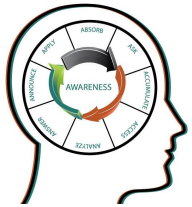


Develop Your Data Mindset

Module 8 - Progress Monitoring
Part 5 - Absorb, Ask, Accumulate, Access & Analyze
(Cycle 2 - Compute Baseline Performance)

By Nathan Anderson, Amy Ova, Wendy Oliver, and Derrick Greer

This material is based upon work supported by the National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, through Grant R372A150042 to North Dakota Department of Public Instruction. The opinions expressed are those of the authors and do not represent the views of the National Center, Institute, or the U.S. Department of Education.

Learning Goals

- Implement A+ Inquiry to compute -- and take action based on -- a student's baseline performance level

SLDS Data Use Standards

- K.1.A Question Formation: Knows which questions can be answered with data and how to identify the nature and extent of the data needed to answer questions
- K.1.C Types of Data: Knows that data come in two main forms—quantitative and qualitative—and that, within these forms, there are other categories
- K.1.E Data Metric: Knows that MEASURES can be broken down into data metrics, which are calculated for ANALYSIS and monitored for changes
- K.1.F Data Sources: Knows different types of data sources and the benefits and limitations of using each
- K.2.D Data Context: Knows the circumstances and purposes for which data are collected

SLDS Data Use Standards (continued)

- K.3.B Data Limitations: Knows that data have limitations and that these limitations affect the interpretation and usefulness of data

- S.4.C Aligned Analysis: Using appropriate technologies, conducts ANALYSIS suitable for the type of data collected, the VARIABLES identified, and the questions or hypotheses posed

- S.5.C Patterns: Identifies patterns, TRENDS, and gaps in data and suggests reasons for their occurrence

- S.6.B Explanation: Explains different data representations and distinguishing features (e.g., histograms, bar charts, contingency tables)

- S.7.A Strategies: Identifies appropriate strategies grounded in evidence to address the needs and goals identified during data ANALYSIS

Introduction

Teacher 1: It seems like Ryan was plotting when he had us do this topic at the holidays!

Teacher 2: Yeah. Are baseline scores like my weight going into the holiday season?

Teacher 3: Exactly!

Teacher 4: But, is it when Aunt Sue says, “Oh my! You’ve gained weight!”

Teacher 5: Ha! Or when the scales actually show the true numbers?

Teacher 6: I’m detecting a pattern here. I wonder what we can hypothesize?

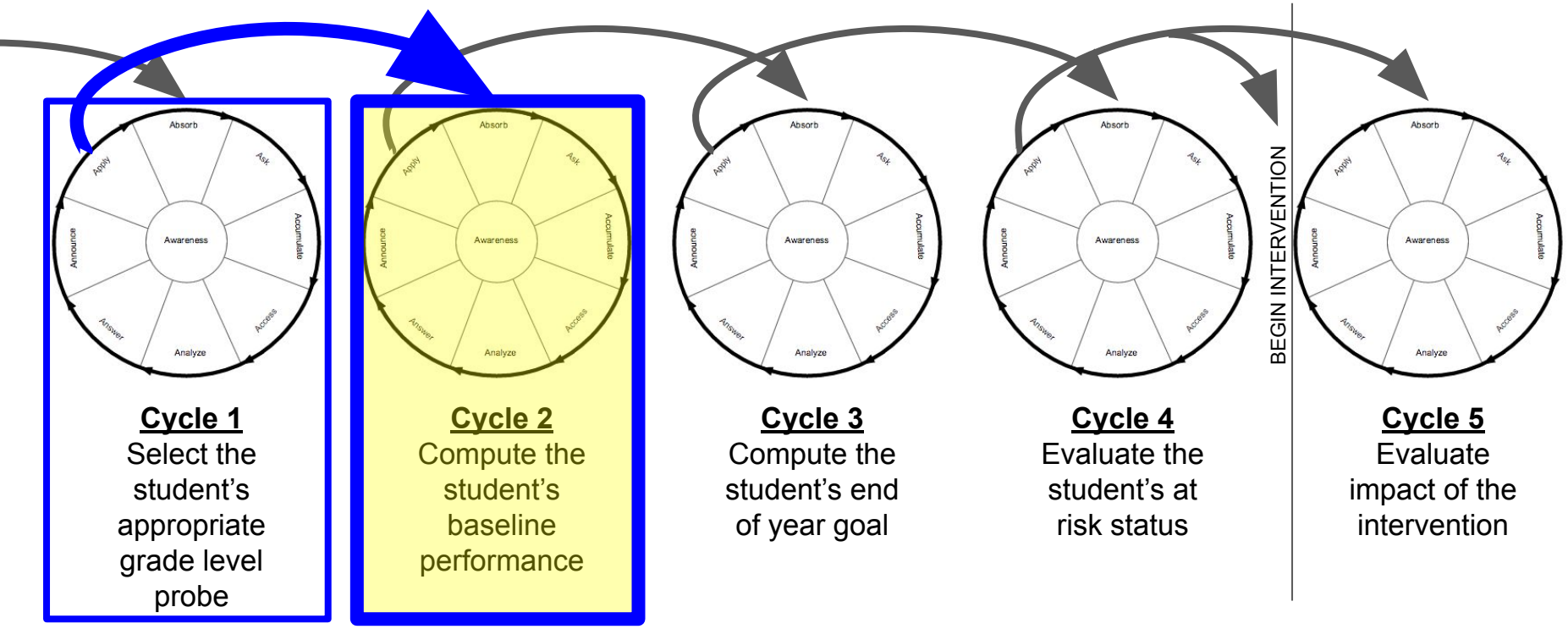
Teacher 7: You guys have been around Ryan way too long!

Introduction

Ryan:

Now that you have determined the appropriate grade level probe for a student in Cycle 1 of progress monitoring, you may proceed to the next cycle of establishing the student's baseline performance level.

Progress Monitoring Data Cycles



Cycle 1
Select the student's appropriate grade level probe

Cycle 2
Compute the student's baseline performance

Cycle 3
Compute the student's end of year goal

Cycle 4
Evaluate the student's at risk status

Cycle 5
Evaluate impact of the intervention

Determining the appropriate grade level probe for a student needs to occur before establishing a student's baseline performance. Establishing a student's baseline needs to occur before determining the student's end of year goal. Determining the student's end of year goal needs to occur before confirming or disconfirming the student's at risk status. Confirming or disconfirming a student's at risk status needs to occur before monitoring a student's progress toward the goal.

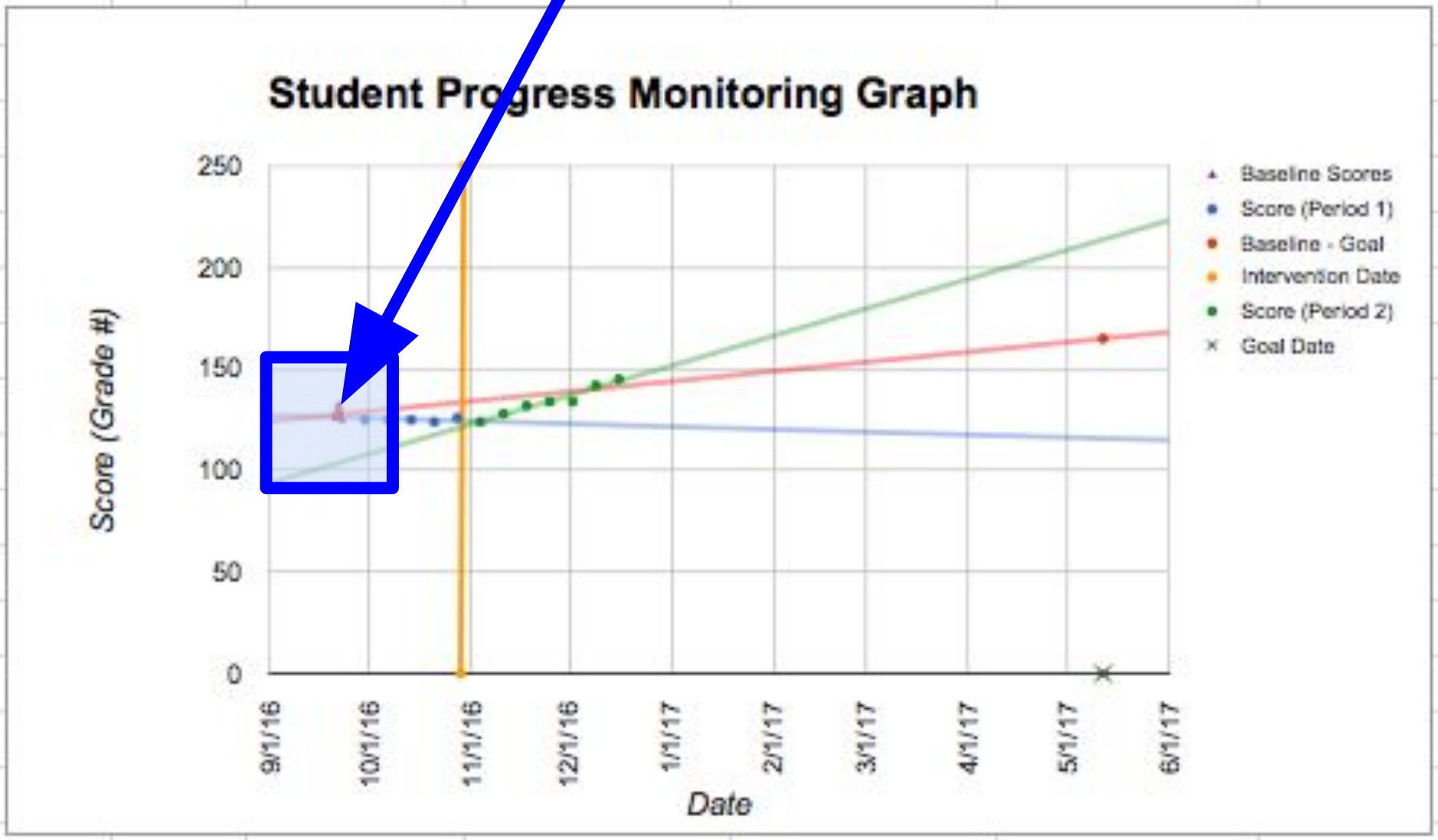
Whose progress should be monitored? An individual "at risk" student

