ORIGO

STEPPING STONES

COMPREHENSIVE MATHEMATICS

TEXAS

Implementation Handbook

ORIGO EDUCATION

Contents

Section 1: Introduction and overview

The *ORIGO Stepping Stones Texas Implementation Handbook* has been developed to assist schools and school systems with the process of implementing *ORIGO Stepping Stones Texas* across their sites. This handbook is based on research into best practices for implementation. The content is clearly organized to guide school system leadership throughout the process. This handbook should be used by teams at district and school levels who are responsible for leading the implementation of *ORIGO Stepping Stones Texas*.

Implementation research

In recent years, the education community has shifted its focus and expectations from research-based to evidence-based (or evidence-informed) programs and practices. While selecting evidence-based practices to improve outcomes for students is important, so is focusing on the research and best practice of *effective implementation* to produce consistent, sustainable, positive outcomes for students (see Figure 1). This means **what** schools are implementing is just as important as **how** they are implementing those practices to be successful.

Figure 1: Formula for success

Through a synthesis and meta-analysis of research findings and literature, the National Implementation Research Network (NIRN) has identified best practices and developed frameworks based on them.[1] Researchers found that effective interventions must be supported by effective implementation to have positive outcomes for students and families.[2]

The NIRN has summarized its findings into five frameworks for active implementation science:

1. Implementation Teams
2. Implementation Stages
3. Implementation Drivers
4. Usable Innovations
5. Improvement Cycles

The frameworks are not linear, but they can be used in unison to effectively implement evidence-based practices.[1]

Please note that this handbook is not meant to provide comprehensive knowledge of implementation science and instead uses this research as the foundation for the *ORIGO Stepping Stones Texas. Implementation Handbook.*

Navigating the handbook

Researchers emphasize that effective implementation takes between two and five years, and should be delivered in stages.[1] This handbook is organized around four of these stages: Exploration, Installation, Initial implementation, and Full implementation. Each stage includes key activities for teams to prepare for the next stage of the process.

Section 2: Key personnel roles and responsibilities

This section outlines the roles and responsibilities of key personnel in *ORIGO Stepping Stones Texas* implementation, including district math leadership, principals, math coaches, lead teachers, and the classroom teachers who will form implementation teams at the district and school levels. They will be directly involved in planning the implementation of the program. Districts should form a District Implementation Team (DIT), while each implementing site should have a School Implementation Team (SIT). These teams work collaboratively, forming communication and feedback loops to support effective implementation (see Figure 2). This section also provides recommendations for the composition of teams, the purpose and frequency of team meetings, and specific responsibilities of personnel involved.

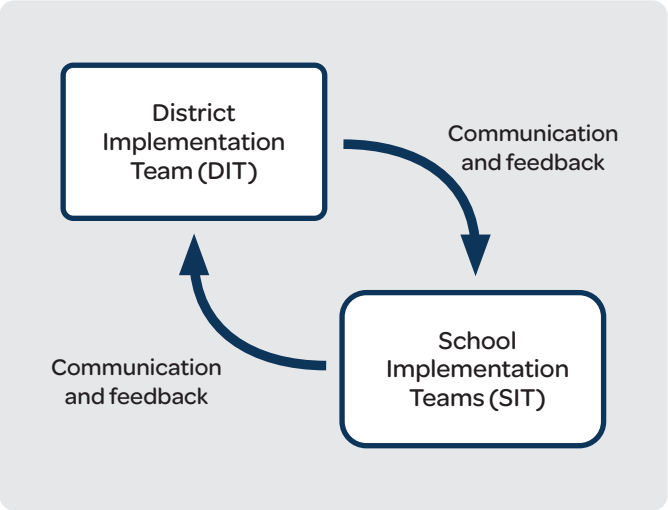

Figure 2: DIT and SIT communication and feedback loop

District Implementation Team

Building a District Implementation Team

The DIT consists of four to six members and is responsible for overseeing system-wide implementation. It is not an advisory group or committee. A district may consider having advisory groups or committees in addition to the DIT, but not in place of the team. **Note:** It is suggested that the DIT includes a math supervisor, elementary math specialists/coaches, key partners from other departments such as Special Education and/or Title I, and other personnel directly related to implementation. This team may also include representation from the Technology Department.

The DIT's responsibilities

This team establishes the vision and mission for the project. They are actively engaged in planning the implementation, and are responsible for the following:

- Developing an annual professional learning plan for *Stepping Stones* leads and participating teachers.
- Creating a data collection plan to monitor student outcomes and implementation fidelity data on a monthly, quarterly, and annual basis.
- Participating in school-level collection of implementation fidelity data using the Stepping Stones Implementation Tool (SSIT).
- Resolving implementation barriers to support effective implementation at the school and classroom levels.
- Analyzing implementation data to identify implementation strengths and needs and planning for additional supports to improve implementation data.
- Developing a communication plan and establish feedback loops between the district and schools.
- Seeking feedback from teachers, math coaches, School Implementation Teams (SIT), and stakeholders to adjust and refine the implementation plan as needed throughout the year.

The DIT is responsible for *making it all happen!*

Scheduling meetings

The DIT should meet at least monthly at a regularly scheduled time. The team may choose to meet more often during the initial stage of implementation (for example, weekly or twice a month).

Engaging stakeholders

The DIT may seek feedback through a project advisory group including other stakeholders (for example, classroom teachers, math coaches, central office special education administrators, and parents). The team may meet quarterly with the advisory group to present progress updates and seek input on the implementation plan.

Principals

The principal's responsibilities

As with any school initiative, school-level implementation cannot succeed without the commitment of the principal. A principal should have, or be willing to work toward, a strong belief in building students' conceptual understanding of mathematics. They should believe that all students can learn mathematics at high levels if they are afforded a first-class curriculum, instruction, and assessment. Principals of schools selected to implement the *Stepping Stones* program should also:

- Honor programs and frameworks currently in place and communicate how *Stepping Stones* fits within those structures and initiatives.
- Be familiar with the SSIT and Stepping Stones Core Four (SSCF) tools to understand the effective use of the program.
- Identify a staff member to serve as the *Stepping Stones* lead for the school.

- Facilitate implementation through logistical planning. This could include scheduling time for the *Stepping Stones* lead to meet with teachers or grade-level teams, providing cover for teachers to observe a model lesson, and scheduling time for *Stepping Stones* professional development.
- Identify barriers to school-level implementation and problem-solve to offer solutions.
- Report any implementation barriers outside of the school's control to the DIT.
- Maintain the expectation that identified staff use *Stepping Stones* as intended (aligned to the district's expectations).
- Meet with the SIT at least monthly to monitor progress and plan implementation activities.

School Implementation Team

Building the School Implementation Team

The SIT is responsible for overseeing the day-to-day implementation of *Stepping Stones* at the school level. The team should have at least three members, but no more than five. These can include the principal, assistant principal, *Stepping Stones* lead, and math coach or lead teacher (if applicable).

The SIT's responsibilities

- Embed the implementation of *Stepping Stones* into the School Improvement Plan, specifically addressing mathematics-related goals and activities, as appropriate.
- Set goals for student outcomes and the implementation of *Stepping Stones* for the school year.
- Collaborate and communicate with the DIT to schedule implementation activities, such as school-level training and coaching opportunities.
- Use the SSIT to monitor implementation and plan for professional learning and coaching supports to improve implementation.
- Monitor and communicate the project's progress throughout the year.
- Communicate progress and any barriers to the implementation to the DIT.

Scheduling meetings

The SIT should meet at least monthly to review the project's progress. The team may choose to meet more often during the initial stage of implementation (for example, weekly or twice a month).

Stepping Stones Lead

Selecting the *Stepping Stones* lead

The *Stepping Stones* lead is chosen by the principal and is responsible for overseeing implementation of *Stepping Stones* at the school. This person should have a deep understanding of mathematics content and the SSIT, be able to provide professional development and coaching support to teachers, and have effective communication and collaboration skills. A math coach would be an ideal candidate for the *Stepping Stones* lead. For schools that do not have math coaches, principals should consider math specialists/resource teachers or lead teachers for the role. If a lead teacher is selected as the *Stepping Stones* lead, the principal should plan for substitute cover or informal release time to provide them with adequate time to support colleagues with implementing the program.

The *Stepping Stones* lead's responsibilities

The *Stepping Stones* lead is the primary communication link between the school and the DIT. They will also:

- Develop a plan to offer professional development for teachers throughout the school year.
- Work with teachers in a non-evaluative manner. The lead can support teachers in a variety of ways, including disseminating *Stepping Stones* resources, co-planning lessons, co-teaching, modeling *Stepping Stones* lessons, and observing teachers to provide constructive feedback.
- Report on the implementation's progress and barriers to the DIT through established communication loops.
- Participate in monthly SIT meetings.
- Collect data as requested by the SIT and/or DIT.
- Participate in *Stepping Stones* professional development.
- Conduct surveys to provide feedback to the DIT and ORIGO representatives.

Teachers

Selecting teachers (first implementers)

The district and/or principal chooses the teachers who will use the *Stepping Stones* program according to the guidance of the DIT. The DIT and/or principal can consider a variety of structures for selecting participating teachers. For example, a principal may select teachers across the same grade level, multiple teachers in each grade level, or one teacher per grade level. Principals can consult with the DIT when they are considering their selection. Teams should select teachers and/or grade levels based on a variety of factors but, ultimately, teachers and/or grade levels where successful implementation is most likely is a priority. Teachers who are resistant to change and the adoption of new practices will not be suitable as first implementers. Look for teachers who will work toward success and be able to share those stories and practices with others to support buy-in.

The teachers' responsibilities

The teachers are responsible for consistently using the *Stepping Stones* program, aligned to the DIT implementation plan, during math instruction. They also:

- Provide high-quality mathematics instruction that is aligned to best practices.
- Participate in *Stepping Stones* professional development.
- Are familiar with the SSIT.
- Collaborate with the *Stepping Stones* lead to plan and deliver instruction.
- Share student outcomes and implementation fidelity data with the principal, SIT, *Stepping Stones* lead, and DIT, as requested.
- Complete surveys to provide feedback to the DIT, SIT, *Stepping Stones* lead, and ORIGO representatives.

Section 3: Exploration

The Exploration stage often happens when selecting a math curriculum or resource at the district level, so this section primarily pertains to the DIT. During this stage, the DIT is appointed to oversee the work, assessing the district's needs and analyzing *ORIGO Stepping Stones Texas* to ensure a suitable fit within existing initiatives. The team should also examine the district's capacity to implement the program as intended, including staffing and resources. Teams may use the NIRN's Hexagon Tool[3] (see Appendix 1), or a similar exploration aid, to assist with this discussion and analysis. The DIT should also develop methods to promote buy-in and support the use of *Stepping Stones* at the school level.

Goals for this stage

The leadership overseeing the *Stepping Stones* implementation should:

- Organize the DIT and schedule monthly meetings for the school year.
- Assess the district's needs and analyze the *Stepping Stones* program to ensure a suitable fit with existing resources and requirements, and capacity to implement.
- Develop methods to promote buy-in for using *Stepping Stones* for mathematics instruction.

