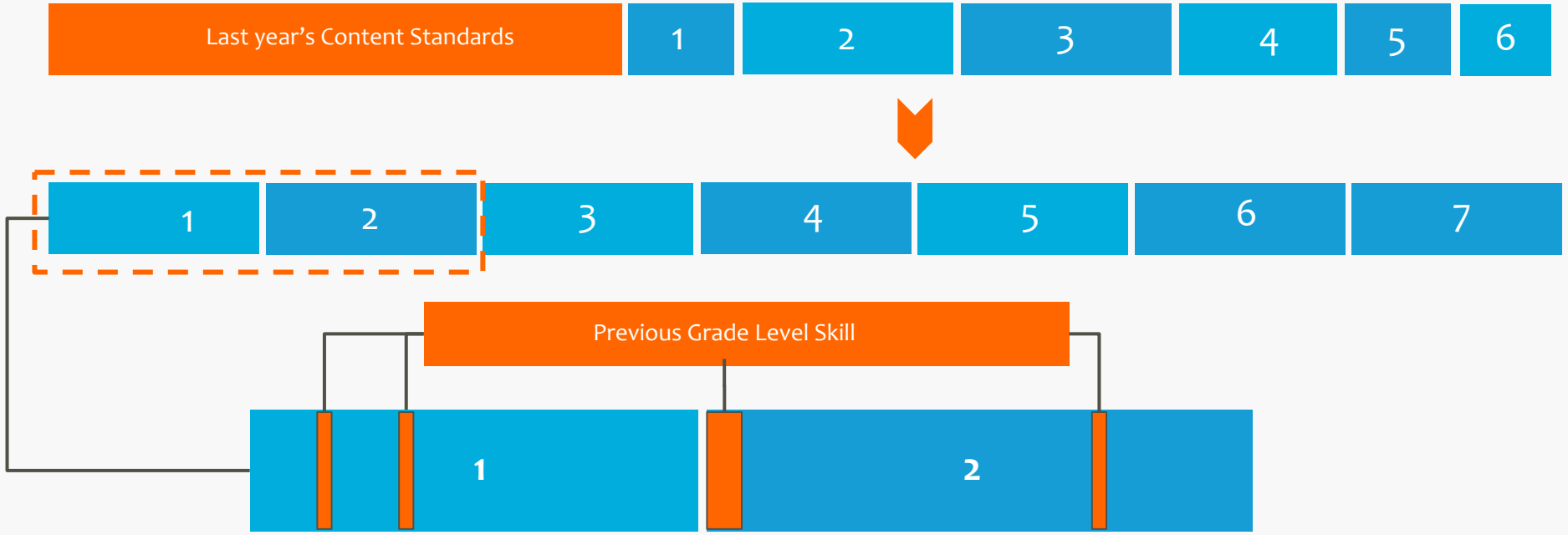
The Challenge	HQIM
Teachers developing their own curricula had a difficult time adapting to remote learning in the spring.	Alleviate the burden of designing lessons, adapting them to work both in-person and remotely, and supporting cohorts of students with diverse needs.
Leaders needed to navigate multiple sets of resources to support teachers in the spring.	Make it easier for principals and coaches to support all teachers, despite changing teaching and learning scenarios.
Schools are relying on groups of adults for an unprecedented amount of student support, care, and guidance.	Provide consistency and predictability for those supporting students, while teachers remain the core instructors.

HQIM include . . .