When should the first progress monitoring data cycle begin? After a student has been identified as potentially "at risk" through a universal screening process

When should an intervention be assigned? After confirming a student's "at risk" status (i.e. after Cycle 4)

What are some tools available for progress monitoring? Aimsweb, Edcheckup, DIBELS, easyCBM, FAST, istation, STAR (see more details at http://www.intensiveintervention.org/chart/progress-monitoring)

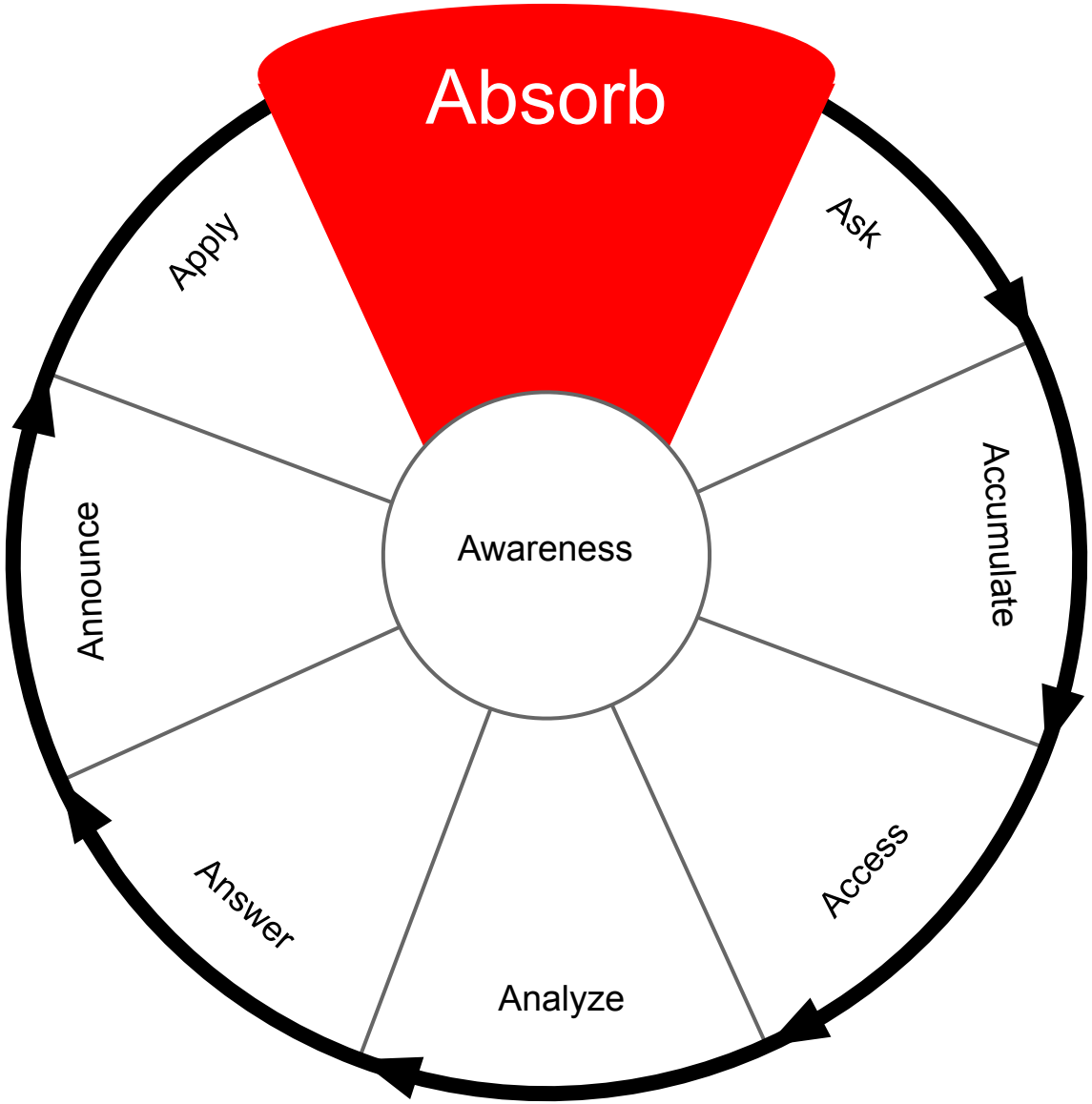
Cycle 2 is required to plot a student's baseline value.

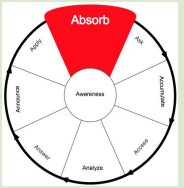


Absorb Stage

Ryan:

Let's begin in the Absorb stage where you identify information that is known about a context and reveal a need for more knowledge.



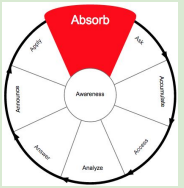


Activity - 08.05.01

You know Lisa Lund performed below the cut score on the universal screening assessment. As a result, she was targeted for a subsequent stage of screening through progress monitoring using an Oral Reading Frequency (ORF) probe. Her ORF accuracy was on a probe that represents her current grade level was 91.3%, which is above the ORF accuracy cut score of 90%. Therefore, you know _____.

- she is capable of being assessed with a probe that represents her current grade level
- she needs to be assessed with a probe level that is below her current grade level
- she needs to be assessed with a probe level that is above her current grade level
- the genre of literature she prefers for an ORF assessment

Standard: S.7.A Strategies

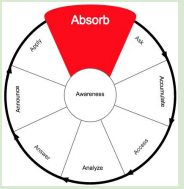


Activity - 08.05.02

You'll be using Oral Reading Fluency (ORF) probes to monitor Lisa's progress toward her end-of-year goal, which hasn't been set yet. Before Lisa's end-of-year goal is set, you need to know _____.

- Lisa's average number of minutes read at home each day
- Lisa's average grade to date on classroom tests during the current year
- Lisa's ORF baseline performance
- The highest education level of Lisa's parents

Standard: K.2.D Data Context



Activity - 08.05.03

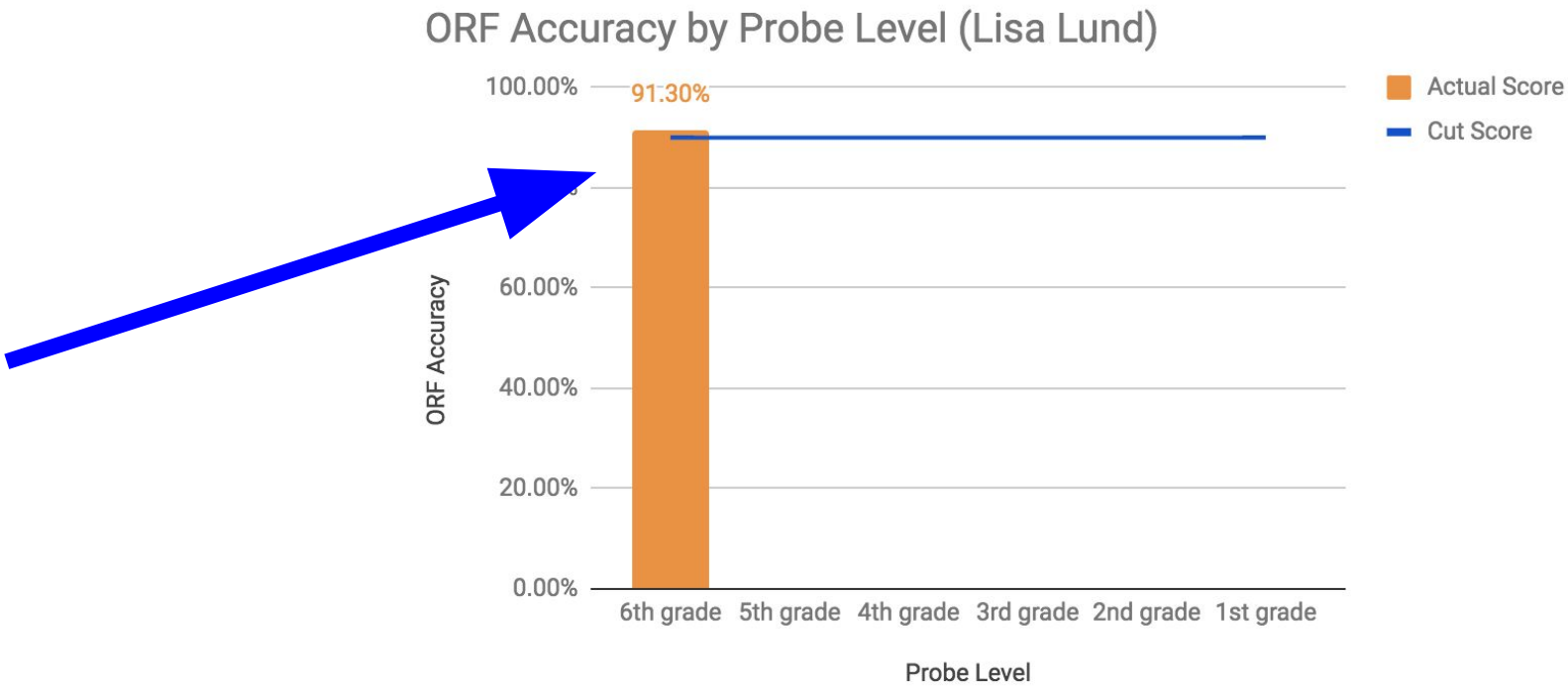
An appropriate method for establishing Lisa's Oral Reading Fluency (ORF) baseline performance would be to _____.

