

## DRC Simulation Science G7



## CLASSROOM DIAGNOSTIC TOOLS

# Logging on to eDIRECT

<https://pa.drctdirect.com>

Log On

Welcome to  
**eDIRECT**

Pennsylvania Department of Education (PDE) in partnership with Data Recognition Corporation (DRC) welcomes Pennsylvania educators to eDIRECT!

This website enables you to access links to program tools and provides information for the following Pennsylvania testing programs:

- Pennsylvania System of School Assessment (PSSA)
- Keystone Exams
- Classroom Diagnostic Tools (CDT)

To access program content, authorized personnel need to log on to the secure website with their email address and password. To log on, click the **Log On** link in the upper right of this page.

[CDT New User Registration Form](#)  
[Voluntary Model Curriculum User Registration Form](#)

**ONLINE TOOLS TRAINING SOFTWARE DOWNLOAD**

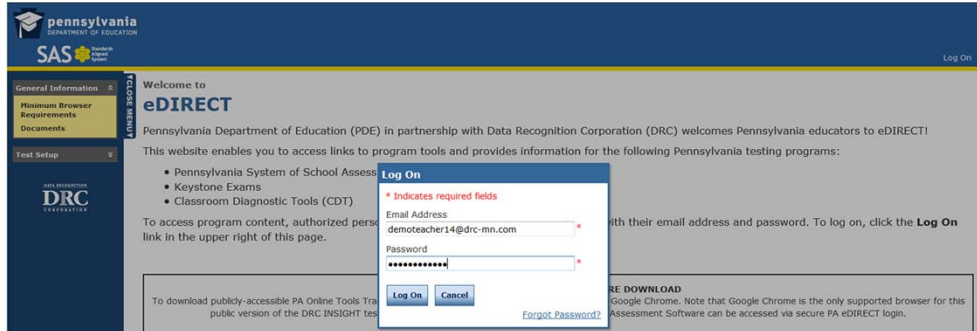
To download a publicly accessible Online Tools Training ONLY version of the Pennsylvania Online Assessment Software, please click on the download links below. The full versions of the Pennsylvania Online Assessment Software can only be accessed via secure PA eDIRECT login. Please ensure that the auto-update function is enabled, otherwise, the software must be uninstalled prior to the installation of an updated version.

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To access the Grade 7 Science CDT simulation:

- Using an Internet browser, go to <https://pa.drctdirect.com>
- Click on the **Log On** icon at the right end of the eDIRECT banner

# Logging on to eDIRECT



Email Address: demoteacher14@drc-mn.com

Password: Simulation14

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To access the Grade 7 Science CDT simulation:

- In the Log On window, enter the training email address: **demoteacher14@drc-mn.com**
- Next, enter the training password: **Simulation14**
- Now, click on the **Log On** button
- You will normally use your school email address and password to access eDIRECT and the Classroom Diagnostic Tools

# You are now able to use the CDT Reporting Tools and the simulation

Welcome to  
**eDIRECT**

Congratulations, you have successfully logged on.

Several helpful links are just a click away. Please take time to familiarize yourself with the navigation menu on the left. The menu provides access to important Pennsylvania assessment and administrative tools.

If you are having difficulty navigating through the site, please review the instructions at the top of each page, review the user guides within the Documents tab, or contact our customer support team.

(800) 451-7849	Pennsylvania System of School Assessment (PSSA) and Keystone Exams
(888) 551-6935	Classroom Diagnostic Tools (CDT)
<a href="mailto:PAcustomerservice@datarecognitioncorp.com">PAcustomerservice@datarecognitioncorp.com</a>	

Select **Reporting Tools** and then  
**Interactive Reports**

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To access the Grade 7 Science CDT simulation:

- Go to the eDIRECT menu options on the left
- Select **Reporting Tools**
- Then select **Interactive Reports**

Select Teacher, Demo (151224152) from the Teacher dropdown menu.

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This window is used to select the Student Group or to search for individual students to see their scores in current and previous administrations. Here is a sample scenario.

- It is the third week of school, and my seventh-grade students have completed their online Science CDT for students in Grades 6 through high school. I would like to know how well prepared the students are as they build toward mastery of the Mathematics Assessment Anchors and Eligible Content.
- Use the **Teacher** dropdown menu to select **Teacher, Demo (151224152)**. (You will normally select your last name, first name, and PPID to view the results for your class.) This causes the Student Group dropdown menu to become populated with all Student Groups to which you have access.

Select Gr 7 Science Administration #1 from the Student Group dropdown menu.

Click the *Continue* button.

To select the Student Group and configure the diagnostic map:

- Use the **Student Group** dropdown menu to select **Gr 7 Science Administration #1**
- Click the **Continue** button

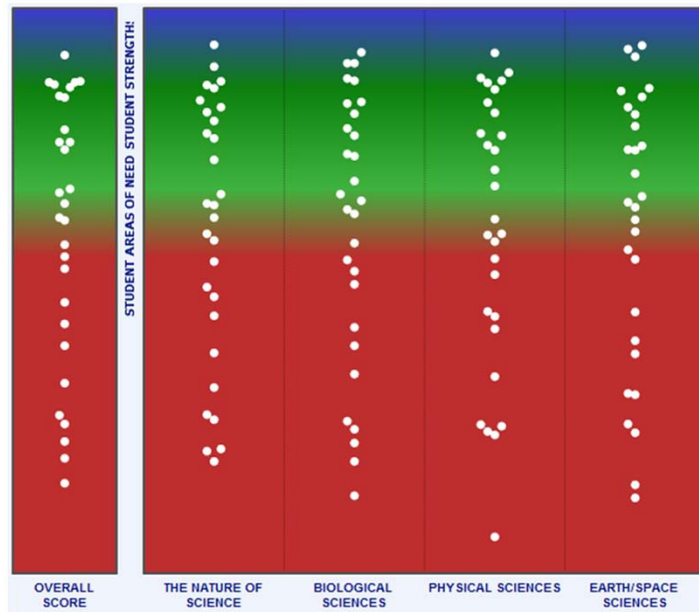
Select **Science Grade 7** from the **Map Configuration** dropdown menu.

The screenshot shows a software interface with a 'Group Map' tab selected. A dropdown menu is open, displaying a list of options: 'Science Grade 3-5 Lower Grades', 'Science Grade 4 Lower Grades', 'Science Grade 5', 'Science Grade 5 Lower Grades', 'Science Grade 6', 'Science Grade 6-8', and 'Science Grade 7'. The 'Science Grade 7' option is highlighted in blue. Below the dropdown, there are several input fields: 'Begin Date' with the value '9/1/2013', 'Content Area' with a dropdown arrow, and 'Range' with a dropdown arrow. There are also 'Continue' and 'Clear' buttons at the top left of the interface.

To select the Student Group and configure the diagnostic map:

- Leave the Begin Date and End Date as they are currently set. (You can set your Begin Date and End Date to the range of dates during which the students in your student group were administered the CDT. Because the CDT will show the most recent data within the date range for each student, defining the date range ensures that you are looking at students' data when they have received similar amounts of instruction, i.e., students who did not test during the date range that other students tested will not show up in the reports.)
- Use the **Map Configuration** dropdown menu in the Group Map tab to select **Science Grade 7**
- Once the Map Configuration has been selected, the data will load to show the Group Map for this student group

## The Group Diagnostic Map for Science Grade 7



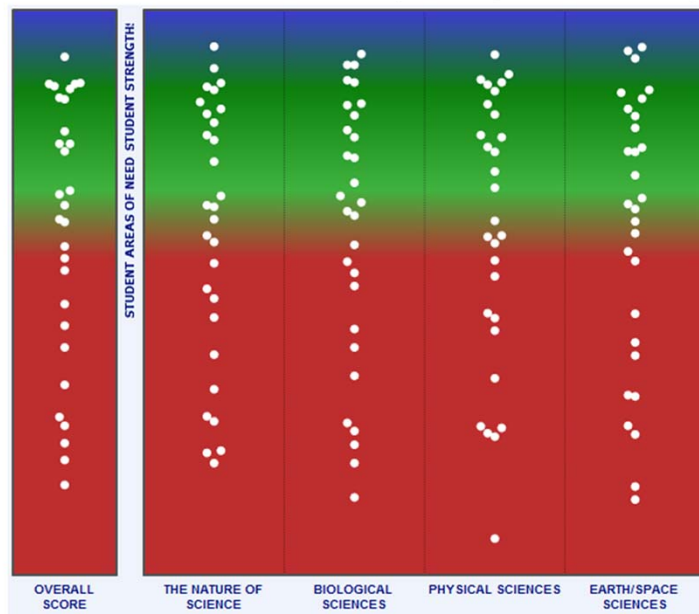
8

Here I see the Group Diagnostic Map. I have selected **Optimize Zoom** to focus in on the range of scores received by my students.

Taking into consideration the time of year, how well prepared are my students?



## Elements of the Group Diagnostic Map



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In order to answer the question, I first notice that there are four diagnostic categories. What are the categories?

I also notice that there is an Overall Score.

There are also several white dots appearing across two different colors. The white dots represent individual student scores on the CDT. By hovering over a dot, I can learn more information about the student.

