Develop Your Data Mindset

Module 5 - Universal Screening
Part 1 - Background Knowledge

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Learning Goals

- Increase knowledge of the purpose of universal screening
- Increase knowledge of vocabulary relevant to universal screening

SLDS Data Use Standards

- K.2.D Data Context: Knows the circumstances and purposes for which data are collected
- S.1.D Data Meaning: Identifies different types of data and can explain specific DATA DEFINITIONS and how data are collected and formatted
- K.1.D Types of Measures: Knows various types and purposes of ASSESSMENTS and other MEASURES
- S.2.B Critical Evaluation: Knows how to perform CRITICAL EVALUATION on data sources for reputability, quality (including validity and reliability), relevancy, and ability to address the identified need

Teacher Thought

If I understand the purpose of universal screening and the meaning of relevant terms, I will be better prepared to contribute to the process of identifying students who may be at risk or need enrichment.

Introduction

Teacher 1:
Can you believe Great Plains School District has 500 students this year?

Teacher 2:
I'm so glad I only have 14 students this year, even if some are higher/lower performers than others.

Teacher 3:
I heard that Great Plains has resources to provide extra support to 25% of the student population?

Teacher 4:
What? No way! -- that is only about 125 students district wide.

Introduction

Ryan:
That is right, ladies and gentlemen. You all heard correctly. We are serious about focusing on student achievement data this year, which is why I'm glad you all made it to our first PLC meeting this fall. We have resources that have been allocated to provide remedial opportunities for about 100 underperforming students and enrichment opportunities for 25 high performing students.

Great Plains wants to provide supplemental support to students who perform at similar levels across the school. Low performing and high performing students in one class should have access to the same types of supplemental supports as low performing and high performing students in another class.

Let's use our time together today to see if some of students you have in your classes this year should receive additional support? First, we need to determine how you identify them and the level of additional support they need.

Introduction

Ryan:

I hope you remembered to bring your Data Binder to our first PLC meeting this year because you know me, I like to test you!

Seriously, though, I know you are anxious to analyze the fall interim benchmark assessment data that we are about to get back, but first we are going to review background knowledge we will need for our district's RTI protocol for universal screening. I have created a flyer to assist you. For now, there are multiple choice items that you will complete.

If you recollect from last year, you will fill in the terms and keep the information in a binder for all of our PLC and Data Team meetings throughout the year. During this simulation you will complete it online, but at the end of the module, you will have access to print the document and store it in your physical binder if you'd like.

In your binder, you should see your Universal Screening flyer for our meeting today. It is the September edition. Go ahead and take it out by clicking here.

Activity - 05.01.01

RTI is an acronym for
- Response to intervention
- Really tough inquiry
- Respect, trustworthiness, ingenuity
- Right to inclusion

Standard: K.2.D Data Context

Activity - 05.01.02

Universal screening is part of the RTI process, which fits into North Dakota's Multi-Tier System of Supports framework. Universal screening is part of which NDMTSS essential component?
- Assessment
- data-based decision making
- multi-tier instruction
- infrastructure and support mechanisms
- fidelity and evaluation

Standard: K.2.D Data Context

Activity - 05.01.03

What is the purpose of universal screening?
- Identify students who may be at risk for poor learning or need enrichment
- Assess student progress over time
- Identify student strengths and skill deficits
- Evaluate student knowledge relevant to a specific learning target

Standard: K.2.D Data Context

Activity - 05.01.04

Universal screening should occur a minimum of 2 times per year. At a minimum, when should screening occur?
- Beginning of the school year and Middle of the school year
- Beginning of the school year and End of the school year
- Middle of the school year and End of the school year
- Before of the school year and After the school year

Standard: K.2.C Data Collection

Tutorial

RTI stands for **Response to Intervention**. RTI is a multi-level prevention system in which schools use data to identify students who may be at risk for poor learning outcomes, monitor progress of at-risk students, and implement and adjust evidence-based interventions depending on student responsiveness to the interventions (NCRTI, 2010).

Universal screening is part of the RTI process, which fits into North Dakota's Multi-Tier System of Supports framework. Universal screening is part of the "Assessment" essential component. Other essential components include data-based decision making, multi-tier instruction, infrastructure and support mechanisms, and fidelity and evaluation (NDMTSS, 2016 April).

