# District Elementary Math Night

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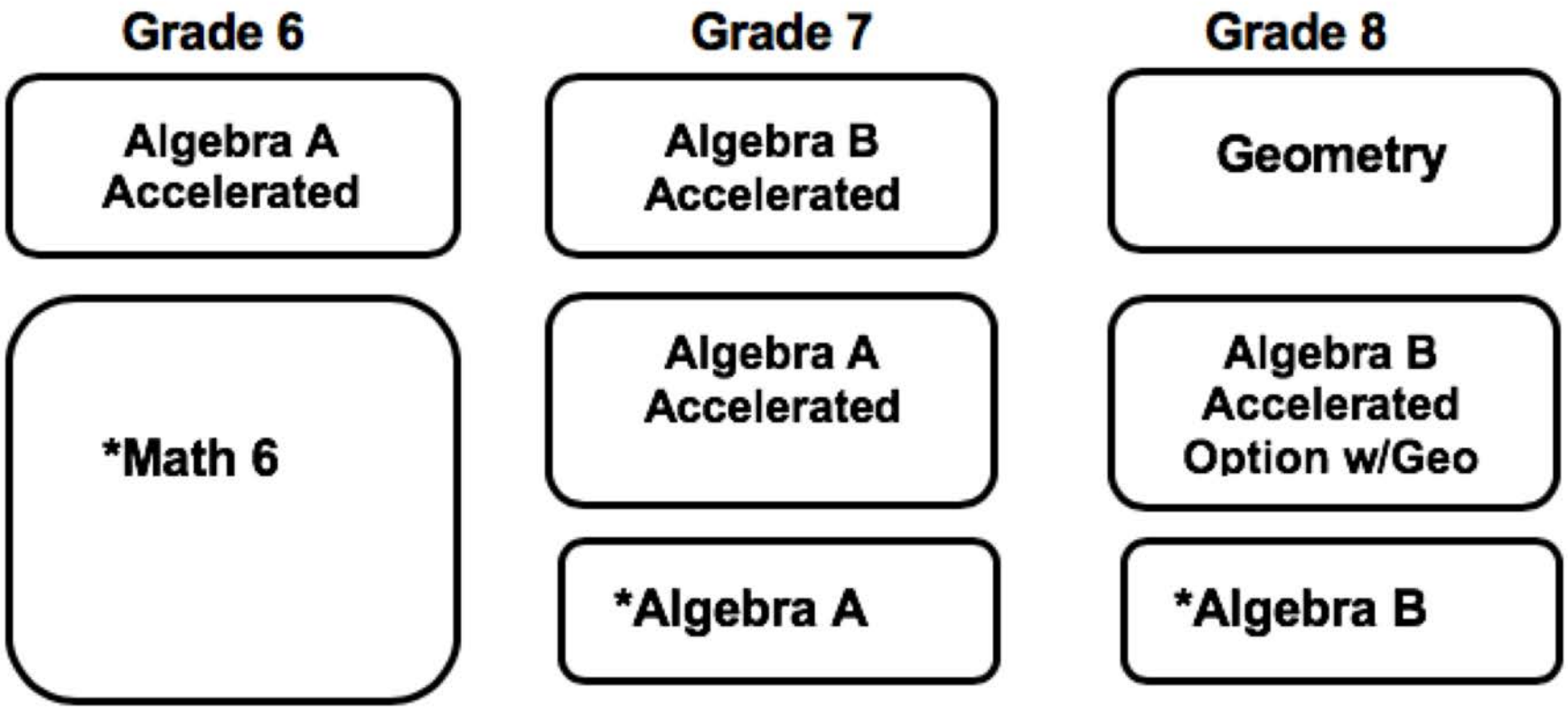
# Welcome to K-5 Math Night

Today you will learn:

- Overview of 6-12 Math Pathways
- How teachers can use GO Math in their classrooms.
- How students use GO Math at home.
- How you can support Math at home.

