Welcome participants to the training on Screening. Throughout this module the notes will be formatted in the following way

“Text formatted in standard font is intended to be read aloud by the facilitator.
Text formatted in bold is excerpted directly from the presentation slides.
Text formatted in italics is intended as directions or notes for the facilitator; italicized text is not meant to be read aloud.”

Additional information can be found in the NCRTI Facilitators Guide which can be accessed at www.rti4success.org

This is the first of three modules developed by the National Center on Response to Intervention (NCRTI). These modules are aimed at district or school teams involved in planning for Response to Intervention (RTI) implementation. This module focuses on screening. The following two will focus on progress monitoring and multi-level prevention system. Data-based decision making, which is at the heart of RTI, is embedded within each of the three modules.

Introduce yourself (or selves) as the facilitator(s) and briefly cite your professional experience in regards to RTI implementation.
Session Agenda

- Welcome and Introductions
- What Is RTI?
- Understanding Types of Assessment Within an RTI Framework
- What Is Screening?
- Using Screening Data for Decision Making
- Establishing a Screening Process
- Wrap-Up Review, Questions, Homework, Resources

Read slide to participants.

The agenda may be changed to fit the timeframe and focus of the training. See the Facilitator’s Guide for suggested agendas and considerations for adapting the presentation.
The objectives for this training are:

*Read slide to participants.*
Before I delve deeper into screening, it is important to spend some time ensuring that everyone here today has a shared understanding of what RTI is, as well as a common vocabulary for discussing RTI. The first part of our time together will be spent on the National Center’s definition of RTI and a broad overview of the essential components of RTI.

The amount of time spent on NCRTI’s definition and essential components may vary according to audience need and time available.

The following are key terms and main points that should be focused on during this segment of the presentation.

Key Terms:
- **Essential Components**
- **Screening**
- **Progress monitoring**
- **Multi-level prevention system**
- **Data-based decision making**
- **Culturally responsive**
- **Evidence based**

Main Points:
- RTI is a school-wide, multi-level prevention system that integrates assessment and intervention.
- RTI is preventative, not pre-referral. The primary purpose of RTI is to prevent poor learning outcomes, not to refer students to special education or comply with requirements.
- The four Essential Components of RTI are screening, progress monitoring, multi-level prevention system, and data-based decision making.
The Think-Pair-Share activity is optional. The purpose of the activity is to engage the audience and conduct an informal assessment of the audience’s knowledge of RTI.

Think about what words come to mind when you hear RTI.

Give participants approximately 20 seconds.

Pair and share with your neighbor/table and list as many words as you can.

Give participants approximately 2-3 minutes.

Allow two or three pairs/tables to orally share their lists. The text below may be adapted based on the responses.

Thank you to the pairs/tables that shared their lists. We heard a lot of the same terms repeated. We heard terms related to RTI as an innovation (possible terms include screening, progress monitoring, and interventions) and the implementation of RTI (possible terms include parent involvement, leadership, teams). Today we will be focusing on RTI as an innovation. In other words, what needs to be in place in order for RTI to happen. We refer to the innovation as the essential components of RTI. We will briefly talk about the implementation of RTI and its components, but it is first important to understand what RTI is and why we should implement RTI.

Note: An optional activity that can also be used can be found in Appendix A, Vocabulary Review Handout. This includes a list of vocabulary words that will be featured in the presentation. The first column of the handout allows participants to predict what the terms mean. In this column participants should write down what they think the words mean prior to the presentation. This will enable them to see how their understanding of key terms may change due to the information provided in the presentation.
Why RTI?

- Sustained improvements in academic performance
- Decreased expulsion, behavioral referrals, and suspension rates
- Decreased inappropriate special education referral and placement rates

Read slide to participants.

The information below can be shared with the group or used as a reference if participants have questions about this slide.

- In a review of four RTI studies (research based and large-scale implementation), Burns, Appleton, and Stehouwer (2005) found strong effects on student academic outcomes and system outcomes (referrals to and/or placements in special education, student time in special education services, and number of students retained in a grade) when RTI was implemented.
- Dexter, Hughes and Farmer (2008) found improved academic performance and a slight decrease in special education referral and placement rates due to the implementation of RTI.
- Simmons, Coyne, Kwok, McDonagh, Harn, and Kame’enui (2008) found that students who were identified early as at risk and were provided additional reading supports had improved performance that was sustained over time.
Defining RTI

- Response to intervention (RTI) integrates assessment and intervention within a school-wide, multi-level prevention system to maximize student achievement and reduce behavior problems.

Although not required, it is recommended that participants have access to the one-page What Is RTI? Placemat (http://www.rti4success.org/pdf/What_is_RTI_2010_07_14_placemat.pdf), a supplement to the RTI Essential Components Document, for easy reference. If not, refer participants to pages 2-5 of the Screening Training Manual.

The National Center on RTI has a definition for RTI that includes what the NCRTI considers to be the essential components. **Response to intervention integrates assessment and intervention within a school-wide, multi-level prevention system to maximize student achievement and reduce behavior problems.** It is important to point out that RTI is a school-wide prevention system, as opposed to a pre-referral process for special education, and it is multi-level as opposed to multi-tier. It is important to understand that there are three levels of prevention in an RTI framework, and states, districts, and schools can have multiple tiers within those three levels of instruction in order to prevent poor learning outcomes. This will be discussed more in Module 3: Multi-Level Prevention System.
Defining RTI

- With RTI, schools identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the intensity and nature of those interventions based on a student’s responsiveness, and
- RTI may be used as part of the determination process for identifying students with specific learning disabilities or other disabilities.

(National Center on Response to Intervention)

The second part of the definition highlights the essential components of an RTI framework.

- The first component involves **schools identifying students at risk for poor learning outcomes**. We commonly refer to this process as universal screening.
- The next component involves **monitoring student progress**, through progress monitoring.
- The third component relates to **providing evidence-based interventions based on a student’s responsiveness**. It is not merely the delivery of interventions that is important, but that there is a multi-level prevention system in which students have access to increasingly intense levels of instruction and interventions.
- The last component involves the use of data (e.g., screening, progress monitoring) to **adjust the intensity and nature of those interventions based on student’s responsiveness**. In other words, there is an explicit, systematic process for data-based decision making.

Some people mistakenly believe that RTI involves only special education. It is important to remember that RTI is a school-wide, multi-level prevention system that results in data that may be used as part of the determination process for identifying students with specific learning disabilities or other disabilities in accordance with your state law.
So as you saw in the definition, the Center has identified four essential components for RTI.

- **Screening** – a system for identifying students at risk for poor learning outcomes.
- **Progress Monitoring** – a system for monitoring the effectiveness of the supports provided to students.
- **School-wide, Multi-Level Prevention System** – at least three increasingly intense levels of instructional support.
  - **Primary** – which is the core instruction and curriculum.
  - **Secondary** – which is in addition to the primary level and provides supports targeted to students’ needs
  - **Tertiary** – interventions that are more individualized and intensive than secondary.
- **Data-Based Decision Making for**
  - **Instruction** – determining who needs assistance, what type of instruction or assistance is needed, determining if the duration and intensity are sufficient, etc.
  - **Evaluating effectiveness** – evaluating the effectiveness of the core curriculum and instruction for all students, interventions, and the RTI framework.
  - **Movement within the multi-level system** – when to move students to something more or less intense, who is responding and/or not responding, etc.
  - **Disability identification** – when to refer for special education evaluation, how the student compares to his/her peers, did he/she receive appropriate instruction, etc. This is, of course, in accordance with state law.
The Center has developed this graphic to highlight the RTI framework. Many of you probably associate the red, green, and yellow triangle with RTI. In reality, the triangle does not represent the RTI framework; it only represents one component, the multi-level prevention system. The Center graphic takes into account all of the essential components and most importantly the use of data to make decisions, which is often absent from the traditional RTI triangle.

If you look to the far left, you see screening; to the far right, progress monitoring; and at the bottom, the multi-level prevention system. The three outer components require and are necessary parts of data-based decision making, which is why the arrows travel in both directions. If the three other components are in place, but data-based decision making is absent, then RTI is technically not being implemented.

In the center ring, you will see the phrase “culturally responsive,” meaning the screening tools, progress monitoring tools, core instruction, interventions, and data-based decision making procedures should all be culturally responsive. In the same ring, you will notice the phrase “evidence based,” implying that all components are evidence based. If these components are implemented through a cohesive model, it is expected that student outcomes would be improved. I’m now going to talk about each essential component in a little more detail.
The first component that will be discussed is Screening.
Screening

- **PURPOSE:** Identify students who are at risk for poor learning outcomes
- **FOCUS:** ALL students
- **TOOLS:** Brief assessments that are valid, reliable, and demonstrate diagnostic accuracy for predicting learning or behavioral problems
- **TIMEFRAME:** Administered more than one time per year (e.g., fall, winter, spring)

The **purpose of screening** is to **identify those students who are at risk for poor learning outcomes.** Because RTI is a framework for providing services, the outcomes you are concerned about could vary and include things such as academic achievement, behavior, graduation, or post school outcomes. Sites (state, district, schools) typically identify the outcomes students are expected to achieve, and then screen to see which students are not likely to achieve those outcomes. Screening can answer the questions:

- Is our core curriculum and instruction effective?
- Which students need additional assessment and instruction?

For example, if the desired outcome is graduation, a quick screen of attendance and credits – predictors of graduation – can reveal which students are not likely to meet the requirements of graduation and need additional support. If the desired outcome is mastery on end-of-year tests, student performance measures like curriculum-based measurements (CBMs) can reveal which students are not likely to pass the test and need additional support.

The **focus** is on **all students**, not just those students we may believe are at risk. Students may slip through the cracks unless there is a systematic process for screening in place. Screening is not a diagnostic test; it is a **brief, reliable, and valid assessment** to identify which students may need additional assessments, such as progress monitoring or diagnostic assessments, or additional instructional support. The tools should demonstrate diagnostic accuracy for **predicting learning or behavioral problems.** In other words, they should be able to accurately identify who could be at risk.

At a minimum, screening should be **administered more than once per year**, such as at the beginning of the school year and the middle of the school year. Schools and districts that wish to use screening data to evaluate program effectiveness, to establish local norms and cut scores, and to provide data to the next year’s teacher, typically choose to administer the screening assessment three times a year (**e.g.** fall, **winter, spring**) and should select a screening tool that provides alternative forms and multiple benchmarks.
The Center has developed a screening tools chart that can be accessed at http://www.rti4success.org/screeningTools. A more in depth look at the columns, which include both indicators of valid tools and efficiency factors to consider, as well as the user’s guide and glossary of terms, will be presented later in the presentation. The tools chart does not recommend tools, but provides users with a “consumer report” on available tools, similar to what you may find when searching for consumer goods, such as a car.
What questions do you have specific to screening?

Remind participants that this topic will be discussed in more detail throughout the presentation. Spend no more than 5 minutes answering these questions.
Let’s move on to the next essential component: progress monitoring.
The purpose of progress monitoring is to monitor students’ response to primary, secondary or tertiary instruction in order to estimate rates of improvement, identify students who are not demonstrating adequate progress, and compare the efficacy of different forms of instruction. Progress monitoring data can be used to 1) estimate the rates of improvement, which allows for comparison to peers; 2) identify students who are not demonstrating or making adequate progress so that instructional changes can be made; and 3) compare the efficacy of different forms of instruction. In other words, progress monitoring can help to identify the instructional approach or the intervention that led to the greatest growth among students. It answers the questions:

- Are students meeting short- and long-term performance goals?
- Are students making progress at an acceptable rate?
- Does the instruction need to be adjusted or changed?

Progress monitoring is not just for those students identified for supplemental instruction. The focus is on students who have been identified through screening as at risk for poor learning outcomes. This could include students just above the cut score as well as those scoring below the cutoff score.

Progress monitoring tools, just like screening tools, should be brief, valid, reliable, and evidence based. Common progress monitoring tools include general outcome measurements, including CBMs and mastery measurements.

The timeframe for progress monitoring assessment is dependent on the tools being used and the typical rate of growth for a student. Progress monitoring can be used any time throughout the school year. With progress monitoring, students are assessed at regular intervals (e.g., weekly, biweekly, or monthly) to produce accurate and meaningful results that teachers can use to quantify short- and long-term student gains toward end-of-year goals. At a minimum, progress monitoring tools should be administered at least monthly. However, more frequent data collection is recommended given the amount of data needed for making decisions with confidence (six to nine data points for most tools). With progress monitoring, teachers establish long-term (i.e., end-of-year) goals that indicate the level of proficiency students should demonstrate by the end of the school year.
As with screening, the Center has developed a **progress monitoring tools chart** that can be accessed through the National Center on RTI’s website at [http://www.rti4success.org/progressMonitoringTools](http://www.rti4success.org/progressMonitoringTools).