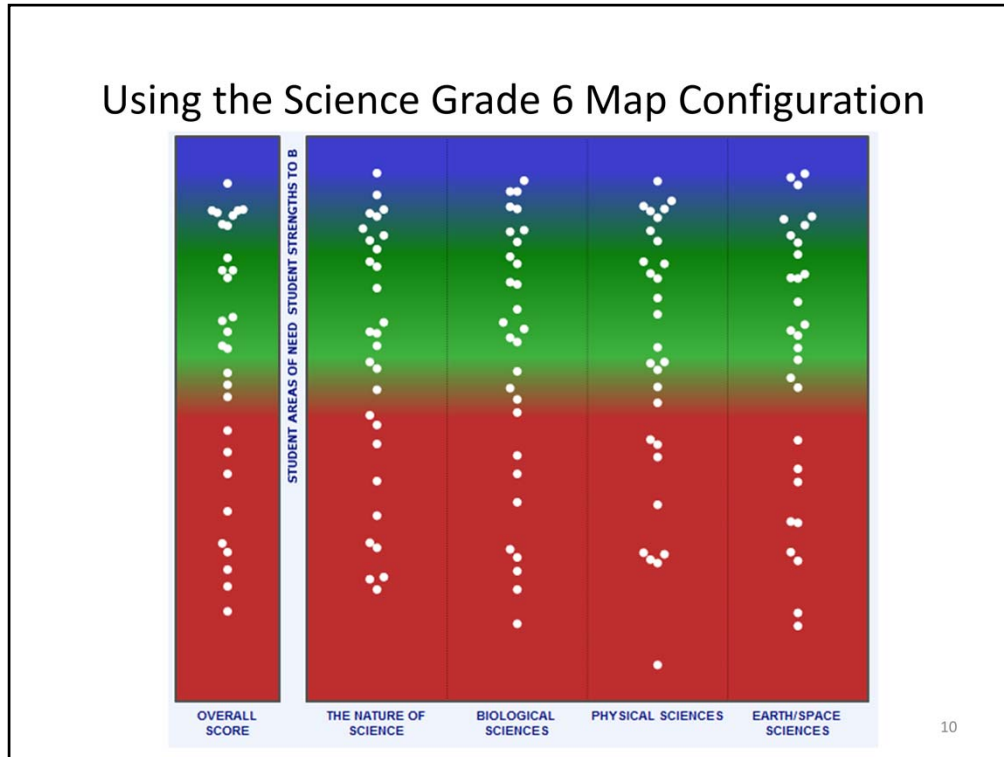
The colors represent Student Areas of Need (red) and Student Strengths to Build On (green). Notice that some scores in each of the categories are in the Green band while others are in the Red band or between the two bands. Many of the student scores are within the Red band, which is to be expected at the beginning of the school year.

From this report, are there any students who have already met the end of grade level or course expectations?

There is also a third color (blue) that appears when you expand the slider bar along the left side. The blue is just barely visible because I have selected the Optimize Zoom button and there are no dots that appear in the blue area. What does that mean? Why are there no dots in the blue?

The position of the dots on the colors represents the scores of the students in my class in each diagnostic category. What do the scores in the red represent? What do the scores in the green represent?

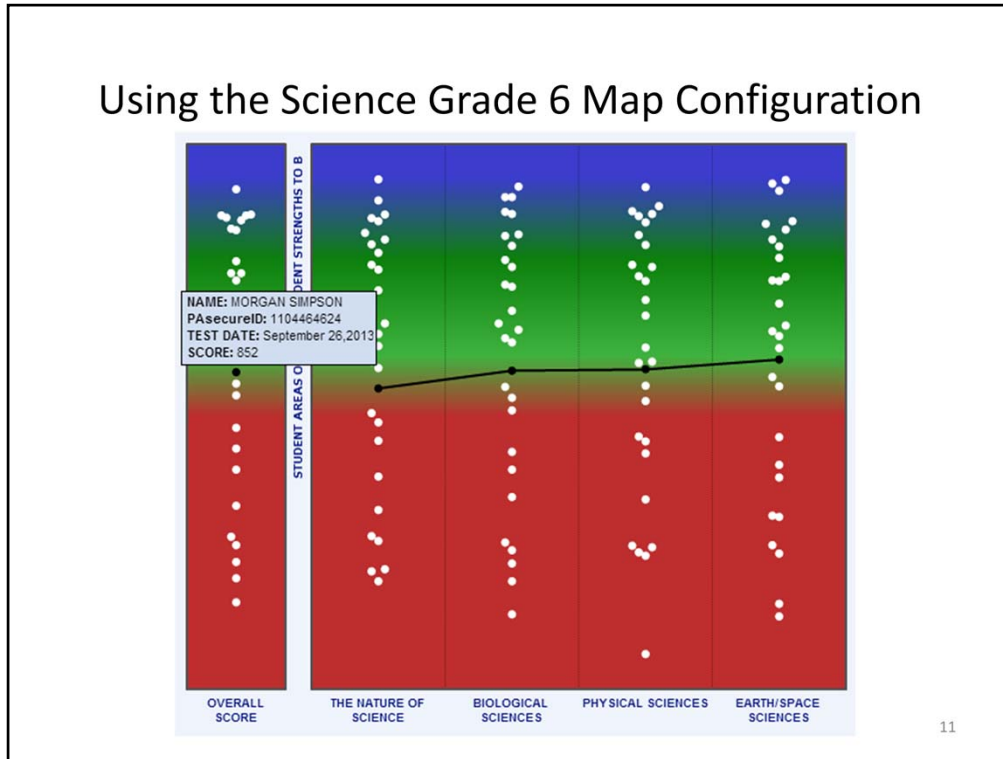
## Using the Science Grade 6 Map Configuration



Another way I can answer the question of how well prepared my students are, given that it is the beginning of the school year, is to change the **Map Configuration** to *Science Grade 6*. The Group Map reconfigures to show my students' scores with the expectations for the end of grade 6.

I select **Optimize Zoom** again. More students are now in the Green band, but I have only one student with an Overall score in the Blue band, and there are still several students in the Red band. What does this tell me about the students in this classroom?

## Using the Science Grade 6 Map Configuration



The students who are still in the Red band are starting the year below the expectations for students at the end of grade 6, so I may want to identify those students for additional instruction. I can hover over each dot to see the student's name, PAscoreID, Testing Date, and Score. I can also click on a dot to see the diagnostic category scores that combine to create that student's Overall Score. The student with the highest Overall Score that is still in the Red band is Morgan Simpson.

## Grid View of Diagnostic Map

29 of 29 Students have tested

<input type="checkbox"/>	First Name	Last Name	PASecureID	Overall Score	THE NATURE OF SCIENCE	BIOLOGICAL SCIENCES	PHYSICAL SCIENCES	EARTH/SPACE SCIENCES	Test Date
<input type="checkbox"/>	JAMIE	GARCIA	2511509032	526	570	509	453	524	09/26/2013
<input type="checkbox"/>	GUADALUPE	HERNANDEZ	2119295387	560	556	581	592	506	09/26/2013
<input type="checkbox"/>	MACKENZIE	EDWARDS	2459630069	583	573	556	597	607	09/26/2013
<input type="checkbox"/>	KEETON	BANKS	2431328503	607	613	611	604	595	09/26/2013
<input type="checkbox"/>	VICTORIA	MORALES	2308789379	619	620	600	606	649	09/26/2013
<input type="checkbox"/>	BAILEY	MOORE	2028190876	663	657	675	672	647	09/26/2013
<input type="checkbox"/>	MATTHEW	HARRISON	1267501979	714	704	714	737	703	09/26/2013
<input type="checkbox"/>	JAYDEN	MONTGOMERY	1171919492	744	755	739	761	721	09/26/2013
<input type="checkbox"/>	ELIZABETH	LARSEN	1155360869	773	781	798	754	760	09/26/2013
<input type="checkbox"/>	AVERY	WILLIAMS	1133137229	819	794	816	833	832	09/26/2013
<input type="checkbox"/>	TAYLOR	HALL	1051630746	836	858	831	811	845	09/26/2013
<input type="checkbox"/>	MORGAN	SIMPSON	1104464624	852	829	854	856	870	09/26/2013
<input type="checkbox"/>	RORY	ALVAREZ	1029338566	885	867	900	887	886	09/26/2013
<input type="checkbox"/>	REESE	DEAN	1014138124	889	889	894	867	903	09/26/2013
<input type="checkbox"/>	CORBIN	BROWN	2604303159	908	908	939	865	918	09/26/2013
<input type="checkbox"/>	HAYDEN	DUNN	2579043535	923	906	921	954	910	09/26/2013
<input type="checkbox"/>	LUIS	CHAPMAN	3054593207	928	921	912	932	949	09/26/2013
<input type="checkbox"/>	DEVON	HAWKINS	3171355833	982	968	973	1004	982	09/26/2013
<input type="checkbox"/>	CARLOS	FERNANDEZ	3245433905	992	997	1011	981	981	09/26/2013
<input type="checkbox"/>	ANDRE	SCOTT	3281758932	992	1004	976	1001	987	09/26/2013
<input type="checkbox"/>	PIPER	ROBERTS	3347812263	1009	1033	1001	988	1014	09/26/2013
<input type="checkbox"/>	STEPHANIE	PEREZ	1731659431	1053	1021	1031	1032	1124	09/26/2013
<input type="checkbox"/>	ADOLSON	CAMPBELL	3503623051	1055	1066	1047	1076	1030	09/26/2013
<input type="checkbox"/>	MYLES	BURKE	3410710094	1067	1049	1079	1073	1066	09/26/2013
<input type="checkbox"/>	JONATHAN	ROSE	17006693913	1071	1070	1076	1087	1054	09/26/2013
<input type="checkbox"/>	ETHAN	GARDNER	1678977292	1074	1075	1100	1080	1040	09/26/2013
<input type="checkbox"/>	SIDNEY	GORDON	1741361184	1074	1040	1100	1046	1109	09/26/2013
<input type="checkbox"/>	KELLY	PETERSON	3589378328	1075	1125	1045	1064	1062	09/26/2013
<input type="checkbox"/>	MICAH	JONES	1743810881	1111	1095	1115	1114	1119	09/26/2013

[Show Selected Students](#)
[Export to CSV](#)
[Export to PDF](#)
[Export to Zip](#)
[Export Individual Reports](#)

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I can also scroll down below the group map to see a grid that contains the results for my students. If I click on Overall Score, the data is sorted by the students' Overall Scores. (I can also sort by any of the other columns, e.g., a diagnostic category such as Biological Sciences, student last name, or test date.) I can also move the columns around by clicking on and dragging them, so I have moved the Overall Score to be next to the student's PASecureID.

Because Morgan Simpson's Overall Score was near the top of the Red band, I know that any student with a lower Overall Score is also showing areas of need. I might want to form a student group consisting of Jamie, Guadalupe, Mackenzie, Keeton, Victoria, Bailey, Matthew, Jayden, Elizabeth, Avery, Taylor, and Morgan for additional support.