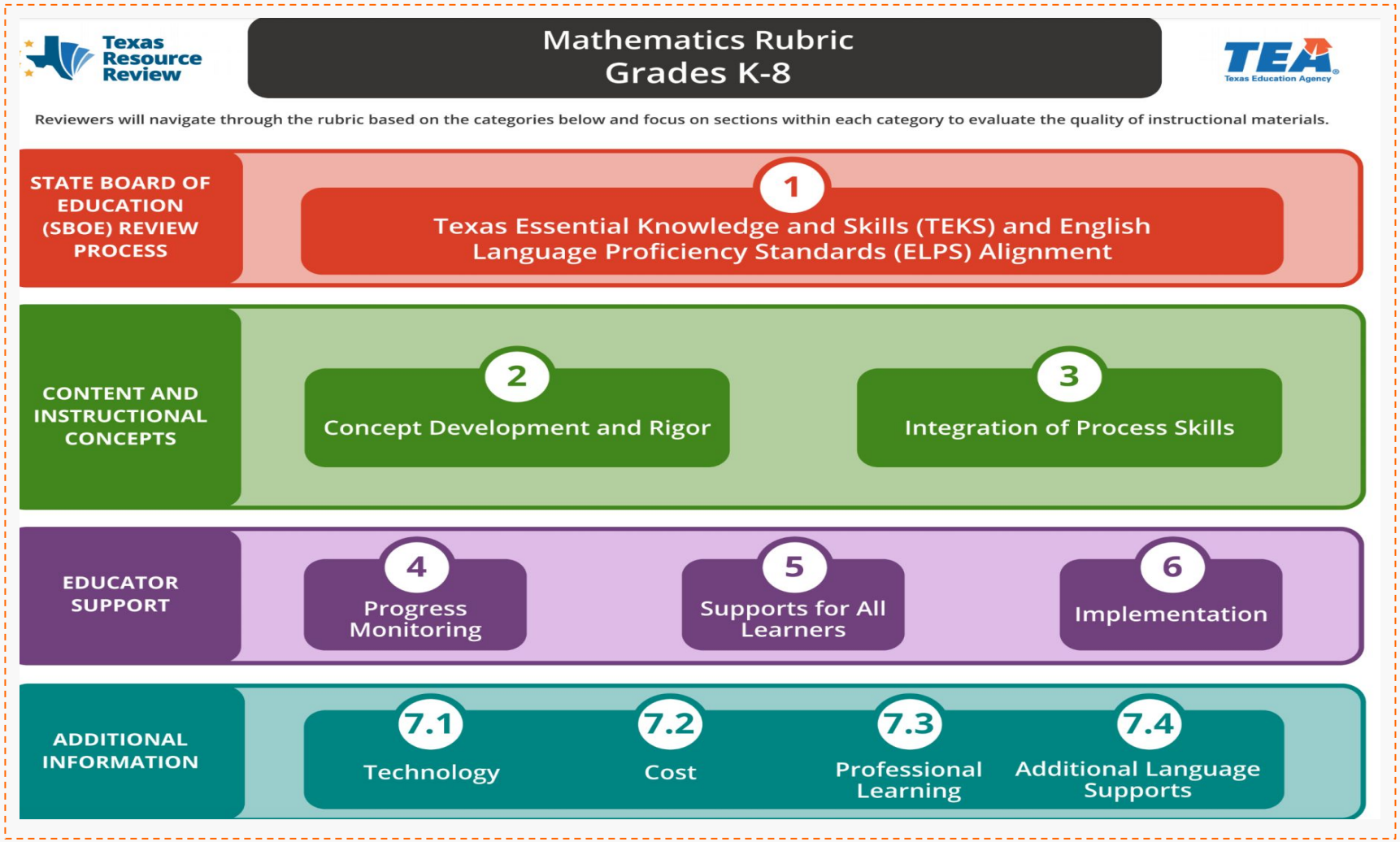
- TEKS-aligned content
- Support for all learners
- Support for content connections
- Progress monitoring
- Support for educators, including support for unfinished learning
- **Usability both on-campus and in a virtual, remote setting**
- **Usability and additional supports for families**

Defining unfinished learning

Unfinished learning refers to any prerequisite knowledge or skills that students need for future work that they haven't yet acquired.



Texas resource review: K–8 mathematics rubric



Key considerations for adopting HQIM for math

Alignment

- Are the materials aligned to grade-level TEKS and ELPS?

Content and Instructional Concepts

- Does the curriculum include coherent use of models and strategies to support grade-level conceptual development?
- Does the curriculum integrate the process standards throughout lessons?
- Are students encouraged to problem solve independently?

Educator Support

- Are there built-in supports to ensure all students, including students with special needs and emerging bilingual students, can access grade-level content?
- Are there built-in supports for families to utilize in the event that students are working remotely?

Additional Information

- How does this curriculum incorporate technology?
- How transferable is the material between in-person and remote learning?
- What professional development is provided for teachers?

Key considerations for adopting HQIM for math

Action Step	Mid-sized Urban District Owner(s)	Small Rural District Owner(s)
Identify the Selection Team	- Superintendent - Program Director(s) of Mathematics	- Superintendent - Math Curriculum Coordinator
Determine how the final decision will be made	- Program Director(s) of Mathematics	- Math Curriculum Coordinator
Map the schedule of events (timeline from review to adoption)	- Superintendent	- Superintendent
Form the review committee	- Program Director(s) of Mathematics	- Math Curriculum Coordinator
Complete the review of materials	- Campus Math Department administrator(s) - Virtual School Coordinator - Program Director of RTI	- Math Curriculum Coordinator - Technology Integration Director(s) - Lead math teachers throughout the district
Decide what to adopt	- Superintendent - Program Director(s) of Mathematics	- Superintendent - Math Curriculum Coordinator
Organize the next steps and communicate the plan	- Program Director(s) of Mathematics	- Superintendent

Key takeaways

HQIM for math:

- Are TEKS-aligned
- Have rigorous content that shows coherence and consistency from year to year
- Incorporate independent problem-solving
- Provide instructional supports and usability for all students and families

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Additional criteria necessary to meet demands particular to this year:

- **Usability both in-person and in a virtual/remote setting**

ADAPTING FOR INSTRUCTIONAL QUALITY, COHERENCE, AND CONTINUITY

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Now, we will show:

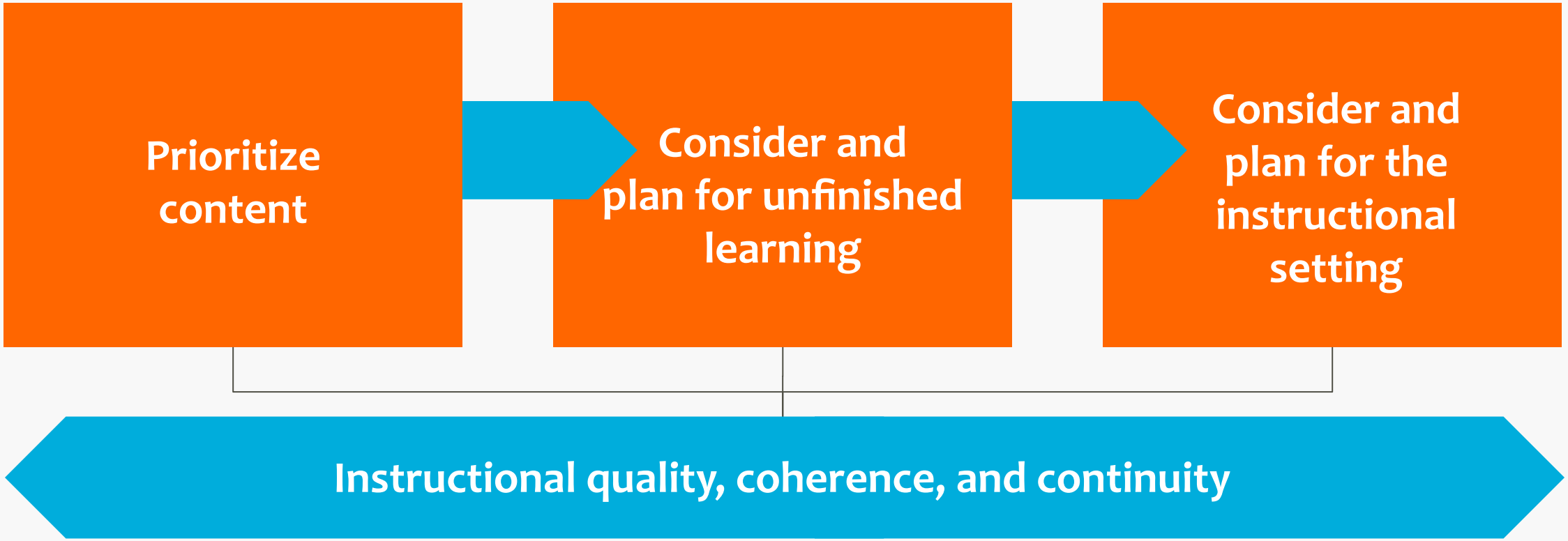
HOW you can adapt your HQIM for math to meet the needs of remote instruction and unfinished learning.

Considerations for adapting

My materials align to the key features of HQIM and the needs for remote learning.

- How will we adjust the scope and sequence to account for unfinished learning caused by COVID-19?
- How do we ensure that conceptual understanding and development exist in a remote setting?
- How will teachers and students access manipulatives and visual models fluidly between remote and on-campus learning environments?
- How will teachers progress monitor seamlessly throughout different instructional settings?

The math framework



TEKS (bold = readiness standards)		Instructional Days
5.2A	Represent the value of the digit in decimals through the thousandths using expanded notation and numerals	2
5.2.B	**Compare and order two decimals to the thousandths and represent comparisons using the symbols >, <, or =**	4
5.2C	**Round decimals to the tenths or hundredths**	2
Mid-Unit Assessment		1
5.3D	**Represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models**	2
5.3E	**Solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers**	2
5.3F	Represent quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using objects and pictorial models, including area models	1
5.3G	**Solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisions, using strategies and algorithms, including the standard algorithm**	3
End-of-Unit Assessment		1
Instructional Days:		18

HQIM Include . . .

- TEKS-aligned content
- Support for all learners
- Support for content connections
- Progress monitoring
- Support for educators, including support for unfinished learning
- **Usability both on-campus and in a virtual, remote setting**
- **Usability and additional supports for families**

HQIM Include . . .