*You will likely not want to share all of the information below, but rather use it as a reference if participants have questions about this slide.*

The **PM tools chart** began through the National Center on Student Progress Monitoring and has continued through the National Center on RTI. Given the extensive research being conducted in the area of progress monitoring, the progress monitoring tools chart has significantly more indicators (columns) and tools than the screening tools chart. This is discussed further in the Progress Monitoring Training Module.
What questions do you have specific to **progress monitoring**?

*Remind participants that this topic will be discussed in more detail in the progress monitoring module. Spend no more than 5 minutes answering these questions.*
The next essential component of an RTI framework is a school-wide, multi-level prevention system. School-wide implies preventive instruction for all students. This does not mean providing a series of interventions for some students. This instructional system is also designed to be preventive, meaning instructional supports are put in place BEFORE a child fails. It is important to remember that special education is not what we are trying to prevent. Instead, special education is another level of support designed to prevent general school failure.
When many folks think of RTI, they imagine this triangle. This triangle represents the three levels of prevention and the percentage of students who would be expected to benefit from these levels of prevention in an effective system. The first, or **primary level**, is indicated in green. It is expected that most students, at least 80%, should benefit from differentiated instruction within the core curriculum.

The next level, or **secondary level**, is supplemental to the primary level. It is expected that about 10-15% of students will need supplemental, small group instruction to benefit from core instruction and curriculum.

The top level, or **tertiary level**, includes specialized, individualized systems for students with intensive needs. It typically involves small group instruction of 1-3 students who are significantly behind their peers. It is expected that about 5% of students will need intensive support.

If fewer than 80% of students are benefiting from the primary prevention system, consider focusing school improvement efforts on improving core instruction and curriculum. If there is a large percentage of students in the secondary or tertiary level, consider implementing large group instructional activities and system changes with the primary level in order to reduce the number of students requiring additional support.
The **focus** of the **primary level** of prevention is on **all students**. The instruction is the district’s **core curriculum and instructional practices that are research based, aligned with state or district standards, and incorporate differentiated instruction**. Instruction is delivered within the **general education classroom**. The **assessments** administered within the primary level of prevention are **screening, continuous progress monitoring** (for students near the cut point for screening or those who have transitioned from more intensive levels of support), **and summative assessments** (such as state assessments or final exams). School-based professional development is institutionalized and structured so that all teachers continuously examine, reflect upon, and improve instructional practice.
The focus of the secondary level of prevention is on students identified through screening as at risk for poor learning outcomes. The instruction is targeted evidence-based interventions that are supplemental to primary instruction and closely aligned and complementary to the core curriculum. Instruction is typically delivered within the general education classroom or other general education location within the school to small groups of students where the group size is optimal for the age and needs of the student. Procedures are in place to monitor the fidelity of implementation of the secondary level interventions. The assessments administered within the secondary level of prevention are progress monitoring and diagnostic measures.
The focus of the tertiary level of prevention is on students who have not responded to primary or secondary level prevention. The instruction is evidence-based intensive instruction and is continuously adjusted and individualized to address the needs of each student. Decisions regarding student participation in both primary and tertiary levels of prevention are made on a case-by-case basis, and according to student need. Tertiary level interventions address the general education curriculum or underlying skills in an appropriate manner for students. It is typically delivered within the general education classroom or other general education location within the school to small groups of students or individually. It is important to note that in some RTI models, tertiary instruction is special education. Procedures are in place to monitor the fidelity of implementation of the tertiary level interventions. The assessments administered within the tertiary level of prevention are progress monitoring and diagnostic measures.
Data should guide decisions about changing the level of support needed for students to be successful. This change can either be an increase or decrease in the intensity of the instruction. In cases where students are responding, teams may consider decreasing the intensity. In cases where students are not responding or making adequate progress, the team may consider increasing the intensity.

There are five main approaches to changing the intensity of an intervention.

• The first is to change the intervention itself; in cases where the current intervention is believed to be ineffective for the student, the team may consider selecting a different intervention. However, this may not always be necessary. If student data indicate a student is making some progress but not necessarily adequate progress, the data-based decision making team may decide to change the intensity of support by manipulating one or more factors of the intervention.

• Another way to address the intensity is to increase or decrease the duration of the intervention, or how long the student is receiving the intervention each time.

• The intensity may also be changed by increasing or decreasing the number of times a student participates in the intervention (or the frequency of the intervention). For example, the delivery of the intervention may increase from three to five times a week or increase the number of times per day.

• In some cases, the intensity may be modified by changing the interventionist. For example, some schools use paraeducators to deliver supplemental interventions. The intensity of the intervention may be changed by using a specialist, such as a reading coach or special education teacher to deliver the intervention.

• Another way to modify the intensity is to increase or decrease the number of students participating in the intervention. For example, the team may consider reducing the group size from five to two in order to provide the students more direct instruction and opportunities to respond.
In 2010, the Center released its **Instructional Intervention Tools Chart** to help users determine the effectiveness of interventions used in secondary prevention systems. The tools chart can be accessed through the National Center on RTI’s website at http://www.rti4success.org/instructionTools.

*This is discussed further in the Multi-level Prevention System Module.*
What questions do you have specific to a multi-level prevention system?

Remind participants we will discuss the topic in depth during the Multi-Level Prevention Training Module. Allow no more than 5 minutes for questions and answers.

Let’s move on to the next essential component, data-based decision making.
Implementation of screening, progress monitoring, and a multi-level prevention system alone is not sufficient for RTI. A systematic, comprehensive, data-based decision making process is necessary to connect the pieces.
In a comprehensive RTI framework, data analysis occurs at all levels of RTI implementation, not just at the student level. For example,

- States may use RTI data to establish policy and guidance and allocate resources.
- Districts may use data to evaluate the effectiveness of RTI, establish policies and procedures, and allocate resources.
- Schools may use data to evaluate the effectiveness of their overall framework and the essential components, assess alignment among grade levels, and allocate resources.
- Grade-level teams may use data to evaluate core curriculum and instruction, identify students for secondary and tertiary instruction, and allocate resources.

Data analysis and decision making occur in all levels of the prevention system. For example, in primary prevention, the interest is the effectiveness of the core curriculum and instruction. With secondary and tertiary prevention, the interest is in student-level decisions, but also how well particular interventions work for the majority of students in the secondary and tertiary levels.

Districts and schools should have established routines and procedures, ideally in writing, for making decisions. Written procedures increase fidelity of the data-based decision making process; ensure equity of resources among students, classes, and schools; and help train new teachers more efficiently.

Districts and schools should also establish explicit decision rules for assessing student progress. This includes goal-setting procedures, changing instruction/interventions, referring students to special programs, and moving students to more or less intensive levels.

Schools can also use data to compare and contrast the adequacy of the core curriculum and the effectiveness of different instructional and behavioral strategies at all levels of the prevention system.
These are the more common types of decisions that schools make.

- **Instruction** – How effective is the instruction? What instructional changes need to be made?
- **Evaluate Effectiveness** – Is the core curriculum effective for most students? Is one intervention more effective than another intervention?
- **Movement within the multi-level prevention system** – How do we know when a student no longer needs secondary prevention or should move from secondary prevention to tertiary?
- **Disability Identification** – How do we know if the student should be referred and is eligible for disability identification? Decisions about disability identification should be made in accordance with your state law.

These decision rules should be outlined prior to the implementation of your RTI framework.

*Ask if there are any questions about data-based decision making.*
The National Center on RTI does not provide guidance on eligibility for special education. NCRTI recommends you contact the division responsible for special education within your State Department of Education and determine what the procedures are for your state.

IDEA states that, “To ensure that underachievement in a child suspected of having a specific learning disability is not due to lack of appropriate instruction in reading or math, the group must consider” two things. The first one is that “Data that demonstrate that prior to, or as a part of, the referral process, the child was provided appropriate instruction in regular education settings, delivered by qualified personnel; and Data-based documentation of repeated assessments of achievement at reasonable intervals, reflecting formal assessment of student progress during instruction, which was provided to the child’s parents.”

The requirements for using a process based on a child’s response to scientific, research-based intervention when determining that the child is a child with a specific learning disability are found in the regulations at 34 CFR §§300.307, 300.309 and 300.311.

Additional information can be found at http://www.rti4success.org/webinars/video/992.

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<tr>
<th>Data-Based Decision Making: IDEA 2004 Learning Disability Eligibility</th>
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<tr>
<td>To ensure that underachievement in a child suspected of having a specific learning disability is not due to lack of appropriate instruction in reading or math, the group must consider, as part of the evaluation described in 34 CFR 300.304 through 300.306:</td>
</tr>
<tr>
<td>- Data that demonstrate that prior to, or as a part of, the referral process, the child was provided appropriate instruction in regular education settings, delivered by qualified personnel; and</td>
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<tr>
<td>- Data-based documentation of repeated assessments of achievement at reasonable intervals, reflecting formal assessment of student progress during instruction, which was provided to the child’s parents.</td>
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(www.iden.ed.gov)
In review, the essential components of RTI are—

**Screening** or how to identify which students are at risk and need additional assessment and instruction

**Progress Monitoring** or how to monitor whether students are responding to the instruction and supports we provide

**Multi-Level Prevention System** or how to provide increasingly intense levels of supports to meet student needs

**Data-Based Decision Making** or how to use data from those particular components to make decisions about student supports and program effectiveness
Implementing the RTI Framework

- Select and implement evidence-based practices and procedures
- Implement essential components and identified framework with integrity
- Ensure that cultural, linguistic, and socioeconomic factors are reflected in the RTI framework and its components

Implementation of RTI can be quite difficult and will most likely take at least 2 to 4 years to achieve full implementation. NCRTI recommends that you select and implement evidence-based practices and procedures. The tools charts available through the Center can help you do that.

You should also implement the essential components and identified framework with integrity. It’s not enough to deliver the core curriculum and interventions with fidelity, you also must ensure that the screening and progress monitoring assessments are administered consistently and that data-based decision making procedures are implemented with integrity.

It is important to ensure that cultural and linguistic and socioeconomic factors are reflected in the RTI framework and its components. District and school teams should continually evaluate the efficacy of the model and model components for the diverse populations they serve. On the tools charts, there is a column that provides information about how these particular tools have been used with different groups.
At this point, we are going to drill deeper into screening. First, we are going to discuss how to select appropriate assessments to use when screening.

This section is important because many participants may be trying to use summative or diagnostic assessments as screening assessments or they might be using several assessments, some of which are redundant. Screening assessments are typically formative assessments. The following are key terms and main points that should be focused on during this segment of the presentation.

Key Terms:

- Summative
- Diagnostic
- Formative
- Mastery Measures
- General Outcome Measures

Main Points:

- There is no perfect test, but it is important to find the right type of test to fit your purpose, and to be sure that you are using the test the way it was intended.
- Summative assessments are given after learning, diagnostics are given before learning, and formative assessments are given during learning.
- Screening assessments should be used formatively they allow you to evaluate overall progress and are more efficient than diagnostic assessments at quickly identifying students.
- General outcome measures and mastery measures are two types of formative assessments.
- Refer participants to the Screening Training Manual for more information and to view graphics more closely throughout this section.
There are three types of assessments commonly used within an RTI framework: summative, diagnostic, and formative. Summative assessments occur after instruction and are assessments of learning. Diagnostic assessments occur before instruction and help to identify skill strengths and weakness. Formative assessments occur during instruction and are assessments for learning.

We will now spend some more time on each type of assessment.

Refer participants to the Screening Training Manual for more information and to view this graphic more closely.
The first type of assessment is summative. **Summative assessments** measure what students learned over a period of time. They are typically administered after instruction and can help to determine what to teach, but not how to teach. Summative assessments are typically administered to all students and are often used for accountability decisions and to determine the mastery of certain skills or standards. While summative assessments can also be used to allocate resources, because they occur after instruction, the decision is reactive.

If you only use summative assessments, you need to wait until the end of the year to make instructional decisions. That may not always be efficient. Our goal is to prevent poor learning outcomes, not just identify them at the end of the year.
Examples of Summative assessments include High-stakes tests (e.g., state tests, achievement test); GRE, ACT, SAT, and GMAT; Praxis Tests; and Course Final Exams

Although summative assessments provide useful information, they:
1. Usually require time away from instruction
2. Are not valid for individual decision making and
3. Don’t tell us how or why students achieved certain scores
Diagnostic Assessments

- PURPOSE: Measures a student’s current knowledge and skills for the purpose of identifying a suitable program of learning.
- Administered **before** instruction
- Typically administered to **some** students
- Educational Decisions:
  - What to Teach
  - Intervention Selection

Diagnostic assessments are measures of students’ current knowledge and skills and can be used to identify a suitable program of learning. They are administered **before** instruction occurs to assist in identifying appropriate instruction and interventions. Because diagnostic assessments provide detailed information about individual student learning, they are most effective in helping teachers understanding the needs of specific students rather than all students and are therefore they are **typically administered to only some students**. Diagnostic assessments can help teachers determine **what to teach**, thereby supporting the selection of appropriate interventions. Diagnostic assessments provide useful information but should be used sparingly, as they can be very expensive and time consuming to administer.

