



Office of Data & Accountability

*Implementing Effective  
Data Cycles*

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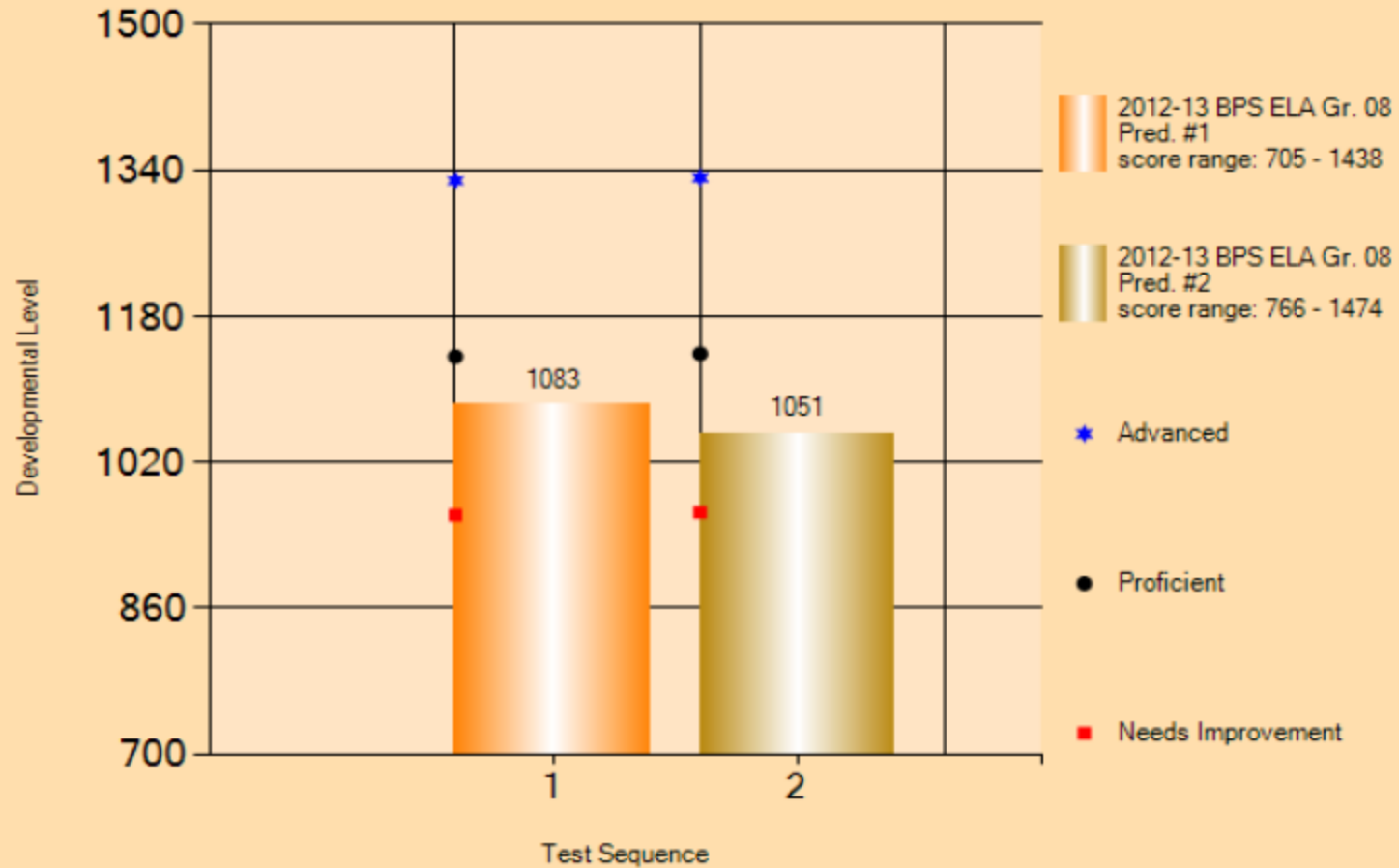
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# Session Objectives