- TEKS-aligned content
- Support for all learners
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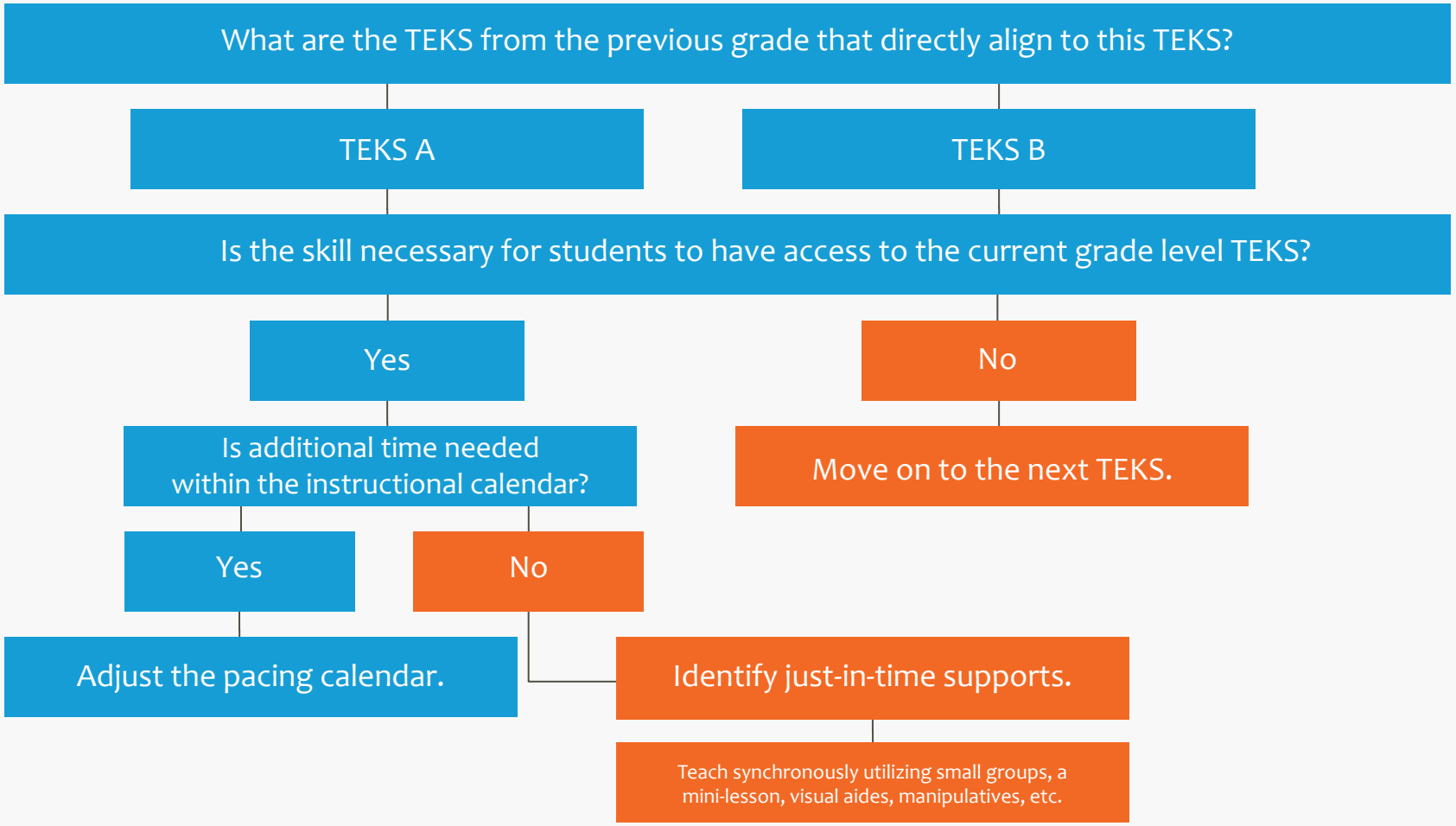
- Support for educators, including support for **unfinished learning**
- **Usability both on-campus and in a virtual, remote setting**
- **Usability and additional supports for families**

Name the priority content

TEKS introduction to Grade 5 Math names three primary focal areas:

- Solving problems involving all four operations with positive rational numbers
- Determining and generating formulas and solutions to expressions
- Extending measurement to area and volume

Assess math curriculum for unfinished learning



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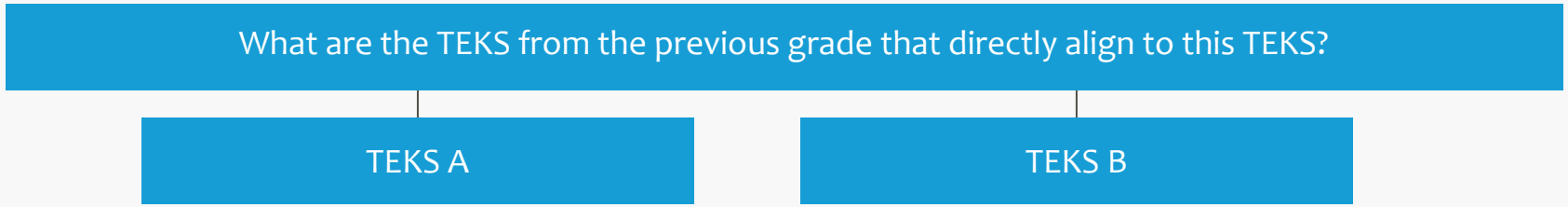


Scope and sequence for 5th-grade unit 1

TEKS (bold = readiness standards)		Instructional Days
5.2A	Represent the value of the digit in decimals through the thousandths using expanded notation and numerals	2
5.2.B	**Compare and order two decimals to the thousandths and represent comparisons using the symbols >, <, or =**	4

Previous Grade-Level TEKS:

Current Grade-Level TEKS:

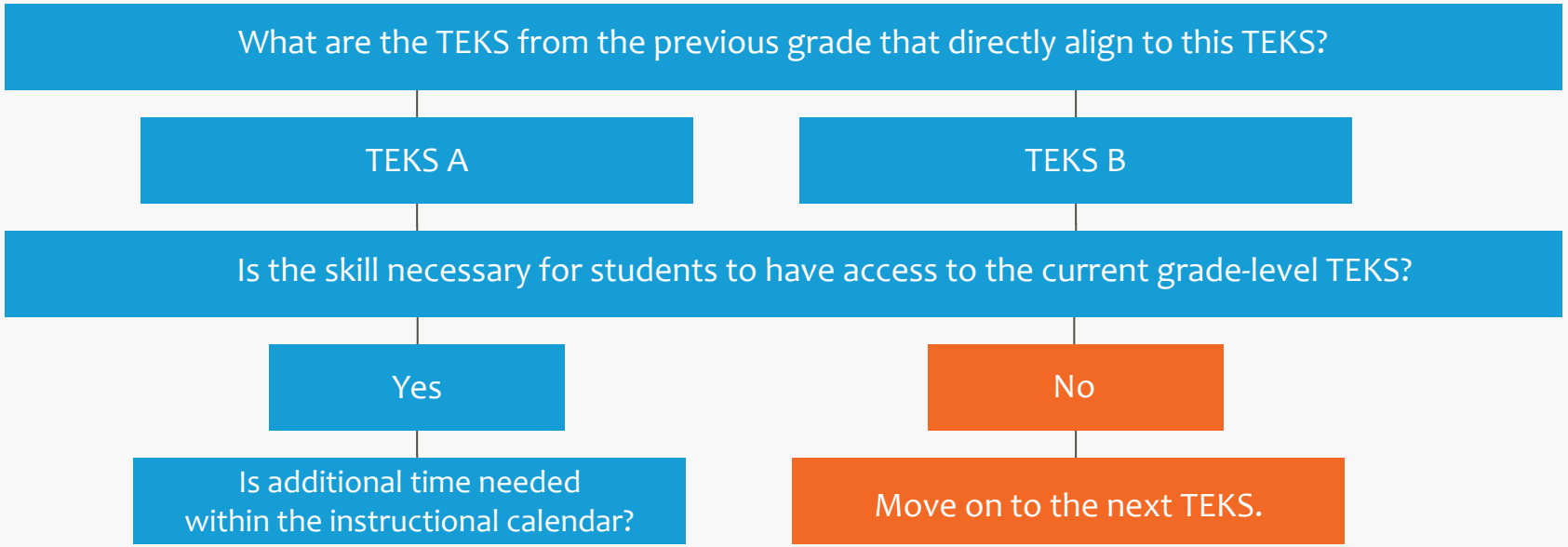
Previous Grade Scope and Sequence

Scope and sequence for 5th-grade unit 1

TEKS (bold = readiness standards)		Instructional Days
5.2A	Represent the value of the digit in decimals through the thousandths using expanded notation and numerals	2
5.2.B	**Compare and order two decimals to the thousandths and represent comparisons using the symbols >, <, or =**	4

Previous Grade-Level TEKS:	Previous Grade Scope and Sequence	Current Grade-Level TEKS:
4.2B Represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals	Paced for 4th Grade, 4th Quarter	5.2A: Represent the value of the digit in decimals through the thousandths using expanded notation and numerals
4.2F **Compare and order decimals using concrete and visual models to the hundredths** 4.2C Compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or =	Paced for 4th Grade, 4th Quarter Paced for 4th Grade, 1st Quarter	**5.2B:** **Compare and order two decimals to the thousandths and represent comparisons using the symbols >, <, or =**