*If you are familiar with the district, you may list types of diagnostics and ask participants to think about whether they are using these diagnostic tools the way they were intended.*
Examples of diagnostic assessments include Qualitative Reading Inventory, Diagnostic Reading Assessment, Key Math, and Running Records with Error Analysis.
Formative assessment is a form of evaluation used to plan instruction in a recursive way. **Formative assessments tell us how well students are responding to instruction.** With formative assessment, student progress is systematically assessed **during instruction** to provide continuous feedback to both the student and the teacher concerning learning successes and failures. Formative assessments are **typically administered to all students during benchmarking** (screening) and some students for progress monitoring.

Formative assessments may be **informal or formal**. Informal assessments are not data driven but rather content and performance driven. Examples include observations and teacher-made assessments. Formal assessments have evidence of reliability and validity. These formative assessments typically follow a standardized administration format. Scores such as percentiles, stanines, or standard scores may be obtained from this type of assessment.
Formative Assessments

Educational Decisions:

- Identification of students who are nonresponsive to instruction or interventions
- Curriculum and instructional decisions
- Program evaluation
- Resource allocation (proactive)
- Comparison of instruction and intervention efficacy

With formative assessment, teachers diagnose skill, ability, and knowledge gaps; measure progress; and evaluate instruction. Educational decisions that can be made using formative assessments include the following:

- Identification of students who are nonresponsive to instruction or interventions (screening and progress monitoring)
- Curriculum and instructional decisions
- Program evaluation
- Resource allocation (proactive) as this information is provided as the instruction is occurring) and
- Comparison of instruction and intervention efficacy

Formative assessments are not necessarily used for grading purposes.
We are now going to focus on formal formative assessments. As a reminder these are formative assessments that have evidence of reliability and validity.

The main types of formative assessments are:

- **Mastery Measures** are measures that index a student’s successive mastery of a hierarchy of objectives and are intervention or curriculum dependent.

- **General Outcome Measures** (GOM) are measures that reflect overall competence in the annual curriculum. Examples of general outcome measures include AIMSweb’s R-CBM, Early Literacy and Early Numeracy, Dynamic Indicators of Basic Early Literacy Skills (DIBELS) Retell, and iSTEEP’s Oral Reading Fluency.
The following quote is helpful in thinking about the differences between summative and formative.

“When the cook tastes the soup, that's formative. When the guests taste the soup, that's summative.”

**Activity: Types of Assessments**

- Turn to the Types of Assessments Handout in your training manual.
- Each group will receive one of the three types of assessments that we just discussed (Summative, Formative, Diagnostic).
- Use the assigned type of assessment to answer questions with your table group.
- We will reconvene to discuss in 10 minutes.

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**Turn to the Types of Assessments Handout in your training manual.** For each of the first four questions, there are three possible answers. You and your team will receive a card with one type of assessment written on it. Your job is to select the one answer for each question that correctly describes the type of assessment you were assigned. Then discuss and identify the benefits associated with this type of assessment with your table. **We will reconvene and discuss responses as a group in 10 minutes.**

**Note:** Prior to this activity you will need to create cards with the different types of assessment (Diagnostic, Summative, Formative) written on them. Give one of each of these cards to each of the tables or groups. Give participants about 10 minutes to complete this activity. Depending on the size of the group you may need to make additional sets of cards.

**This activity was developed by Dr. Valerie Lynch, Puget Sound Educational Service District 121, Renton, Washington.**
One final concept to think about in relation to assessments is whether tests are norm referenced, criterion referenced, or possibly both.  

**Norm-referenced** test include tests like the ACT, SAT, and GRE. Students’ scores are **compared with each other** using **percentile scores**. For example, a student who scored in the 64th percentile scored better than 64 out of 100 students who took the test. S/he scored lower than 36 out of 100 students who took the test.

**Criterion-referenced** tests are often standards-based tests that compare a student’s performance to a **criterion for mastery** of a skill or objective. The **score indicates whether the student met the mastery criteria**, and so it often looks like a **pass/fail** or proficiency score.

Assessments, including screening assessments, can be both norm referenced and criterion referenced depending on what information you are trying to gather. If you are interested in knowing how a student compares with other students in the screening process, you would be interested in norm-referenced assessment. If you want to screen for which students met or did not meet the set criteria, typically a score, then you would be interested in criterion-referenced assessment. This will be discussed more later.
Team Activity

1. List the assessments and data collected that are used at your school (quizzes, state-developed, CBM, etc.).
2. What questions are being answered with those assessment data? How are the data used?

With your team list the assessments and data collected that are used at your school (quizzes, state-developed, CBM, etc).

Then answer the following questions: What questions are being answered with those assessment data? How are the data used? Do the purposes of the assessments match the type of assessments? For example, are you using diagnostic tests when you should be using summative or vice versa?

Depending on time, this can be used as a quick activity where participants are encouraged to continue the conversation at their site or as an expanded activity that is completed during extended team discussion time. Facilitators may want to assign the first part of this activity as prework to be completed before they attend the training.

Possible follow-up questions:
- Are you over assessing students?
- Do you see any redundancy in your data collection?
- Are all of the data being collected necessary or being used for education decision making? Why or why not?

This activity helps schools see that they may be using too many screeners, or using assessments in the wrong way. When you add assessments for RTI, you may need to reduce other assessments. Teams should think, “Why are we (district/school teams) doing these assessments?” “Can we (district/school teams) be more efficient?”
We are now going to discuss in more detail the two common formats for formative assessments. Each type of measure has value, although they are typically used for different reasons.

Mastery Measurement indexes a student’s successive mastery of a hierarchy of objectives.

General Outcome Measure reflects overall competence in the annual curriculum.
Mastery Measurement

- Describes mastery of a series of short-term instructional objectives
- To implement Mastery Measurement, typically the teacher:
  - Determines a sensible instructional sequence for the school year
  - Designs criterion-referenced testing procedures to match each step in that instructional sequence

A Mastery Measure

*Read slide*
Here is an example of a typical fourth-grade math computation curriculum, with 10 objectives the teacher plans to accomplish for the year. The first objective is **multidigit addition with regrouping**.

<table>
<thead>
<tr>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Multidigit addition with regrouping</td>
</tr>
<tr>
<td>2. Multidigit subtraction with regrouping</td>
</tr>
<tr>
<td>3. Multiplication facts, factors to 9</td>
</tr>
<tr>
<td>4. Multiply 2-digit numbers by a 1-digit number</td>
</tr>
<tr>
<td>5. Multiply 2-digit numbers by a 2-digit number</td>
</tr>
<tr>
<td>6. Division facts, divisors to 9</td>
</tr>
<tr>
<td>7. Divide 2-digit numbers by a 1-digit number</td>
</tr>
<tr>
<td>8. Divide 3-digit numbers by a 1-digit number</td>
</tr>
<tr>
<td>9. Add/subtract simple fractions, like denominators</td>
</tr>
<tr>
<td>10. Add/subtract whole number and mixed number</td>
</tr>
</tbody>
</table>
While teaching multidigit addition with regrouping, the teacher may give assessments that look something like this. There are 10 problems all dealing with multidigit addition with regrouping.
As the teacher gives this assessment, he or she could graph the student’s results. In the first week of teaching the objective, the student did not get many answers correct. But as the weeks go by, the student gets better until he or she has had three consecutive weeks of getting 80% or more of the problems correct.

Once this happens, then the teacher moves on to the next objective.
The next objective in the curriculum is **multidigit subtraction with regrouping**.
Again, as the teacher is teaching this objective, he or she may give assessments that look like this: 10 problems all dealing with multidigit subtraction with regrouping.
Again, the student’s progress is charted. A problem with this chart is that you cannot tell if the student is learning the objectives at a pace fast enough that will allow him or her to learn all the curriculum’s objectives in the span of the school year. You also cannot tell if the student has maintained his mastery of multidigit addition once multidigit subtraction is introduced.
Advantages of Mastery Measures

- Skill and program specific
- Progress monitoring data can assist in making changes to target skill instruction
- Increasing research demonstrating validity and reliability of some tools

There are some advantages of using mastery measures. By focusing on a single skill, practitioners can assess whether a student can learn target skills in isolation. Teachers can use the information from the ongoing progress monitoring data to make decisions about changing target skill instruction. Until recently, the psychometric properties of most mastery measures were not valid and reliable. However, as you can see by the addition of Mastery Measures on the NCRTI Progress Monitoring Tool Chart, there is increasing research demonstrating the validity and reliability of some tools. Mastery measures are typically not valid screening measures, but they are often used for progress monitoring students identified through the screening process.
Despite some advantage, there are some problems associated with mastery measurement:

- **Hierarchy of skills is logical, not empirical** – meaning that while it may seem logical to teach addition first and then subtraction, there is no evidence-based research that says you have to do it that way.

- **Assessment does not reflect maintenance or generalization**. After teaching subtraction with regrouping, you don’t know if the student remembers how to do addition with regrouping.

- **Number of objectives mastered does not relate well to performance on criterion measures** – meaning how a student does on these assessments does not indicate how he or she will do on standardized tests.

- **Measurement methods are often designed by teachers, with unknown reliability and validity**.

- **Cannot compare scores longitudinally**. You will not be able to compare a student’s score on a mastery measure in September with his or her score in May because the skills assessed are different.
General Outcome Measure (GOM)

- Reflects overall competence in the yearlong curriculum
- Describes individual children’s growth and development over time (both “current status” and “rate of development”)
- Provides a decision making model for designing and evaluating interventions
- Is used for individual children and for groups of children.

General outcome measures often address the problems associated with mastery measures.

A General Outcome Measure:

- Is program independent – it reflects overall competence in the yearlong curriculum as opposed to being dependent on the instructional sequence in a particular program
- Describes individual children’s growth and development over time (both “current status” and “rate of development”)
- Provides a decision making model for designing and evaluating interventions
- Is used for individual children and for groups of children.

As a result, GOM can be used for both screening and progress monitoring.
General Outcome Measures are

- **Simple and efficient** – These are brief assessments that typically take 1-10 minutes to administer. They provide you with enough information to be able to make quick decisions.

- **Reliability, validity, and classification accuracy are established.** The classification accuracy indicates the extent to which a screening tool is able to accurately classify students into “at risk” and “not at risk” categories.

- **Sensitive to improvement** – Sensitivity is the extent to which a screening measure accurately identifies students at risk for the outcome of interest.

- **Provide performance data to guide and inform a variety of educational decisions**

- **National/local norms allow for cross comparisons of data**
The focus of general outcome measures is on repeated measures of performance. GOMs make no assumptions about instructional hierarchy for determining measurement. In other words, GOMs fit with any instructional approach. Also, GOMs incorporate automatic tests of retention and generalization. Therefore, the teacher is constantly able to assess whether the student is retaining what was taught earlier in the year.

The point here is not to say that practitioners should always use GOM or Mastery measures, but that it is important to think about which measure is better for different objectives.

For screening purposes, GOMs are preferred because GOMs do a better job of classifying students into at risk and not at risk categories.
One type of a general outcome measure is **curriculum-based measure or CBM**.

**CBM is a general outcome measure of a student’s performance in either basic academic skills or content knowledge.**

CBM was initially developed more than 30 years ago by Stanley Deno and others at the University of Minnesota Institute for Research on Learning Disabilities as a reliable and valid measurement system for evaluating basic skills growth.

Research began in the area of reading and has expanded to additional tools in literacy, math, and writing as well as tools in Spanish.
Here is an example of a CBM for reading fluency. Students would be asked to read this passage aloud while being timed for one minute. The score would be based on the words correct per minute the student read aloud. Passages of similar difficulty are administered periodically throughout the school year (e.g. every grading term), with the expectation that students' accuracy and fluency at reading the text increases over time.
In summary, both types of formative assessment provide useful, but different, information. **Mastery measurement data** indicate progress toward mastery of specific subskills (e.g., decoding short vowel sounds, calculating nine math facts) while **GOMs** indicate progress toward a broader outcome. The latter involves the application of all of the subskills learned over time.

One key difference between Mastery Measures and General Outcome Measures is comparability of data longitudinally. With GOM you can compare the score a student received in May to a score he or she had in September. This cannot be done with Mastery Measures.
The Think-Pair-Share activity is optional. The purpose of the activity is to engage the audience and conduct an informal assessment of the audience’s conclusions from the session.