Communicate early and often to promote buy-in

Clearly communicate any changes occurring before or early in the process. An open discussion about changes can have a significant impact on stakeholders' reactions to the information. Communication should include: Why the change is happening; how it will potentially affect schools, teachers, and students; and the key goals and objectives of implementing the *Stepping Stones* program. The DIT should establish and use a communication plan throughout the year to report on the implementation's progress and its success stories.

Get buy-in from the top down

As well as encouraging teachers' support, consider including principals and key district-level staff in the change plans early on. Gaining support for the project from leaders at different levels in the district will make it stronger. It will also ensure leaders have time to prepare for any questions about the process that could be asked by the *Stepping Stones* leads and participating teachers.

Share success stories

Change takes time, so not everyone will get on board at the same time. Identify early adopters, the teachers who are finding success with the program, and have them share their stories. Ask early adopters to present at district-wide professional development events. They can video their classroom instruction (with permission), or model lessons for teachers across other grade levels or at other schools. The more teachers share their positive *Stepping Stones* stories with other teachers, the better!

Get input along the way

It is important for teachers to know their feedback and ideas are valued and acknowledged. Ensure every implementation plan incorporates a process for gathering input from stakeholders (known as the communication and feedback loop). After collecting feedback, the DIT should decide how to use the data as they adjust their implementation plan. Be sure to share how the team used teacher feedback and what specific changes were made based on their input.

Section 4: Installation

NIRN research explains that the Installation stage focuses on developing the infrastructures that will support the implementation of the program or practice.[1] This includes planning for ongoing training, coaching, and supervision. During this stage, implementation plans are made and include forming teams, organizing regular meeting times and schedules, and planning the logistics of the project. Decisions made at this stage include funding, resources, personnel, and sustainability of the project. The activities recommended during this section primarily concern preparations at the district level.

Goals for this stage

The DIT/SIT overseeing the *Stepping Stones* implementation should:

- Acquire necessary resources.
- Define and communicate expectations and responsibilities to principals, *Stepping Stones* leads, and teachers.
- Create an implementation plan.
- Develop a communication plan to describe the *Stepping Stones* implementation process (for example, activities, participants, timeline, and benefits) to key stakeholders.
- Create an annual training plan, including professional development and coaching supports, for *Stepping Stones* leads and teachers.
- Develop methods to promote communication and networking across the participating schools.
- Develop a data collection plan, including student outcomes and implementation fidelity.

Resources for implementation

- Student Journals (printed; Grades K–5)
- Practice Books (printed; Grades K–5)
- *Slate* (digital Teacher Edition)
- *The Number Case* (Grades K–5)
- *ORIGO Big Books* (Grades K–2; Tunes and teacher notes are on *Slate*)

Technology requirements:

- *Slate* login (direct or through single sign-on) for each teacher
- Current version of Chrome, Firefox, or Safari

The DIT's communication plan

The DIT should define the roles, responsibilities, and expectations of the implementing schools at one of the team's first meetings. This will also be an important step in the communication plan. As the team works to define the expectations, they should consider:

- What are the roles and responsibilities of the school staff, including the principals, *Stepping Stones* leads, and teachers?
- What data do we expect to collect from the schools throughout the year?
- What additional professional development are the schools expected to participate in?
- How should the teachers use the *Stepping Stones* program during mathematics instruction?
- Will the program scope and sequence be followed as intended, or will it be integrated into the current curriculum and pacing guide?

Components of a communication plan

A communication plan celebrates successes, clears any misunderstandings (overcomes barriers), and builds the collective commitment of a diverse range of stakeholders. A communication plan should include:

- **Mission and purpose —** What is the clear purpose and mission of the communication plan?
- **Information or messages —** What needs to be communicated? How does the information change over time as the implementation progresses?
- **Methods —** Are a variety of communication modes used (for example, presentations, meetings, websites, and emails)?
- **Responsibility —** Who is responsible for the implementation? What is the role of the leadership?
- **Communication and feedback loops —** Who is responsible for ensuring that feedback and information gathered through communications are used to inform practices, overcome barriers, and celebrate successes?
- **Audience —** Who should be included in communications? How do these communications change to best be understood by different audiences?
- **Frequency —** When and how often should the team communicate with stakeholders?
- **Indicator of success —** What data is used and how often is it analyzed to determine the effectiveness of our communication plan?

What should be included

The plan should include the team's vision for *Stepping Stones* implementation. As the DIT develops a vision statement, they should consider what a successful implementation would look like. The plan should also include the team members' names and roles, and a meeting schedule. Teams should also set an implementation goal for the school year. For example, consider assessing the percentage of participating teachers who use the program as intended, according to the SSIT. Teams should also think about other methods to measure implementation (for example, surveys, observations, teacher inteviews, and professional development evaluations). The implementation plan is also where the communication, training, coaching and data collection plans for the year can be documented. The *ORIGO Stepping Stones Texas* Annual Implementation Plan Template (see Appendix 2) can support district and school teams as they develop implementation plans.

Annual training plan

An annual training plan should be developed for both the *Stepping Stones* leads and the teachers. Because the leads will be responsible for supporting the teachers, they will need more in-depth training to support the teachers in planning and delivering math instruction using the *Stepping Stones* program. The teachers will need initial training in *Stepping Stones*, but much of the follow-up training and support should happen through job-embedded professional development (coaching) at the schools by *Stepping Stones* leads and ORIGO representatives.

Data collection plan

The following should be considered when creating a data collection plan:

- What data can be used to measure student outcomes?
- What data can be used to measure the implementation of *Stepping Stones* at the school level?
- Will pre- and post-module assessment data for *Stepping Stones* be collected to measure progress?
- Who will be responsible for data collection?
- How often will data be collected? (At least twice per school year is encouraged.)

Section 5: Initial Implementation

Manage change and expectations, improvement cycles, learn from mistakes, and celebrate progress

This is the most challenging stage of any implementation because practitioners are introducing a new program while changing their usual way of working. Best practice is implemented in selected schools, and District and School Implementation Teams use a *Plan, Do, Study, Act* cycle to monitor progress and adjust the process along the way. The DIT and SIT has a critical role identifying barriers and seeking solutions to changes in practice, while improving implementation efforts. This section includes steps for teams to follow in the first year to ensure benchmarks are reached.

Benchmarks for the first month of school

- *Stepping Stones* leads provide coaching support to teachers as they begin using *Stepping Stones*.
- *Stepping Stones* leads focus on providing support to grade-level teams during scheduled team meeting time, and on working closely with early adopters.
- Survey teachers and *Stepping Stones* leads for feedback in preparation for *Stepping Stones* training sessions.
- Identify early adopters and success stories that can help encourage teacher buy-in.
- Refine data collection plan and use data to inform next steps.

Benchmarks for the school year

- Provide ongoing professional development and coaching with *Stepping Stones*.
- Provide opportunities for teachers and *Stepping Stones* leads from implementing schools to collaborate and communicate (for example, plan meetings or trainings with schools at the same place, date, and time, set up after-school virtual meetings, or create an online repository for resources and lesson sharing).
- Implement communication plans to inform stakeholders of launch dates and activities, and convey support.
- Develop communication protocols for identifying barriers and adaptive challenges, and for problem solving at each level (for example, use weekly or monthly team meetings or a shared spreadsheet to collect and identify reported issues, create plans, review results of past problem-solving efforts, and forward issues to the next level, as appropriate).
- Provide ongoing training and coaching to address teacher needs, based on implementation data.
- Collect implementation fidelity data using the SSIT (at least twice per year). The DIT/SIT and *Stepping Stones* leads use this data to plan professional development and coaching support for teachers and grade-level teams.
- Conduct surveys (at least twice per year) to collect feedback on successes and challenges from the initial implementation to improve the process for the following year.
- Revise the plan to prepare for full implementation.

Section 6: Data collection and analysis

Data collection and analysis are key components of the implementation process, ensuring its effectiveness. Data analysis allows the DIT and SIT to identify areas of concern, inform training and coaching efforts, and identify schools and/or teachers that are effective in their practice. It is important to understand that during the initial implementation stage, the primary focus for data analysis should be implementation data since it is unreasonable to expect changes in student outcomes while teachers are just beginning to use these new practices.

The data to analyze

Teams should analyze two types of data: student outcome data and implementation fidelity data. This should be done throughout the year to assess the project's progress.

Student outcome data

Examples of student outcome data include diagnostic assessments, district assessments, *Stepping Stones* pre- and post-module assessments, and state assessments. Teams should consider which type of student outcome data will be the most sensitive and show incremental progress. This will give the team a clearer idea of how the implementation of *Stepping Stones* affects student outcomes.

Implementation fidelity data can be collected through the use of the SSIT (see Appendix 3). The purpose of the SSIT is to provide DITs and/or SITs with an efficient measure of the extent to which school personnel are applying the core elements of the *Stepping Stones* program in classrooms. This tool is intended to be used over time to guide implementation planning of the *Stepping Stones* program. This tool is intended to be used not to evaluate teacher performance but to inform the actions of DITs and/or SITs. Teams complete the SSIT using a sampling of classrooms up to three times each year (fall/ winter/spring). The teams use the data collected to set and monitor annual and quarterly implementation goals.

Classroom walkthroughs can also be used by district and school leadership to collect implementation data. The *Stepping Stones* Core Four (SSCF) tool is a classroom walkthrough tool that district- and school-level teams use to measure the implementation of the core features of the *Stepping Stones* program in the classroom (see Appendix 4). While the SSIT provides a comprehensive picture of implementation levels and takes thoughtful planning to complete, the SSCF tool provides a quick snapshot of implementation through 15–20 minute classroom walkthroughs. It focuses on the four key components of *Stepping Stones* implementation that can be assessed during a classroom observation. Data gathered across a sampling of classrooms at a school and/or district can inform the professional development and coaching plans to support teachers with implementation.

It is important that the SSIT and SSCF tool are shared with school-level teams, *Stepping Stones* leads, and teachers to ensure all stakeholders understand the case for best-practice use. The DIT and SITs should consider other methods to measure the effectiveness of their implementation plan, such as *Stepping Stones* usage reports, and surveys.

Frequency of data analysis

Depending on the type of data, teams should analyze them on a monthly or quarterly basis. For example, teams should analyze formative data monthly to make in-the-moment adjustments to their implementation plan. Formative data could include surveys, professional development evaluations, and other types of qualitative feedback from the participating staff. Teams should collect and analyze student outcomes and implementation fidelity assessment data, such as the SSIT and SSCF tool, at least twice per year, but ideally three times per year: in the fall, winter, and late spring.

Using the data

Implementation fidelity data becomes extremely important during the initial implementation stage. It can be used to make immediate adjustments to the implementation plan, and inform professional development and coaching needs. Data should provide information on the effectiveness of the teams' implementation efforts, and not be used to evaluate teachers' performance.

In addition, the DIT and SITs may analyze the relationship between the implementation fidelity data and student outcomes data. For example, teams might ask, "Are students making more academic progress in classrooms with higher levels of implementation fidelity, according to the SSIT and/or SSCF tool?"