Assess math curriculum for unfinished learning



Scope and sequence for 5th-grade unit 1

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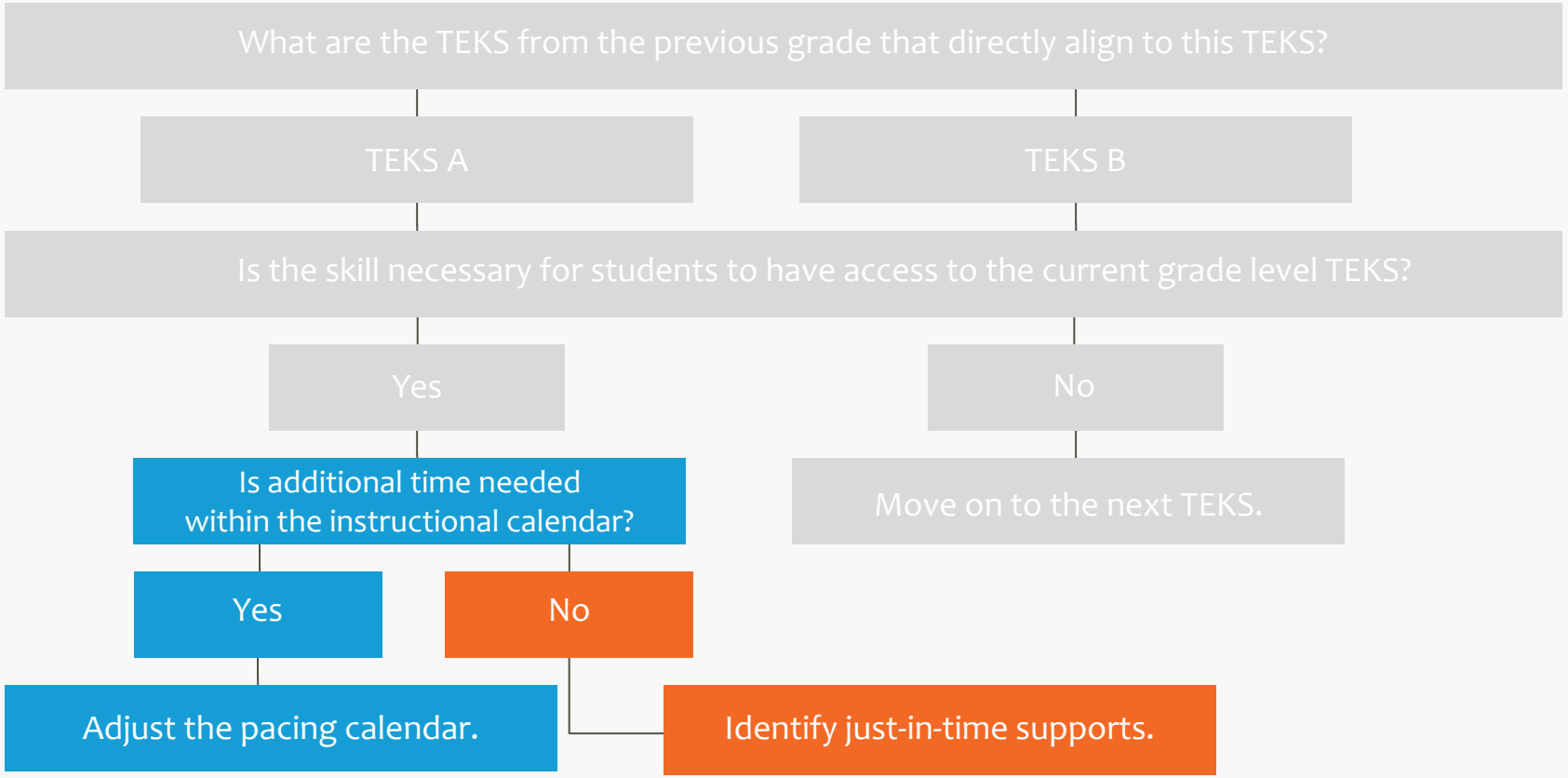
Previous Grade-Level TEKS:		Current Grade-Level TEKS:
4.2B Represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals	**Not necessary for access** →	5.2A: Represent the value of the digit in decimals through the thousandths using expanded notation and numerals

Scope and sequence for 5th-grade unit 1

TEKS (bold = readiness standards)		Instructional Days
5.2A	Represent the value of the digit in decimals through the thousandths using expanded notation and numerals	2
5.2.B	**Compare and order two decimals to the thousandths and represent comparisons using the symbols >, <, or =**	4

Previous Grade-Level TEKS:		Current Grade-Level TEKS:
4.2B Represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals	**Not necessary for access** →	5.2A: Represent the value of the digit in decimals through the thousandths using expanded notation and numerals
4.2F **Compare and order decimals using concrete and visual models to the hundredths** 4.2C Compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or =	**Necessary for access** →	**5.2B: Compare and order two decimals to the thousandths and represent comparisons using the symbols >, <, or =**

Assess math curriculum for unfinished learning



Scope and sequence for 5th-grade unit 1

TEKS (bold = readiness standards)		Instructional Days
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Previous Grade-Level TEKS:		Current Grade-Level TEKS:
4.2F **Compare and order decimals using concrete and visual models to the hundredths** 4.2C Compare and order whole numbers to 1,000,000,000 and represent comparisons using the symbols >, <, or =	**Necessary for access** →	**5.2B:** **Compare and order two decimals to the thousandths and represent comparisons using the symbols >, <, or =**