Think to yourself about the answers to the following questions:

1. What mastery measures and GOMs are currently used in your district or school?
2. How are mastery measures and GOMs used to inform instruction?

Give participants approximately 20 seconds.

Pair and share with your neighbor/table and discuss.

Give participants approximately 2-3 minutes.

Allow two or three pairs/tables to orally share their thoughts.

This is more about making participants aware of what they are using, rather than showing that one is right and one is wrong.
The following are key terms and main points that should be focused on during this segment of the presentation.

Key Terms:
Universal screening
Classification accuracy

Main Points:
• Screening is helpful in identifying students at risk for poor learning outcomes and who need additional assessment and intervention.
• Screening data are important and useful at the state, district, and school levels.
This training focuses on the essential component of screening. Without screening, it is difficult to determine who should be progress monitored or who should receive supplemental instruction. Universal screening (the first part of the screening process) is necessary to make these initial data-based decisions.
A basic understanding of the purpose, focus, tools, and timeframe for screening was introduced earlier. Now we will talk about each of these in more detail.
The screening process is not unique to education. In fact, standardized screening processes are common in many other fields, such as blood pressure screenings, courtesy checks during oil changes, and vision screenings in the primary grades. In all cases, the purpose is to identify indicators that predict if more testing or further intervention is needed. The major thing all of the screening processes do is to identify and address potential problems early in order to prevent bigger problems in the future.

Depending on time available, you may or may not want to provide the following more in-depth explanations of other types of screening.

For example, how many of you have participated in blood pressure screenings? These measures do not actually indicate if you have heart problems. Instead, the results of these cost-efficient and brief assessments indicate when more information is needed. Additional assessments (that are most likely more expensive and invasive) are needed to confirm the presence of a problem.

How many of you get regular oil changes? During the oil change, there is typically a 17 to 21 point courtesy check. Aside from regular maintenance, the screening checks are designed to identify issues that may make the car at risk for more expensive problems later on (e.g., leaks, worn brake pads). Although the car functions okay now, it is likely to experience issues in the future. We perform these check-ups for preventive purposes.

All of us have had eye exams, probably beginning in school. This very cheap screening process provided school nurses with sufficient data to refer a child for further assessment. Without this type of standardized eye screening in schools, many children may not have received appropriate vision supports until much later in their schooling. Many schools have or did have similar screening processes for hearing and scoliosis checks.
The same principle applies in learning environments. In addition to identifying students at risk for poor learning outcomes and who need additional assessment and intervention, screening data can help to answer key questions about the effectiveness of your curriculum and instruction.

*Read slide.*
Now you will hear from several principals about why they believe screening is important.

*Play the video (3:26).*

Universal Screening: [http://www.youtube.com/watch?v=HaHWoN-LVFc](http://www.youtube.com/watch?v=HaHWoN-LVFc)

Skipping the video entirely is not recommended as it is valuable for the participants to hear a practitioner’s point of view on screening.

Note: This is a good opportunity to remind participants about the importance of coming to consensus as a team about why screening is important. This might be a good time to mention that teams will be given some time in the second half of the training to talk about the purpose of screening at their sites.
This is an optional activity that should be used if you intend to complete the selecting a screening process section.

In teams/tables, you will now use the Purpose for Screening Handout to identify a shared purpose for screening. We will now pause so you can complete it. As a team, discuss your purpose for screening and record your answers.

Directions for this activity are written on the top of the handout. It may be helpful to review the directions with participants.

Allow 5 to 15 minutes for this activity. When approaching this activity, prompt teams to focus on the district level first and then school level second and so on.

Prompts you can use to encourage discussion among teams: What you are looking for (i.e., what do you want to know)? Why are you screening?
Who gets screened and what are they screened for?

**Screening typically includes all students.**

- As mentioned in the video, regular screening is necessary throughout the year for ALL students. Through screening at the middle or end of the year, you may “catch” students who were doing well at the beginning of the year but are struggling as the demands increase.

**Two-stage screening process**

- Struggling students are identified by implementing a two-stage screening process. The first stage, *universal screening*, is a brief assessment for all students conducted at the beginning of the school year; however, many schools and districts use it two or three times throughout the school year.
- For students who score at or below the cut score on the universal screener, a second stage of screening is then conducted to more accurately predict which students are truly at risk for poor learning outcomes. This *second stage* involves additional, *more in-depth testing or short-term progress monitoring* to confirm a student’s at-risk status.

**Should be an educationally valid outcome.**

- What is screened should be based on the needs and goals of the school. Schools typically screen in reading, math, and behavior but may also consider screening in other areas because of need. This may include language or writing.
When selecting screening tools you:

**Must choose reliable, valid tools that demonstrate diagnostic accuracy** for predicting which students will develop learning or behavioral difficulties. GOMs are commonly used as screeners, because the goal is to predict to an outcome.

**Must choose age-appropriate outcome measures that capture student ability.**

It is important that the screener you choose has strong classification accuracy, meaning the screening tool is able to accurately classify students into “at-risk” and “not at-risk” categories. For example, in reading, in order to have good classification accuracy, screeners must target reading or reading-related skills that are pertinent to the grade and time the screen is administered (Jenkins, Hudson, & Johnson, 2007, pp. 585).

- In kindergarten, relevant skills could include phonemic awareness, letter and sound knowledge, and vocabulary.
- In first grade, phonemic spelling, decoding, word identification, and text reading are important skills to assess.
- In second and third grades, measures should assess number and type of words students can read and comprehend, and the fluency of those skills.
- In higher grades, comprehension of more difficult texts is an important, relevant reading skill.

**May have different screeners to assess different outcome measures.**

- No one screener can screen for all areas. Different screeners may be necessary for different outcome areas.
Here is an example of a common screening assessment, Passage Reading Fluency (PRF). This copy is placed in front of the student. Students are provided standardized directions and asked to read aloud for one minute. To get an accurate score for CBM for reading at each screening period, students read three 1-minute passages, and the median (middle) score is recorded.
As mentioned earlier, the Center has developed a screening tools chart that can be accessed through the National Center on RTI’s website at http://www.rti4success.org/screeningTools. We will look at the process for using the tools chart, recommended in the Users Guide. We will also look in depth at the columns, which include both indicators of valid tools and efficiency factors to consider.

When possible, demonstrate the most updated version of the tools chart on the website (http://www.rti4success.org/screeningTools) at instead of using the following screenshots.
The tools chart includes a large amount of information designed to assist you in selecting a tool that is most appropriate for use in your classroom, school, or district. The “best” tool is not going to be the same for every user and is not determined by any single element on the chart. Users of the chart should review all of the different elements of the chart when making a decision. NCRTI recommends the following six steps for using the tools charts to select a screening tool:

Read the slide.

Often, decisions about appropriate screening tools will involve the input of multiple teachers and staff. When using the tools chart, a team of key constituents in your school and district should review the information together. In gathering this team, you should think about the following questions:

Read the slide.
2. Determine Your Needs

- For what skills do I need a screening tool?
- For which specific academic outcome or measure am I interested in screening?
- For what grades do I need a screening tool?
- Will this screening tool be used with all students or only a specific subgroup(s) of students? Which subgroup(s)?

The most appropriate screening tool for you will depend on your specific needs. In determining your needs, you should think about the following questions:

Read the slide. Refer participants to the Screening Tools Chart User’s Guide for the list of questions. Additional discussion of this topic can be found in the Establishing a Screening Process section of the presentation.
In addition to determining your needs for a screening tool, your team should also consider its priorities. Although you may want a tool that meets all of these criteria, such a tool may not exist. You will need to weigh your priorities carefully when making your selection. In determining your priorities, you should think about the following questions. For example, if cost is a priority ask, “Is it a tool that can be purchased for a reasonable cost?”

Other priorities may be administration time (read bullet 2), training required (read bullet 3), standard of technical rigor (read bulletin 4), or demonstrated effectiveness (read bulletin 5).

Refer participants to the Screening Tools Chart User’s Guide for the list of questions.
There are four main areas on which tools are evaluated: ratings of technical rigor, efficiency, implementation requirements (e.g., cost, training needs), and the data submitted by the vendor (e.g., reliability data, validity data). The ratings of technical rigor are represented with rating bubbles, similar to the symbols used in Consumer Reports. A full bubble indicates convincing evidence, and an empty bubble indicates unconvincing evidence.
When possible, demonstrate the most updated version of the tools chart on the website (http://www.rti4success.org/screeningTools) at instead of using the following screenshots.

The first area that is presented is the ratings of technical rigor. For each of these standards, the Technical Review Committee (TRC) reviewed data submitted by developers of the tools and gave a rating of “convincing,” “partially convincing,” “unconvincing,” or “no evidence.” If using the tools chart online, you can click on the name of the standard in the column heads of the chart to view a definition of the standard and a rubric describing the specific criteria used by the Technical Review Committee (TRC) to rate tools on that standard.

Refer participants to the tools chart and glossary of terms in the back of the training manual.

Briefly review the definitions of the different technical criteria

- **Classification Accuracy.** The classification accuracy indicates the extent to which a screening tool is able to accurately classify students into “at risk for poor learning outcomes” and “not at risk for poor learning outcomes” categories.

- **Generalizability.** Generalizability is the extent to which results generated from one population can be applied to another population. A tool is considered more generalizable if studies have been conducted on larger, more representative samples.

- **Reliability.** Reliability is the consistency with which a tool classifies students from one administration to the next. A tool is considered reliable if it produces the same results when administering the test under different conditions, at different times, or using different forms of the test.

- **Validity.** Validity is the extent to which a tool accurately measures the underlying construct that it is intended to measure.

- **Disaggregated Data.** Data are disaggregated when they are calculated and reported separately for specific sub-populations (e.g., race, economic status, academic performance, etc.).
When possible, demonstrate the most updated version of the tools chart on the website (http://www.rti4success.org/screeningTools) at instead of using the following screenshots.

The last four columns of the chart offer information about the efficiency of each screening tool:

- **Administration format**: Is the tool designed to be administered to an individual or to a group or both?
- **Administration and scoring time**: How long does it take to administer and score the tool?
- **Scoring key**: Is a scoring key provided? If not, is it scored by a computer?
- **Norms/Benchmarks**: Are benchmarks and/or norms available for reference?
When possible, demonstrate the most updated version of the tools chart on the website (http://www.rti4success.org/screeningTools) at instead of using the following screenshots.

The tools chart offers an “implementation table” for each tool, which can be accessed by clicking on the name of the tool. The implementation table includes the following information:

- Cost of the tool
- Training required to implement the tool
- Level of staff expertise required to administer the tool
- Where to go for training and technical support
- How scores are reported

All of this information is provided by the vendor.
When possible, demonstrate the most updated version of the tools chart on the website (http://www.rti4success.org/screeningTools) at instead of using the following screenshots.

The tools chart also includes detail about the actual data that were submitted to the TRC for review. These data can be viewed by clicking on any of the rating bubbles in the cells in the chart.

NCRTI recommends that when possible you look for tools that conducted classification studies with outcome measures and samples similar to your population and outcome of interest. By clicking on the rating bubble, you will obtain more information about which tool(s) is most appropriate for which populations of students.

To explain the ratings, it is recommended that someone on the team is familiar with data.
When possible, demonstrate the most updated version of the tools chart on the website (http://www.rti4success.org/screeningTools) at instead of using the following screenshots.

Examining the data provided on the screening tools chart can be useful for a number of reasons. You may see two or more tools that received the same rating for a particular standard. But in these cases, how do you know which one really best meets your needs? By clicking on the rating and viewing the actual data, you have more information to help you determine which tool is most appropriate. For example, for classification accuracy, the chart includes statistics about how well a tool classifies students into at risk and not at risk groups, as well as the outcome measure and details about the sample that was used to generate such statistics.

The detailed data can also help you determine the tools that are most appropriate for certain subgroups of students. For example, your district or subgroup of interest may comprise mostly of English language learners (ELLs). Therefore, you may be interested in how accurately the tool classifies students into risk categories, how reliable it is, and how valid it is, for only the ELL subgroup. By clicking on the bubble in the disaggregated data column, you will be able to see detailed data about how well the tool works among various subgroups.
When possible, demonstrate the most updated version of the tools chart on the website (http://www.rti4success.org/screeningTools) at instead of using the following screenshots.

You may find that the tools chart does not provide you with all the information you need. For example, what if a tool in which you are interested does not have disaggregated data for a particular subgroup that is important to you? NCRTI recommends you ask the vendor or developer. Developers who have chosen to submit their tools for review and publish them on the chart are interested in meeting the needs of their customers. As such, they are interested in doing more research to provide the data that you need. Similarly, if a tool that you currently use or are interested in learning about is not on the chart, call the developer of that tool. Let them know about the TRC review process and the tools chart, and ask them to consider submitting the tool for review.