Section 7: Full implementation and scaling up

Monitor outcomes, improvement cycles, and sustainability

Full implementation is reached when 50 percent or more of the intended practitioners are using an evidence-based practice with fidelity[1]. During this stage, the *Stepping Stones* program is being routinely implemented. The teachers are comfortable with the materials and core components of the program, and few changes are made to ongoing practice. The implementation teams continue to support the practices to ensure processes are maintained and constantly improved, even during changes in leadership and staff.

Preparing for full implementation

Planning for full implementation should begin during the spring and continue through the summer of the initial implementation year. By using the data collected in the initial implementation stage, the DIT and SIT can make necessary adjustments to their plan for full implementation. The DIT and SITs can use The Planning for Full Implementation Guide (see Appendix 5), which can help them prepare for full implementation.

Key activities for full implementation

- Training for new users and booster training for experienced teachers are provided.
- Coaching infrastructure is improved and refined to provide more coaching support during the full implementation stage.
- Implementation fidelity data is collected, analyzed, and reported using the SSIT and SSCF tool.
- The DIT and/or SIT elicits feedback from teachers and uses that information for action planning (for example, administrative support and policies are changed to facilitate best practices).
- Improvement processes address issues, identify challenges, develop plans for improvement, monitor execution, and assess results (PDSA cycles) until improvement occurs or processes are fully embedded.

Expanding to other sites

The process is considered at *full implementation* when 50 percent of teachers are using the *Stepping Stones* program with 80 percent fidelity. The DIT and SITs will know when it is appropriate to include more schools, grade levels, and/or teachers when the expected practices are being used consistently as intended in the selected schools and teachers' classrooms. If practices are not being used consistently as intended, implementation efforts should continue into the next year until they are.

Section 8: Conclusion

The handbook is meant to be used by District and School Implementation Teams throughout the process. Change takes time and can be difficult. It is important for teams to anticipate challenges and leverage best practices in implementation research to assist the change process. It is essential that programs and practices are implemented as intended, since this will improve mathematics outcomes for all. Teams should focus as much on **what** they are implementing as on **how** they are implementing it to make a true difference for students and families.

References

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3. Metz, A. & Louison, L. (2018) *The Hexagon Tool: Exploring Context.* Chapel Hill, NC: National Implementation Research Network, Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill. Based on Kiser, Zabel, Zachik, & Smith (2007) and Blase, Kiser & Van Dyke (2013).

Appendix 1

Hexagon Discussion and Analysis Tool

NATIONAL IMPLEMENTATION RESEARCH NETWORK

The Hexagon: An Exploration Tool

The Hexagon can be used as a planning tool to guide selection and evaluate potential programs and practices for use.

IMPLEMENTING SITE INDICATORS

CAPACITY TO IMPLEMENT

Staff meet minimum qualifications

Able to sustain staffing, coaching, training, data systems, performance assessment, and administration

- Financial capacity
- Structural capacity
- Cultural responsivity capacity

Buy-in process operationalized

- Practitioners
- Families

FIT WITH CURRENT INITIATIVES

Alignment with community, regional, state priorities

Fit with family and community values, culture and history

Impact on other interventions & initiatives

Alignment with organizational structure

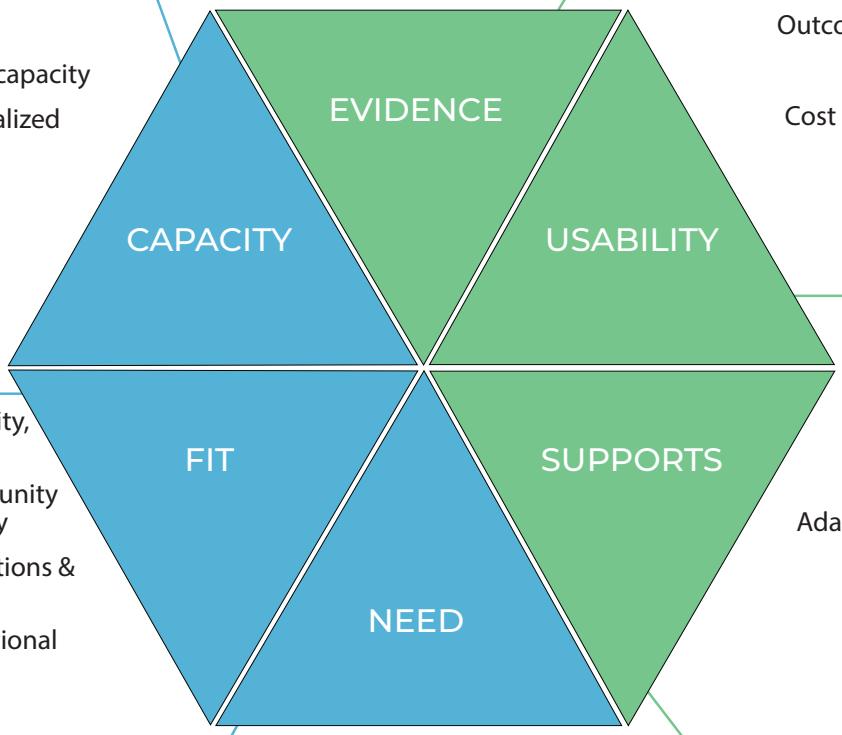
NEED

Target population identified

Disaggregated data indicating population needs

Parent & community perceptions of need

Addresses service or system gaps



PROGRAM INDICATORS

EVIDENCE

Strength of evidence—for whom in what conditions:

- Number of studies
- Population similarities
- Diverse cultural groups
- Efficacy or Effectiveness

Outcomes – Is it worth it?

Fidelity data

Cost – effectiveness data

USABILITY

Well-defined program

Mature sites to observe

Several replications

Adaptations for context

SUPPORTS

Expert Assistance

Staffing

Training

Coaching & Supervision

Racial equity impact assessment

Data Systems Technology Supports (IT)

Administration & Svstem

NIRN | NATIONAL IMPLEMENTATION RESEARCH NETWORK

Download the full hexagon tool resource at
nirn.fpg.unc.edu/sites/nirn.fpg.unc.edu/files/imce/documents/NIRN%20Hexagon%20Discussion%20Analysis%20Tool%20v2.2.pdf

Appendix 2

ORIGO Stepping Stones Texas Annual Implementation Plan Template

ORIGO Stepping Stones Annual Implementation Plan:	[Insert Team Name]
School Year:	[Insert School Year Here]

Vision

Describe what a successful implementation of *Stepping Stones* in your district or school would look like.

[Insert your vision here]

Implementation Team Members

Roles	Names
[Insert roles here]	[Insert your team members' names here]

DIT Meeting Schedule: (dates, times, location)	Implementation Goal
[Insert established meeting schedule here]	[Insert annual implementation goal here]

Communication Plan

Who are the different stakeholder groups you will communicate with?	How/What/When will you communicate with them?
[Insert stakeholder groups here]	[Insert details for communication plans for each stakeholder group here]

Training Plan

Date & Time	Content	Audience	Facilitator
[Insert dates & times of trainings here]	[Insert training content here]	[Insert training audience here]	[Insert facilitator for each training here]

Data Collection Plan

Data Source	Implementation Data or Student Outcome Data	Timeline	Person(s) Responsible
[Insert data source here]	[Write "Implementation" or "Student Outcome" data here]	[Insert timeline when you will collect data here]	[Insert person(s) responsible here]

Appendix 3

Stepping Stones Implementation Tool

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STEPPING STONES

COMPREHENSIVE MATHEMATICS

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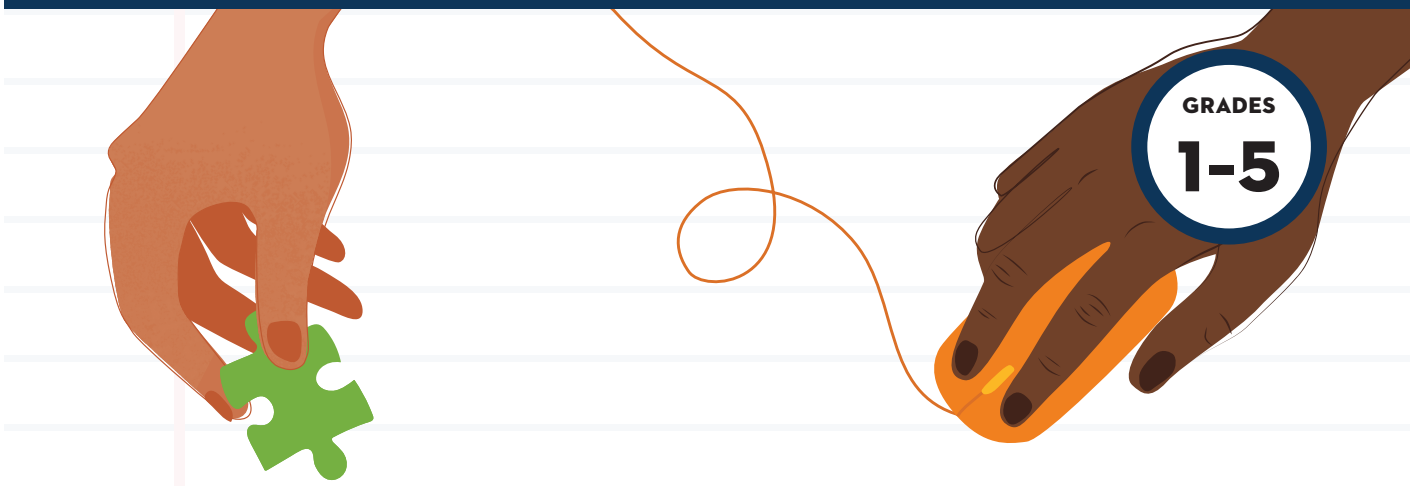

GRADES 1–5

Implementation Tool

ORIGO EDUCATION

STEPPING STONES TEXAS

Implementation Tool

Introduction and purpose

ORIGO Stepping Stones is a comprehensive elementary (K–5) mathematics program that makes learning mathematics meaningful, enjoyable, and accessible for all teachers and their students. *Stepping Stones* makes intentional use of:

- conceptually based instruction;
- language and discourse;
- critical thinking to apply mathematics in context;
- visual representations;
- strategy-based fluency development;
- coherent spaced teaching and practice; and
- the *Stepping Stones* suite of resources

to facilitate effective teaching and engaging learning to cultivate mathematically proficient teachers and students.

The purpose of the *Stepping Stones* Implementation Tool (SSIT) is to provide District and/or School Implementation Teams with an efficient measure of the extent to which school personnel are applying the core elements of the *Stepping Stones* program in classrooms.

This tool is intended to be used over time to guide implementation planning of the *Stepping Stones* program. This tool is not intended to be used to evaluate teacher performance but to inform the actions of District and/or School Implementation Teams.

Intended participants

Members of District and/or School Implementation Teams (see pages 4–6 of the *Stepping Stones Texas Implementation Handbook*) should complete the SSIT.

Administration

Teams complete the SSIT using a sampling of classrooms up to three times each year (fall/winter/spring). The teams use the data collected to set and monitor annual and quarterly implementation goals.

