

# Data-Driven, Differentiated Instruction

Making a Measurable Difference in Learning



In every classroom you will find students with varying levels of learning. So how do you ensure that each student is appropriately challenged and can accurately demonstrate what has been learned? A “One size fits all” approach to teaching and assessing does not work. The ATI **data-driven, differentiated approach** centers on the student with a focus on appropriate instructional and assessment tools that are flexible, challenging, and engaging in meaningful ways.

## EMPOWERING TEACHERS AS EDUCATORS

Galileo® K-12 Online *Dashboard* reports provide educators with the right tools for facilitating data-driven, standards-based differentiated instruction of three essential types:

- **skill mastery instruction** guided through information from the *Test Monitoring Report* and *Detailed Item Analysis Report*
- **standards mastery instruction** guided through information from the *Intervention Alert* and *Instruction Performance Tracker Report*
- **pattern of progress mastery instruction** guided through information from the *Student Growth and Achievement Report*

## EMPOWERING STUDENTS AS LEARNERS

Galileo provides students with rapid access to a broad diversity of differentiated instructional learning opportunities aligned with their learning needs and pattern of progress. These opportunities include resources available in Galileo *Instructional Dialogs* coupled with district/educator developed/determined materials and with resources available on the web, such as those from **KHAN ACADEMY®** videos and activities and **EngageNY** lessons. Both local resources and those from the web can be delivered through customized *Instructional Dialogs* in Galileo.

## HOW IT WORKS

Galileo K-12 Online *Dashboard* reports provide actionable assessment results that quickly inform differentiated instructional decision-making for individual students, classes, and tiered intervention groups based on their skill mastery, standards mastery, and/or pattern of progress. Plus, *Dashboard* reports directly link student assessment results to engaging instructional materials including interactive *Instructional Dialogs* and web-based resources such as those from **KHAN ACADEMY®** and **EngageNY**. These unique Galileo features facilitate rapid planning and scheduling of learning opportunities for all students.

All KHAN ACADEMY® content is available for free at [www.khanacademy.org](http://www.khanacademy.org).

## Engineered for

STUDENTS

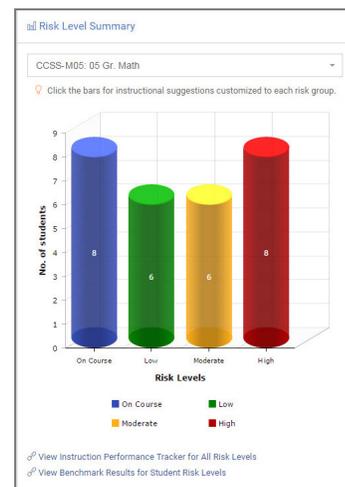
CLASSES

TIERED  
INTERVENTION  
GROUPS

### RISK LEVEL SUMMARY REPORT

Identifies the students who are On Course or at Low, Moderate, or High risk for not meeting standards on the statewide assessment.

*Teacher Dashboard view*



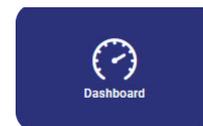
## TARGETING THE STANDARDS MASTERY LEVEL

*Teacher Dashboard, Risk Level Summary Report:*

- select the library
- select the subject
- select the level for which the differentiated instruction will be planned (e.g. moderate)
- optional selection includes viewing all risk levels at once by choosing to view the *Instructional Performance Tracker* which then opens in a new window

*Admin Dashboard:*

At this level, administrators and specialists have the ability to direct differentiated instruction for an entire school or district.



# Galileo® K-12 Online

## PLANNING DIFFERENTIATED INSTRUCTION

Based on student assessment results, the *Instruction Performance Tracker* will display an empirically sequenced listing of standards to guide instruction in ways that reduce student level of risk and lead to standards-mastery. Galileo provides an *Assignments* button for each grouping of standards (e.g. standards to move a student[s] from higher to a lower risk such as from Moderate Risk to Low Risk).

Clicking on the *Assignments* button generates a list of several instructional resources including Galileo *Instructional Dialogs* and web-based resources such as those from *EngageNY* aligned to standards in the grouping. These instructional materials can then be viewed, selected, and scheduled for an individual, class, or tiered intervention group.