- 1) Practice making specific observations about data that are low on the “Ladder of Inference.”
- 2) Learn and apply a model for data inquiry (Data Wise)
- 3) Practice Steps 4-6 of the Data Wise inquiry process:
  - **Step 4: Dig into student data**
    - Identify a student learning challenge
  - **Step 5: Investigate root causes**
    - Identify a problem of practice
  - **Step 6: Develop an action plan**
    - Propose an aligned solution
- 4) Determine data needed to implement robust data cycles

- **Take an inquiry stance**
- **Ground statements in evidence**
- **Assume positive intentions**

# ATI Aggregate Test Report: Boston Public Schools, Grade 8



Test	Warning / Failing	Needs Improvement	Proficient	Advanced
2012-13 BPS ELA Gr. 08 Pred. #1 (2706) NI: 962 PROF: 1136 ADV: 1329	19.96 % (540)	38.10 % (1031)	39.73 % (1075)	2.22 % (60)
2012-13 BPS ELA Gr. 08 Pred. #2 (2706) NI: 965 PROF: 1139 ADV: 1332	23.54 % (637)	52.59 % (1423)	23.06 % (624)	0.81 % (22)

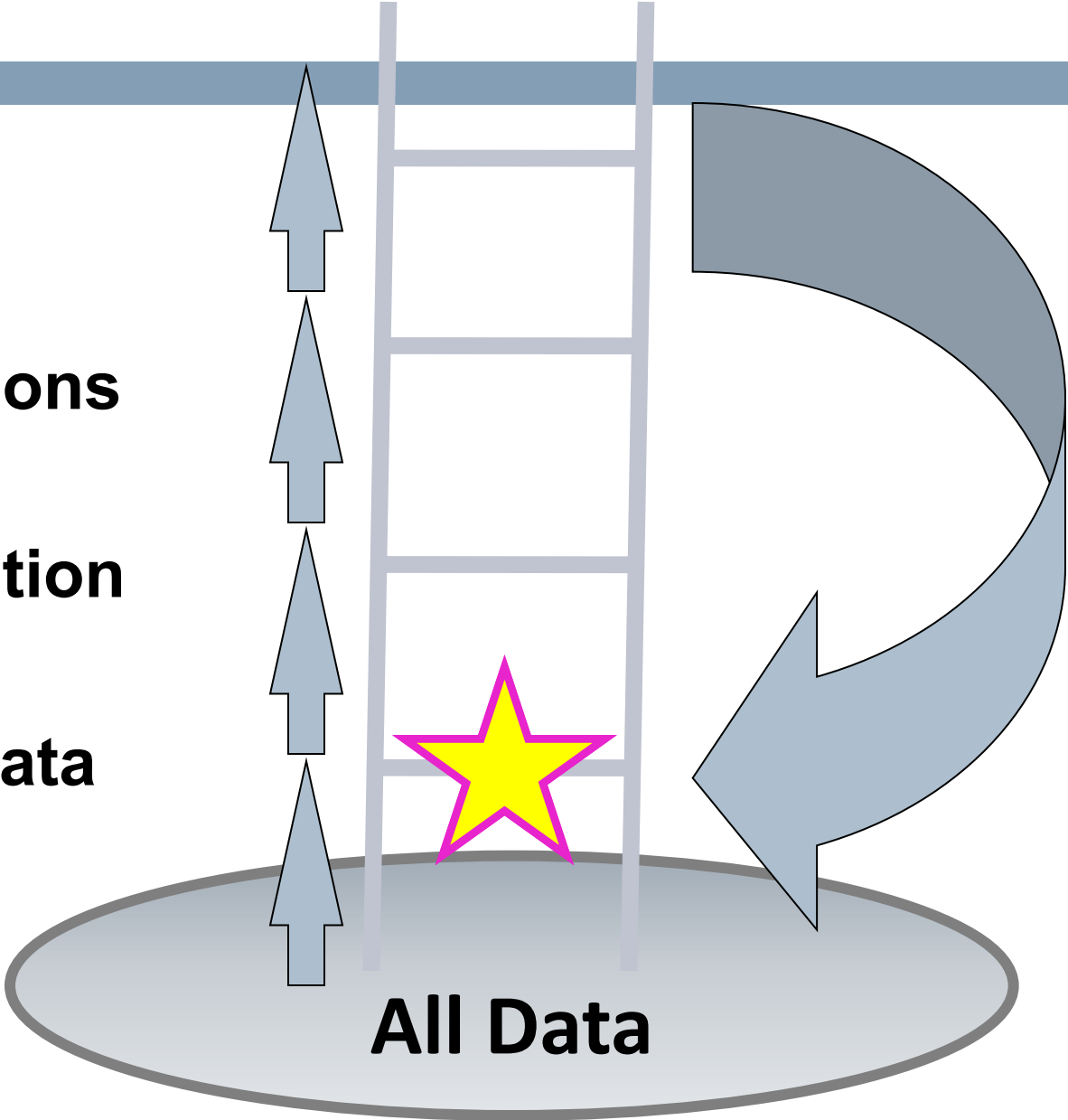
# Ladder of Inference

**I take: actions**

**I draw: conclusions**

**I add: interpretation**

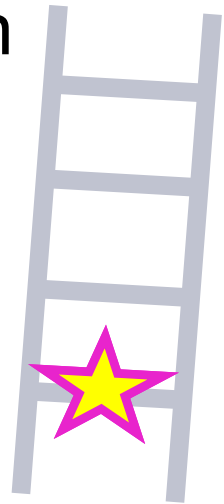
**I select: some data**



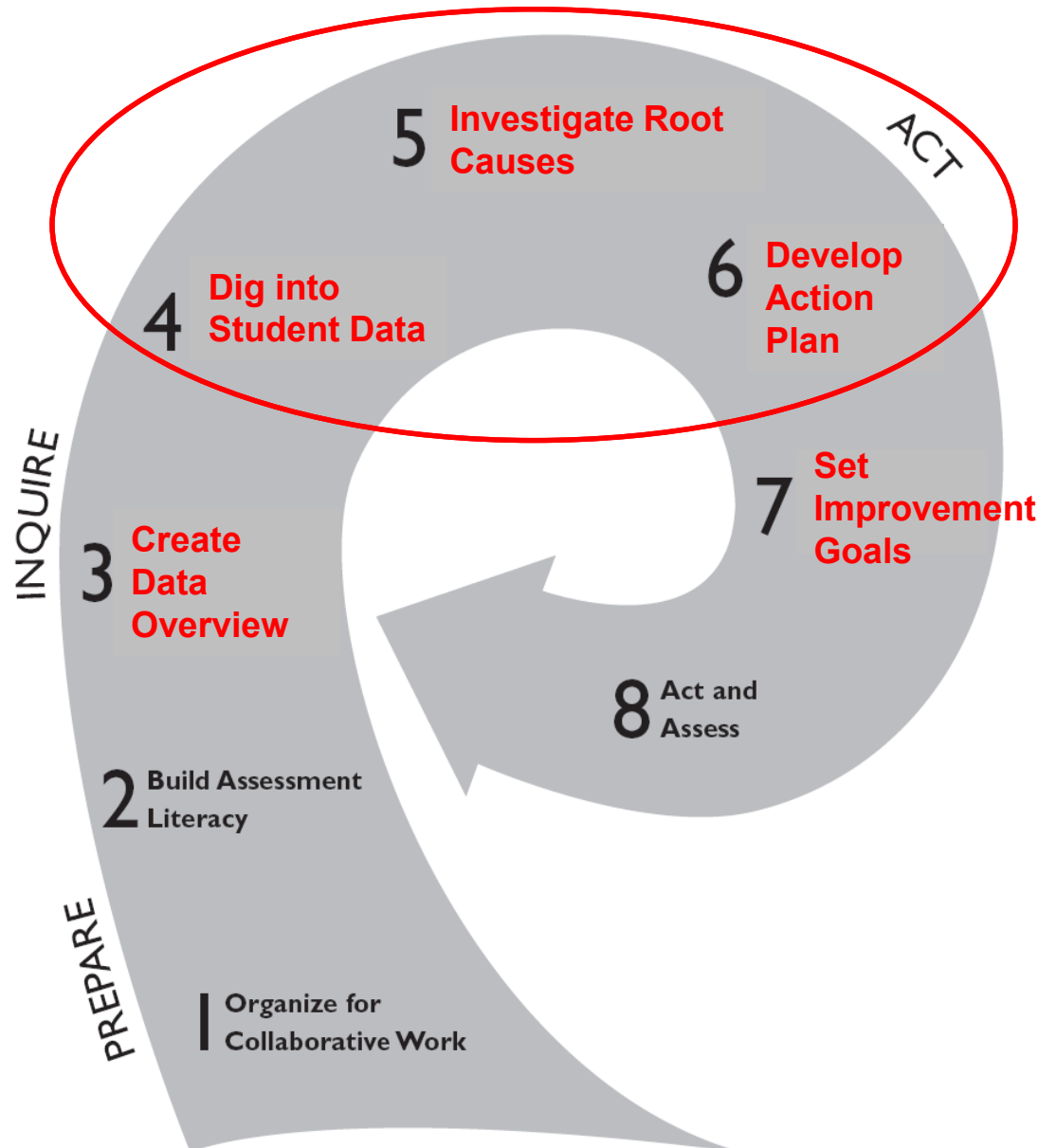
Adapted from Senge, P., Cambron-McCabe, N., Lucas, T. Smith, B. Dutton, J., and Kleiner, A. *Schools that Learn: A Fifth Discipline Handbook for Educators, parents, and Everyone Who Cares About Education*. Doubleday/Currency, 2000, p. 71.