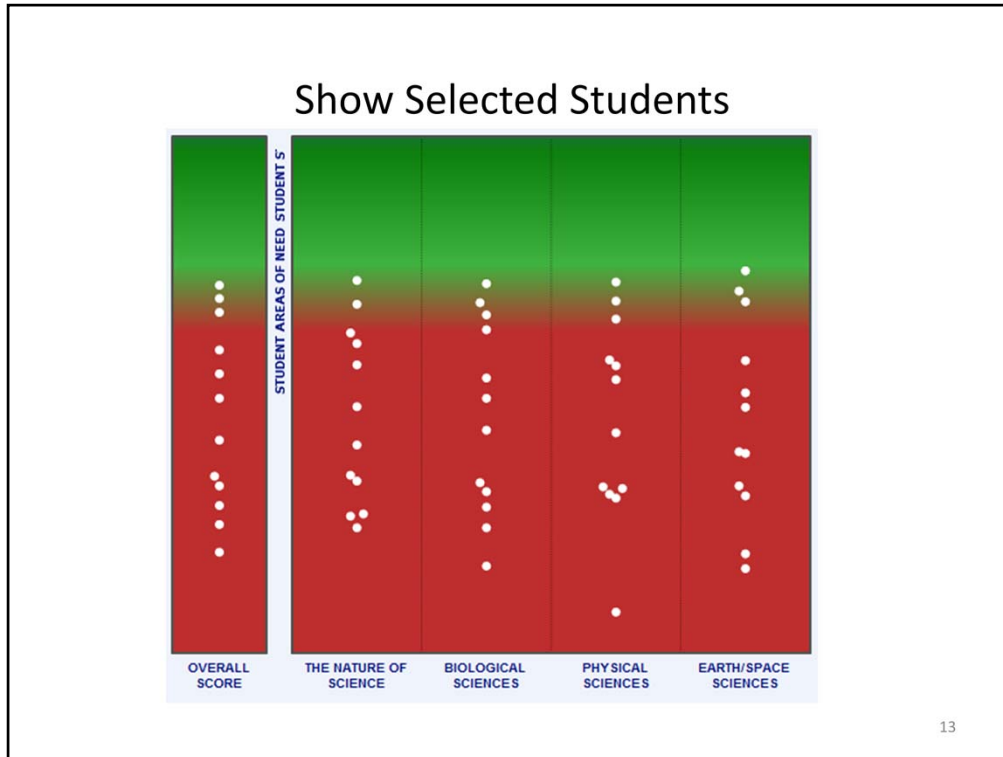
How else might I use this grid?

If I would like to use this data in Excel or Access, I can click on the **Export to CSV** button. Why might I want to export this data?

If I would like to print this report, I can click on the **Export to PDF** button. Besides providing a snapshot of where my students are, how might I use this report?

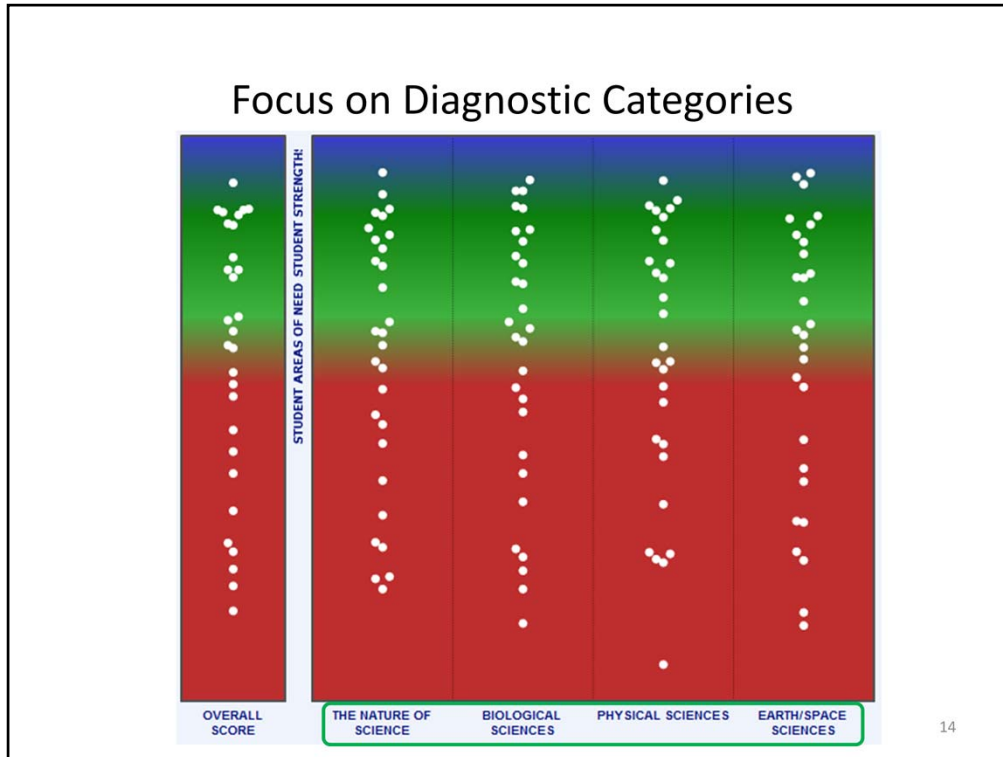
How would this data support me during a data team meeting(s)?

I also notice a **Show Selected Students** button. I can select students in the grid which enables me to see only those selected students in the map. I can also print a report for just those students. I click on the boxes beside each of the students I identified as having areas of need and select **Show Selected Students**.



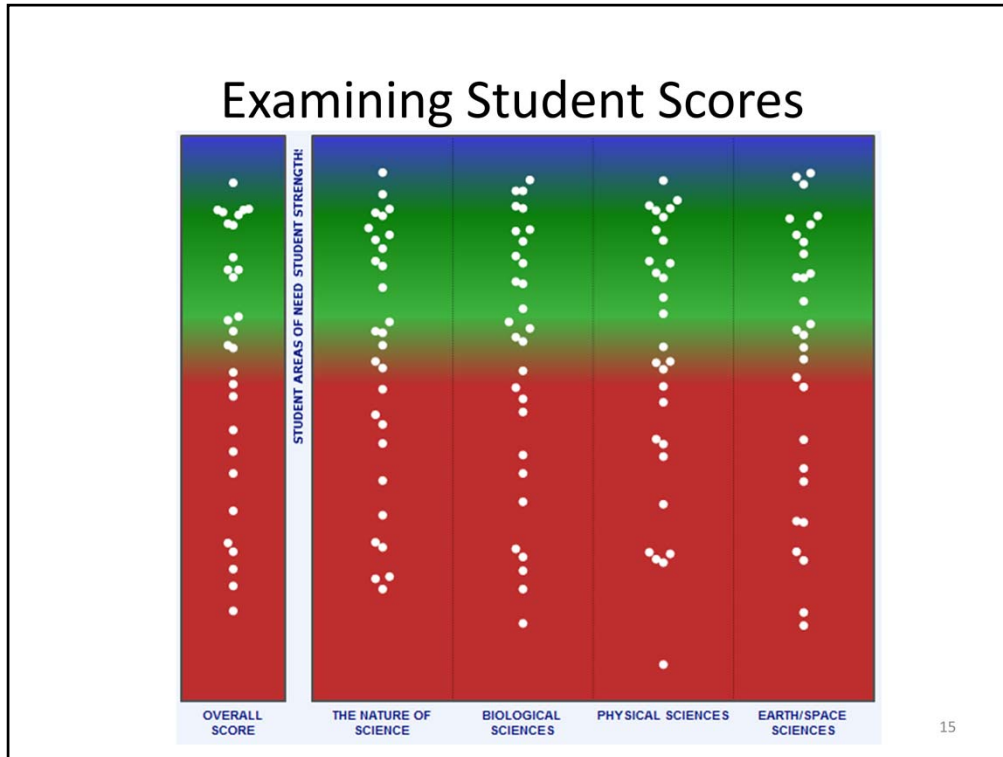
I can see that each Diagnostic Category score for each of these students is also in the Red band when using the Grade 6 Map Configuration, so I know these students will likely need additional support with all four Diagnostic Categories as we work toward understanding of the Science Assessment Anchors and Eligible Content. I can also use other formal and informal formative assessments in my classroom to gauge how these students are progressing in the Science AA/ECs.

Note to Trainer: Some teachers may be unaware of the Eligible Content for grades K-2, 3, 5, 6, and 7. These Eligible Content are available on SAS at: <http://www.pdesas.org/Standard/AnchorsDownloads>. Off-grade Eligible Content needed to be developed in collaboration with Pennsylvania educators for the purpose of the Classroom Diagnostic Tools. This was done for grades 3, 5, 6, and 7 first, and Eligible Content for the grade band of K-2 were developed using a similar process prior to the development of items that would allow the CDT to be extended down to students in grades 3-5. The Assessment Anchors and Eligible Content for grades 4, 8, and 11 were foundational in developing a vertical articulation of science content from grade to grade.



I want to look at the report for my entire class using the Grade 7 expectations, so I change the **Map Configuration** back to *Science Grade 7 Lower Grades* and select the **Optimize Zoom** button again.

I notice that this class does not seem to have differing performances across the diagnostic categories, but students seem to be spread across both the red and green bands for each of the diagnostic categories. In fact, I can see (by hovering over dots, clicking on a dot to show all of the diagnostic category scores of a student, or by scrolling down to the grid below the map) that most students are performing quite consistently across diagnostic categories.