# Middle School Math Course Sequence




*With Math Lab as needed

| Middle School | Grade 9 | Grade 10 | Grade 11 | Grade 12 |
|---|---|---|---|---|
| Geometry<br><br>(*Opt Alg B Accel<br><br>with Geometry) | Algebra 2/Trig H<br>Algebra 2 H<br>(*Opt Geo. H) | Trig/Calc. H<br>or<br>Pre-Calc. H | AP Calc. BC<br>AP Calc. AB<br>Calc. H | Calc. III HH<br>AP Calc. BC<br>AP Calc. AB<br>AP Statistics |
| Algebra B Accel.<br>or<br>Algebra B | Geometry H<br>or<br>Geometry | Algebra 2 H<br>or<br>Algebra 2 | Trig/Calc. H<br>Pre-Calc. H<br>Pre-Calc.<br>** Prob & Stats H<br>** Prob & Stats | AP Calc. AB<br>Calc. H<br>AP Stats<br>Prob. & Stats H<br>Prob. & Stats |
| Algebra B | Algebra I H<br>or<br>Algebra I | Geometry H<br>or<br>Geometry | Algebra 2 H<br>or<br>Algebra 2 | Pre-Calc.<br>or<br>Prob. & Stats |

* Option to double in Geometry in 8th or 9th Grade to accelerate.
** Alternate option to Pre-Calculus or recommend taking Probability & Statistics after Pre-Calculus.

# Placement Process

1. All 5th graders take a District Math Test at the end of school year on Math 5 and 6 standards, including ratio and proportional reasoning, operating with fractions, decimals and percents and signed numbers.
2. Criteria for placement:
    a. High average math grade
    b. High average End of Year Grade 5 math test
    c. High average District Math Test
    d. Teacher recommendation
3. Renaissance MS- Algebra A Accelerated in 6th Grade in conjunction with Math 6
4. Criteria for remaining in Accelerated Algebra A/B- Students must maintain above 87% average.

# Math Focus Areas

New Jersey Student Learning Standards

# Major Focus Areas- Kindergarten

| Counting and Cardinality | Operations and Algebraic Thinking | Number and Operations in Base Ten | Measurement and Data | Geometry |
|---|---|---|---|---|
| • Know number names and the count sequence.<br>• Count to tell the number of objects.<br>• Compare numbers. | • Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. | • Work with numbers 11–19 to gain foundations for place value. | • Describe and compare measurable attributes.<br>• Classify objects and count the number of objects in categories. | • Identify and describe shapes.<br>• Analyze, compare, create, and compose shapes. |

# Major Focus Areas- Grade One

| Operations and Algebraic Thinking | Number and Operations in Base Ten | Measurement and Data | Geometry |
|---|---|---|---|
| • Represent and solve problems involving addition and subtraction.<br>• Understand and apply properties of operations and the relationship between addition and subtraction.<br>• Add and subtract within 20.<br>• Work with addition and subtraction equations. | • Extend the counting sequence.<br>• Understand place value.<br>• Use place value understanding and properties of operations to add and subtract. | • Measure lengths indirectly and by iterating length units.<br>• Tell and write time.<br>• Represent and interpret data. | • Reason with shapes and their attributes. |

# Major Focus Areas- Grade Two

| Operations and Algebraic Thinking | Number and Operations in Base Ten | Measurement and Data | Geometry |
|---|---|---|---|
| • Represent and solve problems involving addition and subtraction.<br>• Add and subtract within 20.<br>• Work with equal groups of objects to gain foundations for multiplication. | • Understand place value.<br>• Use place value understanding and properties of operations to add and subtract. | • Measure and estimate lengths in standard units.<br>• Relate addition and subtraction to length.<br>• Work with time and money.<br>• Represent and interpret data. | • Reason with shapes and their attributes. |