# Ladder of Inference

- Locate the statements that you made about the BPS Grade 8 ELA Predictive data on the Ladder of Inference.
- For statements that are “up the ladder,” bring yourself down by grounding your statement in evidence from the data chart.
- Share a statement that you made about the Predictive data chart that was “up the ladder”
- Explain how you brought yourself “down the ladder” by grounding your statement in evidence from the chart.



# Implementing an Effective Data Inquiry Cycle



## Step 3. Create a Data Overview

- Choose a focus area
- Analyze data; find the story
- Display the data
- Allow staff members to make sense of the data.

*Note: While I chose the focus area (ELA) and selected the data displays/reports, ideally you would invest time in understanding the data story and then improving the data displays so they convey that story to your staff.*



## Step 3. Create a Data Overview

- Take 5 minutes to review the new data for your case study school.
- Digest.
- Talk with your colleagues about what you see.
- Highlight or annotate your data set
- Stay low on the ladder!

## Step 4. Dig Into Data

- Examine a wide range of student data.
- Get progressively smaller in scope.
- Come to a shared understanding of what the student data shows.
- Identify a student learning challenge that is:
  - A statement about student learning
  - Based on evidence found when digging into data
  - Directly related to the focus area
  - Specific and small

## Data sources you have for determining a student learning challenge:

- 2011 MCAS data
- 2012 Report card on learning
- 2012 PPI data
- 2012-13 WSIP
- OELL data (MCAS, MEPA, enrollment, teacher data)

### ***NEW Data!***

- ***2012 MCAS data by grade and subgroup***
- ***2012-13 ATI data by grade – Predictives #1 & #2***
- ***2012-13 ATI data by class/section – Predictives #1 & #2***
- ***2012-13 ATI data by standard – Predictive #2***

## Step 4. Dig Into Data

Get progressively smaller...