Tutorial

Our emphasis in this module is on identifying at risk students through universal screening. Students are identified as being **at risk** if they perform below the cut score on a universal screening assessment. **Screening** is conducted to identify students who may be at risk for poor learning outcomes so early intervention can occur (NCRTI, 2010). Screening can be conducted to identify students at risk for a poor outcomes in a variety of areas, such as academics, mental health, physical health, and behavior. The focus of this module is on identifying students at risk for poor academic outcomes.

Tutorial

Universal screening should occur at a minimum of **2 times per year**, at the beginning of the school year and in the middle of the school year, such as in the fall and in the winter (NCRTI, 2010). By screening at these times of year, teachers not only have two opportunities to identify students who may need additional support; there is also plenty of time to implement the additional support and determine if it is working. If the school only administers screening assessments in the fall, they limit their opportunities to identify potentially at risk students mid-year who might have been missed at the beginning of the year or students who made poor learning progress during the first half of the year and ended up being at-risk mid year even though they may have appeared to be on track at the beginning of the year.

Tutorial

Some schools administer screening assessments at the beginning, middle, and end of a school year. Although there's not much time for additional supports to be implemented and have much of an impact on students identified as at-risk on the end-of-year screening assessment, the screening results could provide teachers with a better understanding of growth that occurred throughout the year. Furthermore, the spring results could also be useful data for the following year's teachers to get a better sense of the achievement levels of incoming students.

Activity - 05.01.05

Universal screening helps ensure each student is targeted for the appropriate level of prevention within an RTI framework. Students receiving primary prevention are able to achieve success with only the core curriculum, which is delivered daily in the classroom. This is is also known as

- Tier 1 or universal intervention
- Tier 2 or strategic intervention
- Tier 3 or intensive intervention
- Tier 4 or enrichment intervention

Standard: K.2.D Data Context

Activity - 05.01.06

Students receiving secondary prevention require moderately intense supports beyond the core curriculum to be successful. This is also known as
- Tier 1 or universal intervention
- Tier 2 or strategic intervention
- Tier 3 or intensive intervention
- Tier 4 or enrichment intervention

Standard: K.2.D Data Context

Activity - 05.01.07

Students receiving tertiary prevention require intense supports beyond the primary and secondary prevention levels to be successful. This is also known as
- Tier 1 or universal intervention
- Tier 2 or strategic intervention
- Tier 3 or intensive intervention
- Tier 4 or enrichment intervention

Standard: K.2.D Data Context

Activity - 05.01.08

This pyramid represents the three prevention levels, or tiers, within an RTI framework. According to conventional RTI guidelines, approximately ____ of the student population should be targeted for Tier 1.

- 95-100%
- 80-90%
- 65-75%
- 50-60%

Standard: K.2.D Data Context

Tertiary Prevention

3

Secondary Prevention

2

Primary Prevention

1
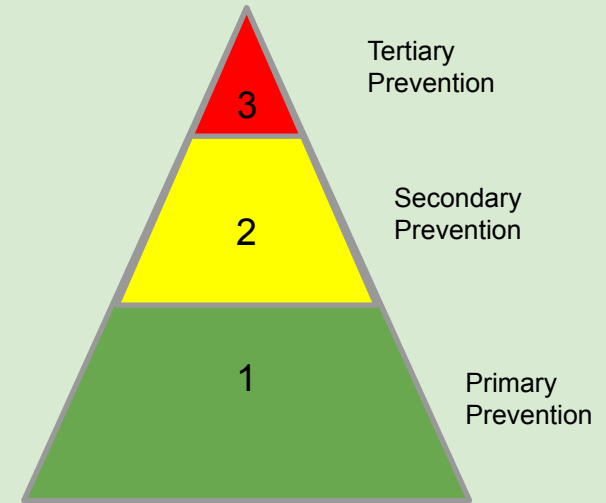
Activity - 05.01.09

According to conventional RTI guidelines, approximately _____ of the student population should be targeted for Tier 2.