- administer 3 ORF probes to Lisa at the same point in time and compute the median of the 3 probes
- compute the overall average of all ORF probes administered to Lisa the prior year
- identify the actual value of the final probe that will be administered to Lisa during the current school year
- ask Lisa what an appropriate baseline would be for her

Standard: K.1.E Data Metric

Tutorial

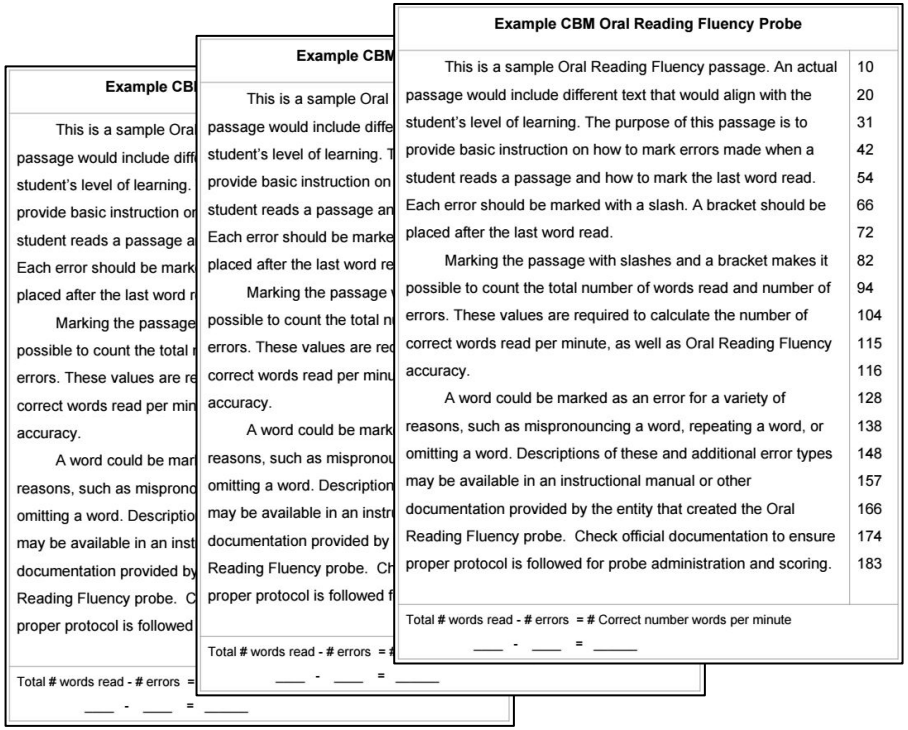
In the Absorb stage, you acknowledge that Lisa Lund performed below the cut score on the universal screening assessment. As a result, she was targeted for a subsequent stage of screening through progress monitoring using an Oral Reading Frequency (ORF) probe. You know she is capable of being assessed with a probe that represents her current grade level because her ORF accuracy of 91.3% on probe at that level is above the ORF accuracy cut score of 90%.



Tutorial

You'll be using ORF probes to monitor Lisa's progress toward her end-of-year goal, which hasn't been set yet. Before Lisa's end-of-year goal is set, you need to know her Oral Reading Fluency baseline performance, which may be computed as the median of three values collected at the same point in time.

On a side note, the baseline may instead be computed as the mean of three data points. Mean tends to be preferred when 3 probes are administered at different points in time, such as administering one probe per week across a three week timespan. In the current situation with Lisa, you will be collecting all required data at the same point in time; therefore, the median is an appropriate method for establishing her baseline.



A+ Inquiry Framework

The Absorb stage has been completed. You understand the context and identified general details of missing information that could be revealed by data.

NORTH DAKOTA DATA UP

A+ INQUIRY

GRAPHIC ORGANIZER - Progress Monitoring - (2) Compute Baseline

ABSORB

Lisa Lund's performance below cut score on universal screening assessment. Lisa was targeted for additional screening through oral reading fluency (ORF) progress monitoring. She is capable of being assessed with an ORF probe representing her current grade level. Her baseline performance is needed before setting an end-of-year goal.

APPLY

ASK

ANNOUNCE

AWARENESS

ACCUMULATE

ANSWER

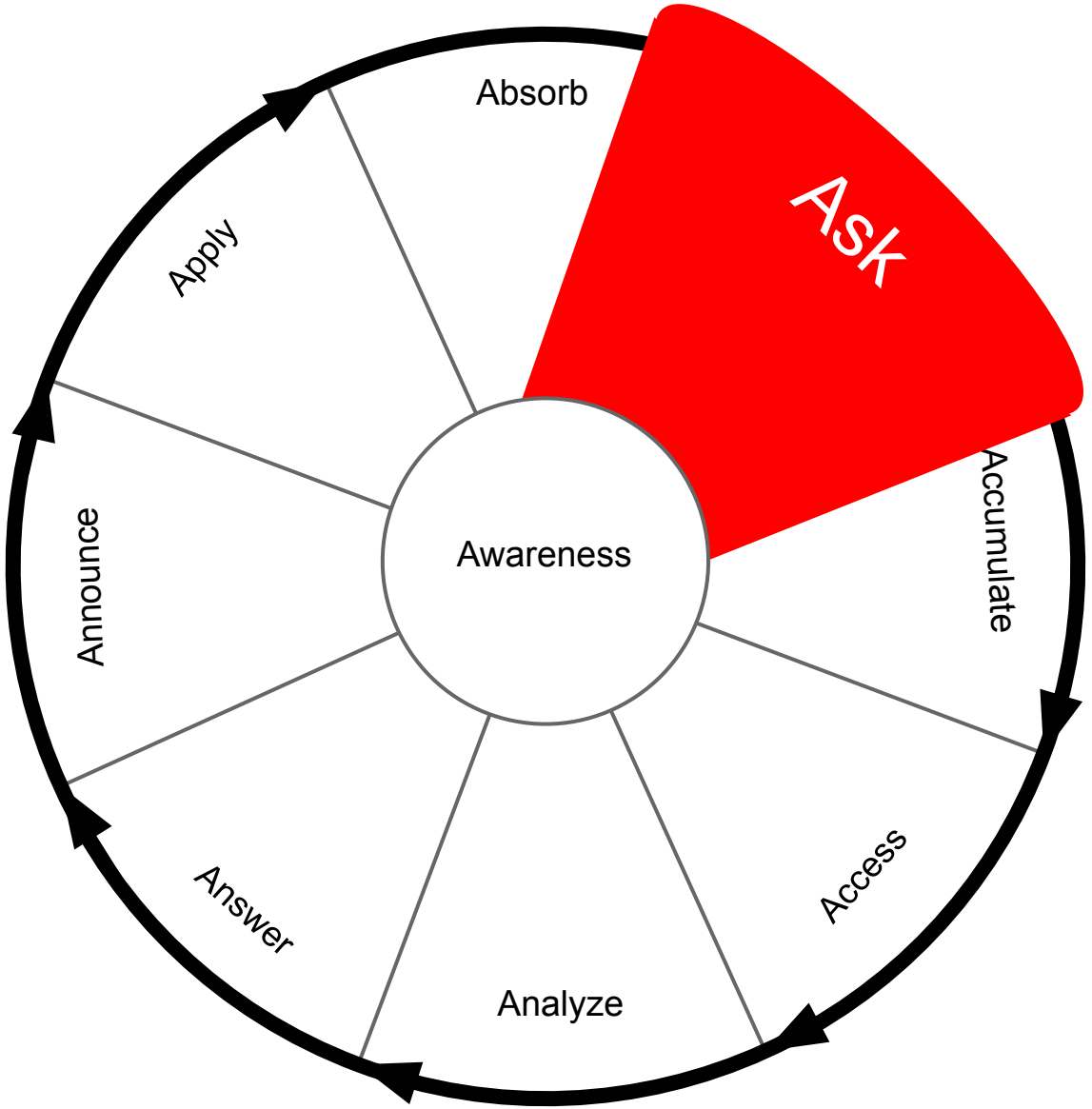
ANALYZE

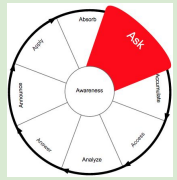
ACCESS

Ask Stage

Ryan:

Now that you are past the Absorb stage, let's proceed to the Ask stage.