Scope and sequence for 5th-grade unit 1

TEKS (bold = readiness standards)		Instructional Days
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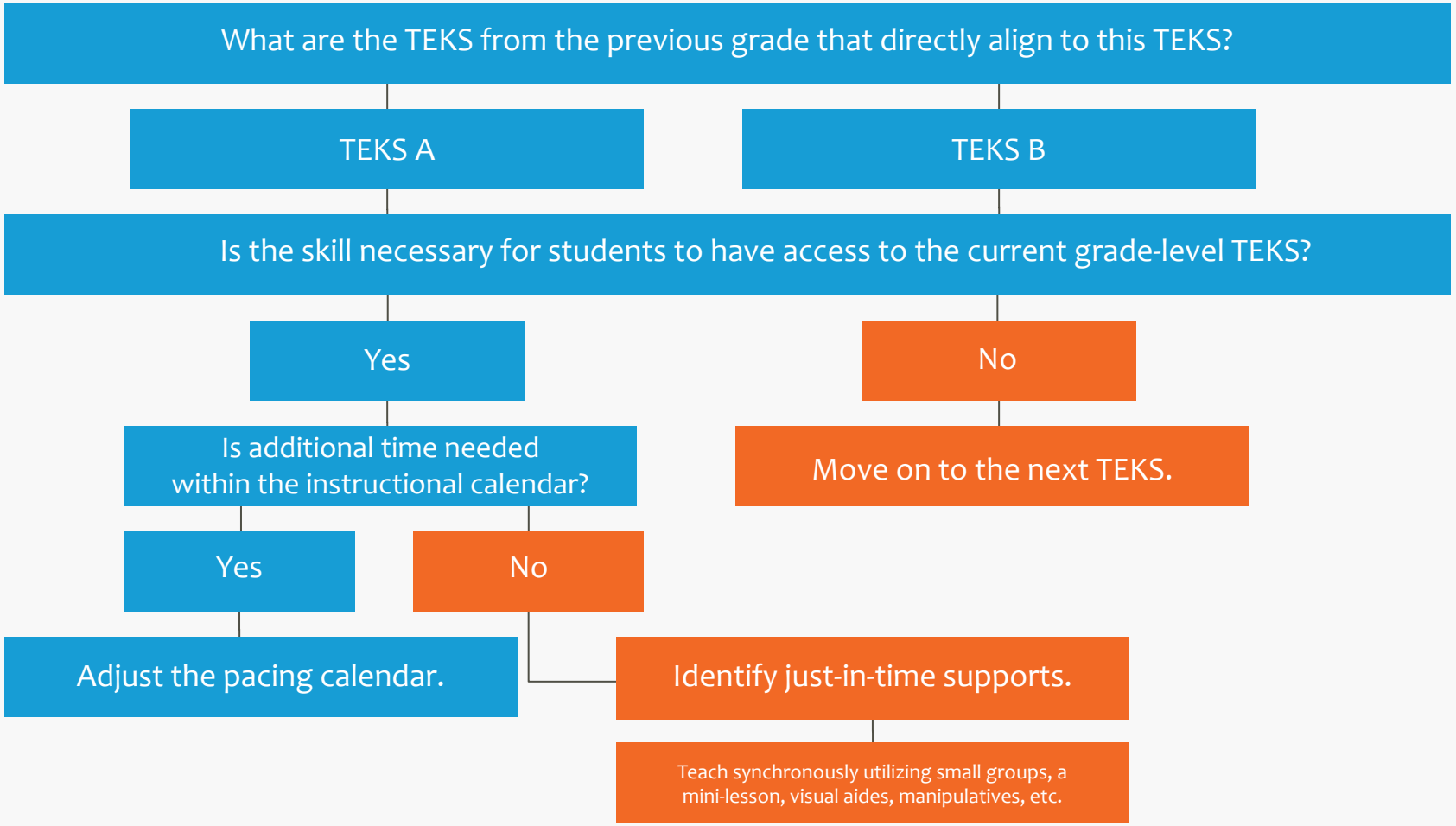
Day 1	Day 2	Day 3	Day 4
Introduce Place Value Chart *- Asynchronous -> record video* *- students complete example problems*	Place Value and expanded notation *- Asynchronous -> independent** *- students practice writing and reading decimals to the thousandths*	Compare Decimals to the thousandths using a place value chart *- Synchronous -> live lesson* *- students complete problems* *- teacher progress monitors*	Order Decimals to the thousandths using a place value chart *- Asynchronous -> independent* *- students complete example problems and an exit ticket*

Assess math curriculum for instructional setting



Imagine you're a 5th-grade math teacher . . .

Grade-level TEKS	Prerequisite TEKS	Considerations	Solution
5.2B: Compare and order two decimals to the **thousandths** and represent comparisons using the symbols >, <, or = ○ Readiness standard	**4.2F** Compare and order decimals using concrete and visual models to the **hundredths** ○ Supporting standard	How will I address unfinished learning from 4th grade while still teaching grade-level material?	Teacher and students use place value charts to compare decimals to the **thousandths** throughout the 5th grade lessons ○ Teacher models comparative language

Considerations for adapting

My materials align to the key features of HQIM and the needs for remote learning.

- How will we adjust the scope and sequence to account for unfinished learning caused by COVID-19?
- How do we ensure that conceptual understanding and development exist in a remote setting?
- How will teachers and students access manipulatives and visual models fluidly between remote and on-campus learning environments?
- How will teachers progress monitor seamlessly throughout different instructional settings?

OPERATIONALIZING ADAPTATIONS

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Key considerations for adopting HQIM for math

Action Step	Mid-sized Urban District Owner(s)	Small Rural District Owner(s)
Assess materials to decide which TEKS need additional time	- Program Director(s) of Mathematics	- Math Curriculum Coordinator
Revise the scope and sequence to account for unfinished learning (including notes about what should be taught synchronously)	- Campus Math Department administrator(s)	- Lead math teachers throughout the district
Create guidance on "just-in time" supports	- Campus Math Department administrator(s)	- Math Curriculum Coordinator - Technology Integration Director(s)
Collect input and feedback from stakeholders (school leaders, teachers, families)	- Program Director(s) of Mathematics	- Superintendent
Identify additional materials needed for at-home learning	- Campus Math Department administrator(s) - Virtual School Coordinator - Program Director of RTI	- Math Curriculum Coordinator - Technology Integration Director(s) - Lead math teachers throughout the district
Order additional curricular supplies	- Operations Coordinator	- Operations Coordinator
Communicate to stakeholders	- Program Director(s) of Mathematics	- Superintendent
Train Teachers and Leaders	- Campus Math Department administrator(s) - Virtual School Coordinator - Program Director of RTI	- Math Curriculum Coordinator - Technology Integration Director(s) - Lead math teachers throughout the district

Key understandings

Once you have HQIM for math, you can adapt to meet the needs of both COVID closures and remote learning.