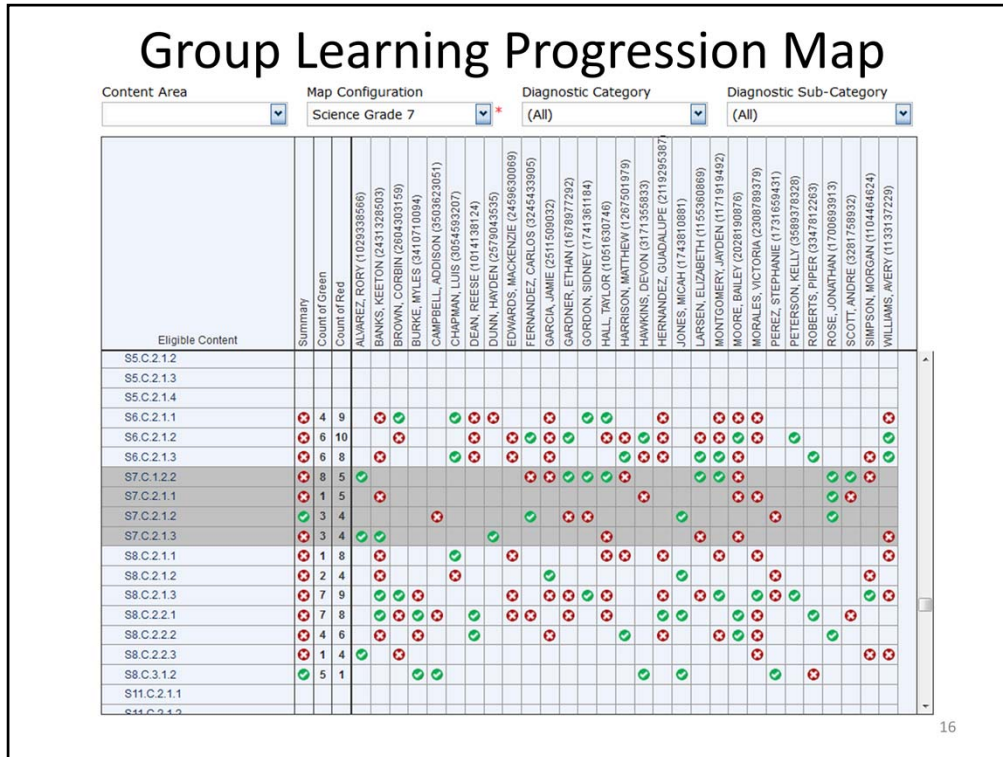


Now I want to focus on student scores in the Overall Score column in relation to the diagnostic categories.

Are there any students showing areas of strength?

Which students show areas of need?

What patterns do I see? (Are the students showing areas of strength or areas of need similar across diagnostic categories? Are students scoring between the red and green bands in one diagnostic category performing similarly in other diagnostic categories as well or are the scores in other diagnostic categories higher or lower?)



Another way that I can analyze the results of the students in my class is by using the Group Learning Progression Map. I select the Group Learning Progression Map tab and the Group Learning Progression Map populates. I see a row for each Eligible Content assessed on the CDT and a column for each of my students, in addition to a few extra columns. These columns are: Summary, Count of Green, and Count of Red.

The **Summary** column shows either a red dot or a green dot. To determine the color of the summary dot, all students in the group who received at least one item for that Eligible Content count equally, even though they may have taken different numbers of items for the Eligible Content. The summary dot calculation includes how close each student's performance is to the expected performance for a student just ready for the next grade/course rather than just whether the student scored better or worse than expected. Therefore, the summary dot color may not be the same as the most frequently-occurring color for the group. By hovering over the Summary dot, I learn how many students in my student group received items for this Eligible Content and how many items those students received. (Remember that the dot colors are based on the expectation for the end of grade 7 since the Science Grade 7 Map Configuration is being used.)

The **Count of Green** and **Count of Red** columns indicate the number of students who received each of those colors of dots on their individual learning progression map. (Remember, some students may have received more items than other students.)

I can also hover over the Eligible Content code to see the Eligible Content Description and links to Materials and Resources in SAS as well as a sample item for that Eligible Content.



# Group Learning Progression Map

Eligible Content	Summary	Count of Green	Count of Red	ALVAREZ, RORY (1029338566)	BANKS, KEETON (2431328503)	BROWN, CORBIN (2604303159)	BURKE, MYLES (3410710094)	CAMPBELL, ADDISON (3509232051)	CHAPMAN, LUIS (3054592207)	DEAN, REESE (1014138124)	DUNN, HAYDEN (2579043535)	EDWARDS, MACKENZIE (2459630069)	FERNANDEZ, CARLOS (3243433605)	GARCIA, JAMIE (2511509032)	GARDNER, ETHAN (1678977292)	GORDON, SIDNEY (1741381184)	HALL, TAYLOR (1051630746)	HARRISON, MATTHEW (1267501979)	HAWKINS, DEVON (3171355833)	HERNANDEZ, GUADALUPE (2119295387)	JONES, MICAH (1743810881)	LARSEN, ELIZABETH (1155360869)	MONTGOMERY, JAYDEN (1171919492)	MOORE, BAILEY (2028190876)	MORALES, VICTORIA (2308789379)	PEREZ, STEPHANIE (1731659431)	PETERSON, KELLY (3589376326)	ROBERTS, PIPER (3347812283)	ROSE, JONATHAN (17006593913)	SCOTT, ANDRE (3281758932)	SIMPSON, MORGAN (1104484624)	WILLIAMS, AVERY (1133137229)			
S5.D.2.1.1																																			
S5.D.2.1.2																																			
S6.D.1.1.1	3	4																																	
S6.D.1.1.2	4	5																																	
S6.D.2.1.1	3	9																																	
S6.D.2.1.2	0	4																																	
S6.D.2.1.3	3	10																																	
S7.D.1.1.1	1	5																																	
S7.D.1.1.2	3	12																																	
S7.D.1.2.1	8	9																																	
S7.D.1.2.2	2	4																																	
S7.D.1.2.3	4	1																																	
S7.D.2.1.1	4	7																																	
S7.D.2.1.2	3	4																																	
S8.D.1.1.1	3	2																																	
S8.D.1.1.2	1	3																																	
S8.D.1.1.3	3	1																																	
S8.D.1.1.4	3	10																																	

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I can use the Summary, Count of Green, and Count of Red columns to identify Eligible Content for which targeted instruction could benefit my students.

Under Earth and Space Sciences, Earth, I see the Eligible Content code S7.D.1.1.2, which has a red summary dot.

The code tells me a lot of information about this Eligible Content. S7 at the beginning tells me this is content for Science, grade 7. The next part of the code, D, tells me that this EC is for Earth and Space Sciences. (The letter refers to the PSSA Reporting Category, which is also the Diagnostic Category. A is for The Nature of Science; B is for Biological Sciences; C is for Physical Sciences; and D is for Earth and Space Sciences.) The following three numbers represent the Assessment Anchor, Descriptor, and Eligible Content. I can find more information about the Reporting Categories, Assessment Anchors, Descriptors, and Eligible Content in the Assessment Anchors and Eligible Content documents posted at [www.pdesas.org](http://www.pdesas.org).

I see that 15 of my 24 students received one or more items for this Eligible Content, and that only 3 received green dots, while the other 12 received red dots. I hover over the Eligible Content code, and I see the Eligible Content Description, as well as links to Materials and Resources and a Sample Item. The Eligible Content Description says “Explain how fossils are formed and how they can provide evidence about plants and animals that once lived on Earth.”

I can click on Sample Item to see an example of an item aligned to this Eligible Content.

## Sample Item

1. An insect is discovered within hardened tree sap, called amber. Which statement **best** describes the insect?
  - A. It is a rock because the amber is now solid.
  - B. It is a mineral because the tree sap has hardened.
  - C. It is a crystal because it is a single organism within the amber.
  - D. It is a fossil because it is a preserved organism that was once alive.

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A PDF showing a sample item opens. This item asks students to identify that an insect within hardened sap (amber) is a fossil because it preserves an organism that was once alive. I can use this question without the answer choices to begin a class discussion about different fossils are formed prior to planning additional instruction. I go back to the Group Learning Progression Map, hover over the Eligible Content Code again, and click on **Materials and Resources** for additional resources to help me plan my next steps.

# Materials and Resources

Materials & Resources

Lesson/Unit Plan | Instructional Content | Educational Resources | Assessment | Videos | Web-Based Content | PA Educator Created Content

Materials & Resources - Results

Keys to the Past	Unit Plan Grade(s):7th Grade
What Are Fossils, Anyway?	Lesson Plan Grade(s):7th Grade
Fossil Stories from Tar Pits	Lesson Plan Grade(s):7th Grade
Fossils and Geologic History	Lesson Plan Grade(s):7th Grade

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This takes me directly into SAS, where I can find lessons/unit plans, instructional content, educational resources, assessments, videos, web-based content, and/or Pennsylvania Educator-created content. I can use these resources, along with other instructional materials I have developed or found, to work with my students on the effects of pollution in a community.

# Group Learning Progression Map

Eligible Content	Summary	Count of Green	Count of Red	ALVAREZ, RORY (102838566)	BANKS, KEETON (2431328503)	BROWN, CORBIN (2604303159)	BURKE, MYLES (3410710094)	CAMPBELL, ADDISON (3503823051)	CHAPMAN, LUIS (30544593207)	DEAN, REESE (10141138124)	DUNN, HAYDEN (2579045535)	EDWARDS, MACKENZIE (2459630089)	FERNANDEZ, CARLOS (32454339605)	GARCIA, JAMIE (2511509032)	GARDNER, ETHAN (1878977292)	GORDON, SIDNEY (1741361184)	HALL, TAYLOR (1051630748)	HARRISON, MATTHEW (1287501979)	HAWKINS, DEVON (3171355833)	HERNANDEZ, GUADALUPE (2119295387)	JONES, MICAH (743810881)	LARSEN, ELIZABETH (1155360899)	MONTGOMERY, JARDEN (1171919492)	MOORE, BAILEY (2028190876)	MORALES, VICTORIA (2308789379)	PEREZ, STEPHANIE (1731659431)	PETERSON, KELLY (3698378328)	ROBERTS, PIPER (3347812263)	ROSE, JONATHAN (1700893913)	SCOTT, ANDRE (3281756832)	SIMPSON, MORGAN (1104464624)	WILLIAMS, AVERY (1133137229)				
S5.C.2.1.1																																				
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S7.C.1.2.2		8	5																																	
S7.C.2.1.1		1	5																																	
S7.C.2.1.2		3	4																																	
S7.C.2.1.3		3	4																																	
S8.C.2.1.1		1	8																																	
S8.C.2.1.2		2	4																																	
S8.C.2.1.3		7	9																																	
S8.C.2.2.1		7	8																																	
S8.C.2.2.2		4	6																																	
S8.C.2.2.3		1	4																																	
S8.C.3.1.2		5	1																																	

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I can also use the Group Learning Progression Map to identify content that might benefit students during small-group instruction. For example, under Physical Sciences, Energy, I see that 8 students received a green dot for S7.C.1.2.2, while 5 students received a red dot. If I hover over the Eligible Content code, I see that this Eligible Content expects students to “Compare the behavior of particle motion in solids, liquids, and gases.” Carlos Fernandez, Jamie Garcia, Matthew Harrison, Bailey Moore, and Morgan Simpson all received red dots for that Eligible Content. I know that each student counts equally in the calculation of the summary dot and that the distance from the expected score for each student is factored into the calculation of the summary dot. I see that the summary dot for this Eligible Content is red even though more students received green dots than red dots. Therefore, it is likely that the students who struggle with this Eligible Content need substantial help. (It is also likely that some of the students who received green dots just met the expectations of a student at the end of seventh grade and may benefit from additional instruction as well.)