- 20-25%
- 16-21%
- 10-15%
- 5-9%

Standard: K.2.D Data Context

Tertiary Prevention

3

Secondary Prevention

2

Primary Prevention

1

Activity - 05.01.10

According to conventional RTI guidelines, approximately _____ of the student population should be targeted for Tier 3.
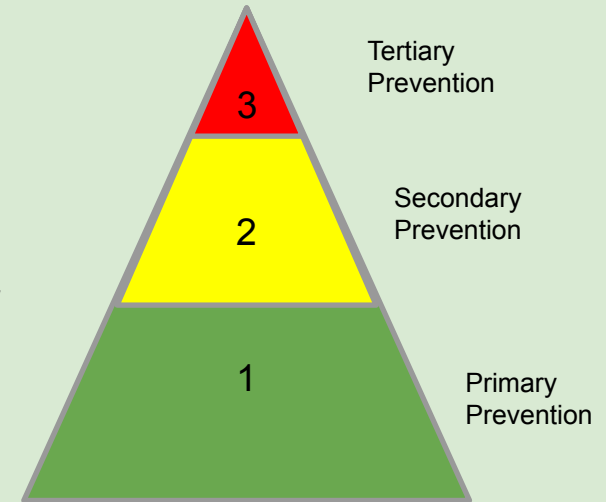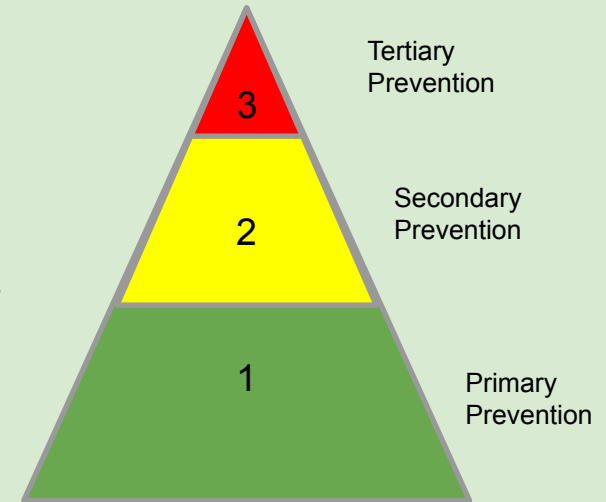
- 1-5%
- 6-10%
- 7-12%
- 10-15%

Standard: K.2.D Data Context
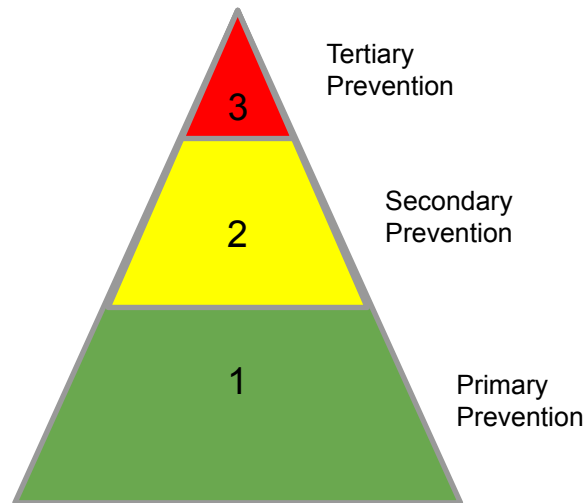
Activity - 05.01.11

Mark the best answer to fill in the blank of the following statement: Students identified as being at-risk may be targeted for _____ intervention, which often involve(s) progress monitoring.

- Tier 1
- Tier 2
- Tier 3
- Tier 2 or Tier 3

Standard: K.2.D Data Context

Tutorial

There are three levels of prevention in an RTI framework: Primary, secondary, and tertiary.

Tutorial

Primary prevention, also known as **Tier 1** or universal intervention, represents core curriculum delivered daily in the classroom.

Secondary prevention, also known as **Tier 2** or strategic intervention, is given to students who need instruction beyond the core curriculum to be successful.

Tertiary prevention, also known as **Tier 3** prevention, is intense intervention given to students who need help beyond the primary and secondary prevention levels.