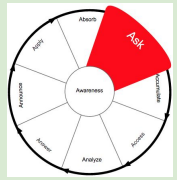


Activity - 08.05.04

Now that you're in the Ask stage, it's time to _____.

- Formulate questions that will lead you the information identified as missing in the Absorb stage (i.e., Lisa's Oral Reading Fluency)
- Collect data that will help you answer questions relevant to Lisa's Oral Reading Fluency baseline
- Analyze data to reveal Lisa's baseline Oral Reading Fluency
- Communicate the results of Lisa's Oral Reading Fluency baseline to appropriate stakeholders

Standard: K.1.A Question Formation

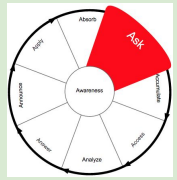


Activity - 08.05.05

You need to know Lisa's Oral Reading Fluency (ORF) baseline performance level. You convert this knowledge gap into a general question by stating, _____ .

- What is Lisa's baseline Oral Reading Fluency performance?
- Why is it important to calculate Lisa's baseline Oral Reading Fluency performance?
- How many people need to know Lisa's baseline Oral Reading Fluency performance?
- To what extent is Lisa's baseline Oral Reading Fluency performance above or below the performance of her peers?

Standard: K.1.A Question Formation



Activity - 08.05.06

What would be the most operational version of the question, “What is Lisa’s baseline Oral Reading Fluency (ORF) performance?”

- What is Lisa’s median score on three ORF probes administered at the same point in time?
- What is Lisa’s median score on a series of ORF probes administered at the same point in time?
- What is Lisa’s performance level on three ORF probes administered at the same point in time?
- What is Lisa’s score on ORF probes recently administered?

Standard: K.1.A Question Formation

Tutorial

The Absorb stage illuminated a need to know Lisa’s baseline Oral Reading Fluency (ORF) performance level. You convert this knowledge gap into a general question by stating, “What is Lisa’s baseline ORF performance?”Generally stated, the question is too vague to be answered.

Tutorial

A more operational version of the question could be formulated by drafting a few potential options and then selecting the most answerable option. A few options to consider may include

- What is Lisa's score on ORF probes recently administered?
- What is Lisa's performance level on three ORF probes administered at the same point in time?
- What is Lisa's median score on a series of ORF probes administered at the same point in time?
- What is Lisa's **median** score on **three ORF probes** administered at the **same point in time**?

The fourth option, "What is Lisa's median score on three ORF probes administered at the same point in time?" is the most operational version because it indicates a timeframe in which the probes should be administered (i.e., the same point in time); the number of required probes (i.e., 3); and the metric that will represent the baseline (i.e. median score). The other three options are not as operational because they are not as specific on one or more of these items.

A+ Inquiry Framework

The Ask stage has been completed. You posed questions that will lead you to the information identified as missing in the Absorb stage.

NORTH DAKOTA DATA UP

A+ INQUIRY
GRAPHIC ORGANIZER - Progress Monitoring - (2) Compute Baseline

ABSORB

Lisa Lund's performance below cut score on universal screening assessment. Lisa was targeted for additional screening through oral reading fluency (ORF) progress monitoring. She is capable of being assessed with an ORF probe representing her current grade level. Her baseline performance is needed before setting an end-of-year goal.

APPLY

ASK

What is Lisa's baseline?

What is Lisa's median score of three ORF probes administered at the same point in time?

ANNOUNCE

AWARENESS

ACCUMULATE

ANSWER

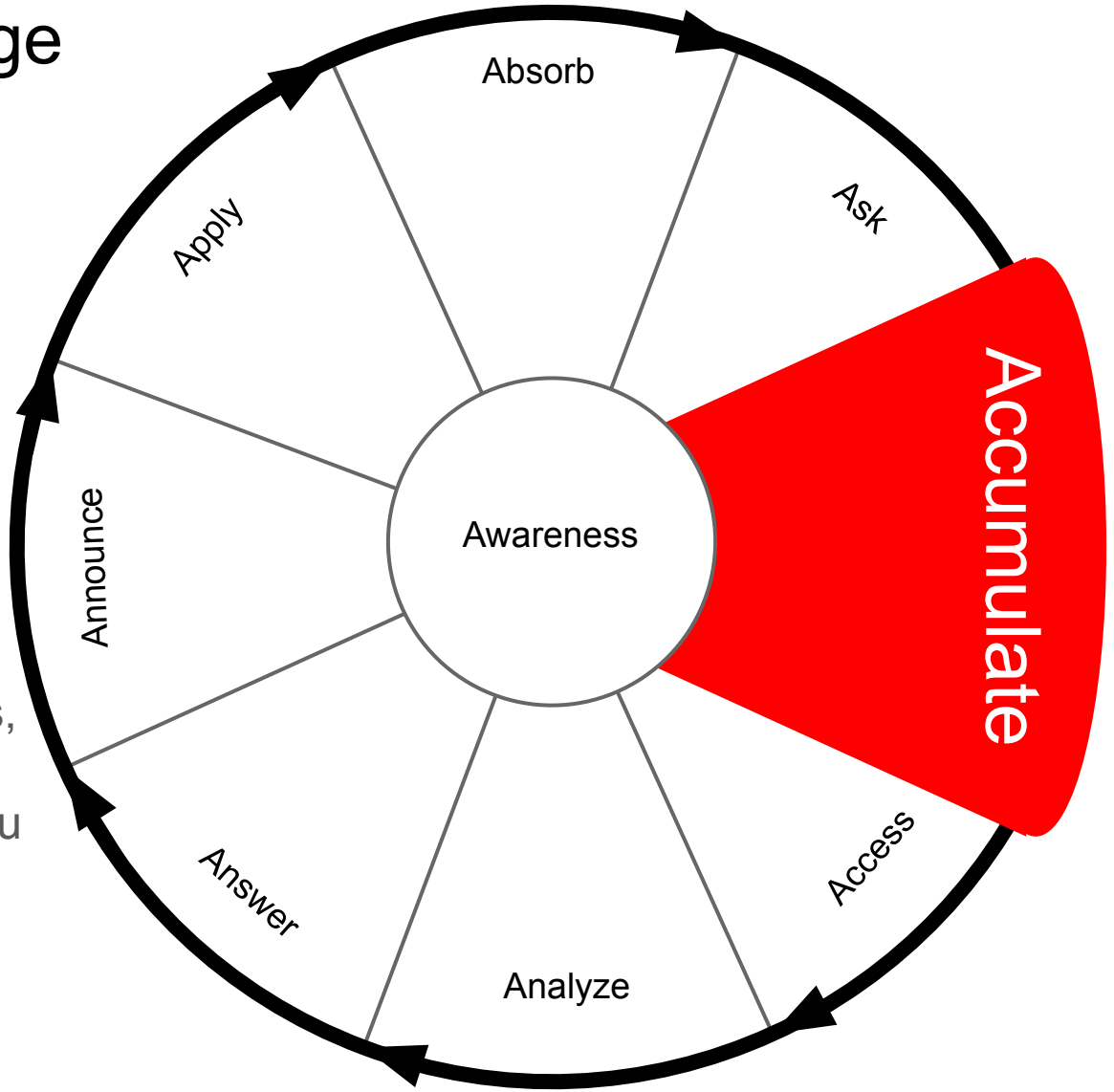
ANALYZE

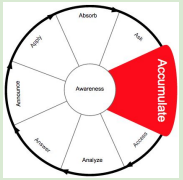
ACCESS

Accumulate Stage

Ryan:

Now it's time to enter the Accumulate stage where you will identify details of data required to answer the questions you posed in the Ask stage. When formulating the operationalized questions, you demonstrated an awareness of the data you need. Here, you'll specify a few more details of the data, which will help ensure you retrieve the appropriate data in the Access stage.





Activity - 08.05.07

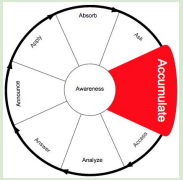
In order to answer the question regarding Lisa's Oral Reading Fluency (ORF) baseline, you collect Lisa's _____ and _____ on three separate ORF probes and enter the data into Lisa's progress monitoring spreadsheet.

- preferred reading style; perceived level of difficulty
- total number of words read; number of errors
- number of paragraphs; number of words in the title
- ideal font size; number of questions

Standard: K.1.C Types of Data

Link to example of unmarked ORF probe PDF: https://goo.gl/7U96py

Link to spreadsheet PDF (DataCycle2noAvg): https://goo.gl/VyhG7m



Activity - 08.05.08

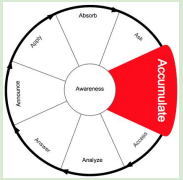
As Lisa reads each probe for 1 minute, you mark _____ with a slash (/).