I remember that these dots may represent only a few items for each student. I can hover over each student’s dot to see how many items this score is based on. For each of the students with a red dot, the dot is based on one item. I can look at the sample item and ask these students, as well as students who did not receive items for this Eligible Content, questions similar to the sample item to determine if they really are struggling with this Eligible Content. (The same applies to students who received green dots. The dot may be based on only a few items; if I feel a student needs additional support with an Eligible Content regardless of a green dot on the CDT, I should use my professional judgment and provide that support.)

Once I have identified my flexible student group for additional support, I can access the Materials and Resources in SAS to help me find ways to support my students.

## Now open Gr 7 Science Administration #2

- Go to the Student Group dropdown menu and select **Gr 7 Science Administration #2**
- Next click on the ***Continue*** button
- Then select **Science Grade 7** from the Map Configuration dropdown menu

The resulting Group Map represents student scores after the mid-year CDT administration.

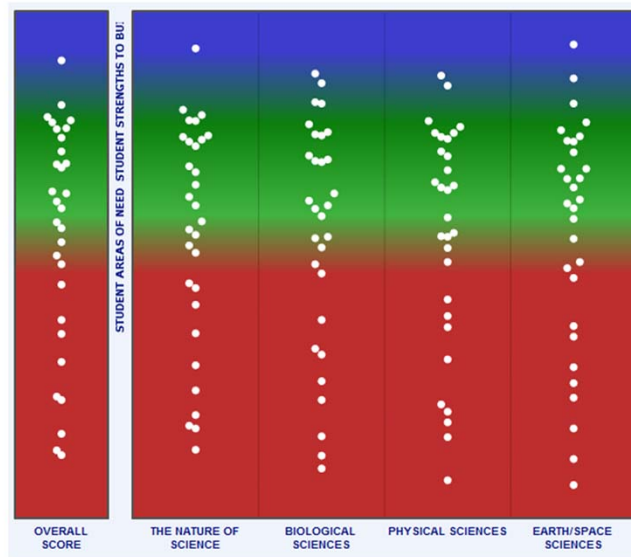
21

Note to Trainer: For this scenario, data for the previous test event for Science Grade 7 will also be shown.

The current version of the CDT only shows the most recent test event for the Group Learning Progression Map and the Individual Learning Progression Map; therefore, the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> test events are stored as separate Student Groups for the purpose of training. This is why you need to select the different student group as we enter this part of the training.

This part of the demonstration uses the second test administration.

## Group Map



22

I administered the CDT to my entire class on February 4, and now I am going to analyze the results. I am using this mid-year CDT administration to see how my students are doing as they progress toward understanding of the Assessment Anchors and Eligible Content. In some schools, the teacher may decide to use the second administration only for students who participated in a particular intervention due to issues of timing or access to technology.

**Note:** If I scroll down below the map, I see that my class now has 30 students instead of 29. This is because I have a new student in my class, Madison Howell.

## Individual Learning Progression Map

Student: MADISON HOWELL (5574902834) \*    Content Area:    Map Configuration: Science Grade 7 \*

Eligible Content	Grades / Courses											
	K	1	2	3	4	5	6	7	8	B	C	K-2 HS
S6.D.2.1.1												
S6.D.2.1.2												
S6.D.2.1.3												
S7.D.1.1.1												
S7.D.1.1.2												
S7.D.1.2.1									+			
S7.D.1.2.2												
S7.D.1.2.3												
S7.D.2.1.1									+			
S7.D.2.1.2									✓			
S8.D.1.1.1												
S8.D.1.1.2												
S8.D.1.1.3												
S8.D.1.1.4										+		
S8.D.1.2.1												
S8.D.1.2.2										+		
S8.D.1.3.1										+		
S8.D.1.3.2										+		

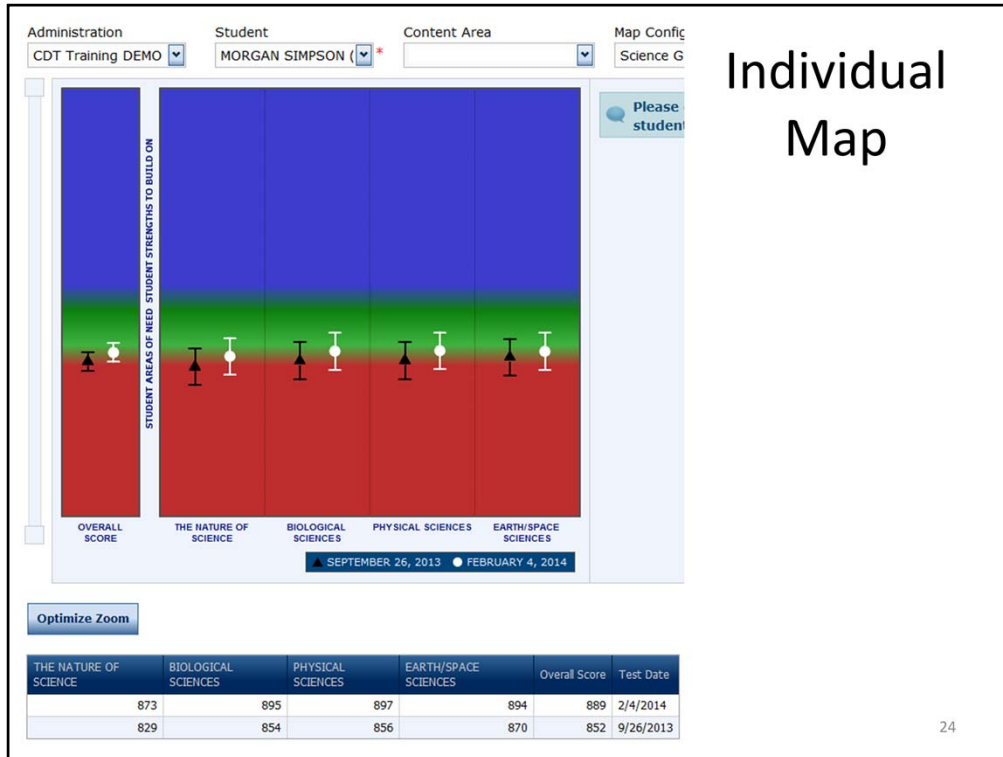
[Export to CSV](#)

23

Madison recently moved into this school district from out of state. I don't know a lot about the previous instruction Madison has received, so I added Madison to my student group and included Madison in the second CDT administration for my class.

I click on the **Individual Learning Progression Map** tab and select Madison Howell from the **Student** dropdown menu, and I see the Individual Learning Progression Map. Like the Group Learning Progression Map, there is a row for each Eligible Content, and I can hover over the codes to see the Eligible Content Description and links to Materials and Resources and a Sample Item.

As I scroll through Madison's learning progression map, I can see red and green dots that identify the Eligible Content for which Madison received items. I can hover over each dot to see the number of items administered and the administration date. Below the map is the **Export to CSV** button that I can use to create a .csv file that I can open in Excel or Access.



## Individual Map

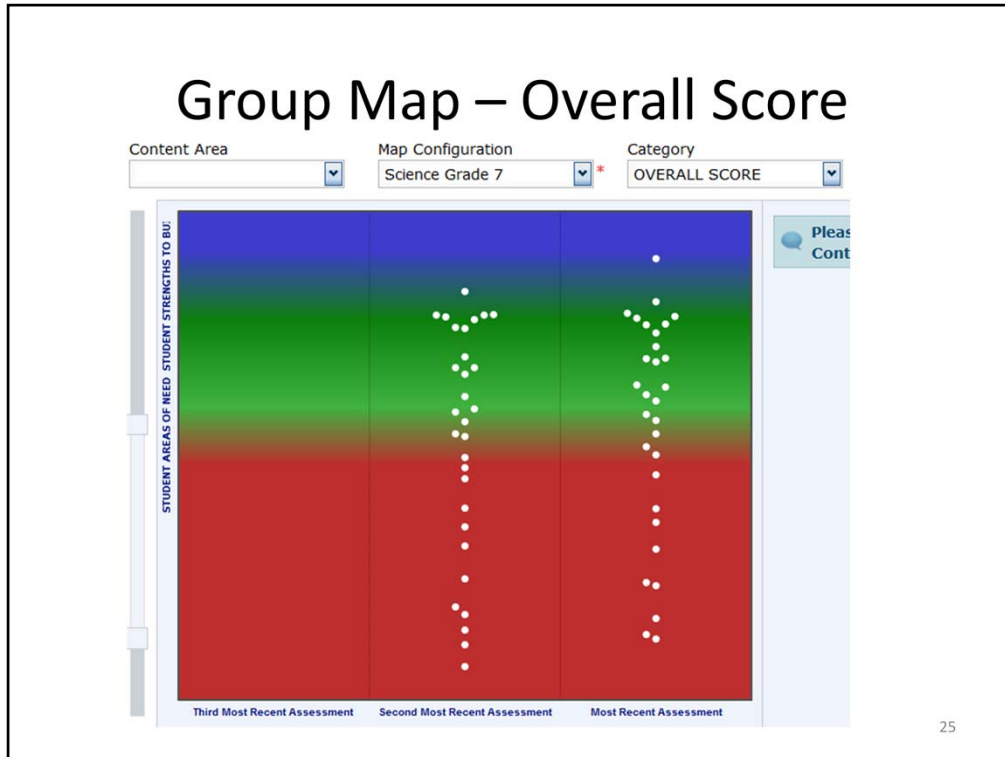
If you remember from the first administration, Morgan Simpson began the year below the expectations for students completing third grade. Morgan's family is monitoring his progress and has scheduled a conference to discuss his current progress and next steps.

I can click on the **Individual Map** tab and select Cameron from the Student dropdown menu. The Individual Map shows a student's Overall Score and each Diagnostic Category score for the three most recent administrations of the CDT. Morgan has only completed two administrations of the CDT so far this year.