Tertiary Prevention

Secondary Prevention

Primary Prevention
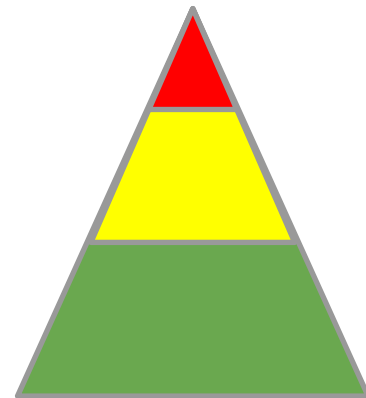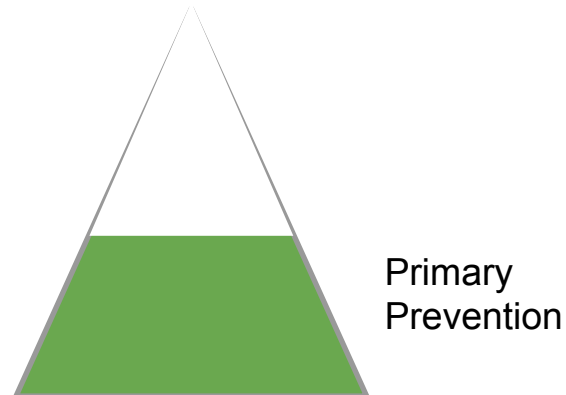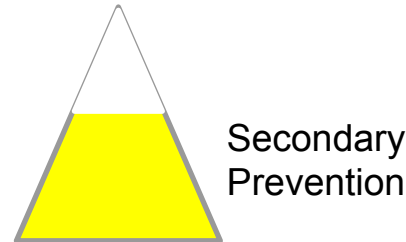
Tutorial

This pyramid represents the three prevention levels, or tiers within an RTI framework. According to conventional RTI guidelines, **80-90%** of students are expected to fit into Tier 1; **10-15%** are expected to fit into Tier 2; **1-5%** are expected to fit into Tier 3 (Searle, 2010).

Tertiary Prevention 1-5% of students

3

Secondary Prevention 10-15% of students

2

Primary Prevention 80-90% of students

1
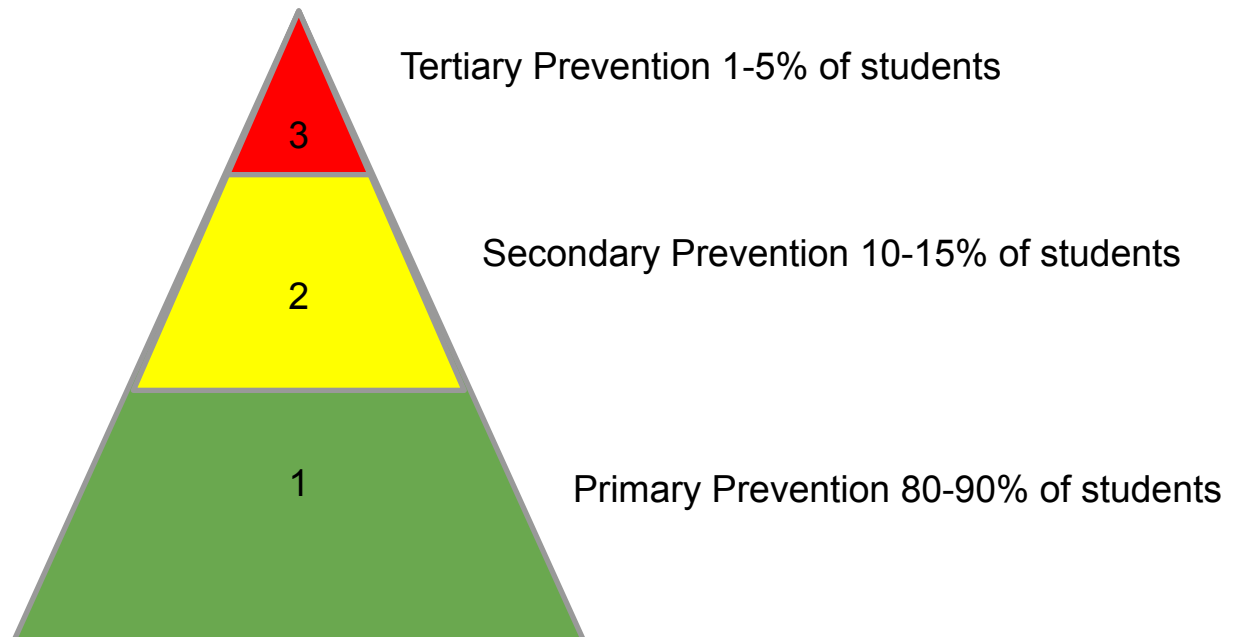
Tutorial

You'll see some pyramids with a 4th level **(Enrichment)**, which represents extremely high performing students, often the **95th percentile or above**, who may need to be given enrichment opportunities in addition to core instruction. This module focuses on how to place students in these tiers using a universal screening assessment.