To complete the SSIT, District and/or School Implementation Teams review documents, including student work samples, conduct classroom observations, and interview teachers implementing the *Stepping Stones* program. Teams may use the Interview Protocol (Appendix A) and the Student Journal Review Protocol (Appendix B) to support data collection. Specific *Stepping Stones* resources that support the indicators are listed on the form. Teams use this information to rate each implementation indicator as "Fully in place," "Mostly in place," "Somewhat in place," or "Not yet in place" using a scale of 3, 2, 1, 0. To support the team, Appendix C provides a glossary of terms used in the SSIT.

This tool also provides examples of the types of evidence suggested for rating implementation indicators (for example, observations, lesson plans, teacher interviews). Teams are required to review at least one source of evidence before scoring each implementation indicator. They identify sources of evidence by placing a check mark or circling the types of evidence used for the rating.

Teams should look at aggregate data from across the school for each core component of the program. In this way, teams may identify areas of strength and need, set goals, and develop an action plan to improve implementation.

SSIT use

After the District and/or School Implementation Teams complete the SSIT, they set short-term and long-term goals to improve implementation levels across the district and/or school. Teams can use the action planning form provided in Part III of this guide as a resource when they develop their action plans.

Part I: *Stepping Stones* Implementation Tool

Classroom ID:	
School:	
Grade:	
Date:	
District:	

SSIT team members' names and roles:

Notes:

2

Section A: Curriculum

	Core component	Implementation Indicators	Type(s) of evidence (*check*)	Related *Stepping Stones* resources	Fully in place (3)	Mostly in place (2)	Somewhat in place (1)	Not in place (0)
1	ORIGO model for teaching concepts  CPA approach	**1.1** Understands and applies the concrete-pictorial-symbolic approach to develop conceptual understanding of mathematics.	Observations ☐ Lesson plans ☐ Teacher interviews ☐	Digital Teacher Edition Student Journal Practice Book				
	 Language approach	**1.2** Understands and applies the language stages (student, materials, mathematical) to develop conceptual understanding of mathematics.	Observations ☐ Lesson plans ☐ Teacher interviews ☐	Digital Teacher Edition Practice Book				
2	ORIGO model for teaching skills 	**2.1** Understands and applies the stages of strategy development (introduce, reinforce, practice, and extend) when teaching lessons related to strategy.	Observations ☐ Lesson plans ☐ Student work ☐	Digital Teacher Edition Student Journal Practice Book				

Section A: Curriculum

	Core component	Implementation Indicators	Type(s) of evidence (*check*)	Related *Stepping Stones* resources	Fully in place (3)	Mostly in place (2)	Somewhat in place (1)	Not in place (0)
3	Spaced teaching and practice	3.1 Understands and applies spaced teaching and practice by teaching the modules and lessons in the order outlined in the *Stepping Stones* scope and sequence.	☐ Lesson plans ☐ Teacher interviews ☐ District pacing guides ☐ Review of Student Journal and Practice Book ☐ Observations	Digital Teacher Edition Student Journal Practice Book				
		3.2 Includes ongoing practice during daily instruction.	☐ Review of Student Journal and Practice Book ☐ Observations ☐ Lesson plans ☐ Teacher interviews	Student Journal Practice (playlist) Practice Book Problem solving Investigations Projectable fluency practice				

Notes:

4

Section B: Planning

	Core component	Implementation Indicators	Type(s) of evidence (*check*)	Related *Stepping Stones* resources	Fully in place (3)	Mostly in place (2)	Somewhat in place (1)	Not in place (0)
4	Module planning	**4.1** Teachers plan modules collaboratively.	Observation of planning meetings ☐ Teacher interviews ☐ Meeting notes ☐	Module resources				
		4.2 Uses the supports in the **Mathematics** section to:						
		a. explore the depth and complexity of the standards to understand the module vocabulary and learning targets.	Observation of Planning Meetings ☐ Teacher interviews ☐	*MathEd* Research into practice Coherence Focus Sequence navigator				
		b. review the best practices for teaching the content within the module.	Observation of Planning Meetings ☐ Teacher interviews ☐	*ORIGO ONE* *MathEd* Research into practice ELL supports Vocabulary development				

Section B: Planning

	Core component	Implementation Indicators	Type(s) of evidence (*check*)	Related *Stepping Stones* resources	Fully in place (3)	Mostly in place (2)	Somewhat in place (1)	Not in place (0)
4	Module planning	**4.3** Previews assessments within the module to:						
		a. determine what students need to know and do by the conclusion of the module.	Observation of planning meetings ☐	Module resources				
			Teacher interviews ☐					
		b. select and schedule assessments and plan record-keeping to use throughout the module.	Lesson plans ☐	Assessment recording tools				
			Observation of planning meetings ☐					
			Teacher interviews ☐					
			Assessment calendar ☐					
			Student assessment data ☐					
		4.4 Reviews and intentionally selects ORIGO resources in the More Math section to plan for reasoning, critical thinking and contextual problem solving.	Lesson plans ☐	Investigations Problem solving Cross-curricula tasks				
			Observation of planning meetings ☐					
			Teacher interviews ☐					

Section B: Planning

	Core component	Implementation Indicators	Type(s) of evidence (*check*)	Related *Stepping Stones* resources	Fully in place (3)	Mostly in place (2)	Somewhat in place (1)	Not in place (0)
5	Lesson planning	**5.1** Reads the lesson title and introductory section to focus on the intent of the lesson and specific learning target(s).	Observation of planning meetings ☐ Teacher interviews ☐	Digital Teacher Edition				
		5.2 Reviews the steps of the lesson to plan for lesson delivery.	Observation of planning meetings ☐ Teacher interviews ☐	Digital Teacher Edition				
		5.3 Reviews the support tabs to plan for differentiation.	Observation of planning meetings ☐ Teacher interviews ☐ Lesson plans ☐	Differentiation tab ELL supports Formative assessment				
		5.4 Reviews ongoing practice to plan to implement spaced learning practices.	Observation of planning meetings ☐ Teacher interviews ☐ Lesson plans ☐	Digital Teacher Edition				
		5.5 Completes Step 1 by planning and gathering resources necessary to deliver the lesson.	Observation of planning meetings ☐ Teacher interviews ☐	Digital Teacher Edition				

Notes:

Section C: Instruction

	Core component	Implementation Indicators	Type(s) of evidence (*check*)	Related *Stepping Stones* resources	Fully in place (3)	Mostly in place (2)	Somewhat in place (1)	Not in place (0)
6	Instructional delivery	**6.1** Provides **at least** 60 minutes of continuous mathematics instruction daily.	☐ Master schedules ☐ Teacher interviews ☐ Observations					
		6.2 Communicates the learning target throughout the lesson. Instructional materials are tightly aligned to the learning target.	☐ Observations	Digital Teacher Edition				
		6.3 Uses appropriate mathematics vocabulary throughout the lesson.	☐ Observations	Vocabulary development Digital Teacher Edition *MathEd*				
		6.4 Teaches the full lesson (Steps 2–4) including the use of slides, projectables, and all other recommended resources.	☐ Observations ☐ Lesson plans	Digital Teacher Edition Lesson playlist resources				
		6.5 Poses questions, including but not limited to those included in Steps 2–4, to facilitate student-to-student discourse.	☐ Observations ☐ Lesson plans	Digital Teacher Edition Step In discussion				

Section C: Instruction

	Core component	Implementation Indicators	Type(s) of evidence (*check*)	Related *Stepping Stones* resources	Fully in place (3)	Mostly in place (2)	Somewhat in place (1)	Not in place (0)
6	Instructional delivery	**6.6** Guides students to complete Student Journal sections *Step In* (to summarize the lesson), *Step Up* (to check for individual understanding), and *Step Ahead* (to extend thinking) after Step 3 of the lesson is taught.	☐ Observations ☐ Student Journals	Student Journal				
		6.7 Uses ongoing practice as a part of daily instruction.	☐ Observations ☐ Teacher interviews ☐ Student work	Practice Book pages Fluency practice (Lessons 1, 5, 9) Problem solving or Investigations (Lessons 3, 7, 11)				
		6.8 Provide feedback and differentiate instruction to meet the needs of each learner through the use of formative assessment data.	☐ Observations ☐ Teacher interviews ☐ Lesson plans ☐ Student work	Differentiation tab ELL supports Formative assessment				

Notes:

Section D: Assessment

	Core component	Implementation Indicators	Type(s) of evidence (*check*)	Related *Stepping Stones* resources	Fully in place (3)	Mostly in place (2)	Somewhat in place (1)	Not in place (0)
7	Progress monitoring	**7.1** Tracks student learning over time through systematically collecting and monitoring formative and summative data.	☐ Student assessment data ☐ Teacher data recording tools ☐ Observations ☐ Teacher interviews	Assessment recording tools				
		7.2 Uses formative data to inform module planning, lesson planning, and differentiation.	☐ Observation of planning ☐ Student portfolios ☐ Student assessment data ☐ Student work ☐ Teacher interviews	Pre-tests Observations and discussions Journals and portfolios				
		7.3 Uses multiple and varied summative data sources to evaluate student learning.	☐ Student assessment data ☐ Teacher records ☐ Teacher interviews ☐ Observations ☐ Lesson plans ☐ Assessment calendar	Performance tasks Check-ups Interviews Quarterly tests				

Notes:

Part II: SSIT scoring guide

The SSIT generates scores reflecting the percentage of implementation for each core component of the program. Scores are determined by calculating the percentage of possible points awarded for items in each category of Curriculum, Planning, Instruction, and Assessment.

Category	Items	Points awarded/ possible points	Percentage of *Stepping Stones* implementation
Curriculum	1.1–3.2	/ 15	
Planning	4.1–5.5	/ 33	
Instruction	6.1–6.8	/ 24	
Assessment	7.1–7.3	/ 9	
Total	1.1–7.3	/ 81	

Across time, schools and/or districts monitor progress on *Stepping Stones* implementation by category. Simulated data for a district is depicted in Figure 1. The sample district used the SSIT to assess *Stepping Stones* implementation levels at three different points in time during the first year of implementation, known as the initial implementation stage.

In this example, the District Implementation Team may notice that Assessment has been the lowest category of implementation throughout the initial implementation stage of the *Stepping Stones* program. To improve implementation, the team plans to offer professional development, resources, and additional coaching support related to SSIT indicators 7.1–7.3.

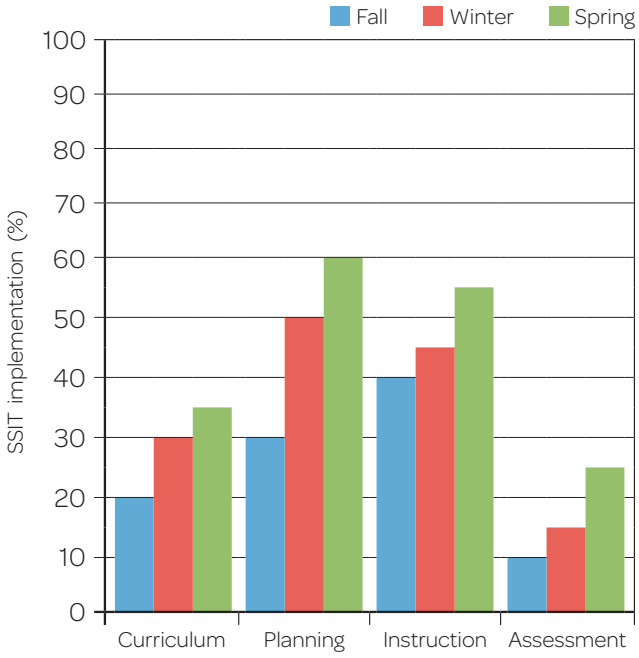

Figure 1. SSIT scores for one district across three administrations during initial implementation

Goal setting

Goal setting is an effective way to keep teams on track and to set districts and schools up for small wins along their implementation journey!