I see that there are vertical lines with a dot or triangle in the center of each line. The dots (or triangles) represent the student's actual score. The lines represent error bands. The error band (or standard error of measurement) shows the variation in CDT scores if the same student were to take the CDT multiple times without additional instruction. The variation in scores is similar to the variation found when other tools are used to measure attributes. For example, if you use a bathroom scale and measure your weight multiple times, it is unlikely that the same weight will appear every time. This variation is related to the reliability, or precision, of the tool you are using. For the CDT, I can see that the error bands for the Overall Score are shorter than the error bands for each Diagnostic Category score. Because a student's Overall Score is made up of more test questions than each of the Diagnostic Category scores, the Overall Score is a more precise measurement, and the lines are not as long.

If the lines for different Diagnostic Categories overlap, there may not be a statistically significant difference between the two scores. However, for instructional purposes, I may still want to look at the entire profile to help inform instructional decisions. While the grid shows that Morgan's scores have increased since September, the lines show that this growth is not statistically significant and we still have more work to do. I can Export this report to either a .csv file or a .pdf file to use during my conference with Morgan's family.

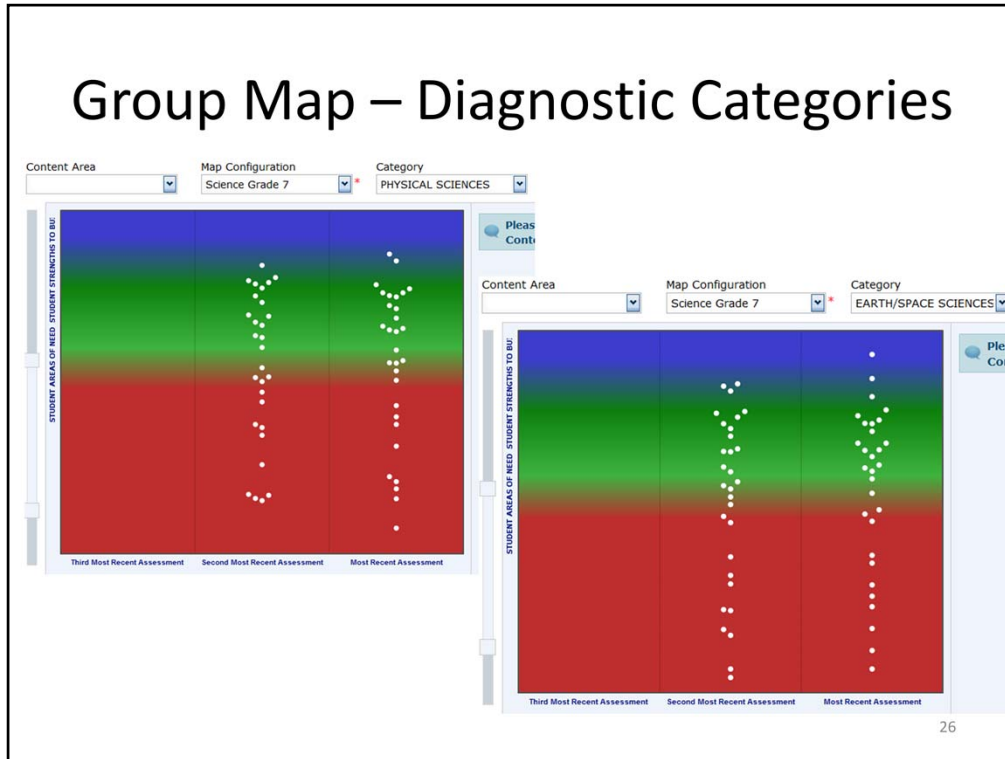




Now that I am ready for my conference, I will take some time to look over the results for all of the students in my class. I switch back to the Group Map and click on **Optimize Zoom**. Under the Category dropdown menu, I first select Overall Score.

I see that more of my students have moved into the Green band, but there are still several students in the Red band, so I will take a look at the growth in each diagnostic category to help me determine my next steps.

# Group Map – Diagnostic Categories



These are the Group Maps for Physical Sciences and Earth and Space Sciences for the second administration. It seems that more of my students have shown growth in Earth and Space Sciences (the map on the right) than in Physical Sciences (the map on the left) since the first administration.

I can use this information, as well as information from the Group Learning Progression Map, to determine my next instructional steps. I also might want to compare the Group Maps for other Diagnostic Categories based on the areas I have focused on in my instruction as well as the topics I am planning to cover in upcoming instruction.

## Now open Gr 7 Science Administration #3

- Go to the Student Group dropdown menu and select [Gr 7 Science Administration #3](#)
- Next click on the ***Continue*** button
- Then select [Science Grade 7](#) from the Map Configuration dropdown menu

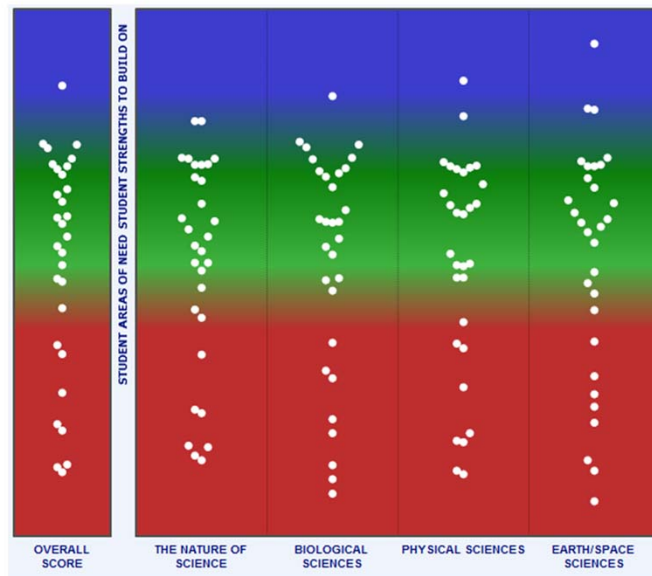
The resulting Group Map represents student scores for the end-of-year CDT administration.

27

Reminder to Trainer: The current version of the CDT only shows the most recent test event for the Group Learning Progression Map and the Individual Learning Progression Map; therefore, the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> test events are stored as separate Student Groups for the purpose of training. This is why you need to select the different student group as we enter this part of the training.

This part of the demonstration uses the third test administration.

## Group Map – End of Instruction for Grade 7 Science



28

It is now nearing the end of the school year, and these students have completed the third administration of the Science CDT for Grades 6 through high school. I am still interested to know how well prepared the students are as they approach the end of instruction.

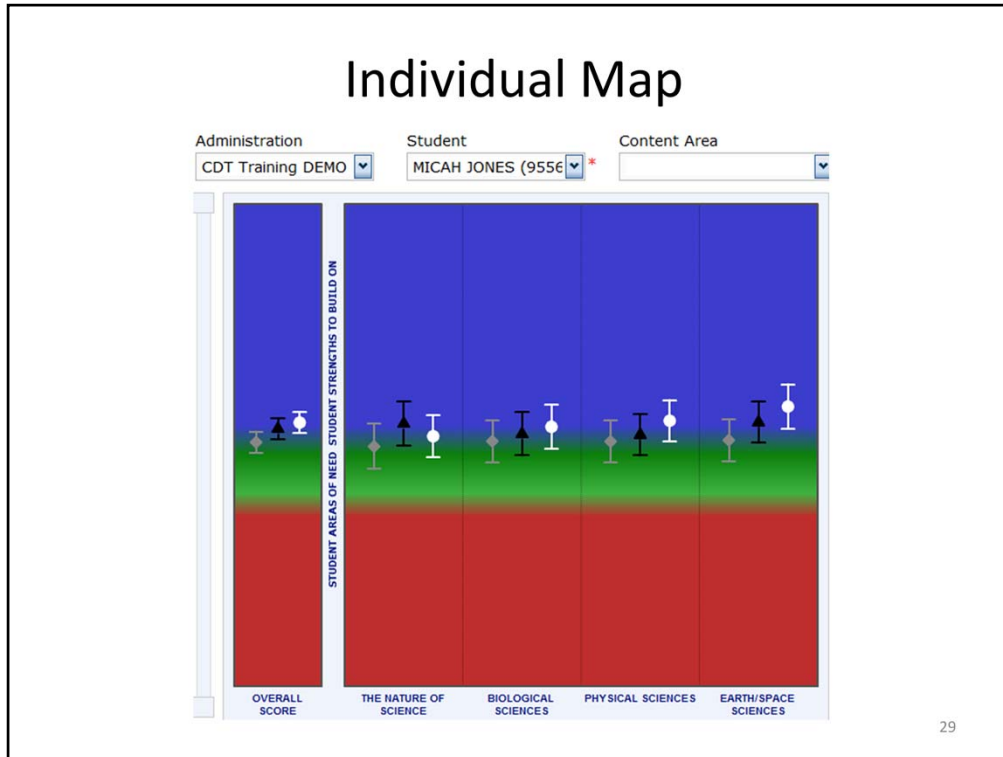
I notice that the map looks quite a bit different from the first administration.

Which students are showing strengths to build on?

Which students are showing areas of need?

Which students might need additional support?

How can I use the maps in the CDT to help build on student strengths and support student areas of need?



I hover over the dot with the highest overall score and find that it belongs to Micah Jones, so I click on the Individual Map tab and select Micah Jones from the Student dropdown menu.

Micah's individual map shows Diagnostic Category and Overall scores for each of the three administrations. I can see that the error bands for Diagnostic Categories for the most recent administration (shown by white dots) overlap, so it seems that Micah is not performing significantly differently in any of the diagnostic categories. I can use the Individual Learning Progression Map or Sidney's column in the Group Learning Progression Map to look for patterns and identify some ways to build on Micah's strengths.

# Selecting Students

Please draw a box around a group of students within a Diagnostic Category, and click the Show Eligible Content button, to view Eligible Content associated with the students' scores and category selected.