### **MCAS data**

- Grade level performance
  - Sub-groups within grade level
    - Test blueprint for grade

### **ATI data**

- BPS performance by grade level
  - School performance by grade level
    - Class/section data
      - Content standard data

## Step 4. Dig Into Data

Statement of student learning challenge	Evidence demonstrating challenge	Is a priority? (Y/N)
<p>Students in 8<sup>th</sup> grade are not mastering Key Ideas and Details.</p> <p>In particular, <b><i>students are struggling to cite text evidence that supports their claim about a text, for both informational texts and literature.</i></b></p>	<ul style="list-style-type: none"><li>• 32% - 55% of students are meeting standard for RI 8.1 (Informational Texts) and RL 8.1 (Literature), compared to 19% - 48% for BPS.</li><li>• Class performance ranges from 20% to 60% at mastery.</li><li>• There were 7 total items on these two standards.</li></ul>	<p>Yes; the Key Ideas cluster comprises 65% of the ELA MCAS</p>

## Additional data that would help pinpoint a student learning challenge?

- ATI data by subgroup
- ATI average % correct
- MCAS data by standard
- Item-level ATI data
- Item-level MCAS data
- Student work samples

## Step 5. Investigate Potential Root Causes

- Examine a wide range of instructional, operational, perceptual, and contextual data.
- Set a clear purpose for observation then observe instruction using a standardized protocol.
- Come to a shared understanding of what is happening in classrooms.
- Identify a problem of practice that is:
  - A statement about teacher practice (“As teachers, we...”)
  - Based on evidence found when investigating root causes
  - Directly related to the student learning challenge
  - Specific and small

## Data sources you have for hypothesizing root causes:

- Enrollment
- Teacher data from School Profile
- Staff and student climate surveys
- WSIP (reflections of current leadership team)
- Educator evaluation self-assessment – areas of strength and growth
- Educator evaluation professional practice goals
- Educator evaluation student learning goals (assessment, subgroup, and subject)



## Step 5. Investigate Potential Root Causes

Student Learning Challenge	Potential Root Cause/ Problem of Practice	Evidence to Support Hypothesis
<p><b>Students are struggling to cite text evidence that supports their claim about a text, for both informational texts and literature.</b></p>	<p><b>As teachers, we do not explicitly model how to use direct quotations from text to support a claim.</b></p>	<ul style="list-style-type: none"><li>• <b>Peer observation notes</b></li><li>• <b>ILT observations</b></li><li>• <b>Lesson plans</b></li><li>• <b>Curricular resources inventory</b></li></ul>

## Additional data that would help when hypothesizing root causes?

- *ATI data by subgroup*
- *Student-level ATI data*
- *Student-level MCAS data*
- *MCAS data by standard*
- *Student work samples*
- Instructional walkthrough/ observation data
- Lesson plan samples
- Curricular resources in use
- Student and teacher schedules
- Prof. development calendar
- Coaching logs
- Educator evaluation data
- Intervention resources/schedule

## Step 6. Develop an Action Plan

- Decide on an improvement strategy that:
  - Directly addresses the identified problem of practice
  - Is feasible & high-impact
- Agree on what the plan will look like in classrooms.
  - Students, teachers, task, classroom environment
- Put the plan in writing.
- Set improvement goals. (Technically Step 7)
  - Student learning goals
  - Teacher practice goals

## Step 6. Develop an Action Plan

The improvement strategy should be:

- **Aligned** – clear through line for how the strategy will lead to accomplishing the goal
- **Impactful** – likely to make the biggest difference in what children learn
- **Feasible** – can be implemented readily given capacity, time, and resources
- **Based on best practice** – research, internal resources, external resources

# Step 6. Develop an Action Plan

<b>Student learning challenge</b>	Students are struggling to cite text evidence that supports their claim about a text.		
<b>Problem of practice</b>	As teachers, we do not explicitly model how to use direct quotations from text to support a claim.		
<b>Improvement strategy</b>	Write A-louds		
<b>Practice goal</b>	During the upcoming unit, teachers will model how to select and incorporate quotations that support a claim about the text by using Write A-louds once a week.		
<b>Student learning goal</b>	At least 80% of students will score a 3 of 4 (Mastery) for the skill “I can cite text evidence that supports my claim” on the end-of-unit common writing assessment.		
<b>Progress assessment</b>	Common writing assessment rubric		
<b>Task</b>	<b>Key Action Steps</b>	<b>Implementation Timeline</b>	<b>Person/Team Responsible</b>

# Closing and Feedback