The tools chart provides publisher contact information in the pop-ups found in the second column.
**Timeframe**

- Screening typically occurs at least three times a year.
  - Fall, winter, spring
  - Should remain consistent across school years and sites
- Screeners must target skills pertinent to the grade and time the screen is administered.
- Delivery option:
  - Individually administered test: approximately 1–5 minutes
  - Class-wide tests: range from 2–60 minutes

When should screening occur and how long does it take to screen?

Many schools and districts screen **at least three times a year** in the **fall, winter, and spring**. This allows schools to use screening data to evaluate the effectiveness of the core curriculum and instruction across the year, establish local norms and cut-scores, and can provide data for the following year teachers to use. Regardless of the number of times that screeners are used, screening **should remain consistent across school years and sites and must target skills pertinent to the grade and time the screen is administered**.

Screeners can be delivered in two ways. Screeners can be **individually administered tests**, **which take approximately 1 to 5 minutes**. They can also be **class-wide tests, which range from 2 minutes to 60 minutes**.
Team Time: Screening

- Review Screening Tools Chart
  - What screening tools in math and reading have high classification accuracy, reliability, and validity?
  - Are your tools there? What evidence exists for their reliability and validity?

Read slide.

Allow 10 to 15 minutes for teams or tables to look more closely at the screening tools chart, either online if computers are available, or printed copies. The time for this team time activity will depend on the needs of the group. If time allows, consider having two or three teams share their tool and the evidence they found that supports its validity and reliability.
Decision making is an essential part of any RTI model. As we saw earlier in the diagram of the RTI framework, data-based decision making is part of the screening process, and data from the screening process are used for a variety of educational decisions. Data-based decision making is not just for student-level decisions. RTI asks entire systems (schools, districts, states) to use data-based procedures at all levels of implementation.

The following are key terms and main points that should be focused on during this segment of the presentation.

Key Terms:
- Cut scores, Target scores, and Benchmarks
- Criterion referenced
- Norm referenced
- Box and whisker plots
- Target identification rate

Main Points:
- Screening data can help answer key questions about the effectiveness of curriculum and instruction, and inform allocation of resources.
- Screening measures are not perfect, so you need to be aware of screeners’ strengths and weaknesses as you select and use them.
- If possible, districts should adhere to the same cut scores across schools, so there is consistency and comparability within the district.
- Teams should establish routines and procedures for conducting data reviews, establish decision making processes, and establish explicit decision rules for assessing student progress.
- Data analysis is important for identifying students who need additional assessment and instruction, evaluating effectiveness of core curriculum and instruction, allocating resources, and evaluating effectiveness of instruction programs for target groups (e.g., ELL, Title 1).
- Be purposeful in data analysis – determine what you are looking for at all levels (school, district, state).
- Your purpose should determine what data you use and how you choose to interpret your data.
This slide should help explain why screening is important for districts. Screening is more than just determining who needs interventions; the data inform district-level decisions about support and allocation.

District-level decisions related to screening include:

Read slide.
This slide helps answer the question of why screening is important for schools.

School-level decisions related to screening include identifying:

- **General school trends or issues, and then grade-level trends**
  - Are there holes in grade-level performance?
  - Do we lose subgroups of students at certain times?

- **Effectiveness of school-wide curriculum and instruction delivery**
  - Is there consistent performance across grade levels? For example, data may indicate consistent growth from grades 1-4 and then a significant drop in performance when students reach fifth grade. This may be an indication that fourth grade instruction/curriculum is not adequately preparing students for fifth grade expectations.

- **Areas of need and guidance on how to set measurable school-wide goals**
Grade-Level Educational Decisions: Screening

- Grade-level trends or issues
- Effectiveness of grade-level curriculum and instruction
- Areas of need and guidance on how to set measurable grade-level goals
- Students who may need additional instruction or assessment

This slide helps answer the question of why screening is important at the grade level.

Grade-level decisions related to screening include identifying:

Read slide.
A cut score is a score on a screening test that divides students who are considered potentially at risk from those who are considered not at risk. Cut scores might also be referred to as cut-points or targets, depending on the tool. It is important to remember that cut scores used to identify students as at risk may not be the same way you identify students for supplemental support. This is referred to as the target identification rate and will be discussed in more detail later.
<table>
<thead>
<tr>
<th>Identifying Students as At Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>• RTI success depends on accurate identification of the students identified as at risk.</td>
</tr>
<tr>
<td>• Perfect screening would result in 100% accurate identification of “True Positives” (those who need additional support) and “True Negatives” (those who do not need additional support), but there is no perfect screening tool.</td>
</tr>
<tr>
<td>• Cut scores for screening tools are often set to overidentify students as at risk.</td>
</tr>
</tbody>
</table>

RTI success depends on accurate identification of the students identified as at risk. This is essential for preventing costly identification errors.

Perfect screening would result in 100% accurate identification of “True Positives” (those who need additional support) and “True Negatives” (those who do not need additional support), but there is no perfect screening tool.

Cut scores are often set to overidentify students as at risk. Your choice of cut score will affect classification accuracy (sensitivity and specificity). As the second stage of the screening process, progress monitoring may be used to avoid inappropriately identifying students who do not need interventions despite being identified as at risk through the screener.
Risk can be identified in two ways:

1. The first way is **categorical** – meaning the screener clearly indicates risk. For example, given the results of a particular test, you either have the gene for sickle cell anemia or you do not.

2. The other way is **continuous** – meaning that there are not discrete categories for risk based on the screen. Instead responses fall along a bell curve. For example a student’s performance falls along a bell curve where some kids will do well and others will not. However, his/her performance on the screener does not 100% accurately predict risk status. The cut score is the best guess (based on existing data) of who may or may not be at risk. However, other factors may lead to the over identification or under identification of students (e.g., student was sick on test day, student is a word caller but lacks comprehension).

The establishment of a logical cut score is essential for accurately identifying students for additional assessment and supports, and evaluating the effectiveness of the support system.
Screening tools in education are rarely 100% accurate because there are so many variables that can affect performance. Screening tools vary in their sensitivity and specificity. Sensitivity is the extent to which a screening measure accurately identifies students at risk for the outcome of interest. Specificity is the extent to which a screening measure accurately identifies students not at risk for the outcome of interest.

- Ideally, the screener would only indicate that a student is at risk if he or she is at risk. When students are correctly identified at risk, it is called a true positive. *Point to the chart to show the boxes where students are screened as “at risk” and the outcome is “at risk.”*
- In addition, the hope is that the screener indicates that a student is not at risk if she is not at risk. When students are correctly identified as not at risk, it is called a true negative. *Point to the chart to show the boxes where students are screened as “not at risk” and the outcome is “not at risk.”*
- Unfortunately screeners are not perfect. The screening tool might indicate that a student will be at risk when in fact he was not at risk. A case where the screener indicates that a student is at risk and the actual outcome shows that the student was not at risk, is called a false positive (or a false alarm); students are incorrectly identified at risk. *Point to the chart to show the boxes where students are screened as “at risk” and the outcome is “not at risk.”*
- Alternatively, the screening tool might show that the student was not at risk when in fact he was. This is called a false negative because the screener indicated that he was not at risk when the outcome shows that he was at risk. In this case, students are incorrectly identified as not at risk. *Point to the chart to show the boxes where students are screened as “not at risk” and the outcome is “at risk.”*

Additional screenings (e.g., winter) and follow-up assessment (e.g., progress monitoring or other skill assessment) are used to verify the accuracy of these results.
If you change the cut score, you influence the distribution of students who fall into each category.

Example 1: In the example on the left, 80% of the poor readers are accurately predicted (screened at risk and were at risk) and 80% of the good readers are accurately predicted (screened as not at risk and were not at risk) while over identifying about 20% of good readers and under identifying 20% of poor readers.

Example 2: In this example, the cut score was lowered. With the new cut score, 65% of the poor readers are accurately predicted as at risk and about 5% of the good readers are incorrectly identified as at risk when they were not (false positive). In changing our cut score, we reduced our false positive classifications, but increased the number of false negatives.
So where should the cut score be set? The lines represent options for the cut scores.

Typically the best cut score is the one that produces the most accurate representation of who is at risk and who is not at risk, as shown with the center line. In this example, we are likely to identify students as at risk as accurately as we identify students not at risk. Follow-up progress monitoring and screening will help increase the accuracy of the identification rate.

The cut score can be adjusted to meet the needs and priorities of schools or districts. They may ask themselves... (click for animation) Should the cut score be increased to correctly identifying all students who are not at risk, but accept the possibility of missing a larger group of students who are at risk?

Point to the line farthest to the “poor readers” side of the graph. (click for animation) Or should the cut score be increased to correctly identify students at risk while increasing the number of students we overidentify? Point to the line farthest to the “good readers” side of the graph.

Regardless of what cut score is used, it is critical that those interpreting the data understand the reason for the selected cut score.
The risks associated with the over and underidentification of students are similar to the risks found in Public Health.

*Review the slide with participants.*

To combat the costs associated with overidentification during universal screening, additional assessments, such as progress monitoring, are used to confirm or disconfirm the initial screening results. This is often referred to as the second stage of the screening process.
Screening: Establishing Cut Scores

- Logical practices to establish cut scores indicating skill proficiency
  - National cut scores (e.g., AIMSweb, DIBELS)
  - Local norms
  - Cut scores based on likelihood of demonstrating mastery on core testing
- Typically based on statistical analysis

Establishing a cut score should be based on logical practices and be educationally relevant.

- Some screening tools include national norms to establish cut scores.
- You could also use local norms as cut scores. Some data systems provide users the tools to develop local cut scores based on outcomes on high-stakes tests. Similar district assessment tools and cut scores allow for comparisons across schools. Often data is needed in order to establish norms at the local level.
- You could also use cut scores based on the likelihood of demonstrated mastery on core testing. This is also known as benchmark testing. A benchmark is a predetermined level of performance on a screening test that is considered representative of proficiency or mastery of a certain set of skills.

Cut scores, although considered arbitrary, are typically based on statistical analysis (e.g., ROC curves, correlations).
Screening

- Video 2: Establishing cut scores

Here’s a short clip of two principals discussing how they established their cut scores.

Play the video (1:13 minutes).

Establishing Cut Scores: http://www.youtube.com/watch?v=l0ILkDicXZA
Benefits of District-Over School-Established Cut Scores

- More effective and efficient allocation of resources
- Increased buy-in and use of data by schools/teachers
- Common message and focused activities
- Increased equity in access to supplemental supports

There are some benefits for using district-established cut scores as opposed to using school-established cut scores. District-established cut scores may lead to:

**More effective and efficient allocation of resources**
- Target schools with greatest need
- Identify effective approaches for scale up in other sites
- Decisions about resources are based on data
- Decisions about resource allocation are more relevant and timely

**Increased buy-in and use of data by schools/teachers**
- Districts can clearly justify why changes are being made (e.g., data demonstrate that new curriculum is not working at most sites, data demonstrate school X has greater need, thus requires more resources)

**Common message and focused activities**
- Expectations across sites are clear and consistent
- Changes from performance on outcomes alone to progress (even in highest performing sites)
- TA and PD activities are based on data showing needs of sites

**Increased equity in access to supplemental supports** This last bullet point will be illustrated by an example on the next slide.
Let’s look at three schools in the same district. These schools all established their own cut scores. From this table, which school appears to be doing the best? **School 2.**

Which school or schools appear to have the greatest needs? **Schools 1 and 3.**

Numbers alone can be deceiving. If districts allocate resources based on school-based cut scores, students in school 1 and school 3 would receive equal amounts of resources. In looking at this information, you must ask, “are we comparing apples to apples?”

<table>
<thead>
<tr>
<th>School</th>
<th>Percent At or Above School Cut Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>50%</td>
</tr>
<tr>
<td>School 2</td>
<td>63%</td>
</tr>
<tr>
<td>School 3</td>
<td>48%</td>
</tr>
</tbody>
</table>
Comparing the actual performance graphically, it is clear that school 1 significantly outperforms school 3. While school 1 only has 50% of students at or above the cut score, its cut score is higher than the cut scores for school 2 or school 3. Because each school established its own cut score, it is difficult for districts to determine the actual number of students at risk and make comparisons across schools.
Using a district-established cut score, it becomes clear that School 3 has a much lower percentage of students at or above the cut score (4%) than either school 1 (44%) or school 2 (20%). School 3 would likely receive more intensive supports from the district because it demonstrates the greatest educational need. Even School 2, which had the highest percentage of students at or above the cut score in the school-based example (63%), has only 20% at or above the district-established cut score. A standard cut score or target (as seen in this graph) across the district provides a more accurate picture of performance across the district and provides more accurate data for allocating district resources and targeting district supports.
As a team, take 5 minutes to discuss the following questions.