Initial implementation

During the initial implementation stage, teachers are implementing the *Stepping Stones* program for the first time. Teams set specific, measurable, achievable, realistic, and time bound (SMART) annual and quarterly implementation goals for the first year of implementation of the new program. Annual goals are set based on projected levels of implementation. Quarterly goals are set to focus on specific priority areas based on data from the SSIT.

Sample annual implementation goal:

By the end of this school year, 50% of teachers will implement the *Stepping Stones* program at 80% fidelity according to the SSIT.

Sample quarterly implementation goal:

By March 30th, implementation of the Assessment category will increase from 15% to 25% according to the SSIT.

Full implementation

As districts and schools move into the full implementation stage, more teachers are implementing the *Stepping Stones* program as intended. Figure 2 illustrates how the sample district's implementation has improved in year two as they reach full implementation of the *Stepping Stones* program.

Sample annual implementation goal:

By the end of this school year, 75% of teachers will implement the *Stepping Stones* program at 85% fidelity according to the SSIT.

Sample quarterly implementation goal:

By November 30th, implementation of the Curriculum category will increase from 20% to 50% according to the SSIT.

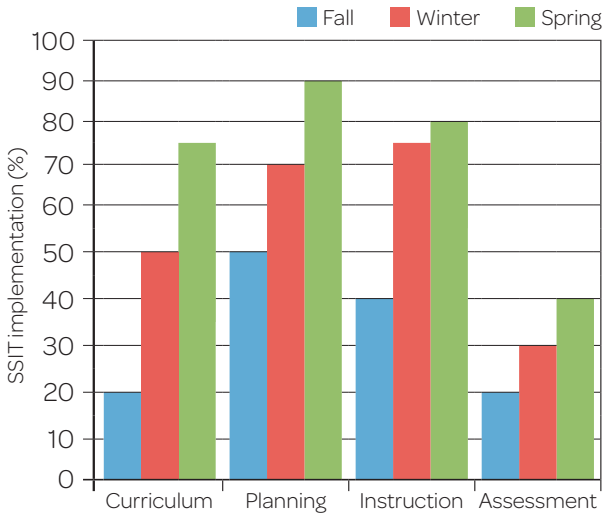

Figure 2. SSIT scores for one district across three administrations during full implementation

SSIT action planning

The SSIT is the basis for action planning. It is designed to facilitate the decision-making of District and/or School Implementation Teams as they identify (a) which categories will be the focus of implementation efforts for the coming quarter or year, known as the priority area(s), and (b) what the specific actions will be, who will lead in completing the action, when the teams expect each action to be completed, and a list of resources needed to complete the actions.

Part III: SSIT action planning form

School system:			School:
Grade level(s):			Date:
Category	Implementation (%)	Priority area rank #1–4	Notes
Curriculum			
Planning			
Instruction			
Assessment			
Total			

Patterns and trends
Directions: As you analyze the SSIT data with your implementation team, identify any patterns or trends that you notice. Consider examining the data by grade level, by indicators, and/or trends over time. Make a bulleted list of any patterns and/or trends in the space provided.
Annual implementation goal:
Quarterly implementation goal:

Directions: When the priority categories have been determined, teams should identify specific indicators of focus to develop an action plan.

Indicator(s) of focus	Actions	Who	When	Resources needed

Appendix A: Interview protocol

The purpose of this document is to provide a list of sample interview questions that can be used to obtain evidence to inform the ratings of the *Stepping Stones* Implementation Tool (SSIT) indicators. Interviewers may decide to ask additional questions based on the responses of the interviewees to prompt more information, if needed.

SSIT Indicator	Interview Question(s) to Elicit Evidence
Curriculum	
1.1	Explain the approach you use to develop conceptual understanding in your math class. How do you use the concrete-pictorial-symbolic model in your instruction?
1.2	How do you use the language stages to develop conceptual understanding of mathematics?
2.1	Explain the stages of strategy development that you use in math instruction?
3.1	How closely do you follow *ORIGO Stepping Stones* scope and sequence? How do you decide the order of the lessons that you teach?
3.2	How often do you use Ongoing Practice? How do you incorporate spaced learning and practice in your instruction?
Planning – Module	
4.1	Do you plan mathematics collaboratively with your team? If so, how often? Who is involved?
4.2a	When planning for the next module, which *Stepping Stones* resources do you explore to understand the standards and learning targets you will be teaching?
4.2b	When planning for a *Stepping Stones* module, which resources do you review to understand and use best practices in your teaching?
4.3a	When planning a module, how do you determine what your students need to know and be able to do by the end of the module? How often do you preview assessments?
4.3b	How do you select and schedule the assessments for each module? How far in advance do you schedule assessments when planning for the module? What tools do you use to record assessment data?
4.4	When planning a module, which *Stepping Stones* resources do you plan to use? How often do you plan for using the Investigations, Problem solving, or Cross-curricula tasks?

Appendix A: Interview protocol

SSIT Indicator	Interview Question(s) to Elicit Evidence
Planning – Lesson	
5.1	When planning a *Stepping Stones* lesson, how do you determine the intent of the lesson?
5.2	What is your process for reviewing the lesson to plan for delivery?
5.3	When planning a *Stepping Stones* lesson, which resources do you review to plan for differentiation?
5.4	How do you plan for including ongoing practice in your daily instruction?
5.5	After you develop your plan, what is your process for preparing for instruction? How far in advance do you gather resources?
Instructional Delivery These indicators are best rated through direct observation, but these questions may be used as supplemental information to support a rating.	
6.1	How many continuous minutes of math are your students receiving on a daily basis?
6.2	How do you know the intent of the lesson that you are teaching? How do you communicate the intent of the lesson to your students? At which point/s during the lesson do you communicate the intent? How do you align your instructional materials to the learning target?
6.3	How do you ensure that you are using appropriate math vocabulary during instruction?
6.4	How closely do you follow all of the lesson steps outlined in the plan and use all of the projectable resources during a *Stepping Stones* Lesson? If you don't, why do you deviate from the resources?
6.5	How do you encourage student discourse during instruction? How often do you use the questions provided in the teacher notes?
6.6	How do you use the Student Journal? Do you use all of the parts of the Student Journal? Why/why not?
6.7	How often do you use the Practice Book? How often do you use the projectable Fluency Practice? How often do you use Problem solving or Investigations?
6.8	What kind of feedback do your students receive during instruction? How do you use your observations during instruction to inform your differentiation? How do you use the differentiation resources for small group instruction?

Appendix A: Interview protocol

SSIT Indicator	Interview Question(s) to Elicit Evidence
Assessment	
7.1	How do you record and monitor your students' assessment data?
7.2	What formative data do you collect? How does the data inform your instruction?
7.3	Which assessment resources do you use to collect summative data to evaluate your students' learning? Which *Stepping Stones* assessments, such as Performance Tasks, Check-ups, Interviews, and Quarterly Tests, do you use? How often?

Appendix B: Student Journal and Practice Book review protocol

Introduction and Overview

The purpose of this document is to provide guidance for staff involved in the Stepping Stones Implementation Tool (SSIT) collection of data from a review of Student Journals and Practice Books. The Student Journal and Practice Book can provide valuable information about the level of implementation of the *Stepping Stones* program across a classroom, grade level, or school. The Student Journal and Practice Book review protocol is a method for collecting implementation data to measure the level of indicators on the SSIT. The following indicators can be measured through the review of Student Journals and Practice Books:

- 3.1: Understands and applies spaced teaching and practice by teaching the modules and lessons in the order outlined in the *Stepping Stones* scope and sequence.
- 3.2: Includes ongoing practice during daily instruction.
- 6.4 Teaches the full lesson (Steps 2–4), including the use of slides, projectables, and all other recommended resources.
- 6.6: Guides students to complete the following sections in the Student Journal: Step In (to summarize the lesson); Step Up (to check for individual understanding); and Step Ahead (to extend thinking) after Step 3 of the lesson has been taught.

Journal reviewers should keep in mind that if portions of the journal are not completed, it does not mean that these practices are not being done. Teachers may be using manipulatives or other hands-on materials or activities to review these concepts. Reviewers should use teacher interviews or observations for information before making a final determination on the indicator ratings. The Student Journal and Practice Book review is one source of evidence to inform the ratings.

Appendix B: Student Journal and Practice Book review protocol

Part I: Student Journal and Practice Book review protocol

Step 1: Sample size

The first step to prepare for the Student Journal and Practice Book review is to decide the sample size. This can affect the reliability of the data, because the larger the sample size, the more reliable the data. Depending on the capacity of the staff and the time available, there is a set of sample sizes that the team may decide on. Examples of sample sizes to consider include:

- 3–5 journals and Practice Books per classroom across all implementing grade levels.
- 5–10 journals and Practice Books from one classroom per grade level.
- All journals and Practice Books from targeted grades, for example, all Grade 2 journals and Practice Books.
- All journals and Practice Books from all students in all implementing grade levels.

Step 2: Data collection sheet

Add the following information to each data collection sheet (see Part II) for each classroom sample:

- School name
- Reviewer's name
- Date
- Grade level
- Classroom identifier (if applicable).

Step 3: Review Student Journals

Reviewers should go through the pages of each student journal in the sample to check for completion of the parts of the lesson (Step In, Step Up, and Step Ahead). Remember that the Step In may or may not be completed based on the direction of the classroom teacher. For example, when some teachers use the projectable discussion provided for the Step In, they ask students to keep their journals closed. This means they are not distracted from the lesson or tempted to go ahead. The primary sections to review and document are Step Up and Step Ahead. Reviewers also need to review the Practice Book to document ongoing practice.

The following provides the scoring based on the completion of the pages within the Step Up, Step Ahead, and Practice Book:

3 points: >80%

2 points: 50–79%

1 point: 25–49%

0 points: <49%

Appendix B: Classroom Student Journal and Practice Book Review Sheet (Form A)

Part II: Data collection forms

The following forms are examples of different methods for organizing the Student Journal data to be analyzed. The reviewer can use the Classroom Student Journal Review Sheet (Form A) to collect individual journal data during the initial collection. Individual data from classrooms can be summarized using the Grade Level Summary Sheet (Form B). The Grade Level Summary by Student Groups Sheet (Form C) allows this information to be further analyzed by student groups. This data should be shared with implementation team to inform the SSIT ratings.