Galileo *Instructional Dialogs* offer students interactive, multimodal opportunities to learn and apply skills. In addition, practice items with real-time feedback are embedded throughout the Dialogs along with a brief formative assessment at the end of instruction to help measure impact.

Galileo provides direct links from individual performance objectives within Galileo to web-based instructional materials. As with Dialogs, these materials may be viewed, selected and scheduled for a student, class or tiered intervention group. Users may navigate to other materials in the subject and skill by clicking on the activity path.

Risk Group		Benchmark Tests			
<input type="radio"/> High <input checked="" type="radio"/> Moderate <input type="radio"/> Low <input type="radio"/> On Course <input type="radio"/> All		Student Count	Test Title	Average DL Score	Cut Scores
<input type="radio"/> # of Students: 2		2 of 2	2017-18 ATI Demo Math 05 Gr. #1	822	HP: 945 P: 888 PP: 800
		2 of 2	2017-18 ATI Demo Math 05 Gr. #2	888	HP: 1079 P: 1022 PP: 934
		2 of 2	2017-18 ATI Demo Math 05 Gr. #3	1135	HP: 1157 P: 1100 PP: 1012

On Test #	# of Items	Stops to Standards Mastery	Mastery Probability	Avg % of Total Points
Step 1: Move students from Moderate Risk to Low Risk				
2	4	CC.8.NF.7c Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/7-cup servings are in 2 cups of raisins? Apply and extend previous understanding of multiplication and division to multiply and divide fractions.	34.80%	37.50%
1	5	CC.5.NBT.3a Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 + 100 + 4 + 10 + 7 + 1 + 3 + (1/10) + 9 + (1/100) + 2 + (1/1000).	35.29%	30.00%
1	7	CC.8.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so. [From the cluster: Analyze patterns and relationships]	36.21%	50.00%

**AZ-M08: 8th Grade Math (2016) AZ-8.EE EXPRESSIONS AND EQUATIONS**  
 AZ-8.EE.A.4 Perform operations with numbers expressed in scientific notation including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities. [From cluster: Work with radicals and integer exponents.]

Show 10 entries Search: \_\_\_\_\_

Type	Title	Test	Description	Rating	Author
<input type="checkbox"/>	Adding & subtracting in scientific notation	--	Exercise - Given two numbers in scientific notation, practice adding and subtracting them.	--	Khan Academy
<input type="checkbox"/>	Compute Using Scientific Notation	✓		☆☆☆☆	EngageNY
<input type="checkbox"/>	Multiplying & dividing in scientific notation	--	Exercise - Practice expressing products and quotients in scientific notation.	--	Khan Academy
<input type="checkbox"/>	Scientific notation word problems	--	Exercise - Practice solving addition, subtraction, multiplication, and division problems involving scientific notation.	--	Khan Academy

Showing 1 to 4 of 4 entries

**A History of Atomic Theory (1E)**

J.J. Thomson's Discovery of Electrons

In the late 1800s, an English physicist named J.J. Thomson began a series of experiments using cathode ray tubes. He designed a special cathode ray tube with a hole through the anode and onto a fluorescent screen. He exposed the cathode ray to magnetic and electric fields, discovering the fields deflected the cathode ray in predictable ways. An example of Thomson's experiment is shown below. You can replicate his experiment by selecting the "on" button next to "High Voltage Source." Once the cathode electric field, turning on the electric field moves the positive and negative plates toward the cathode ray. Turning on the magnetic field moves the magnet toward the cathode. Based on the way that the beam is deflected by the magnet and electrically charged plates, what do you think Thomson concluded from his experiment? Go to the next question.

Which of the following best describes the atomic model shown below?

A. planetary model  
 B. plum pudding model  
 C. quantum model  
 D. nuclear model

**Incorrect.** The planetary model represents atoms with nuclei surrounded by electrons. This model does not contain a nucleus.

**Khan Academy**

Math > High school geometry > Right triangles & trigonometry > Special right triangles

Practice: Special right triangles

30-60-90 triangle example problem

and we're told that the length of AB is equal to 1.

**30-60-90 triangle example problem**

About Transcript

Using what we know about 30-60-90 triangles to solve what at first seems to be a challenging problem. Created by Sal Khan.

# FOCUS

"ATI not only helped my leadership team but also our teachers to have a more data-driven focus."

— Dr. Stephanie De Mar, Principal  
 Creighton School District, AZ



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