- each correct word she reads
- the first word of each sentence she reads
- each proper noun she reads
- each error she makes

Standard: K.1.C Types of Data

Link to example of unmarked ORF probe PDF: https://goo.gl/7U96py

Link to spreadsheet PDF (DataCycle2noAvg): https://goo.gl/VyhG7m



Activity - 08.05.09

When administering each probe, you draw a bracket ( ])_____.

- before the first word Lisa read
- after the last word Lisa reads within one minute
- after the word representing half of the passage Lisa read
- at the end of each word she mispronounced

Standard: K.1.C Types of Data

Link to example of unmarked ORF probe PDF: https://goo.gl/7U96py

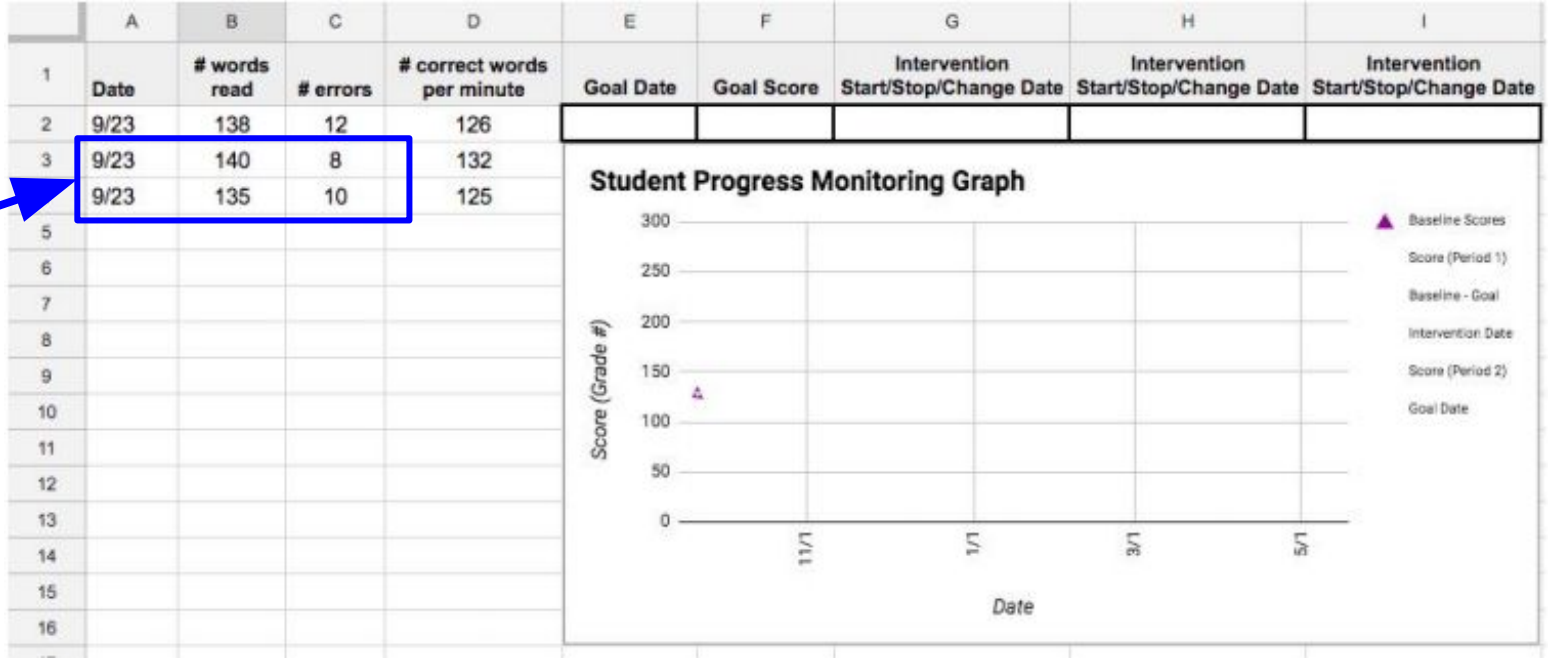
Link to spreadsheet PDF (DataCycle2noAvg): https://goo.gl/VyhG7m

Tutorial

In order to answer the question regarding Lisa's Oral Reading Fluency (ORF) baseline, you need to know the total number of words Lisa read and the number of errors she made on three ORF probes. You already collected one set of ORF data when you identified her ORF accuracy. You administer two additional probes in the same sitting according to CBM protocol.

Link to example of unmarked ORF probe PDF: https://goo.gl/7U96py
Link to spreadsheet PDF (DataCycle2noAvg): https://goo.gl/VyhG7m

ORF data entered into spreadsheet



	A	B	C	D	E	F	G	H	I
1	Date	# words read	# errors	# correct words per minute	Goal Date	Goal Score	Intervention Start/Stop/Change Date	Intervention Start/Stop/Change Date	Intervention Start/Stop/Change Date
2	9/23	138	12	126					
3	9/23	140	8	132					
4	9/23	135	10	125					
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

Tutorial

As she reads each probe for 1 minute, you mark the errors she makes with a slash (/) and draw a bracket ( ]) after the last word read within one minute. You enter the data into Lisa's progress monitoring spreadsheet.

Each error marked with a slash (/)

Bracket ( ]) drawn after last word read

Example CBM Oral Reading Fluency Probe

This is a sample Oral Reading Fluency passage. An actual	10
passage would include different text that would align with the	20
student's level of learning. The purpose of this passage is to	31
provide basic instruction on how to mark errors made when a	42
student reads a passage and how to mark the last word read.	54
Each error should be marked with a slash. A bracket should be	66
placed after the last word read.	74
Marking the passage with slashes and a bracket makes it	84
possible to count the total number of words read and number of	96
errors. These values are required to calculate the number of	107
correct words read per minute, as well as Oral Reading Fluency	118
accuracy.	119
A word could be marked as an error for a variety of	131
reasons, such as mispronouncing a word, repeating a word, or	141
omitting a word. Descriptions of these and additional error types	151

A+ Inquiry Framework

The Accumulate stage has been completed. You specified details of the data you need and collected the data.

NORTH DAKOTA DATA UP

A+ INQUIRY
GRAPHIC ORGANIZER - Progress Monitoring - (2) Compute Baseline

ABSORB

Lisa Lund's performance below cut score on universal screening assessment. Lisa was targeted for additional screening through oral reading fluency (ORF) progress monitoring. She is capable of being assessed with an ORF probe representing her current grade level. Her baseline performance is needed before setting an end-of-year goal.

APPLY

ASK

What is Lisa's baseline?

What is Lisa's median score of three ORF probes administered at the same point in time?

ANNOUNCE

AWARENESS

ACCUMULATE

Three sets of assessment data needed (i.e., two probes in addition to the probe administered when identifying her appropriate probe level). Collect number of words read per minute and number of errors during same sitting using standard CBM protocol. Enter data on probe and in Lisa's progress monitoring spreadsheet.