The following scale provides the scoring:

3 points: >80%

2 points: 50–79%

1 point: 25–49%

0 points: <49%

Journal and Practice Book #	Step Up	Step Ahead	Ongoing Practice

Appendix B: Grade Level Summary Sheet (Form B)

Grade level	Total number of journals and Practice Books reviewed	Step Up (%)	Step Ahead (%)	Ongoing Practice (%)
1				
2				
3				
4				
5				
6				

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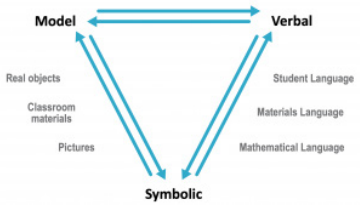
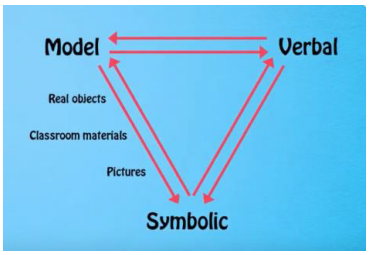
Appendix B: Grade Level Summary by Student Groups (Form C)

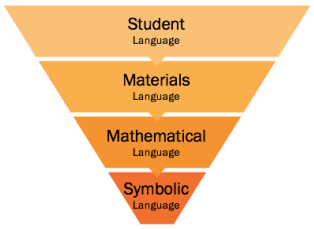
Grade level	Total number of journals reviewed	Special Education students (#)^			Tier 1 (#)			Tier 2 (#)			Tier 3 (#)		
		Step Up	Step Ahead	Practice Book	Step Up	Step Ahead	Practice Book	Step Up	Step Ahead	Practice Book	Step Up	Step Ahead	Practice Book

^Insert the number of students.

Appendix C: Glossary of Terms

Term	Description
ORIGO model for teaching concepts 	*ORIGO Stepping Stones* introduces symbols gradually and after students have had many meaningful experiences with models, including real objects, classroom materials, and 2D pictures, as shown on the left side of the diagram. Symbols are also abstract representations of spoken words, so students move through distinct language stages as depicted on the right side of the diagram. Additional Resource: https://youtu.be/pyZ0sO5W_XE
Concrete-pictorial-symbolic approach 	The concrete-pictorial-symbolic approach that *ORIGO* promotes is shown on the left side of the model above. *ORIGO Stepping Stones* introduces symbols gradually, after students have had many meaningful experiences with models, including real objects, classroom materials, and 2D pictures. Additional Resource: https://youtu.be/pyZ0sO5W_XE

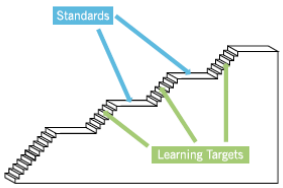
Appendix C: Glossary of Terms

Term	Description
Language stages 	Language is essential in helping students build an understanding of mathematical concepts. There are four stages of language development, and each is crucial to the development of deep understanding. The stages shown on the right side of the ORIGO model for teaching concepts and are detailed below. Student language In the first stage, the program is designed to leverage students' existing natural language to describe concepts. For example, students may use the words *eat*, *break*, *jump away*, *swim away*, or *spend* to describe situations involving subtraction. Teachers should use real-world stories and illustrations to encourage the use of this rich and meaningful language to help students build connections between their existing ideas and new concepts. Materials language In the second stage, the students' language broadens as they begin to act out stories and problems using classroom resources. This stage includes language that is exclusive to the resources being used. For example, new language such as *cover up* or *take away* may be introduced when using concrete, hands-on resources to act out subtraction stories. Similarly, if pictures are being used, the students may say *cross out* or *erase* in the context of subtraction. Mathematical language In the third stage, students begin to exhibit mathematical precision in their language. For example, in the context of subtraction, students will use the term *subtract*. In reference to two-dimensional shapes, they will start to say *vertex* to describe what they may have once called a pointy corner. At this stage, the language is often considered to be unique to mathematics. Symbolic language In the final stage, students are introduced to the symbols or notation of that concept. With subtraction, they learn that the subtraction symbol is an abbreviation for all the language used in the previous stages. It is important to note that students do not simply move through the stages. Rather, they begin by using their own natural language, then as the stories are acted out in the classroom, students add to their language and mental picture of the concept. More mathematical and, eventually, symbolic language is added to build a more comprehensive understanding of the concept. **Additional Resource:** https://youtu.be/6dmcQ1Z1FPo

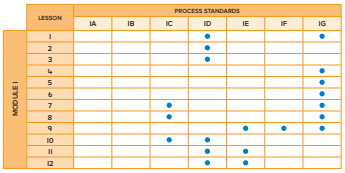
Appendix C: Glossary of Terms

Term	Description
ORIGO model for teaching skills 	ORIGO believes that students acquire skills over time as they engage in four distinctly different types of activities. Introducing In the first stage, students are introduced to the skill using contextual situations, concrete materials, and pictorial representations to help them make sense of the mathematics. Reinforcing In the second stage, the concept or skill is reinforced through activities or games. This stage provides the opportunity for students to understand the concepts and skills as it connects the concrete and pictorial models of the introductory stage to the abstract symbols of the practice stage. Practicing When students are confident with a concept or skill, they move to the third stage where visual models are no longer used. This stage develops accuracy and speed of recall. Written and oral activities are used to practice the skill to develop fluency. Extending As the name suggests, the fourth stage sees students extend their understanding of the concept or skill. For example, the use-tens thinking strategy for multiplication can be extended beyond the number fact range to include computation with greater whole numbers and eventually to decimal fractions. **Additional Resource:** https://youtu.be/UE0iaY5XMKk
Stages of strategy development 	The stages of strategy development are Introduce, Reinforce, Practice, and Extend, and are described above. **Additional Resource:** https://youtu.be/UE0iaY5XMKk

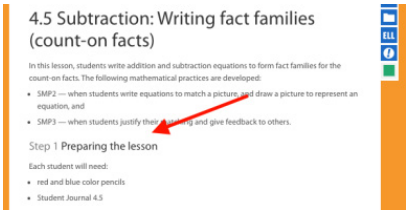
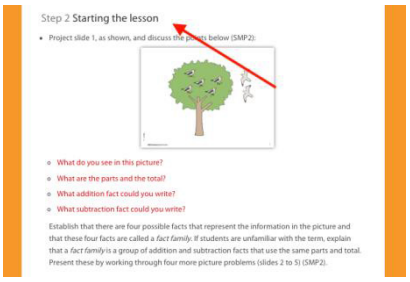
Appendix C: Glossary of Terms

Term	Description
Spaced teaching and practice	The scope and sequence of learning experiences within *Stepping Stones* have been carefully designed to promote deep understanding of mathematical concepts and fluency of skills. Mathematics contains many concepts and skills that are closely interconnected. In *Stepping Stones*, the key ideas and skills within these topics have been identified and placed in smaller blocks to be learned over time. In the lessons, work is included to help students fully comprehend what is being taught alongside the other content development. Consequently, when students come to a new topic, it can be easily connected to previous work. Each of these learning experiences builds on what has been learned previously. It is during the interim, between the experiences, that students are engaged in appropriate practice to maintain concepts and skills. Because of this spaced learning approach, and the opportunity for practice in between, students exhibit better preparation and retention. This means they are better prepared to build on a topic when it is revisited. **Additional Resources:** https://youtu.be/d2l1JVQfkk https://www.origoeducation.com/research-and-case-studies/
Learning target(s) 	Standards are markers for student learning at the end of a given school year. During that time, assessment of more specific learning targets ensures students are progressing as required. Each lesson in *Stepping Stones* includes specific standards-driven learning targets to help teachers monitor how students are progressing toward the standard. The left-hand side of that continuum is where early learning takes place. As students progress in their development, they will move up and to the right on that continuum, as shown on the staircase illustration. **Additional Resource:** https://www.origoslate.com/html5/35109 **Note:** A Slate login is required.

Appendix C: Glossary of Terms

Term	Description
Process standards 	The process standards describe the actions and *habits of mind* that mathematicallyproficient students develop over time. These habits of mind are experienced, practiced, and enhanced as a result of working on meaningful problems. The process standards are: (1A) Apply mathematics to everyday life (1B) Use a problem-solving model (1C) Select tools and techniques to solve problems (1D) Communicate ideas (1E) Create and use representations (1F) Analyze relationships (1G) Explain ideas and justify arguments Within the Mathematics tab for each module in each grade level, there is a chart that indicates the process standards addressed in each lesson of that particular module.

Appendix C: Glossary of Terms

Term	Description
Digital Teacher Edition 	The Digital Teacher Edition is delivered online to give teachers one central location to access all their lesson plans, student activity pages, and teaching tools. The Digital Teacher Edition gives instant access to all content for Grades K–5. One of the great benefits of a digital delivery platform is the ease with which *ORIGO Education* can immediately update content, offer updates, and/or provide enhancements.
Lesson Step 1: Preparing the lesson 	Step 1 lists the materials needed to teach the lesson.
Lesson Step 2: Starting the lesson 	Step 2 launches the lesson with the context of previous learning and appropriate questions to spark classroom discussion. This step often provides an activity that is appropriate for a number sense routine or number talk.

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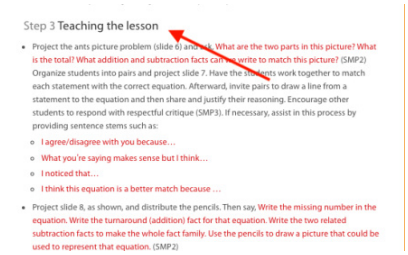
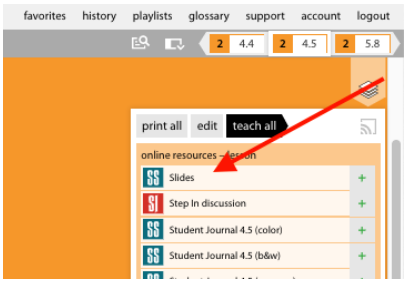
Term	Description
Lesson Step 3: Teaching the lesson 	Step 3 builds conceptual understanding through language-rich learning, visual representations, and engaging student-centered activities.
Step In discussion 	This step is in the last bullet of Step 3 in each lesson for Grades 1–5. It provides discussion points to summarize the lesson as students transition to individual practice. The projectable Step In discussion can be found under the Resources tab in the Digital Teacher Edition. Each point or question can be revealed and discussed with the class, one step at a time.
Lesson Step 4: Reflecting on the work	Step 4 consolidates student understanding and practice with intentional closure conversations.