Tertiary Prevention 1-5% of students

Secondary Prevention 10-15% of students

Primary Prevention 80-90% of students

Enrichment
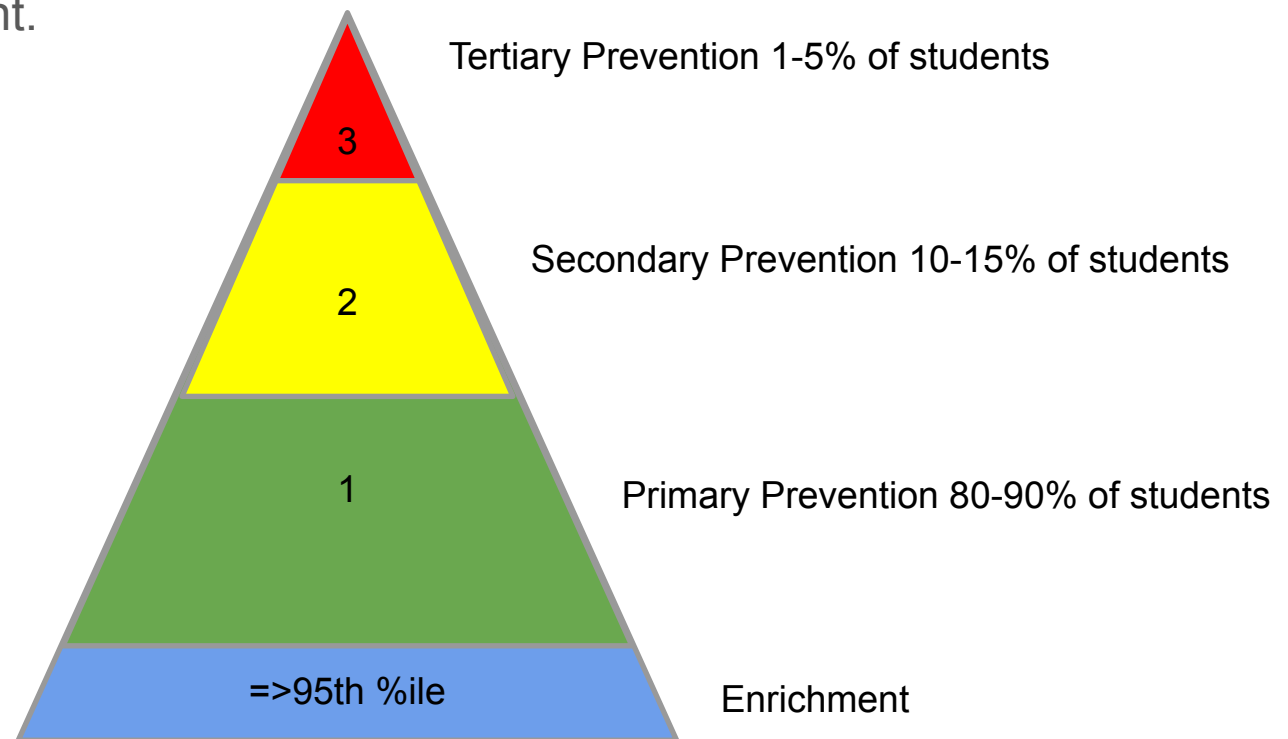
Activity - 05.01.12

The performance value on an assessment that divides students who are considered potentially at risk (i.e. Tier 2 and Tier 3 students) from those who are considered not at risk (i.e. Tier 1 students) is known as a _____.
- Cut score
- Sufficient value
- Goal line
- Trend level

Standard: S.1.D Data Meaning

Activity - 05.01.13

Some types of universal screening assessments measure student performance in relation to a specific standard and do not compare students to other students. With these types of assessments, a cut score may be defined as a percentage correct on an assessment. For example, 70% correct might be the cut score for tier 1, meaning that all students scoring below 70% would be considered at risk for poor learning. This type of assessment would be considered a _____.