ANSWER

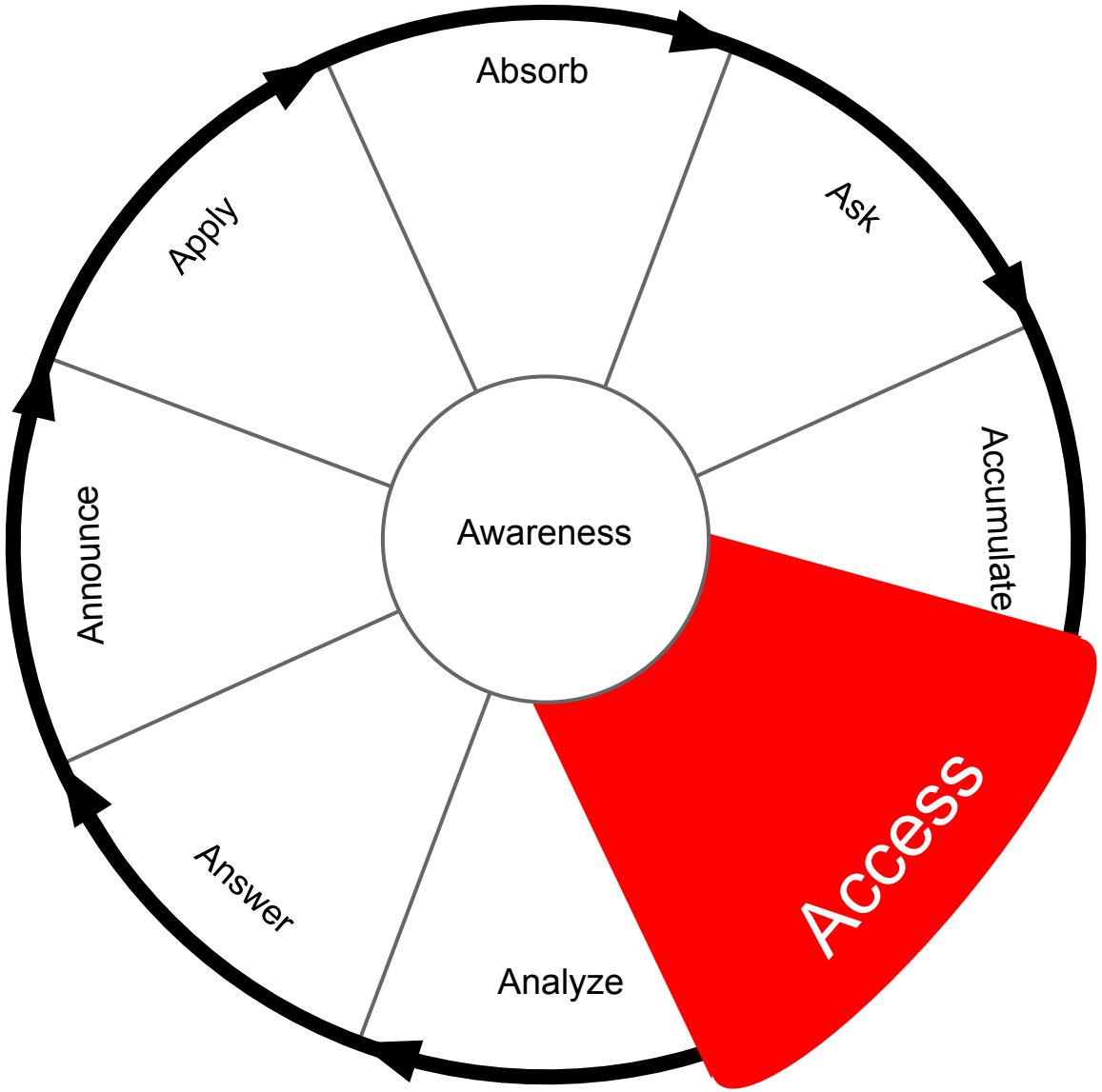
ANALYZE

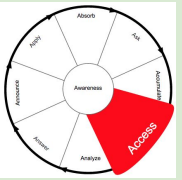
ACCESS

Access Stage

Ryan:

Now it's time to enter the access stage where you will retrieve the specific data you identified in the accumulate stage.



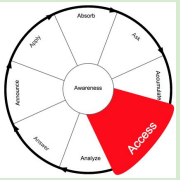


Activity - 08.05.10

You are able to access the data you need compute Lisa's baseline performance level _____.

- on the homepage of the district's website
- in the Statewide Longitudinal Data System
- in the spreadsheet where you entered the data
- in the school newsletter

Standard: K.1.F Data Sources



Activity - 08.05.11

The data you need in order to compute Lisa's baseline will be available to you as soon as _____ after they have been entered into the spreadsheet.

- one day
- immediately
- one week
- two weeks

Standard: K.1.F Data Sources

Activity - 08.05.12

Lisa's progress monitoring spreadsheet includes a variety of data that are currently, or will be, available during the progress monitoring, such as

- Goal date
- Goal score
- # correct words per minute
- All of the above

Standard: K.1.F Data Sources

	A	B	C	D	E	F	G	H	I
1	Date	# words read	# errors	# correct words per minute	Goal Date	Goal Score	Intervention Start/Stop/Change Date	Intervention Start/Stop/Change Date	Intervention Start/Stop/Change Date
2	9/23	138	12	126					
3	9/23	140	8	132					
4	9/23	135	10	125					
5									
6									
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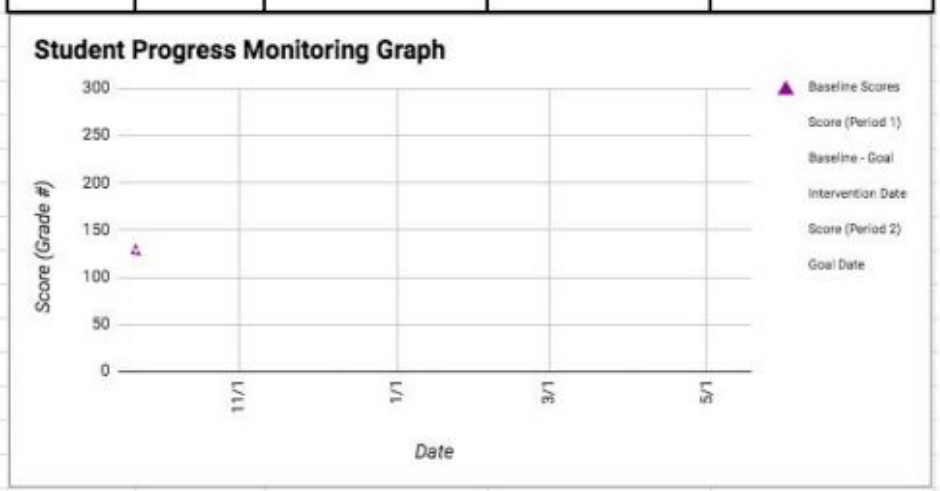
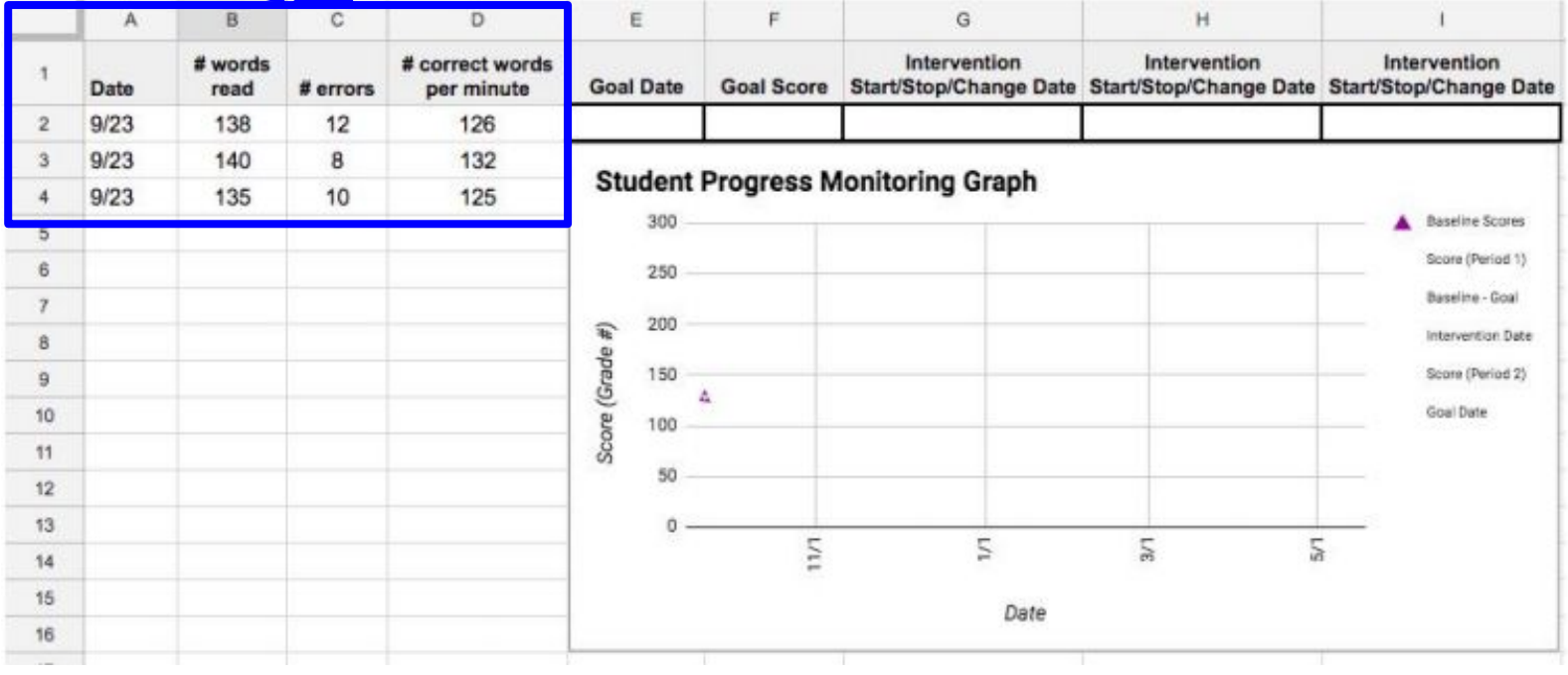


Tutorial

The Accumulate stage included data entry into Lisa's progress monitoring spreadsheet. This step allows you to retrieve the data you need immediately. The point of access is the same as the place where the data were entered during the collection process.