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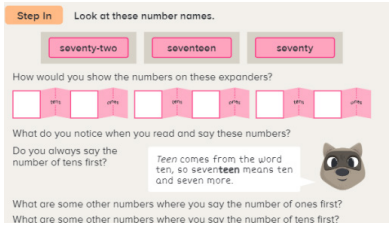
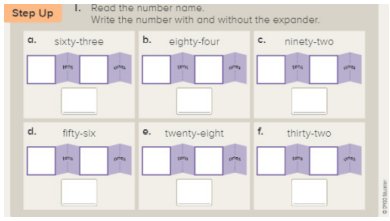
Term	Description
Student Journal 	Each lesson in *ORIGO Stepping Stones* Grade K is accompanied by one or two student journal pages. The pages for kindergarten students are perforated and printed on one side only. This provides a range of hands-on experiences that require students to cut out, arrange, and paste images. In Grades 1–5, there are two pages for each lesson. The parts of each journal are defined below.
Student Journal: Step in 	The Step In provides teachers with guided discussion points to summarize the lesson. When the lesson is complete, it becomes a record of learning that students can access when they need help with future lessons.
Student Journal: Step Up 	The Step Up provides work for students to complete independently or with guidance, based on the discussion generated in the Step In. When completed independently, the Step Up can provide a check for understanding, or an exit ticket to inform future instruction.
Practice Book 	In Kindergarten, every lesson has one or two ongoing practice pages that provide essential practice of skills such as the writing of numbers. In the later modules, these pages also provide practice for number facts. In Grades 1–5, *Stepping Stones* provides one practice page for Lessons 2, 4, 6, 8, 10, and 12 to help students maintain previously learned concepts and skills. These pages contain questions that revisit content from three previous modules or lessons. Question 1 usually comes from a previous module of work. Early in the school year, this content relates to the previous year's work. Question 2 comes from the previous module and Question 3 comes from the current module. For Lessons 3, 7, and 11, the ongoing practice provides written reinforcement and practice of mental computation strategies the students have been learning.

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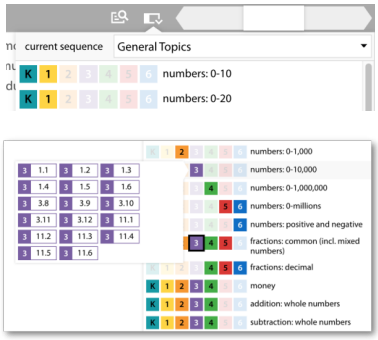
Term	Description
MathEd 	*ORIGO MathEd* is a library of professional learning videos for contemporary Grades K–5 math methods, presented by respected mathematics educators. Hosted by James Burnett, these dynamic sessions provide practical skills to help develop deep understanding of mathematics concepts. Short videos are embedded at the start of modules to assist teachers acquire the content and pedagogical knowledge they need to be effective. Easy-to-follow facilitator notes accompany each *ORIGO MathEd* session. These notes can be used to help plan and present professional learning activities for groups of teachers.
Coherence: **Sequence navigator** 	ORIGO Education believes that content taught conceptually, in a logical, learner-friendly sequence develops deep understanding and success. A coherent curriculum is a part of this method of sequencing content and is demonstrated in *Stepping Stones* lessons in a number of ways. Coherence occurs when students make connections from lesson to lesson, across math topics, and from grade to grade, so that each learning target is an extension of previous learning. *Stepping Stones* lessons are designed to ensure these connections. The Sequence navigator is found in a dropdown tab in the Digital Teacher Edition. It provides quick access to mathematical topics, making it easy for teachers to jump forward and back to provide coherent instruction for students, no matter what their level of understanding.

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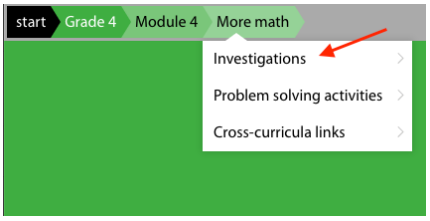
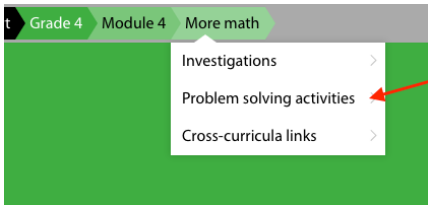
Term	Description
Investigations 	Each module in *ORIGO Stepping Stones* Grades 1– 5 includes three micro investigations. These give the students the opportunity to apply the mathematics they have learned. These activities are open-ended in nature and often require the students to collect, represent, and analyze data.
Problem solving 	Each module in *ORIGO Stepping Stones* Grades 1–5 has at least three problem-solving activities. Teachers can use these when they deem appropriate.

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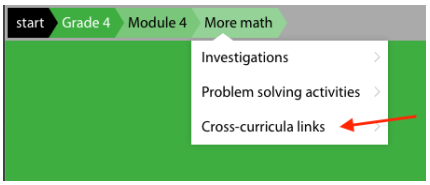
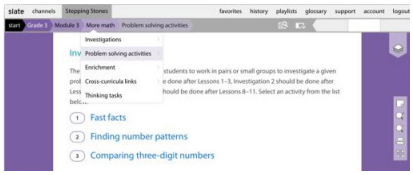
Term	Description
Cross-curricula tasks 	The mathematics of each module can often be used or explored further in other key curriculum areas such as science, history, or English. Therefore, cross-curricula activities are suggested for each module of the *ORIGO Stepping Stones* program.
Application (More math) 	In Grades 1–5, students can apply their knowledge of the concepts and skills by engaging in the investigations, problem solving, enrichment, and cross curricula links activities provided for each module.

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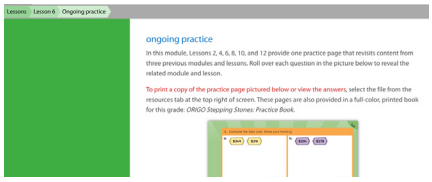
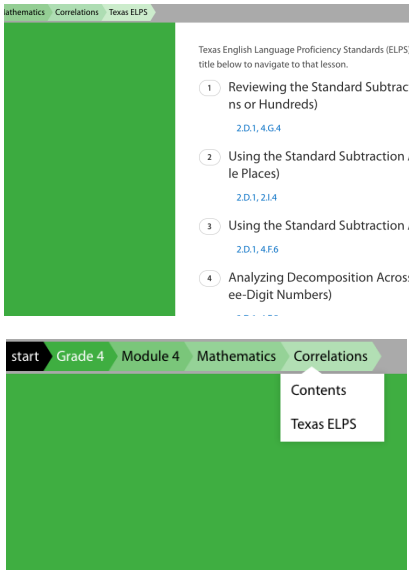
Term	Description
Ongoing Practice 	Ongoing practice is an essential element of the scope and sequence of *Stepping Stones*. It is an integral part of the learning experiences students need to meet the expected standards by the end of the school year. Opportunities for practice are provided after every lesson. In Kindergarten, daily practice opportunities are provided in the Practice Book. A projectable tool in Lessons 1, 3, and 5 of each module provides additional practice. These are found under the Resources tab. In Grades 1–5, Lessons 1, 5, and 9 provide a projectable practice tool under the Resources tab. The even numbered lessons in Grades 1–5 include additional pages for maintaining concepts and skills. These pages offer practice opportunities for previously learned concepts and skills, as well as activities to prepare for an upcoming module. These pages can be found under the Ongoing Practice tab in the digital teacher guide as well as in the Practice Book.
ELL supports 	The *Stepping Stones* program provides a language-rich curriculum where English Language Learners (ELL) can acquire mathematics in a natural second-language progression by listening, speaking, reading, and writing. Each lesson includes accommodations to be aware of when teaching the lesson to ensure scaffolding of content, and misconceptions of language are addressed. Since there may be several stages of language development in your classroom, you will need to use your professional judgement to select which accommodations are best suited to each learner. ELL advice is provided for each lesson in the Digital Teacher Edition. Find these supports by hovering over the ELL icon. In addition, the suggestions inside the lessons reference the ELPS (English Language Proficiency Standards).

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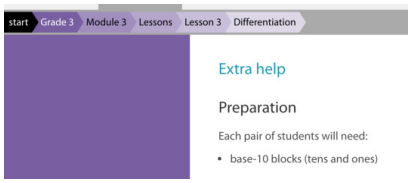
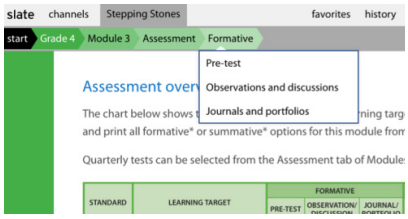
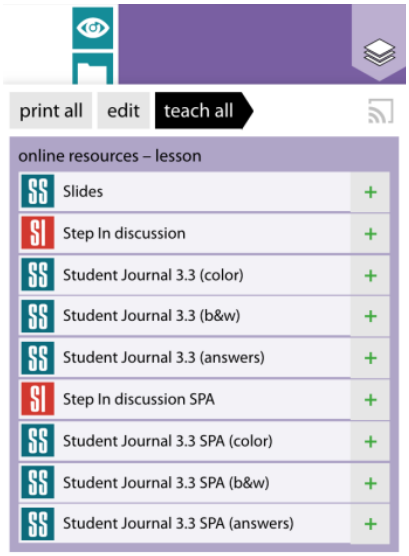
Term	Description
Differentiation tab 	Each lesson in the *ORIGO Stepping Stones* program also includes differentiation activities up to three levels: Extra Help, Extra Practice, and Extra Challenge.
Formative assessment 	Formative assessment is used to make informed decisions to guide instruction. These decisions could range from reviewing content, reteaching concepts, or providing additional work for students who require extra assistance or challenges. Formative assessment can occur informally during lessons with observations of students working and their discourse, or formally with written instruments such as pre-tests or journal entries..
Resources tab: Lesson playlist 	The Resources tab is found on each page of the Digital Teacher Edition. When additional resources are needed for a lesson or activity, they can be found by clicking on the Resources tab, which also provides links to digital resources specifically designed to support the lesson.

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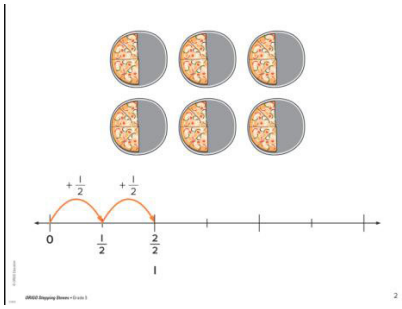
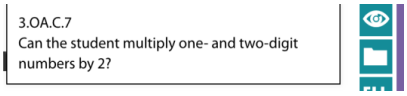
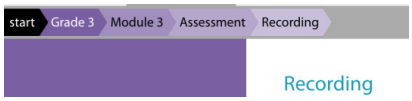
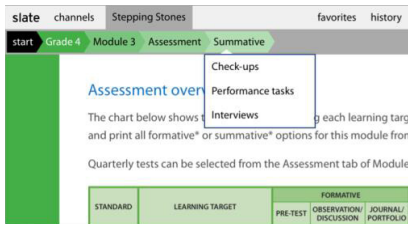
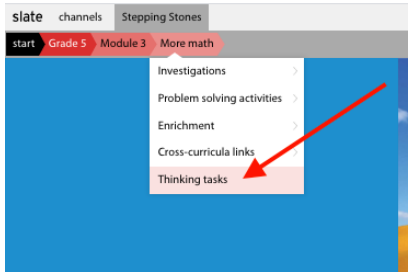
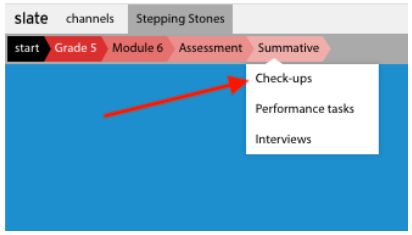
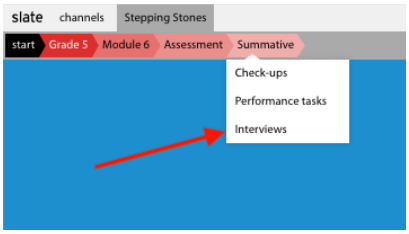
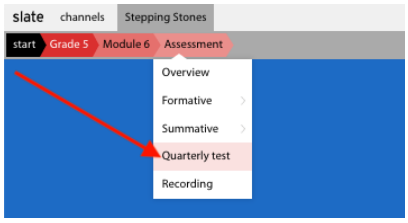
Term	Description
Projectables 	Instead of drawing images or writing problems on the board, the Digital Teacher Edition includes projectable resources, embedded where they are needed. A wide variety of projectables can be found under the Resources tab for each lesson, as well as in other areas such as Differentiation and More math.
Journals and portfolios 	Lessons and activities help to identify learning, as is evidenced by work samples or through observing discussions or other student behavior. Two icons within lessons offer suggestions for assessing formatively through journals and portfolios. The eye-shaped icon has a suggestion for observation, while the folder icon provides suggestions for portfolio assessment. Ideas for journals and portfolios can also be found under the Assessment tab for each module.