*Read the slide aloud.*

*Give teams 5 minutes to discuss (you may adjust this time period based on time available, audience participation, etc.) You may want to ask two or three teams to share how their districts determine which students are at risk.*
NCRTI recommends that teams establish routines and procedures for conducting data reviews, establish decision making processes, and establish explicit decision rules for assessing student progress. This is an important task for district teams to accomplish so that there is some consistency across schools.
It is important to develop routines and procedures for how your team will review data. Teams should:

Read slide.
Learn from several principals about the importance of general education teacher involvement in the data review process.

*This video helps stress that the screening process is not pre-referral for special education, but is rather a preventative process for all students within general education.*

*Play video (4:51 minutes). General Education Teachers Video:*  
http://www.youtube.com/watch?v=IWMapp3AlkA

*If time is available, consider having teams discuss how general education teams are involved in data review in their schools/districts.*
It is important to have established routines and procedures for data-based decision making. In other words, what steps are you going to follow in order to use the screening data to make decisions?

Articulating routines and procedures in writing helps ensure and assess if established routines and procedures are being implemented with integrity. Ongoing evaluation of the selected routines and procedures is necessary to ensure they are culturally and linguistically responsive and lead to the desired outcome.
In thinking about establishing routines and procedures for data-decision making consider clarifying the following points in writing prior to implementation.

What are you looking for?

- Data fishing can be fun but may lead to problems. It can cause sites to delay the use of data (especially if there are a lot of data), change the focus of the analysis, and miss important trends or issues. Identify what you are interested in knowing prior to your data analysis. If you are unclear as to what you are looking for, conduct an analysis of the more critical outcomes first (graduation, reading performance) and then focus on outcomes in other areas. It is important to prioritize.
- Identify what you are looking for at all levels of analysis (district, school, grade, class, students) and levels of prevention (efficacy, struggling students).

How will you look for it?

- Develop a plan for how you will systematically analyze your data. This can increase the efficiency of your data-analysis activities. It also helps manage the output many data systems offer. Only the most critical data are needed at first. It allows you to know where to delve deeper.

How will you know if you found it?

- Determine how much evidence is needed for the team to identify success or lack of success. Once identified the team can continue moving through the problem-solving process in order to develop a plan of action.
Teams might also consider articulating, in writing specific decision rules. They might want to define what happens when certain things occur:

- More than 80% of students are above the cut score
- Less than 80% have reached the cut score
- Lack of progress is evident
- Student progress varies by target group (e.g., Title I, special education, low SES)

Decision rules should be established at all levels including class, grade, and school.
All data presented in this presentation are fictitious but representative of data that a school or district may use.

Data collection is not nearly as difficult for teams as data analysis. Screening data can assist teams in answering many of the questions they are asking. However, data analysis can become overwhelming.

*Click on slide for animation.*

This graphic demonstrates how overwhelming data analysis can be. Many data systems provide users more outputs than they know what to do with. Teams struggle with where to start, what data are most important, and what data provide the information they are looking for. Data systems can help manage data; however, if you are unfamiliar with the data system and what it has to offer, you may be paralyzed by its outputs. As a group, we will discuss some of the different types of data analysis that can be done with screening data further in this section.
Data Analysis

- Data analysis should occur at the:
  - District Level
  - School Level
  - Grade/Class Level
  - Student Level

Read the slide.

Identify what you are looking for at all levels of analysis (district, school, grade, class, students) and levels of prevention (efficacy, struggling students).
Purpose of Data Analysis

- Identify students who need additional assessment and instruction
- Evaluate effectiveness of core curriculum and instruction
- Allocate resources
- Evaluate effectiveness of instruction programs for target groups (e.g., ELL, Title I)

Read the slide.
These are some of the more common, and sometimes confused, terms you may see while analyzing and interpreting data. You may have seen the terms used interchangeably, especially by publishers of screening tools. For purposes of this presentation, we refer to these terms as follows.

*Read the slide.*

The target or benchmark is more often than not the same score as the cut score, especially when the cut score is predictive of the state test. However, it does not have to be. For example, schools or districts may choose to set higher benchmarks or targets that are predictive of higher standards while setting cut scores to be more predictive of who is at risk and not at risk. This is why it is essential for teams to understand how the cut scores, targets, and benchmarks were established. The term “cut score” is sometimes used to refer to criterion scores that separate students by performance levels – commonly viewed by green (e.g., primary), yellow (e.g., secondary), and red (e.g., tertiary) highlighted students. It is important to remember that the purposes of these two terms, cut score and criterion score, are very different. We will talk more about this in a bit.
Before we begin analyzing some sample data, it is important to make sure everyone understands how screening data may be presented. Although we will be looking at fictitious data, the procedures we will be using can be applied to almost any type of data. (It is important to stress this point with the audience.)

Screening data can be interpreted in several different ways. What you are interested in (comparing students, determining the number of students at risk) will determine what data you use (norm referenced, criterion referenced, or target scores) and how you choose to interpret your data. We will discuss each of these further.
If you are using norm-referenced data,

*Read the slide*

The norms used in norm-referenced data can occur at different levels. Students can be compared to other students in their class, school or district, or to national or state norms. For example, the whisker plots shown within the next couple of slides provide examples of the comparison of students at the class, school or district level. National norms and state norms are derived from formal norming studies.
Norm-referenced data, compares an individual against his or her peers. A common way these data are represented is through a bell curve.

In the middle, is the midpoint (median) or the 50% percentile. Half of the population is to one side of the line, and the other half is on the other. In a normal distribution, the majority of people fall near the middle (creating the perception of an average). The farther away from the middle the fewer people you will find. In the education field, imagine the students who are very high achievers on the right end and very low achievers on the left end. In a typical classroom, it would be expected to have a similar distribution of skills among students, with very few high and low achievers, and the majority of students possessing similar skills.
Boxplots are common ways to graphically present norm-referenced data. Think about the bell curve turned on its side; what you end up getting is a box plot. Box plots are somewhat similar in shape and representation. In a bell curve, the middle line is the median score, or 50th percentile; in the box plot, it is the middle line. The box represents the majority of the population, 25th -75th percentiles, while the lines above and below represent the 75th -90th percentiles and 10th -25th percentiles, respectively. Students who fall above or below the box are considered to be outliers.

Box plots are helpful in comparing different groups or cohorts of students. They focus on where the average students fall, instead of the outliers.
This is an example of individual student data for a grade 2 screening measure. This box plot compares an individual student to his peer group. The class or grade is represented in the box plot. This level of analysis would be appropriate for identifying students in need of supplemental support.

Ask the audience to identify the average score (~45), which students in the 90th percentile scored (70), which students in the 10th percentile scored (~15), and which student scored well below his or her peers (~8).

In this example, you can see that the student is performing well below his peer group.
Norm-referenced data allows us to make comparisons of groups, in this case, a school to other schools. This type of analysis would be helpful in identifying which grades need additional support.

Note: For more advanced participants, consider a discussion about the data. The green box plot (or comparison group) provides a composite of all students in a state who have completed the same screening measure for that grade level in the Fall. The grey box is School A’s scores and the black line is the target score.

How does School A’s first grade compare to the state’s composite norm for first grade? Although the median score for the state is below the target score, the majority of first-grade students in School A are below the target, suggesting that this school performs much lower than the norm. However, in grade 2, the school is performing slightly better than the norm (the 25th, 50th and 75th percentiles are higher). What about third-grade performance in comparison to their peers?

For grade 3, the state norm is well below the target score. But even worse, all students in School A are performing below the target. It may be worth noting here that because most students, including those in the comparison group, are performing below the target, teams may need to determine if larger systemic issues are affecting student performance (e.g., ineffective policies, district curriculum, or teacher training).
Turn to the Norm Referenced: Box and Whisker Plots Handout in your training manual for this activity. As a district level data team you are looking at the norm referenced screening data for one school in your district, School A, compared to the composite for the state. What does the information in the graph tell you about School A? Take some time to think about the questions below individually or with those sitting around you.

Below are examples of answers for the questions in the handout. Not all possible answers are represented.

1. What is the cut score? ___60___
2. What is the 50th percentile for the composite? Approximately 75 for School A; Approximately 55 for the composite
3. What is the spread or range of scores for the composite? 30-120; for School A? 47-71
4. What might the difference in spread between School A and the composite tell us?

   The spread for School A is much narrower than the Composite. This may suggest the need for additional analysis to understand why the scores of School A are so limited. This might suggest that the teachers are teaching to the test rather than developing the overarching skills of the students.

5. What might you say about the performance of School A compared to the composite based on this graph?
   - The 50th percentile for School A falls below the cut score whereas the 50th percentile for the composite is above the cut score. This suggests that for the composite more than 50% of the students are reaching the cut score, while at School A less than 50% are achieving scores at or above the cut score.
   - As we just discussed the distribution of scores for the composite is wider than for School A. This may require additional analysis.

6. What additional questions might you ask based on these data?
   - Why is the distribution of scores so narrow for School A?
   - What supports are needed in order to help improve the performance of School A.
If you are using criterion-referenced data,

*Read the slide*

Norm-referenced data, compares students, but criterion-referenced data compares a student to a preset criterion.
Criterion Referenced

There are multiple ways to determine the criterion. One example is percentile ranks:

- Below 10 percentile = deficient
- 10 percentile – 25 percentile = emerging
- Above 25 percentile = established

Read the slide.
This type of data representation is what is often associated with the triangle. In fact if you turn this upside down (*click for animation*), you will see where the triangle graphic originates.
The first table shows how students could be grouped if norm-referenced data are used. In this output, students are compared with their grade-level peers. Some students fall in the upper performance level, others in the lower performance level. This type of data output allows the grade-level teachers to see which students have the lowest and highest scores in the class and what is the “average” performance group in the class. This can assist with differentiation and grouping.

*Click to add the criterion-referenced table.*

The second table presents the same data using criterion scores to identify students (or criterion-referenced data). In this data output, you can see that all students are performing below the criteria (usually national or locally normed scores). These data can assist in evaluating the efficacy of the core program.

Analyzing the same data in multiple ways allows for different questions to be answered.
Data-based decisions can also be made using established benchmarks or **target scores**, not just the criterion-referenced scores. These scores are **typically based on statistical analysis** and can be **correlated with high-stakes testing** (e.g., students who reach the benchmark or target score have an 80% likelihood of scoring proficient on the state test). Using target scores can assist with determining overall efficacy of core curriculum and instruction while criterion referenced scores can help with grouping of students for instructional programming.
The target score is typically a score where teams can feel confident that students are likely to meet standards on a state assessment or other outcome of interest. In other words, these are students the team is confident will not need additional assistance. In this example, several students who met the established criteria fall below the target score. Although they are demonstrating established skills, we are not as confident that they have mastered these skills and, thus, will remain in the established range. Sites may consider progress monitoring these students to ensure they continue to make progress in the general education classroom.
Earlier we mentioned the district-level decisions that can be made using screening data. Including –

- Program improvement and curriculum decisions
- Innovation and sustainability decisions (General effectiveness of implementation and general effectiveness of RTI model)
- Ensuring equitable services and supports across schools (Access to supplemental supports, access to effective instruction, and SLD identification)
- Allocation of resources and professional development

Based on time available, ask the following questions of the audience: What type of questions are you interested in answering at the district level? What data will you use? You may consider allowing them to discuss the answers in teams.

Sample Uses of District Data:

- Program Improvement and Curriculum Decisions
- Innovation and Sustainability Decisions
- Ensure equitable services and supports across schools
  - Access to supplemental supports
  - Access to effective instruction
- SLD identification
- Allocation of Resources and Professional Development
Districts could use data presented in this manner to compare schools at different grade levels and answer questions about effectiveness. For example, is primary prevention (e.g., core curriculum and instruction) working for most students in the schools? Districts can also use these data to make decisions about resource allocation (e.g., which schools appear to need additional support or further analysis?).

Turn to the District Level—Box and Whisker Graph Handout in your training manual and use the graph to answer the questions presented.

Below are examples of answers for the questions in the handout. Not all possible answers are represented.

1. What does the information tell us about how primary prevention (e.g., core curriculum and instruction) is working in schools in our district?

There is also a lot of variation in performance across the schools and the grade levels in this district. The median score for some schools in the district is above the target across all three grade levels and seems fairly consistent with the state composite comparison, while other schools seem to be struggling or struggle in one grade. This variation may be especially worrisome to a district if a standardized district curriculum is in place.

2. Which 2 schools in this district are struggling the most? School E and School A.

3. Which school in the district is doing the best? School D.

4. What decisions might the district make about resource allocation (e.g., which schools appear to need additional support or further analysis)?