**INSTRUCTIONAL ENRICHMENT**

This Report Shows Eligible Content associated with the scores of the students and the Diagnostic Category selected. These students may benefit from enrichment in the following:

- **56.D.2.1.3:** Explain how global patterns (jet stream, water currents) influence weather in measurable terms (e.g., wind direction, temperature, barometric pressure, precipitation).
- **56.D.2.1.1:** Describe cloud types and measurable factors (i.e., wind direction, temperature, barometric pressure, moisture, and precipitation) that are associated with various weather patterns.
- **56.D.3.1.2:** Describe how the size, composition, and surface features of the planets are influenced by their distance from the Sun.
- **56.D.3.1.1:** Compare the size and surface features of the planets that comprise the solar system as well as the objects orbiting them.
- **SZ.D.2.1.1:** Explain the effect of wind patterns, circulation of oceans currents, atmospheric pressure, and temperature on weather.
- **SZ.D.1.1.2:** Explain how fossils are formed and how they can provide evidence about plants and animals that once lived on Earth.
- **SZ.D.3.1.1:** Describe the patterns of Earth's rotation and revolution in relation to the Sun and Moon (i.e., solar eclipse, lunar eclipse, phases of the Moon, and time).
- **SZ.D.3.1.2:** Explain how gravity is the essential force in determining the motions of the planets and other objects in the solar system.

[Show Eligible Content](#) [Optimize Zoom](#) [Clear Map](#)

30

I go back to the Group Map and notice that there is a group of students who are between the Green and Red bands for Earth and Space Sciences. To identify all of those students at once, I can draw a box around them and click the **Show Eligible Content** button. Eligible Content for which these students may benefit from additional instruction are shown to the right of the Group Map, and the dots that were enclosed in the box are now highlighted yellow.

# Selecting Students

30 of 30 Students have tested

<input type="checkbox"/>	First Name	Last Name	PSecureID	THE NATURE OF SCIENCE	BIOLOGICAL SCIENCES	PHYSICAL SCIENCES	EARTH/SPACE SCIENCES	Overall Score	Test Date
<input type="checkbox"/>	RORY	ALVAREZ	7055472547	929	964	926	958	944	05/06/2014
<input type="checkbox"/>	KEETON	BANKS	8049035565	664	704	684	699	688	05/06/2014
<input type="checkbox"/>	CORBIN	BROWN	8179874648	967	992	924	981	967	05/06/2014
<input type="checkbox"/>	MYLES	BURKE	9109432639	1070	1053	1059	1075	1064	05/06/2014
<input type="checkbox"/>	ADDISON	CAMPBELL	9128895568	1079	1078	1064	1051	1068	05/06/2014
<input type="checkbox"/>	LUIS	CHAPMAN	8270687464	977	988	999	1019	996	05/06/2014
<input type="checkbox"/>	REESE	DEAN	7028082695	946	952	942	973	953	05/06/2014
<input type="checkbox"/>	HAYDEN	DUNN	8156183185	954	987	1012	987	985	05/06/2014
<input type="checkbox"/>	MACKENZIE	EDWARDS	8098647676	645	597	673	645	639	05/06/2014
<input type="checkbox"/>	CARLOS	FERNANDEZ	8407285269	1014	1061	1029	1001	1027	05/06/2014
<input type="checkbox"/>	JAMIE	GARCIA	8138237376	666	618	625	630	635	05/06/2014
<input type="checkbox"/>	ETHAN	GARDNER	9295072995	1079	1099	1069	1068	1079	05/06/2014
<input type="checkbox"/>	SIDNEY	GORDON	9529630395	1070	1095	1074	1151	1100	05/06/2014
<input checked="" type="checkbox"/>	TAYLOR	HALL	7098011371	929	904	908	885	906	05/06/2014
<input type="checkbox"/>	MATTHEW	HARRISON	7302381232	797	774	806	816	798	05/06/2014
<input type="checkbox"/>	DEVON	HAWKINS	838984784	993	1038	1068	1037	1035	05/06/2014
<input type="checkbox"/>	GUADALUPE	HERNANDEZ	7396767385	652	638	630	586	628	05/06/2014
<input type="checkbox"/>	MADISON	HOWELL	8341761351	989	988	1008	992	994	05/06/2014
<input type="checkbox"/>	MICAH	JONES	9556203923	1133	1169	1191	1244	1184	05/06/2014
<input checked="" type="checkbox"/>	ELIZABETH	LARSEN	7206682545	862	889	844	861	864	05/06/2014
<input type="checkbox"/>	JAYDEN	MONTGOMERY	7237806572	850	814	813	766	811	05/06/2014
<input type="checkbox"/>	BAILY	MOORE	7327885013	718	763	750	740	742	05/06/2014
<input type="checkbox"/>	VICTORIA	MORALES	8006324379	713	684	671	722	697	05/06/2014
<input type="checkbox"/>	STEPHANIE	PEREZ	9502340256	1080	1080	1066	1149	1094	05/06/2014
<input type="checkbox"/>	KELLY	PETERSON	9190782933	1133	1065	1014	1068	1071	05/06/2014
<input type="checkbox"/>	PIPER	ROBERTS	9073309204	1052	1058	1042	1070	1056	05/06/2014
<input type="checkbox"/>	JONATHAN	ROSE	9471225264	1071	1103	1140	1080	1099	05/06/2014
<input type="checkbox"/>	ANDRE	SCOTT	9008232731	1047	1005	1001	1015	1017	05/06/2014
<input checked="" type="checkbox"/>	MORGAN	SIMPSON	7134611086	918	941	928	916	926	05/06/2014
<input checked="" type="checkbox"/>	AVERY	WILLIAMS	7167997692	893	907	908	900	902	05/06/2014

31

If I scroll down below the map, the students who received these scores are highlighted in yellow.

I can put a checkmark in the box beside each row and click on **Show Selected Students** to see only those students' scores in the Group Map. This can help me find patterns in these students' performances across Diagnostic Categories that might help me to improve their understanding as we approach the end of the year. In addition, this information will be available to the students' next teacher(s) as they move into the next grade in the fall.

# Individual Learning Progression Map

Student: MACKENZIE EDWARDS (8098647676) \*  
Content Area:   
Map Configuration: Science Grade 7 \*

Eligible Content	Grades / Courses												
	K	1	2	3	4	5	6	7	8	B	C	K-2	HS
S11.A.3.3.1													
S11.A.3.3.2													
S11.A.3.3.3													
Advancements in Science and Technology													
SK-2.A.1.1.2													
SK-2.A.1.1.3													
S3.A.1.1.2													
S4.A.1.1.2													
S5.A.2.2.2													
S6.A.2.2.1								+					
S7.A.1.2.1													
S7.A.2.1.2								+					
S7.A.2.2.3								+					
S8.A.1.2.1													
S8.A.1.2.2													
S8.A.1.2.3													
S8.A.2.1.6													
S8.A.2.2.3													

[Export to CSV](#)

32

For students like Mackenzie Edwards who continue to struggle in the final CDT administration of the year, I can click on the Individual Learning Progression Map, select the student name from the Student dropdown menu, and then click the **Export to CSV** button at the bottom of the screen.



# Individual Learning Progression Map

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O		
1	CDT - Individual Learning Progression Map Export																
2	Student:	MACKENZIE EDWARDS (8098647676)															
3	Administration:																
4	District:																
5	School:																
6	Teacher:																
7	Student Group:																
8	Map Configuration:	Science Grade 7															
9	Date Generated:	8/1/2014															
10																	
11	Diagnostic Category	Assessment Anchor	ECC	ECC Dot Color												Materials and Resources	Sample Item
12	The Nature Of Science	Inquiry and Habits of Mind	SK-2.A.1.1.1													Identify a scie http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/SK-2_A_1_1_1.pdf	
13	The Nature Of Science	Inquiry and Habits of Mind	SK-2.A.2.1.1													Understand th http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/SK-2_A_2_1_1.pdf	
14	The Nature Of Science	Inquiry and Habits of Mind	SK-2.A.2.1.2													Describe outc http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/SK-2_A_2_1_2.pdf	
15	The Nature Of Science	Inquiry and Habits of Mind	SK-2.A.2.2.1													Identify simpl http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/SK-2_A_2_2_1.pdf	
16	The Nature Of Science	Inquiry and Habits of Mind	S3.A.1.1.1													Distinguish be http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S3_A_1_1_1.pdf	
17	The Nature Of Science	Inquiry and Habits of Mind	S3.A.2.1.1													Generate que http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S3_A_2_1_1.pdf	
18	The Nature Of Science	Inquiry and Habits of Mind	S3.A.2.1.2													Make predic http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S3_A_2_1_2.pdf	
19	The Nature Of Science	Inquiry and Habits of Mind	S3.A.2.1.3													Identify the va http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S3_A_2_1_3.pdf	
20	The Nature Of Science	Inquiry and Habits of Mind	S3.A.2.2.1													Identify appro http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S3_A_2_2_1.pdf	
21	The Nature Of Science	Inquiry and Habits of Mind	S4.A.1.1.1													Distinguish be http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S4_A_1_1_1.pdf	
22	The Nature Of Science	Inquiry and Habits of Mind	S4.A.1.3.1													Observe and ri http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S4_A_1_3_1.pdf	
23	The Nature Of Science	Inquiry and Habits of Mind	S4.A.1.3.2													Describe relati http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S4_A_1_3_2.pdf	
24	The Nature Of Science	Inquiry and Habits of Mind	S4.A.1.3.3													Observe and d http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S4_A_1_3_3.pdf	
25	The Nature Of Science	Inquiry and Habits of Mind	S4.A.1.3.4													Explain what h http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S4_A_1_3_4.pdf	
26	The Nature Of Science	Inquiry and Habits of Mind	S4.A.1.3.5													Provide exami http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S4_A_1_3_5.pdf	
27	The Nature Of Science	Inquiry and Habits of Mind	S4.A.2.1.1													Generate que http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S4_A_2_1_1.pdf	
28	The Nature Of Science	Inquiry and Habits of Mind	S4.A.2.1.2													Design and de http://pa.drcredirect https://assets.drcredirect.com/States/PA/550389/SampleItems/OP_SCIENCE/S4_A_2_1_2.pdf	

This gives me a file with links to Materials and Resources as well as Sample Items for each Eligible Content code. I can see if Mackenzie received items for each Eligible Content and if she scored at least as well as expected for a student at the end of seventh grade (Green) or if she scored below the expectations for a student at the end of seventh grade (Red). (Those EC with blanks in the ECC Dot Color Column are those for which Mackenzie was not administered items.)

I can use the Sample Items one-on-one with Mackenzie, which will give me more information about how Mackenzie is doing and what next steps I should take. (It is possible that testing makes Mackenzie nervous and these results are not actually indicative of what Mackenzie knows, understands, and is able to do in Science.)