Appendix C: Glossary of Terms

Term	Description
Print assessment reporting tools 	*Stepping Stones* provides nine options for recording student progress in each module. There is also a downloadable tool to record student progress by standard over the course of a year.
Summative assessment 	Summative assessment generally takes place at planned intervals after instruction. It is used to sum up what students know. Used wisely, summative assessments can also serve a formative role and help guide instruction. Formal *ORIGO Stepping Stones* print summative assessments include check-ups, performance tasks, and interviews.
Performance tasks 	These tasks offer a deeper measure of understanding of one or two learning targets in Grades 1–5.
Check-ups 	These provide questions that require the student to select the correct answer, or to write a short response. These assessments can be used to determine what the student has retained from a lesson, and will usually parallel the pre-test.

Appendix C: Glossary of Terms

Term	Description
Interviews 	Interviews are used to assess a student's understanding of certain concepts and skills, such as the fluency of rote counting, or mental computation, which are more difficult to assess solely from paper-and-pencil methods.
Quarterly tests 	Quarterly tests are provided with modules 3, 6, 9, and 12. They assess key learning targets taught in the three modules of that quarter. The information can show how well students are maintaining concepts and skills.

Appendix 4

Stepping Stones Core Four Tool

Stepping Stones Core Four Tool

The *Stepping Stones* Core Four (SSCF) tool is designed to help an observer understand the extent to which school personnel are applying the core elements of the *Stepping Stones* program in classrooms during brief classroom walkthroughs. Using this tool, observers gather data on the Core Four: components of the *Stepping Stones* program that are *look-fors*. Observers then give educators feedback and identify and summarize needs for professional development to improve the implementation of the *Stepping Stones* program. This tool is not intended to be used to evaluate teacher performance.

Administration

Administrators and coaches assess program implementation during 15–30 minute classroom observations. Before observers conduct a walkthrough using the SSCF tool, they should review the lesson plan for the *Stepping Stones* lesson they will be observing. They may also consider a pre-conference with the teacher to better understand the lesson. During the classroom walkthrough, observers use the SSCF tool to identify specific components of the *Stepping Stones* program in use. After the observation, and before making the final rating, observers post-conference with the teacher to ask any clarifying questions and inquire about any of the Core Four Look-fors they did not observe during the lesson.

Scoring

Each Look-for is scored on a rating scale giving a total of 12 possible points per classroom observation.

0 NO EVIDENCE	**1** INITIAL EVIDENCE	**2** SOME EVIDENCE	**3** STRONG EVIDENCE	**N/A** CANNOT BE DETERMINED
This Look-for is not in place and teacher responses do not indicate this Look-for occurs with any degree of fidelity.	Conversations with teachers or observations of the classroom show initial evidence that this Look-for is occurring irregularly.	Some evidence of this Look-for was observed during the classroom walkthrough. Teacher responses indicate this Look-for occurs with some degree of frequency.	Strong evidence observed indicates this Look-for is in place. Teacher responses indicate this Look-for occurs frequently and is routinely practiced in the classroom.	Look-fors may be in place, but this could not be determine during the classroom walkthrough.

School and/or District Implementation Teams use the aggregate scores from the SSCF tool across a sampling of classrooms to monitor progress on the implementation of *Stepping Stones*. (See the *Stepping Stones Implementation Handbook* pages 13–14 for additional information about how to use this data.) The SSCF tool generates scores reflecting the implementation percentage for each of the Core Four Look-fors of the program. For example, from the SSCF data an administrator or coach may notice that a grade-level team is scoring mostly zeros on Look-for 3 – Poses purposeful questions. They will then plan professional learning or coaching support to address this need.

Stepping Stones Core Four Tool

Observer name:		Date:		Overall comments:	Total score: /12
Classroom:		*Stepping Stones* lesson:			

Time into the lesson: beginning middle end

Teaches full lesson

Look-for 1: Teaches the full lesson (Steps 2–4). Uses all recommended resources, as described in Step 1.

Look-fors (check those you observe):

- ☐ Learning target communicated to students
- ☐ Opening number sense activity (Step 2)
- ☐ Main lesson (Step 3)
- ☐ Lesson slides (if applicable)
- ☐ Supporting resources (*ORIGO Big Books*, *The Number Case*, *Flare* tools, etc.)
- ☐ Reflection (Step 4)

Notes:

Score: 0 1 2 3 N/A

Uses Student Journal

Look-for 2: Uses all elements in the Student Journal.and Practice Book (Browse Student Journals if students are not working in them during the observation.)

Look-fors (check those you observe):

- ☐ Step In (closing main lesson)
- ☐ Step Up (assess student understanding)
- ☐ Step Ahead (extend and prepare for what's next)
- ☐ Ongoing Practice

Notes:

Score: 0 1 2 3 N/A

Stepping Stones Core Four Tool

Poses purposeful questions

Look-for 3: Poses purposeful questions, such as those included in Steps 2–4, to facilitate student-to-student discourse about the mathematics of the lesson. (List questions/vocabulary you hear.)

Look-fors (listen for and reflect upon)::

- ☐ Teacher talk
- ☐ Questions
- ☐ Student talk
- ☐ Mathematical vocabulary

Teacher-focused talk ⟷ **Student-focused talk**

Talk is primarily teacher to student, little to no student talk	Student talk is directed toward the teacher	Mix of student-to-student talk and student-to-teacher talk	Primarily student-to-student talk

Questions/vocabulary:

Notes:

Score:	0	1	2	3	N/A

Provides targeted instruction

Look-for 4: Uses formative assessment data to provide feedback and differentiate instruction to meet the needs of each learner.

Look-fors (check those you observe):

- ☐ Differentiation activities
- ☐ Ongoing Practice
- ☐ ELL strategies, where appropriate

Notes:

Score:	0	1	2	3	N/A

Appendix 5

Planning for full implementation: A guide for district and school implementation teams

ORIGO Stepping Stones
District Implementation Team
Planning for Full Implementation Guide

Directions: The District and School Implementation Teams should use this guide to reflect on their successes and challenges during initial implementation in order to plan for full implementation. Teams should reflect on each key feature of effective implementation by responding to guiding questions. Teams may make notes or use this as a discussion tool to facilitate planning.

District/school	[Insert district/school name here]
Date	[Insert today's date here]
Implementation Team Members	[Insert team members' names here]

Implementation Teams

Reflect	
How well did your implementation team work together this year to support *Stepping Stones* implementation on a scale of 1-5? Why? Did you meet on a regular basis? Were your meetings valuable?	Notes:
Plan	
Will the team remain the same or change next school year? What changes can you make to improve team functioning for the following school year?	Notes:

Implementation Drivers

a. Competency

Reflect	
What training and coaching did you provide? Was the training and coaching effective? How do you know?	Notes:
Plan	
What training and coaching supports do the current *Stepping Stones* users need during next school year? How will new staff learn how to use the program?	Notes:

b. Organization

Reflect	
How do you provide support to the school implementation teams? Has the work environment been adjusted at the school level (e.g. scheduling, materials, time) to support the use of *Stepping Stones*? Does your team use data to drive decision making?	Notes:
Plan	
What support will you provide to school implementation teams and teachers next school year as you move into full implementation? What adjustments will need to be made related to the work environment at the school level for teachers to effectively use *Stepping Stones* as intended (e.g. scheduling, materials, time)?	Notes:

c. Leadership

Reflect	
How are challenges and barriers identified, collected, addressed and managed?	Notes:

Plan	
How will your team plan to identify, address, and manage challenges and barriers as you move to full implementation?	Notes:

d. Fidelity

Reflect	
How do you know that the program is being used as intended? What data has been collected to measure implementation (e.g. SSIT, SSCF tool, surveys, and comfort scales)?	Notes:
Plan	
Next school year, what data will be collected to measure *Stepping Stones* implementation? How often will you collect and analyze implementation data?	Notes:

e. Reliable benefits/consistent use

Reflect	
How many students are benefitting from the *Stepping Stones* program? What data tell you they are benefitting?	Notes:
Plan	
Next school year, what data will you collect to determine if students are benefitting from *Stepping Stones*? How often will you collect and analyze it?	Notes:

Implementation Stages Reflection: Where Are We?

Stage Related Activities for: **Exploration** & **Installation**	In Place (2)	Initiated or Partially In Place (1)	Not Yet In Place (0)	Notes
1. Form implementation team or repurpose or expand a current group				
2. Select "first practitioners" (e.g. schools, teachers, *Stepping Stones* lead)				
3. Training of first cohort of implementers				
4. Develop training, coaching, and support plans for teachers				
5. Establish communication links to report barriers to District Implementation Team				
Total	[Insert total # points here]			

Plan
What might we do to further strengthen our Exploration and Installation process? Are there activities that we need to revisit? What are the "right next steps" to engage or revisit Exploration ad Installation activities?

Stage Related Activities for: Initial Implementation _____School Year	In Place (2)	Initiated or Partially In Place (1)	Not Yet In Place (0)	Notes
1. Implementation team meets regularly (at least once per month) to discuss *Stepping Stones* implementation				
2. Implementation data is collected at least twice per year using the SSIT. Data is used to plan professional development and coaching supports				
3. Communication protocols developed and implemented to communicate with stakeholders and identify implementation barriers				
4. Ongoing training and coaching of first cohort of implementers				

Plan
What might we do to further strengthen our Initial Implementation? Are there activities that we need to revisit? What are the "right next steps" to engage or revisit Initial Implementation activities?

Planning for Full Implementation	
What data do you need to collect before the end of this school year related to student benefits and *Stepping Stones* implementation to inform planning for full implementation?	Notes:

Planning for Full Implementation	
What data do you need to collect before the end of this school year related to student benefits and *Stepping Stones* implementation to inform planning for full implementation?	Notes:
What activities will take place in this spring/summer to prepare for full implementation?	Notes:
What adjustments need to be made to your implementation plan?	Notes:
Are you ready/able to "scale-up" to other schools, grade levels, teachers, etc.?	Notes:
According to implementation data, what are the areas of strength and weakness in the implementation of the *Stepping Stones* program? How will you use this data to plan for full implementation?	Notes:
Additional Notes:	

Resources and References

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