Data were entered in this section during the Accumulate stage

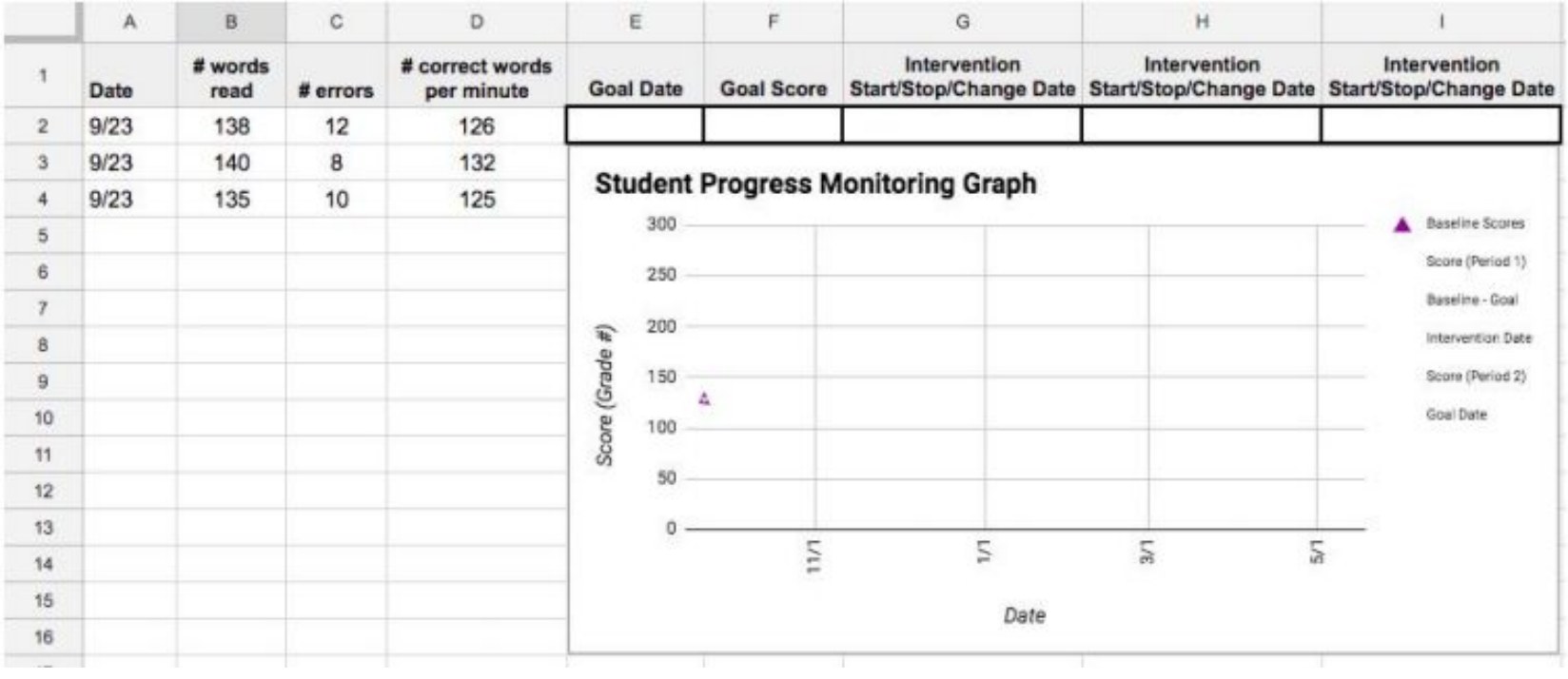
Data may be retrieved in this section during the Access stage



	A	B	C	D	E	F	G	H	I
1	Date	# words read	# errors	# correct words per minute	Goal Date	Goal Score	Intervention Start/Stop/Change Date	Intervention Start/Stop/Change Date	Intervention Start/Stop/Change Date
2	9/23	138	12	126					
3	9/23	140	8	132					
4	9/23	135	10	125					

Tutorial

Lisa's progress monitoring spreadsheet includes a variety of data that currently exist or will exist at some point as the progress monitoring process continues. The "date" column represents the date a probe was administered. The "# words read" includes the total number of words read on a probe. The "# errors" column includes the number of errors committed on a probe. Each value in the "# correct words per minute" column is automatically calculated based on corresponding values in the "# words read" and "# errors" columns. Additional data will eventually be entered into the "Goal Date", "Goal Score", "Intervention Start/Stop/Change Date" columns, if needed. The graph displays a visual representation of all data as they are entered into the spreadsheet.



A+ Inquiry Framework

The Access stage has been completed. You accessed the data you need for analysis.

NORTH DAKOTA DATA UP

A+ INQUIRY
GRAPHIC ORGANIZER - Progress Monitoring - (2) Compute Baseline

ABSORB

Lisa Lund's performance below cut score on universal screening assessment. Lisa was targeted for additional screening through oral reading fluency (ORF) progress monitoring. She is capable of being assessed with an ORF probe representing her current grade level. Her baseline performance is needed before setting an end-of-year goal.

APPLY

ASK

What is Lisa's baseline?

What is Lisa's median score of three ORF probes administered at the same point in time?

ANNOUNCE

AWARENESS

ACCUMULATE

Three sets of assessment data needed (i.e., two probes in addition to the probe administered when identifying her appropriate probe level). Collect number of words read per minute and number of errors during same sitting using standard CBM protocol. Enter data on probe and in Lisa's progress monitoring spreadsheet.

ANSWER

ANALYZE

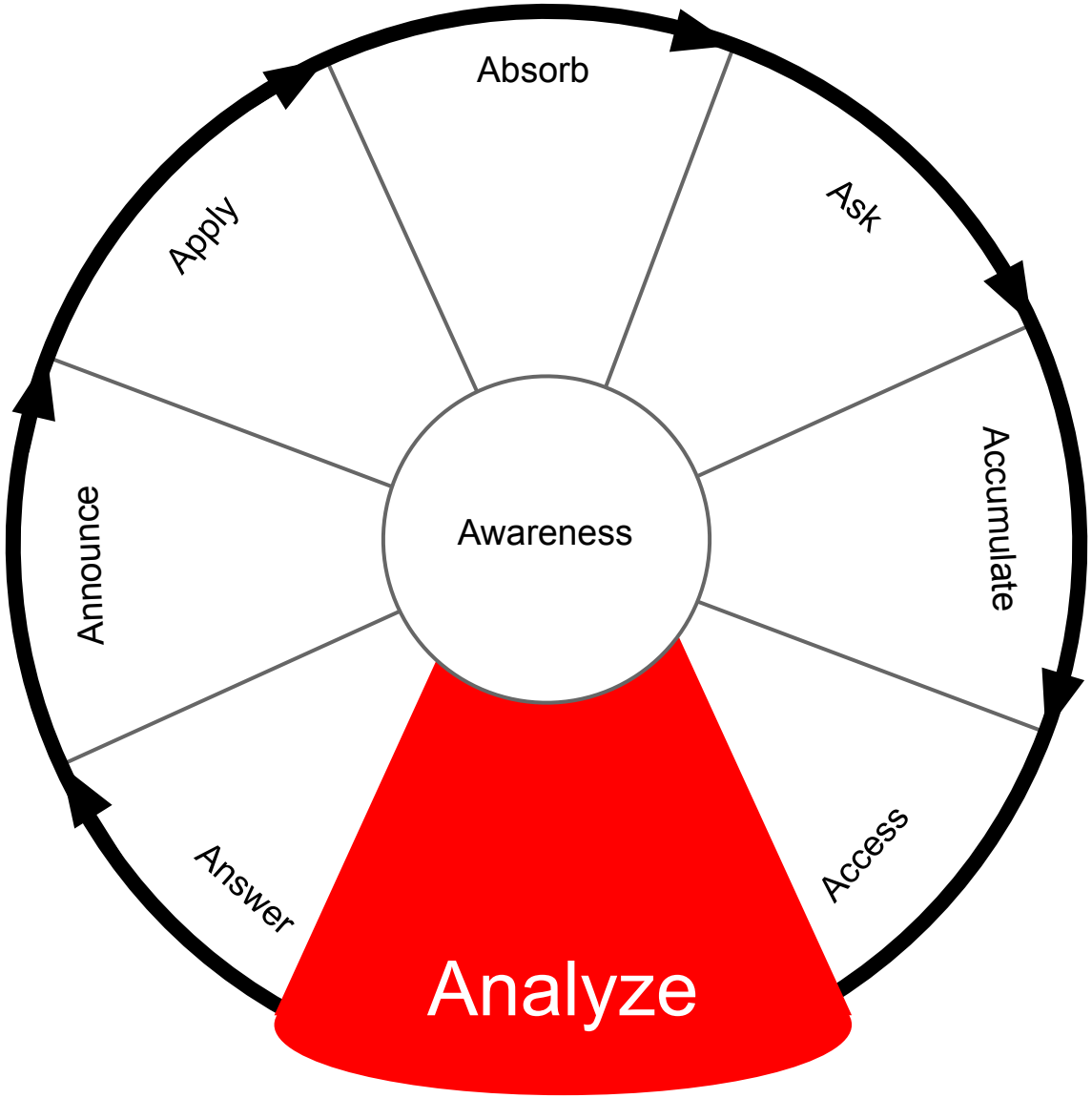
ACCESS

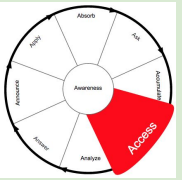
Spreadsheet where data were entered.

Analyze Stage

Ryan:

Now that you have retrieved the data you need, it's time to enter the Analyze stage where you will conduct analysis of the data you accessed.





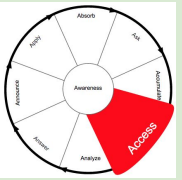
Activity - 08.05.13

Go to the spreadsheet where you entered and retrieved Lisa's Oral Reading Fluency (ORF) probe data. Which column includes the data you need to compute her ORF baseline?