- Criterion-referenced assessment
- Norm-referenced assessment
- Unit level assessment
- Percentage based assessment

Standard: K.1.D Types of Measures

Activity - 05.01.14

Some types of universal screening assessments measure student performance with that of an appropriate peer group, not against any defined criteria. With these types of assessments, a cut score may be defined as a percentile. For example, the 41st percentile might be the cut score for tier 1, meaning that all students below the 41st percentile would be considered at risk for poor learning. This type of assessment would be considered a _____.

- Criterion-referenced assessment
- Norm-referenced assessment
- Unit level assessment
- Percentage based assessment

Standard: K.1.D Types of Measures

Activity - 05.01.15

If a student is at the 45th percentile on a norm-referenced assessment, the student _____.
- scored as well as or better than 45% of the student's peers in the norm study
- answered 45% of the questions correctly on the assessment
- achieved a score that was 45% higher than the average
- answered 45 more questions correctly than the lowest scoring student

Standard: S.1.D Data Meaning

Tutorial

A **cut score** is a score on a screening test (e.g., NWEA MAP, Renaissance Star, aimsweb), that divides students who are considered potentially at risk from those who are considered not at risk (NCRTI, 2012, June). In other words, students who score below the cut score range(s) may need additional support and students who score above may need enrichment. If a student doesn't perform at a high enough level, he or she may be at risk for poor academic performance. Most screening assessments available through vendors include recommended cut scores, which makes identifying potentially at risk students pretty simple and straightforward. The students who were identified at potentially at risk are then targeted for progress monitoring and/or interventions.

Assessment vendors frequently provide recommended cut scores. However, in some cases, districts may choose to modify those cut scores to ensure the district has adequate resources to serve the number of identified students in each tier.

Tutorial

A **criterion-referenced assessment** measures student performance in relation to a specific standard (Geier & Smith, 2012). It typically is used to identify a student's strengths and weaknesses in relation to an age-group or grade-level standard; however, it does not compare students to other students. With this type of assessment, cut scores would typically be defined as a percentage correct on an assessment. For example, 70% correct might be the cut score for tier 1, meaning that all students scoring 70% or above would be in tier 1; 60% correct might be the cut score for tier 2, meaning that all students achieving between 60% and 69% correct would be in tier 2; and all students scoring below 60% correct would be in tier 3.

Both tier 2 and tier 3 students may need additional supports, such as interventions, to be successful. Typically, tier 3 interventions are more intensive than tier 2 interventions because students identified for tier 3 demonstrated weaker performance on the assessment than students identified for tier 2.

Tutorial

Now, moving on to **<u>norm-referenced assessments</u>**. A norm-referenced assessment is an assessment that compares a student's performance with that of an appropriate peer group (Geier & Smith, 2010). When using a norm-referenced measure, a student is measured against those taking the test, not against any defined criteria. A student's performance on a normative assessment is often reported as a percentile.

So, you as a parent could compare his child to other similar children. New parents always love to know how their baby compares to other babies in height and weight. This helps doctors to know if they are growing appropriately. Similarly, this tells us, as educators, if students are progressing academically as they should.

Tutorial

A **percentile** is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below the value. You've probably seen a growth chart displaying how a baby's weight compares to the weight of other babies his age. If a baby is in the 45th percentile for weight, then he is the same weight or heavier than 45% of other babies his age.

The interpretation of a percentile is similar in the context of student achievement. If a student is at the 45th percentile on a reading assessment, it means the student performed as well as or better than 45 percent of the students at his same grade level in the norm study. Let's say the normative sample included assessment scores of one hundred thousand students and the scores ranged from 100 to 300. The closer a student scores to 100, the closer the student would be to the 1st percentile. The closer a student scores to 300 the closer the student would be to the 99th percentile.

Tutorial

When using a norm-referenced assessment for setting cut scores, cut scores are commonly expressed as percentiles. If you're using the NWEA MAP assessment, you might set cut scores based on the performance categories defined by NWEA. There are five categories. They are Low, Low-average, Average, High-average, and High. Students identified as low are at or below the 20th percentile. Students identified as low-average are between the 21st and 40th percentile. Average represents the 41st to 60th percentile. High average represents the 61st to 80th percentile. And high represents the 81st percentile and above (Thum & Hauser, 2015).