# Major Focus Areas: Grades 3-5

| Grade 3 | Grade 4 | Grade 5 |
| --- | --- | --- |
| • Place Value (Numbers in the hundred thousands) (comparing, rounding, ordering 3 digit numbers) (Mental Math 1-2 digit)<br>• Addition & Subtraction<br>• Multiplication & Division (meaning and fluency)<br>• Fractions (meaning, comparison & Equivalency)<br>• Time<br>• Geometry | • Place Value (Numbers in the hundred) (comparing, rounding, ordering 5 & 6 digit numb Number Sense (Mental Math 2 and 3 Digits)<br>• Multiplication (2 by 2 digit & 3 by 2 digit numbers)<br>• Division (upto 4 digit divisors)<br>• Fractions (adding, multiplying, and decimals)<br>• Geometry | • Place Value (Numbers in the hundred billions, decimals) Number Sense (Mental Math Decimals)<br>• Multiplying (Bigger numbers, decimals)<br>• Division (2 digit divisors, decimals)<br>• Fractions (adding, multiplying, & dividing fractions & mixed numbers)<br>• Geometry |

# Fluencies by Grade

| Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 |
|---|---|---|---|---|---|
| • Add and subtract within 5 | • Add and subtract within 10 | • Add and subtract within 20.<br>• Add and subtract within 100 (pencil and paper) | • Multiply and Divide within 100<br>• Add and Subtract within 1000 | • Add/ Subtract within 1 million | • Multi-digit multiplication |

# GO Math in the Classroom

# Go Math Lessons:

Lessons in Go Math are designed around the 5Es

- *Engage*
- *Explore*
- *Explain*
- *Elaborate*
- *Evaluate*

*Teachers provide* Personalized instruction

- Intervention
- Accommodations based on student's needs
- Enrichment

# Program Components Used in the Classroom

Math on the Spot Videos

Student Interactive Edition

GO Math! Student Edition

Grab and Go Differentiated Centers

Online and offline Homework

Online and offline Assessment

Personal Math Trainer

# Math on the Spot

# Students develop critical thinking skills:

Go Math puts high emphasis on Problem Solving
Students are taught Problem solving strategies via how to "Unlock the Problem" which asks:

- What do I need to find?
- What information do I need to use?
- How will I use the information?
- Solve the problem

# NJSLS Math Practices

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for amd make use of structure
8. Look for and express regularity in repeated reasoning

# Problem Solving tags

Math Processes and Practices


Students focus on one of the Standards for Mathematical Practice

Go Deeper


Problems will include multiple steps and operations

Think Smarter


Students will use context clues to decipher the operations and skills required to solve

Write Math


Students will showcase understanding by writing word problems based on the skill taught

# Problem Solving Activities

Work with your table to solve the sample word problem for each grade

Use the “Unlock The Problem” strategy

- What do I need to find?
- What information do I need to use?
- How will I use the information?
- Solve the problem

We will give you five minutes

# Problem Solving Activities

Kindergarten: 36 will be next. Increase the tens place by 1.

1st Grade: Draw a diagonal line from each upper corner down to the bottom side. This will create two right triangles and a trapezoid.

2nd Grade: The missing digits give the problem 837 - 156 = 681.

7 ones - 6 ones = 1 one

3 tens (13 tens after regrouping) - 5 tens = 8 tens

8 hundreds (7 hundreds after regrouping) - 1 hundred = 6 hundreds

Problems like this introduce algebraic thinking to students at a young age.

# Problem Solving Activities

3rd Grade: Ava's class used 163 balloons for the party. 6 packages of 30 balloons is 180 balloons (6 x 30 = 180). Since there were 17 balloons left over, Ava's class must have used 163 balloons (180 - 17 = 163)

4th Grade: Emma will walk 1 ¼ miles on Friday. The numerator increases by one each day -or- Emma's walk increased by ¼ miles each day. On the 5th day (Friday), Emma will walk 5/4 miles. Once converted to a mixed number, it is 1 ¼ miles.

5th Grade: Penny will fill 8 jars of applesauce. After saving 0.56 liters of sauce for dinner from her 6 liters, she has 5.44 liters of applesauce left (6 - 0.56 = 5.44). She will then fill 8 jars that are 0.68 liters each (5.44 ÷ 0.68 = 8).

# GO Math at Home

# What is Think Central?

Think Central is a website that allows students to access resources that will extend his/her learning from the classroom to home. It is the access point to the GO Math! curriculum from their MPS Clever account.

# How do we get to Think Central?

Students access their Think Central (GO Math!) account online through Clever.