- # correct words per minute
- goal date
- goal score
- intervention start/stop/change date

Standard: S.4.C Aligned Analysis

Link to spreadsheet PDF - (DataCycle2noMedian): https://goo.gl/VyhG7m



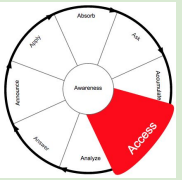
Activity - 08.05.14

The “# correct words per minute” values representing three probes administered on the same date will be used to compute median. A median value is the _____.

- arithmetic average of a range of scores placed in their original order
- maximum value minus the minimum value of a range of scores
- highest value in a range of scores
- midpoint of a range of scores placed in order from lowest to highest

Standard: K.1.E Data Metric

Link to spreadsheet PDF - (DataCycle2noMedian): https://goo.gl/VyhG7m



Activity - 08.05.15

The number of correct words Lisa read per minute by probe are as follows:

1st probe on 9/23: 126
2nd probe on 9/23: 132
3rd probe on 9/23: 125

The median of these values is _____

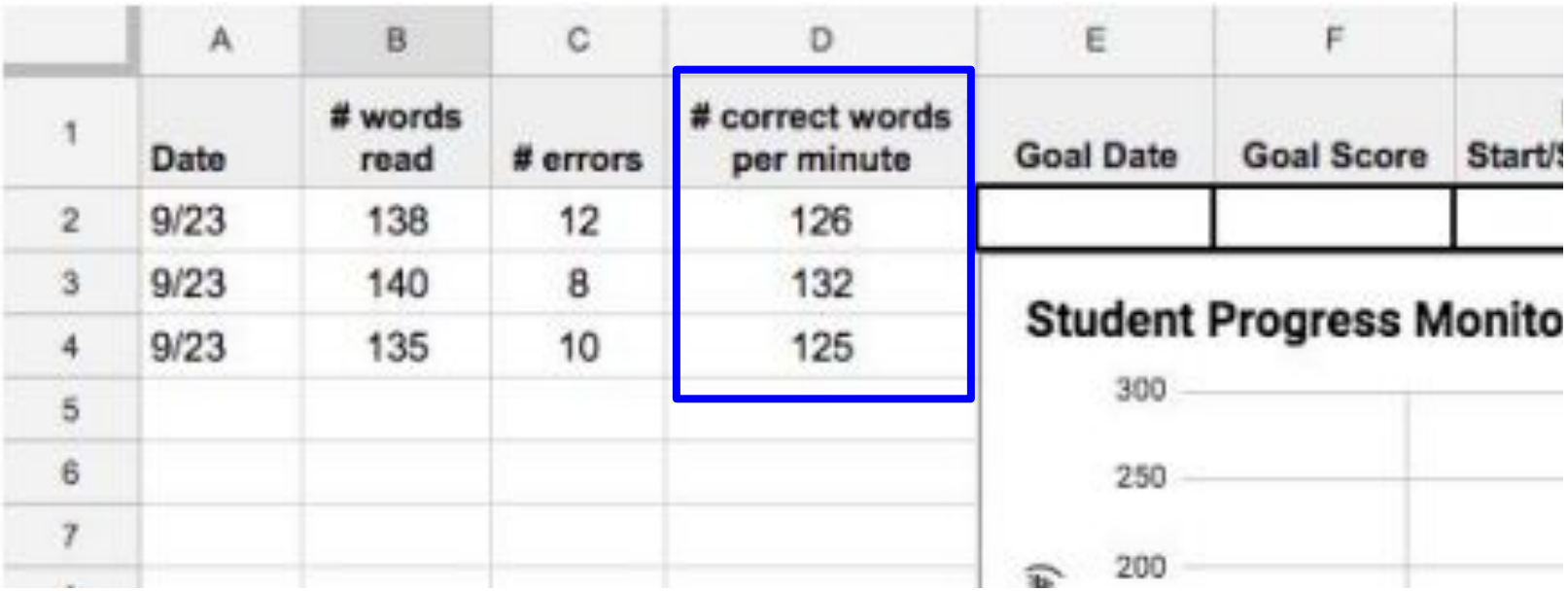
- 125
- 126
- 128
- 132

Standard: S.4.C Aligned Analysis

Link to spreadsheet PDF - (DataCycle2noMedian): https://goo.gl/VyhG7m

Tutorial

To analyze the data you retrieved in Lisa's progress monitoring spreadsheet, compute the median of the number of correct words per minute representing the three probes administered on 9/23. As a reminder, the median is the midpoint of a range of scores placed in order from lowest to highest.



	A	B	C	D	E	F
1	Date	# words read	# errors	# correct words per minute	Goal Date	Goal Score
2	9/23	138	12	126		
3	9/23	140	8	132		
4	9/23	135	10	125		
5						
6						
7						

Tutorial

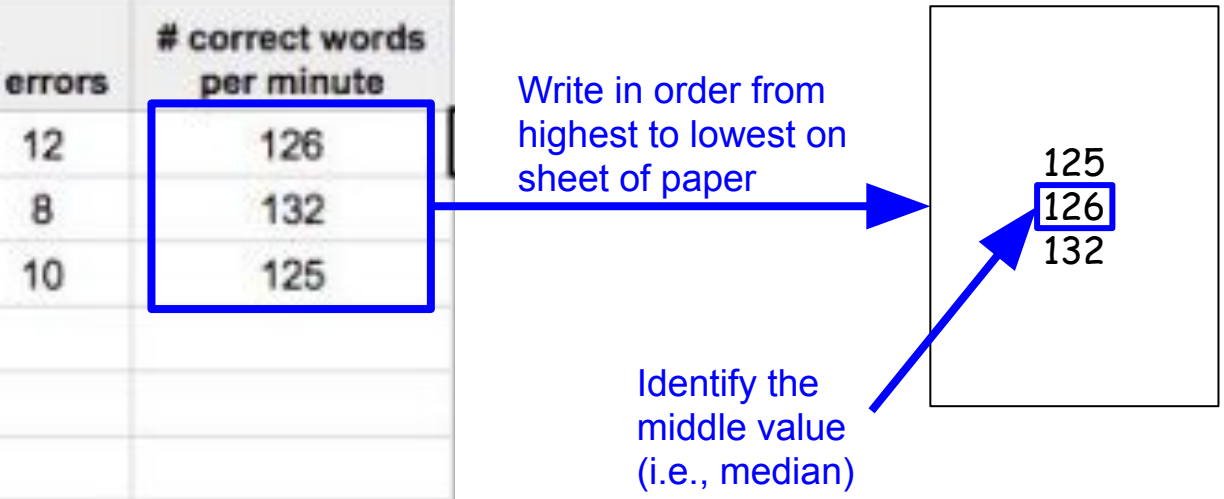
To analyze the data you retrieved in Lisa's progress monitoring spreadsheet,

- Go to the values in the "# correct words per minute" column along the "9/23" rows.
- Write the values on a piece of paper from lowest to highest: 125, 126, 132
- Identify the middle value, 126

126 is the median

Link to spreadsheet PDF - (DataCycle2noMedian): https://goo.gl/VyhG7m

	A	B	C	D
1	Date	# words read	# errors	# correct words per minute
2	9/23	138	12	126
3	9/23	140	8	132
4	9/23	135	10	125
5				
6				
7				



A+ Inquiry Framework

The Analyze stage has been completed.

NORTH DAKOTA DATA UP

A+ INQUIRY
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APPLY

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ANNOUNCE

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ACCUMULATE

Three sets of assessment data needed (i.e., two probes in addition to the probe administered when identifying her appropriate probe level). Collect number of words read per minute and number of errors during same sitting using standard CBM protocol. Enter data on probe and in Lisa's progress monitoring spreadsheet.

ANSWER

ANALYZE

Compute median of three probes administered during the same sitting.

Place the three values in order from lowest to highest, and then identify the middle value.

ACCESS

Spreadsheet where data were entered.

Conclusion

You have now finished the Absorb, Ask, Accumulate, Access, and Analyze stages for Cycle 2 of progress monitoring: compute baseline performance.

Activity Answers

08.05.01	she is capable of being assessed with a probe that represents her current grade level
08.05.02	Lisa's ORF baseline performance
08.05.03	administer 3 ORF probes to Lisa at the same point in time and compute the median of the 3 probes
08.05.04	Formulate questions that will lead you the information identified as missing in the Absorb stage (i.e., Lisa's Oral Reading Fluency)
08.05.05	What is Lisa's baseline Oral Reading Fluency performance?
08.05.06	What is Lisa's median score on three ORF probes administered at the same point in time?
08.05.07	(total number of words read; number of errors)
08.05.08	each error she makes
08.05.09	after the last word Lisa reads within one minute
08.05.10	in the spreadsheet where you entered the data
08.05.11	immediately
08.05.12	All of the above
08.05.13	# correct words per minute
08.05.14	midpoint of a range of scores placed in order from lowest to highest
08.05.15	126

Indicate the extent to which you agree or disagree

	Strongly disagree	Disagree	Agree	Strongly Agree
This module part increased my knowledge of how to implement the Absorb, Ask, Accumulate, Access, and Analyze stages of A+ Inquiry to compute a student's baseline performance level				

Well Done

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