Looking at the data, the district may consider trying to determine what is happening at School E that causes it to perform lower across all three grades. It may be necessary to allocate additional resources to School E in order to bring the scores up. In schools where one grade level scores below the other grade levels it may be necessary to do further analysis to see if additional resources need to be targeted at a specific grade level in order to improve scores.
Districts can also look at districtwide performance by grade level over the year. This chart shows changes in the percentage of students meeting the established criterion scores for each benchmark. This chart indicates that although only 55% of students met the criterion for “established” (or green section) at the beginning of the year, 80% met it by the end of year. In general, it appears that instruction in grade 2 is effective. The district may be concerned, though, that the majority of students did not enter grade 2 meeting the criteria for “established.”

Teams may ask themselves, What happened in first grade? Or why is second grade having to catch up?
Districts can also analyze performance by subgroup. Are students in Title I performing similarly to other students? Are students with disabilities performing at similar rates as students without disabilities? It appears, based on these data, that students in the “other” category, who are not identified with a specific status, are outperforming the target group (based on national or locally developed targets or benchmarks) in this district, yet both the Title I and special education populations fall below the target or benchmark scores score. It is also important to note that compared with other groups, students receiving special education services are not making the same level of growth over time.

The district would need to obtain more information about special education students to determine why they are not closing the gap.

It’s important to look at the district-level data first to identify districtwide trends, before looking at school- and student-level data.

Note: Students receiving special education services may still be receiving instruction within a general education setting.

Note: For more advanced groups, consider emphasizing the differences in slope between groups and any gaps.
Districts may also compare performance across ethnic groups. This graph shows that some ethnic groups are not growing at the same rate as others.

Note: For more advanced groups, consider emphasizing the differences in slope between groups and any gaps.
At the beginning of the school year, this district was able to see that there was a gap in performance between English language learners (ELLs) and non-ELLs. After analyzing for root causes and developing and implementing an action plan, the ELLs’ performance improved significantly. Although their performance does not match the performance of same age peers in the school, their performance is closer to the national performance (target score).

As you can see, depending on how your screening data are coded, districts can use the data to analyze performance differences across a variety of factors – socioeconomic status, teacher characteristics, curriculum, and school schedule.

*Note: For more advanced groups, consider emphasizing the differences in slope between groups and any gaps.*
As a reminder school-level decisions related to screening include identifying—

- **General school trends or issues, and then grade-level trends**
  - Are there holes in grade-level performance?
  - Do we lose subgroups of students at certain times?

- **Effectiveness of school-wide curriculum and instruction delivery**
  - Is there consistent performance across grade levels? For example, data may indicate consistent growth from grades 1 to 4 and then a significant drop in performance when students reach fifth grade. This may be an indication that 4th grade instruction/curriculum is not adequately preparing students for fifth grade expectations.

- **Areas of need and guidance on how to set measurable school-wide goals**

Depending on time available, you may want to ask the audience the following questions: What types of questions are you interested in answering at the school level? What data will you use? You may structure this as a think-pair-share activity.

Possible answers:

- **General school trends or issues**
  - Are there holes in grade-level performance?
  - Do we lose groups of students at certain periods of time?

- **Effectiveness of school-wide curriculum and instruction delivery**
  - Is there consistent performance across grade levels? For example, data may indicate consistent growth from grades 1 to 4 and then a significant drop in performance when students reach fifth grade. This may be an indication that fourth grade instruction/curriculum is not adequately preparing students for fifth grade expectations.
• Areas of need and guidance on how to set measurable school-wide goals.
Schools can analyze performance across grade levels. This graph indicates that Grade 2 (below cut score) and Grade 3 (broad variation in performance displayed by the long box plot) may need additional support.

A school with these data would 1) Identify general trends and issues, 2) Look for potential causes, 3) Develop a plan, 4) Implement and monitor the plan, and 5) Evaluate and adjust the plan. These data could help to guide basic resource allocation.
Schools can look at growth by benchmark period by grade level by looking at the performance of an average student across grade levels. The average student appears to be making growth at all grade levels, with more growth in the earlier grades.
Schools, like districts, can also look at growth by target group (ethnicity, ELL status, SES, special education status). This will depend on what variables schools collect in their student data.

Turn to the School Level—Analyzing Growth by Ethnic Groups Handout and use the data provided to answer the questions.

Below are examples of answers for the questions in the handout. Not all possible answers are represented.

1. Which ethnic groups are performing above the target score in this school?  Asian, Caucasian, and Unidentified

2. Which ethnic groups are performing below the target score? African American and Hispanic

3. Consider the growth of students by ethnic group from fall to spring, what does this tell you about the achievement gap between ethnic groups?

   While there is a difference in the fall between the students identifying as Asian, Caucasian, and Unidentified and those identifying as African American and Hispanic, the widening spread by the spring suggests that the achievement gap is growing across the school year. This is a cause for additional concern. In other words the rate of improvement for some ethnic groups is outpacing that of other ethnic groups. Asian, Caucasian, and Unidentified students are making more growth across the year than African American and Hispanic students. This serves to widen the gap between these groups at the end of the year.

4. If these data represented your school, what next steps might your team consider?

   Note: For more advanced groups, consider emphasizing the differences in slope between groups and any gaps.
At the grade and class level you can look at

• Grade-level or class-level trends or issues
• Effectiveness of grade-level curriculum and instruction
• Areas of need and guidance on how to set measurable grade-level goals
• Students who may need additional instruction or assessment

When analyzing data at the grade-level, it is important to remember that the

• Focus is on grade level data, NOT individual students. Look at big picture first. It should be an efficient and systematic process. Remember – your model may look different to make it more efficient in your context.
• Data analysis procedures should be efficient, systematic practices.
• Analysis must guide and inform core instructional decisions.

Grade-level data analysis should not be about compliance, but rather about improving efficiency and instruction.

Depending on time available, you may want to ask the audience the following questions:
What type of questions are you interested in answering at the grade or class level? What data will you use?

You may structure this as a think-pair-share activity.
Grade and class level teams can also look at screening data to see the effectiveness of the core curriculum and how changes to the core instruction influences students’ responses across the school year. This is an example of grade level data. A similar process could be used for class level data.

As a data team, you have gathered to discuss the effectiveness of core instruction in these second grade classes and to see how an instructional change in the winter related to student outcomes. Look at the data in the graph to answer the following questions with your table group. Turn to the Grade Level—Analyzing Effects of Changes to Instruction Handout and use the data provided to answer the questions.

Below are examples of answers for the questions in the handout. Not all possible answers are represented.

1. Overall, how are the students in second grade doing in the spring? Has this changed across the school year?
   The data indicate that the change led to improvements in the number of students meeting the established criteria. Between the winter and the spring, the percentage of students meeting the established criteria increased from 53% to 76%. The change in instruction led to an improvement from the winter to the spring, but the growth across the entire year was minimal (73% to 76%).

2. What percentage of students require tertiary prevention during the spring? What questions might you ask about this?
   About 10% of the students likely need tertiary prevention during the spring. This is twice the goal of 5 percent. There has been a high percentage of students being identified as “deficient” throughout the year. This is something that might cause concern and be in need of further analysis.

3. How might this be different if you were looking at district level data or school level data?
   At the schools or districts might consider how the distribution shows a need for additional resources or supports in order to address the low level of students responding to the score in the winter. They might consider making curriculum changes or implementing additional professional development to support teachers to implement the curriculum.
Growth, just like at the school and district, can be analyzed at the grade and class level. Given the large number of data (i.e., number of students in the analysis) at the district and school levels, some gaps at the grade or class level may be missed. Class and grade levels should follow the same data-analysis routine to identify potential gaps in performance. Just as with the district level analysis you can look at the data by target groups (e.g., general education and special education), ethnic groups, or ELL status. In this class, the general education students are making progress above the target groups’ benchmark performance, but the special education students remain below the target group and show little progress.

Note: For more advanced groups, consider emphasizing the differences in slope between groups and any gaps.
This chart shows average student performance for four fictitious classes. Teams, looking at classroom data, can compare student performance across classrooms at different points in the year.

Teams can also look at the data to make decisions about resource allocation, instruction, and evaluation of the core curriculum; not to evaluate teachers. There should not be fear about the data. The discussion should be open.

The graph shows that in the fall, the classes were performing at different levels. The school may need to allocate resources appropriately to ensure that classes 1, 3, and 4 can close the gap.

*Click for animation.*

It looks like class 1 made a lot of gains. This may be a result of additional resources, fidelity of implementation, teacher training, or other variables. Further analysis is needed to determine and address performance differences.

*Click for animation.*

Spring data indicate that, on average, students in classes 1, 3, and 4 are not performing similarly to class 2. Adjustments may need to be made in the following grade to account for differences.
Ranking graphs can also be used to conduct student-level analysis at the grade or class level. This type of analysis can allow you to see how individual students rank against other students in the class or grade. Teachers can use this information for differentiating instruction or to create small instructional groups (for example, the students grouped in the black boxes).
When class- and grade-level analysis is complete, data teams should look at the performance of individual students to identify which students need additional support in comparison with their peers, the target score, or other performance criteria.
With screening data, individual student’s performance data can be compared with the norm group (box plots) and the target score (black line).

If you look at the green boxes, you can see that the group appears to be making progress over time. While this student (shown in blue) is making some progress across the year, his progress appears to be insufficient to close the gap with his peers. In fact, if you look closely, it appears the gap may actually be increasing as shown by the increasing difference between the 50th percentile of the peer group and the student’s benchmark score. This may be a student who needs additional support.
Analyzing student data are important not just for students who are struggling. It is important to also ensure that high performers continue to make the appropriate level of progress throughout the school year. This may also be a student who is in need of additional support.
How are screening data used to determine who will need supplemental support? After determining the effectiveness of primary prevention and establishing instructional plans for improving core instruction, teams can begin to analyze data to determine which students need additional support.

**Identifying students in need of additional support** is not always as simple as providing interventions for all students well above or well below the cut score or target score. It may vary based on the needs and resources of the school, and the target or criterion scores chosen.

There may be more students below the target score than can be served by the existing resources. Schools and districts may need to identify the lowest percentage of students whose needs can be met by existing resources (e.g., 20%) and they may need to think about reallocating existing resources or securing additional funding to increase the number of students they can serve in interventions.

Remember, if there are many students below the target (more than 20%), there has to be some changes to the primary level of support and the focus should be on improving core instruction/curriculum.
Practitioners can use “criterion scores” from criterion-referenced assessments to determine what level of instruction supports students may need. In this example, students in the yellow may need secondary support while students in the red may need tertiary. Although this method does provide established scores for grouping, it can lead to challenges for schools where the majority of students fall into these two categories.
This graph provides an example of a situation where most students fall below the cut score or target score. If cut scores or target scores were used to determine supplemental intervention in this district, then School 3 would have significantly more students to support. This would be an issue of inequity in terms of resources. The focus for all of these schools, given the high numbers of students in need, should be on improving core instruction and curriculum.
Another way to identify students in need of support is to use the target identification rate. This is different from the cut score or target score.

- The **target identification rate** is the proportion of students to be identified as at risk. This may depend on program objectives and resources.
- Unique target identification rates may be specified for different skill areas.
- Schools and districts will need to think about reallocating resources or securing additional funds to support all students in need.

Note: It is important to emphasize that using a target identification rate to identify students as at risk does not mean that schools are not responsible for teaching all students. Ideally, schools should provide extra supports to all students who demonstrate a need. Setting a target identification rate can be a first step while schools are a) strengthening their core curriculum to reduce the overall numbers of students identified as at risk, and b) reallocating resources or securing additional funding to support students who need additional interventions and supports.
This is an example of how the target identification rate may differ from school to school. School 1 has resources available to serve 20 percent of the students in secondary or tertiary; therefore, it sets its target identification rate as identifying the lowest 20 percent. In contrast, School 2 only has enough resources available to serve 15 percent of students in secondary and tertiary, so its target identification rate is set to identify the lowest 15 percent.

Regardless of a school’s target identification rate, if more than 20 percent of the student population is identified as at risk, the focus should be on improving core curriculum and instruction.

The district should help identify resources available and help guide schools in allocating resources to support all students who need additional supports.
Things to Remember

- Good data IN... Good data OUT
  - Know where your data came from and the validity of that data
- Focus on the big picture or ALL students
  - Are most students making progress?
- ALL instructional and curriculum decisions should be based on DATA.
- Keep it SIMPLE and EFFICIENT!

Read the slide.

Teachers and leaders need to be able to trust the data.