- Account for **unfinished learning** by:
  - adjusting pacing charts to account for additional time needed for further exploration and development of TEKS
  - providing a menu of options for teachers to offer "just-in-time" scaffolds
- Accommodate varying **instructional settings** by:
  - adjusting pacing charts, noting which lessons or which parts of a lesson should be taught synchronously and which could be taught asynchronously
  - highlighting which lessons can be omitted or combined due to time constraints caused by rotating between on-campus and remote learning
  - providing teachers with suggested just-in-time scaffolds including ways to accommodate remote learning

Suggested actions for adoption

Suggested actions for adaptation

Assess materials to decide which TEKS might need additional time and considerations for unfinished learning; revise the scope and sequence

Create guidance on just-in-time supports

Collect input and feedback from stakeholders

Identify additional learning materials needed and order any additional curricular supplies

Communicate to stakeholders; train teachers and leaders

Upcoming webinars

Adapting or Adopting RLA Curriculum for Remote Settings	Adapting or Adopting Science and Social Studies Curricula for Remote Settings	Implementing Texas Home Learning 3.0
Monday | August 3, 2020	**Wednesday | August 5, 2020**	**Friday | August 7, 2020**

All webinars are at 10 AM CT.

Q&A

Survey and Recording

https://bit.ly/tea_module3

You can find the recording of today's webinar and the Strong Start Reflection tool here.

Texas Home Learning 3.0

THL 3.0 is a freely accessible, optional, aligned suite of resources that educators can use fully or in-part to support the new learning environment

Texas Home Learning 3.0

CURRICULUM

PreK-12 digitized, standards-aligned curricular content customized for Texas and the current learning environment

TECHNOLOGY

Suite of technology tools including a learning management system to support student engagement and instructional collaboration

PROFESSIONAL DEVELOPMENT

Content and technology focused professional development to support educators with implementation both in classroom and remote settings

Districts may optionally adopt none, part, or all of any of the three components above

THL 3.0 offers free access to TEKS-aligned, digitized resources to be facilitated by teachers that are customized for Texas

Districts/schools can **choose** to adopt any portion or subset of the materials as they see fit

Subject	Grades Offered
Math	PreK through 12th grade
English Language Arts and Reading*	PreK through 12th grade
Spanish Language Arts and Reading	PreK through 5th grade
Science	PreK through 5th grade
Social Studies	PreK through 5th grade

Works with required asynchronous plans for remote teaching

*Includes foundational skills and phonics in K-2

Each grade level and subject resource is customized to Texas and includes:

- **Unit plans** and daily **lesson plans aligned to Texas standards**
- **Formative** & **summative** unit assessments
- Built in **progress monitoring**
- **Teacher**, **student**, and **family** supports
- **Digital** format with **printing** capability
- Accessibility supports for **all learners**

TEA has negotiated a statewide license for Schoology for all interested districts for two years

schoology®

A PowerSchool Unified Classroom™ Product

Free two-year license

for Schoology LMS for any interested LEA paid for by TEA

- Districts must **begin using Schoology** anytime between today and **March 1st, 2021** to benefit from license
- License allows for **integration with existing platforms, forthcoming THL instructional resources** and other products as needed
- **Current Schoology customers may pause** current contract to benefit from additional 2 years of LMS
- **Implementation support** available from TEA, Schoology, and Texas ESCs

Learn more about the THL LMS on the TEA Instructional Continuity webpage or sign up today at www.powerschool.com/texas!

Districts and teachers will have access to ongoing professional development throughout the 2020-2021 school year

Remote Learning and School Models

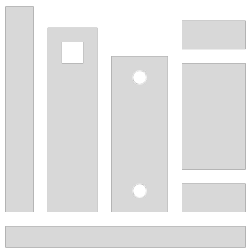
PD offered to districts to optimize remote or hybrid learning. PD comes in the form of:

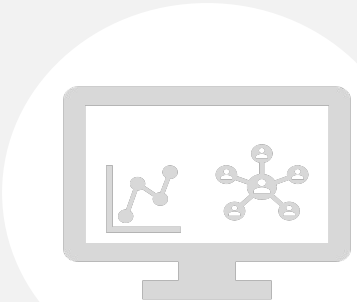
- ESC support
- Webinars
- Office hours
- Targeted support

Instructional Materials

PD offered to from vendors and ESCs. PD comes in the form of:

- Live webinars
- On-demand tutorial videos
- "Train the trainer" sessions
- Customized training for purchase





Storage, Classroom, and Learning Management System

PD offered to districts to give training on system use and implementation. PD comes in the form of:

- ESC support
- 3-hour district on-boarding course for the LMS
- Interactive online trainings
- Self-paced learning courses

ESCs will fully support district implementation and training for THL 3.0

Q&A

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