Scale Score Growth Chart by Grade Level (Spring Reading Student Achievement Percentiles)

Grade	1st %ile	21st %ile	41st %ile	61st %ile	81st %ile	95th %ile
1	144	166	174	182	190	201
2	153	176	185	193	202	214
3	164	186	195	203	212	223
4	171	194	203	210	219	230
5	178	200	208	216	225	236
6	182	204	212	220	229	240
7	183	206	215	222	231	243
8	183	207	216	224	234	246
9	184	209	218	226	236	249
10	181	207	217	226	237	250
11	181	208	218	227	238	251

Activity - 05.01.16

Accurate identification of students requires the use of high quality assessments during the screening process.

____ is an indicator of assessment quality referring to the consistency with which an assessment classifies students; the same results are produced when the test is administered under different conditions, at different times, or when using different forms of the test.

- Reliability
- Validity
- Sustainability
- Effectiveness

Standard: S.2.B Critical Evaluation

Activity - 05.01.17

Accurate identification of students requires the use of high quality assessments during the screening process.

____ is an indicator of assessment quality referring to the extent to which an assessment accurately measures the underlying construct it is intended to measure

- Reliability
- Validity
- Sustainability
- Effectiveness

Standard: S.2.B Critical Evaluation

Activity - 05.01.18

Accurate identification of students requires the use of high quality assessments during the screening process.

A student takes the ACT two times during the same academic term and scores a 23 on each occasion. This is evidence that the test is _____.
- Reliable
- Valid
- Sustainable
- Effective

Standard: S.2.B Critical Evaluation

Activity - 05.01.19

Accurate identification of students requires the use of high quality assessments during the screening process.

If a teacher wants to measure student competence in the area of "literary elements" and uses an assessment that only measures student "vocabulary," the teacher is NOT using a(n) _____ assessment of literary elements.
- Reliable
- Valid
- Sustainable
- Effective

Standard: S.2.B Critical Evaluation

Tutorial

Quality assessments are critical when screening students. How do we determine if they are quality? It is is often discussed in terms of reliability and validity. **Reliability** is the consistency with which an assessment classifies students from one administration to the next (NCRTI, 2012, June). Does the assessment produce the same results when it is administered under different conditions, at different times, or when using different forms of the test, even with different students?

Would you eat at the same restaurant over and over if the food wasn't consistently delicious? What if your steak was undercooked one time and overcooked the next? Would you expect it to be delicious? Probably not. Isn't the definition of insanity expecting different results without trying different methods? We want consistency, so that we know we can reliably compare the data.

Tutorial

The other accurate measurement for assessments is based on **validity**. This is the extent to which an assessment accurately measures the underlying construct it is intended to measure (NCRTI, 2012, June).

Would you use a measuring cup to measure the length of a wall? Of course not! You would use a tape measure. An assessment is only valid if it actually measures what it ~~is~~ intended to measure.

Conclusion

Ryan:

Awesome work on filling in the information for your flyer on our district's RTI protocol for universal screening. Here is a finished and polished version for you to keep in your data binder to reference as we get going on using our fall interim benchmark assessment data for universal screening. Our data binders are going to be our best friends this year as we truly start to apply our evidence based decisions to positively impact students. Please remember to *bring your binder with you* to all of our PLC meetings as well as our Data Team meetings. Have a great rest of your day!

Link to universal screening flyer: https://goo.gl/e2fnkS

Activity Answers

05.01.01	Response to intervention
05.01.02	assessment
05.01.03	Identify students who may be at risk for poor learning or need enrichment
05.01.04	Beginning of the school year and Middle of the school year
05.01.05	Tier 1 or universal intervention
05.01.06	Tier 2 or strategic intervention
05.01.07	Tier 3 or intensive intervention
05.01.08	80-90%
05.01.09	10-15%
05.01.10	1-5%
05.01.11	Tier 2 or Tier 3
05.01.12	Cut score
05.01.13	Criterion-referenced assessment
05.01.14	Norm-referenced assessment
05.01.15	scored as well as or better than 45% of the student's peers in the norm study
05.01.16	Reliability
05.01.17	Validity
05.01.18	Reliable
05.01.19	Valid

Indicate the extent to which you agree or disagree

	Strongly disagree	Disagree	Agree	Strongly Agree
This module part increased my knowledge of the purpose of universal screening				
This module part increased my knowledge of vocabulary relevant to universal screening				

Well Done

You have completed this module part. You can begin the next lesson when you are ready.