When working with data, consider these questions: “Is there a simpler way to do this?” “Do we need these forms?” “Are we getting to the point?”
ESTABLISHING A SCREENING PROCESS

This is an optional section that can be completed if your participants reflect school and district level teams. The intent of this section is to focus on planning how the screening process should be implemented or looking at how the screening process is already implemented to understand if the tools and procedures match the purpose, needs and priorities of the school and district. The Assessing your Needs, Priorities, and Logistics Handouts and Selecting Screening Tools Handout, located in Appendix A of the Training Manual, are meant to be used during this part of the presentation. Depending on time, presenters may stop after each section to have participants complete that particular section, or presenters may chose to review all sections and then have participants complete the handout all at once. Presenters may want to have teams assign roles such as timekeeper, note taker, and facilitator in order to facilitate the completion of this activity. See the Facilitator’s Guide for additional information about how to use the handouts. If you plan to use the Handouts during the Presentation.

Now we are going to discuss how to establish a screening process in your school or district. During this section of the presentation, the Assessing your Needs, Priorities, and Logistics Handout and Selecting Screening Tools Handout will be used. Please take them out now, but do not complete them yet. I will give you time to complete each section.

The following are key terms and main points that should be emphasized during this segment of the presentation.

Key Terms:
- Classification
- Accuracy
- Generalizability
- Reliability
- Validity
- Disaggregated Data

Main Points:
- To establish a screening process, (1) determine needs, priorities, and logistics, (2) select a screening tool, and (3) establish procedures.
- Establishing a screening process is an activity that should be completed by a team of people with different viewpoints and expertise.
- Selecting a screening tool is a process that requires thought and discussion.
Here are some steps to consider in establishing a screening process.

*Read the slide.*
The first step is to determine your needs, priorities, and logistics. As a team, you already identified your purpose or purposes for screening in Purpose for Screening Handout. Keeping that in mind, in a moment, your team will have an opportunity to discuss your school or district’s needs, priorities, and logistics using the Assessing your Needs, Priorities, and Logistics Handout. This tool is designed to be completed by the team.
One of the first decisions you need to make is what your outcome measure is. **What is the criterion? What are you predicting to?** For example, are you predicting to performance on the state grade-level assessment or are you predicting to performance on the SAT?

The outcome measure should be an **educationally valid outcome** (e.g. performance on a state assessment, mastery of standards, progress toward graduation)

**Schools must choose age-appropriate outcome measures that capture student ability.**

You **may have different screeners assess different outcomes**, but it is important to ensure that screeners provide useful data for teams.
As a team, discuss the following and record your discussion in Section 1: What are the outcomes you are focused on? On the Assessing your Needs, Priorities, and Logistics Handout.

*Read the slide.*

*You may allow teams to answer the questions at this point (if so, set a specific time limit and remind them only to answer the questions for this section) or you may remind them that you are reviewing all the sections and questions and then the teams will have time to go back to complete all of the sections.*
Next, you need to determine if you will have a **focus on the district level or the school level.**

**Pros** – For example, an advantage of a district focus is that it provides the ability to evaluate district efforts.

**Cons** – For example, a disadvantage of a school focus is that it makes it difficult to make comparisons across the district (which is needed for allocation of resources).

**Alignment of other initiatives, activities, and policies.** When ‘adding something new,’ something must be removed. Screening should not be seen as an additional component but a component that can help align other activities. Remember, screening can assist with school improvement efforts, special education eligibility, allocating resources, etc.
As a team, discuss the following questions and record your discussion on Section 2: What is our scope? On the Assessing your Needs, Priorities, and Logistics Handout.

Read the slide.

You may allow teams to answer the questions at this point (if so, set a specific time limit and remind them only to answer the questions for this section) or you may remind them that you are reviewing all the sections and questions and then the teams will have time to go back to complete all of the sections.

Inform the teams that they may not have answers to all the questions at this point in time. In those situations, instruct them to use this time to determine action steps for finding the answers.
Target Population

- Screening tools may differ in their validity, reliability, and accuracy depending on the population
  - Specific subgroups (ELL, students with disabilities)
    - Test may need language or other accommodations
  - Grade levels

Screening tools may differ in their validity, reliability, and accuracy depending on the population. This is especially true for specific subgroups, like students receiving special education services and English Language Learners. In addition, not all tools are equally valid or accurate across different grade levels.
As a team, discuss the following and record your responses on Section 3: Who is the target population? On the Assessing your Needs, Priorities, and Logistics Handout.

Read the slide.

You may allow teams to answer the questions at this point (if so, set a specific time limit and remind them only to answer the questions for this section) or you may remind them that you are reviewing all the sections and questions and then the teams will have time to go back to complete all of the sections.

If they have time, they may go back and answer questions from previous sections. Remind the teams that they may not have answers to all the questions at this point in time. In those situations, instruct them to use this time to determine action steps for finding the answers.
In thinking about when screening will occur, it is important to remember that:

**Screening should occur more than one time per year, but in many schools and districts it occurs three times per year (fall, winter, spring).**

Teams should **create a clear schedule before the year begins** to determine when screening will occur.
Screeners must target skills pertinent to the grade and times the screen is administered (in other words, don’t screen students solely on skills that have not been taught yet or that are no longer predictive of future performance—such as a measure of phonemic awareness in third grade.)

You also should consider how the screener will be administered. There are two main delivery options: individual and class-wide.
As a team, discuss the following and record your responses on Section 4: What do we need to know about timing? On the Assessing your Needs, Priorities, and Logistics Handout.

Read the slide.

You may allow teams to answer the questions at this point (if so, set a specific time limit and remind them only to answer the questions for this section) or you may remind them that you are reviewing all the sections and questions and then the teams will have time to go back to complete all of the sections.

If they have time, they may go back and answer questions from previous sections. Remind the teams that they may not have answers to all the questions at this point in time. In those situations, instruct them to use this time to determine action steps for finding the answers.
Schools and districts need to consider who will be conducting the assessment and who will be serving on the data analysis team. These decisions need to be driven by identifying who has the prerequisite skills, who logistically has the time, etc.
Team Question: Staff Roles

- What are staff roles related to screening?
  - Conducting assessments
  - Scoring assessments
  - Interpreting results
- Does staff have adequate skills and knowledge?

As a team, discuss the following questions and record your responses on Section 5: What are staff roles related to screening? On the Assessing your Needs, Priorities, and Logistics Handout.

Read the slide.

You may allow teams to answer the questions at this point (if so, set a specific time limit and remind them only to answer the questions for this section) or you may remind them that you are reviewing all the sections and questions and then the teams will have time to go back to complete all of the sections.

If they have time, they may go back and answer questions from previous sections. Remind the teams that they may not have answers to all the questions at this point in time. In those situations, instruct them to use this time to determine action steps for finding the answers.
There are three main areas of focus regarding the logistics of administering the screener. You will need to consider the **delivery options**, the tools required for **analysis**, and the **location** where the screener can be administered.

## Administration

<table>
<thead>
<tr>
<th>Delivery option:</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Paper and pencil</td>
<td>- Classroom</td>
</tr>
<tr>
<td>- Computer/Internet</td>
<td>- Other space (e.g., Computer lab)</td>
</tr>
</tbody>
</table>

**Analysis**
- Internet-based analysis and reporting software
- Statistical software
As a team, you will answer the following questions on Section 6: What do you need for administration of screening? On the Assessing your Needs, Priorities, and Logistics Handout.

Read the slide.

You may allow teams to answer the questions at this point (if so, set a specific time limit and remind them only to answer the questions for this section) or you may remind them that you are reviewing all the sections and questions and then the teams will have time to go back to complete all of the sections.

If they have time, they may go back and answer questions from previous sections. Remind the teams that they may not have answers to all the questions at this point in time. In those situations, instruct them to use this time to determine action steps for finding the answers.
Schools and districts must, of course, also consider the related costs for screening. These costs include the **cost of the tool**, any **necessary materials** such as computers or number 2 pencils. Additionally you need to consider the **cost of training** (for example, one screening tool in reading – Discovery Education Predictive Assessment-Reading – has on-site professional development for $2500/day or a Professional Development Webinar for $250), and the **cost of instruction for the identified students**. The cut score or targeted instruction rate you select for screening should be related to the resources you have available for instruction.
As a team, discuss the following questions and record your response on Section 7: What funds are available? On the Assessing your Needs, Priorities, and Logistics Handout.

Read the slide.

You may allow teams to answer the questions at this point (if so, set a specific time limit and remind them only to answer the questions for this section) or you may remind them that you are reviewing all the sections and questions and then the teams will have time to go back to complete all of the sections.

If they have time, they may go back and answer questions from previous sections. Remind the teams that they may not have answers to all the questions at this point in time. In those situations, instruct them to use this time to determine action steps for finding the answers.
In order to help ensure that the measures are administered with integrity, anyone administering the screener must be trained.

*Read the slide.*
As a team, discuss the following questions and record your responses on Section 8: What do you need for training? On the Assessing your Needs, Priorities, and Logistics Handout.

Read the slide.

Allow teams to answer the questions on Activity Handout-Step 1 at this point. Set a specific time limit (will vary depending on if they are only answering the training questions or if they are answering the questions in all the sections.) If they have time, they may go back and answer questions from previous sections. Remind the teams that they may not have answers to all the questions at this point in time. In those situations, instruct them to use this time to determine action steps for finding the answers.
After you have determined your priorities, needs, and logistics, you are ready to select a tool. Use the Selecting a Screening Tool Handout to guide discussions about the match between identified tools and your needs and priorities.

Note: The Selecting a Screening Tool Handout is optional. For teams who are able to clearly define their needs and priorities or for teams that already have a tool, this activity may be appropriate. For many teams new to RTI, they may need to go back to their district or school to clarify their needs, priorities, and logistics. Recommend that teams reconvene after the training to complete the Assessing your Needs, Priorities, and Logistics Handout and move to the Selecting a Screening Tool Handout when they are ready.
The three-step process for establishing a screening process is to first determine needs, priorities, and logistics; next, you will select a screening tool; and last, you need to establish basic procedures. Some procedures that need to be considered are:

*Read the slide.*

We’ve already spent time today on the first five. Let’s talk now about number 6: Reporting and sharing data.
Some things to think about when determining how you are going to share screening data:

*Read the slide.*

This is a great way for the district to demonstrate and model for the schools how sharing data can be done.
Before we wrap up, let’s see what you learned today and discuss next steps.
Quickly turn to a partner and quiz each other on the following questions.

Note: Below is a simple way to conduct a review of today’s content. Feel free to change the format to meet the needs of the audience.

Depending on time available, give pairs 5–10 minutes to answer questions. Review the questions and answers with the group.

**List the four essential components of RTI:** screening, progress monitoring, multi-level prevention system, and data-based decision making

**How often are screening assessments administered?** At least once a year; many schools and districts conduct screening at least three times per year.

**Do screening tools tend to overidentify or underidentify?** Why? Overidentify—we’d rather “catch” students who do not need extra help rather than “miss” students who do.

**Provide three examples of questions you can answer based on screening data:** Is your core curriculum effective? What students need additional support? What grades/schools need additional support? Are certain policies effective?

*Note: Continued on next slide*
Review Activity

- What is the difference between a summative and formative assessment? Provide an example of each.
- Who should receive a screening assessment?
- What is classification accuracy?
- What is a cut score?

What is the difference between a summative and formative assessment? Provide an example of each. Summative assessments are typically administered after instruction and tell us what a student learned (e.g., end-of-chapter tests, high-stakes tests, final exams.) Formative assessments are administered during instruction and tell us how well students are responding to instruction (e.g., mastery measures, general outcome measures.)

Who should receive a screening assessment? All students

What is classification accuracy? The classification accuracy indicates the extent to which a screening tool is able to accurately classify students into “at-risk” and “not at-risk” categories.

What is a cut score? A cut score is a score on a screening test that divides students who are considered potentially at risk from those who considered not at risk.
Today, you learned how to

*Read the slide.*
Given what you learned today, what are your next steps? Consider your earlier team discussions.

The following are questions you may consider. Do we need to

*Read the slide. Allow teams 5-10 minutes.*
**Homework**

- Identify and implement valid screening process
  - Identify a valid screening tool
  - Establish a definition and cut scores for ‘at risk’
  - Identify percentage and number of students at risk at winter screening
  - Establish criteria for demonstrating the efficacy of core
- Collect screening data

*This slide is optional. Homework may be altered depending on time elapsing before next session, needs of group, etc. Encourage participants to use the training manual and the handouts as discussion guides when they reconvene as a team.*

Before we meet again on ____*(fill in appropriate date)*, please complete the following steps:

*Read the slide.*
Need More Information?

National Center on Response to Intervention
www.rti4success.org

RTI Action Network
www.rtinetwork.org

IDEA Partnership
www.ideapartnership.org

Here are three websites for additional information on screening and other RTI-related topics.
Questions?

National Center on Response to Intervention

www.rti4success.org