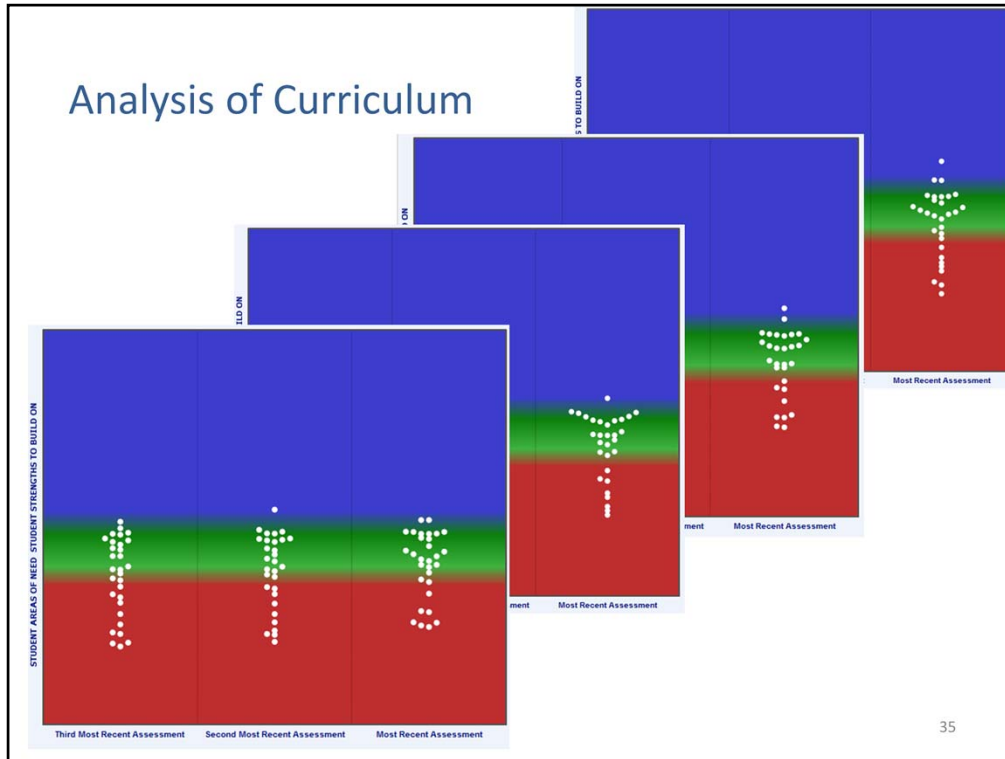
I can also use the Materials and Resources to find additional activities that Mackenzie can do to improve her understanding.

# Planning

Content Area: Science Grade 7
 Diagnostic Category: (All)
 Diagnostic Sub-Category: (All)

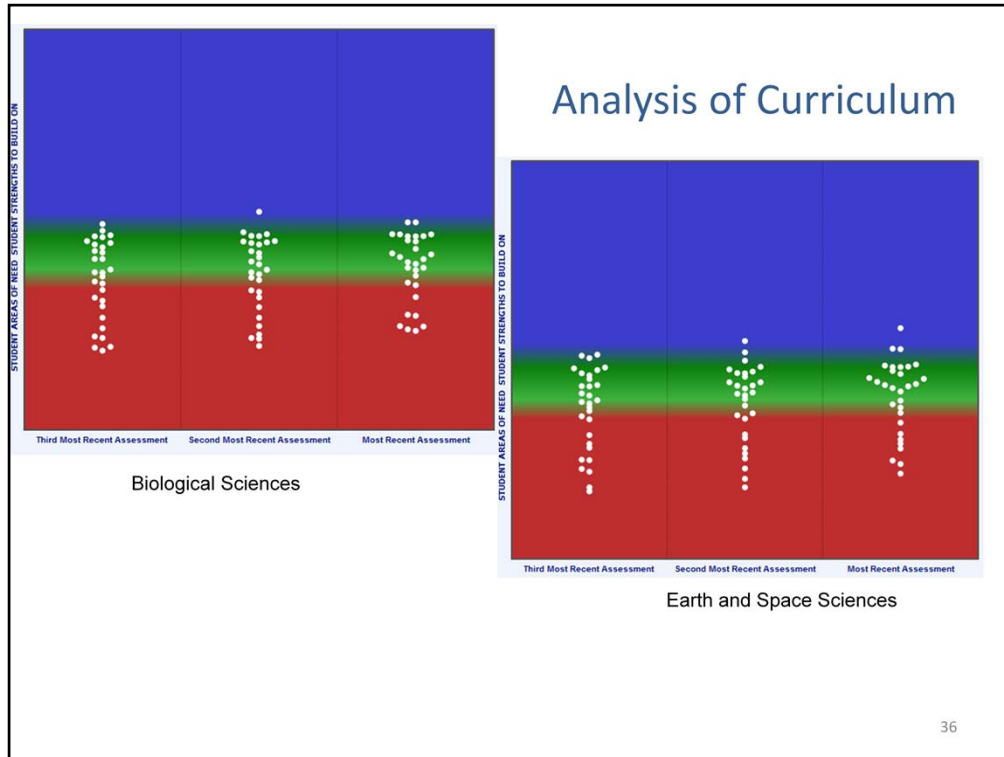
Eligible Content	Summary	Count of Green	Count of Red	ALVAREZ, RORY (7055472547)	BANKS, KEETON (8049035565)	BROWN, CORBIN (8179874648)	BURKE, MYLES (8108432639)	CAMPBELL, ADDISON (8128895588)	CHAPMAN, LUIS (8270887484)	DEAN, REESE (702882885)	DUNN, HAYDEN (8158183185)	EDWARDS, MACKENZIE (8098847876)	FERNANDEZ, CARLOS (8407285289)	GARCIA, JAMIE (8138237376)	GARDNER, ETHAN (8295072895)	GORDON, SIDNEY (8529630395)	HALL, TAYLOR (70988011371)	HARRISON, MATTHEW (7302381232)	HAWKINS, DEVON (8389884784)	HERNANDEZ, GUADALUPE (7396787389)	HOWELL, MADISON (8341761351)	JONES, MICAH (9558203923)	LARSEN, ELIZABETH (7208882545)	MONTGOMERY, JADEN (7237808572)	MOORE, BAILEY (7327885013)	MORALES, VICTORIA (8008324379)	PEREZ, STEPHANIE (8502340256)	PETERSON, KELLY (8180782933)	ROBERTS, PIPER (8073309204)	ROSE, JONATHAN (8471252564)	SCOTT, ANDRE (8008232731)	SIMPSON, MORGAN (7134611086)	WILLIAMS, AVERY (7167997692)		
S6.B.1.1.1	3	2	2																																
S6.B.1.1.2	5	2	2																																
S6.B.1.1.3	3	5	3																																
S6.B.2.1.1	4	1	4																																
S7.B.1.1.1	7	3	7																																
S7.B.1.1.2	7	4	7																																
S7.B.1.1.3	7	4	7																																
S7.B.1.2.1	4	5	4																																
S7.B.1.2.2	1	2	1																																
S7.B.1.2.3	3	4	3																																
S7.B.2.1.1	2	10	2																																
S7.B.2.1.2	3	3	3																																
S7.B.2.1.3	2	2	2																																
S7.B.2.2.1	4	2	4																																
S7.B.2.2.2	2	5	2																																
S7.B.2.2.3	1	3	1																																
S7.B.2.2.4	2	3	2																																
S8.B.1.1.1	4	3	4																																
S8.B.1.1.2	3	2	3																																

I can look at the Group Learning Progression Map to identify Eligible Content that would most benefit my class for me to focus on as we near the end of the year. I can also use this data as I plan for next year, identifying Eligible Content that my students learned well so that I can continue to use the activities that I tried out this year. I can also identify Eligible Content on which my students struggled, and use that information to modify existing lessons and activities in my classroom or add something that may be a missing link in building their understanding.



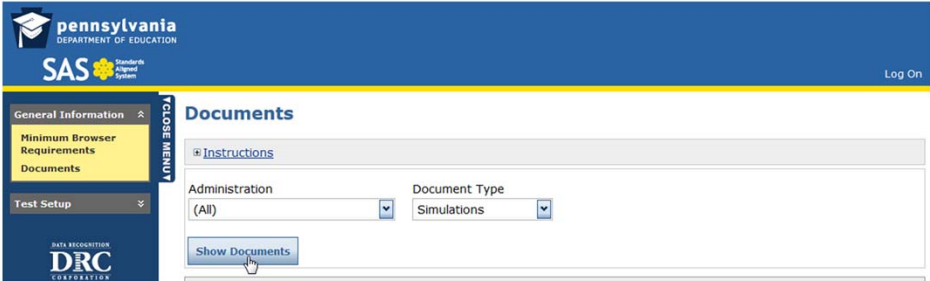
In addition to considering specific Eligible Content, I may want to compare the Group Map for each Diagnostic Category as I plan for the following year.

What might the data (from the reports) suggest about curriculum, interventions, and resources?



Focusing on the *Biological Sciences* and the *Earth and Space Sciences* Category Maps, I notice that more students in the class have made gains in *Biological Sciences* than in *Earth and Space Sciences* since the last administration.

- Could the steady growth in *Biological Sciences* be reflective of previous instruction, student interest, or the focus of the *Biological Sciences* curriculum?
- Could the lagging growth of *Earth and Space Sciences* scores be reflective of the conceptual difficulty of the content and the possible timing of instruction during the year?
- How could *Earth and Space Sciences* curriculum and instruction be adjusted to improve class achievement by the end of the year?
- What important skills that are not assessable using the CDT do I need to consider as I analyze and revise my curriculum?
- Are there patterns between Diagnostic Categories that I need to consider?



This simulation (and others) can be found at <https://pa.drccdirect.com>

Select Documents under General Information; then Select “Simulations” under the Document Type dropdown menu and click on Show Documents.

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Are you ready to analyze data of your own?

If you have questions, you can contact your IU or district representative or call PA Customer Service at (888) 551-6935.

If you need a refresher, this presentation can be found by going to <https://pa.drccdirect.com>, then select Documents under General Information in the right-hand column. Select Simulations from the Document Type dropdown menu and click on Show Documents. A presentation for each content area is available for each of grades 4, 7, and high school.