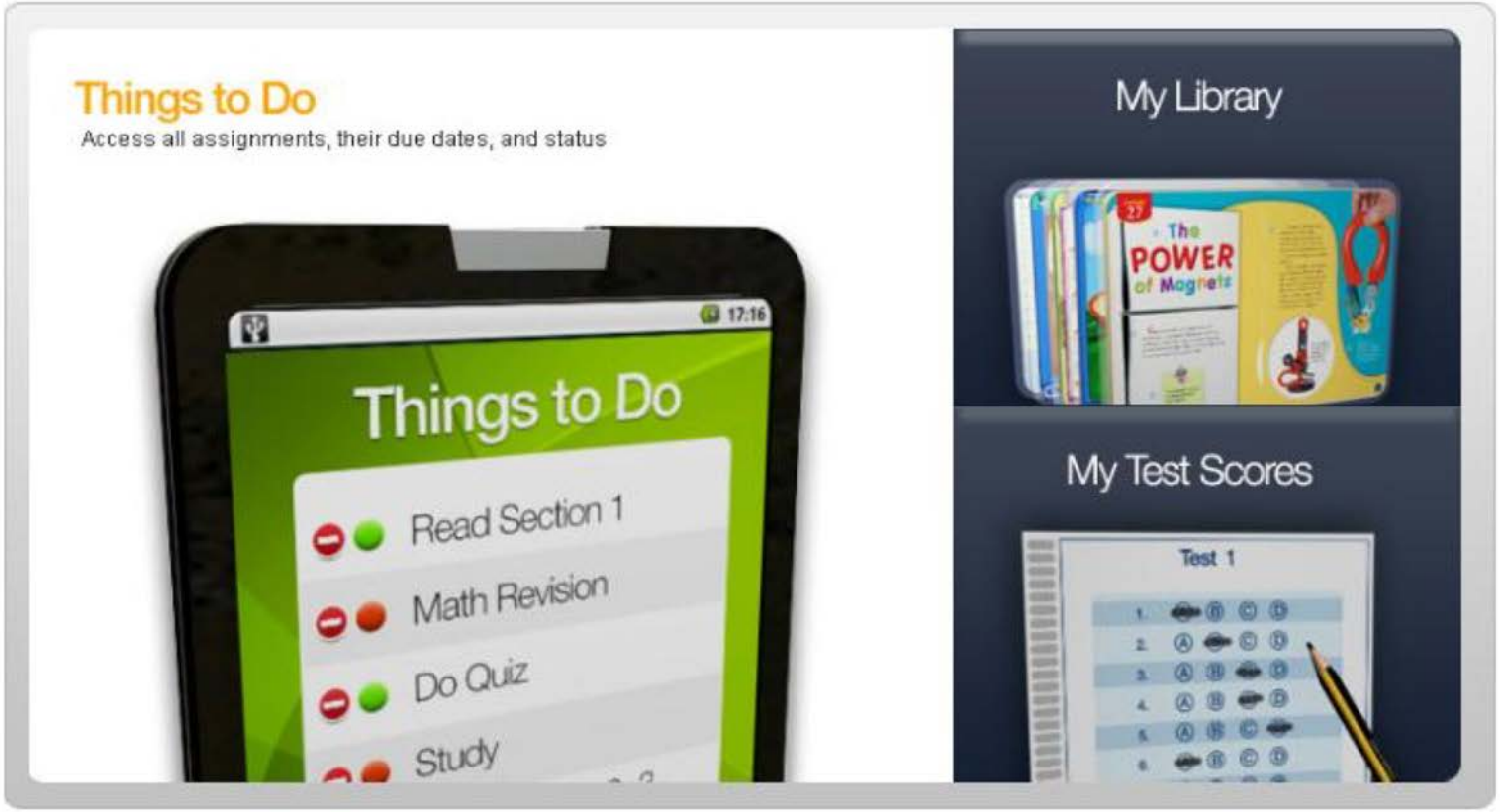
Students use their MPS login information to log into Clever. They then select Think Central from their Clever dashboard.

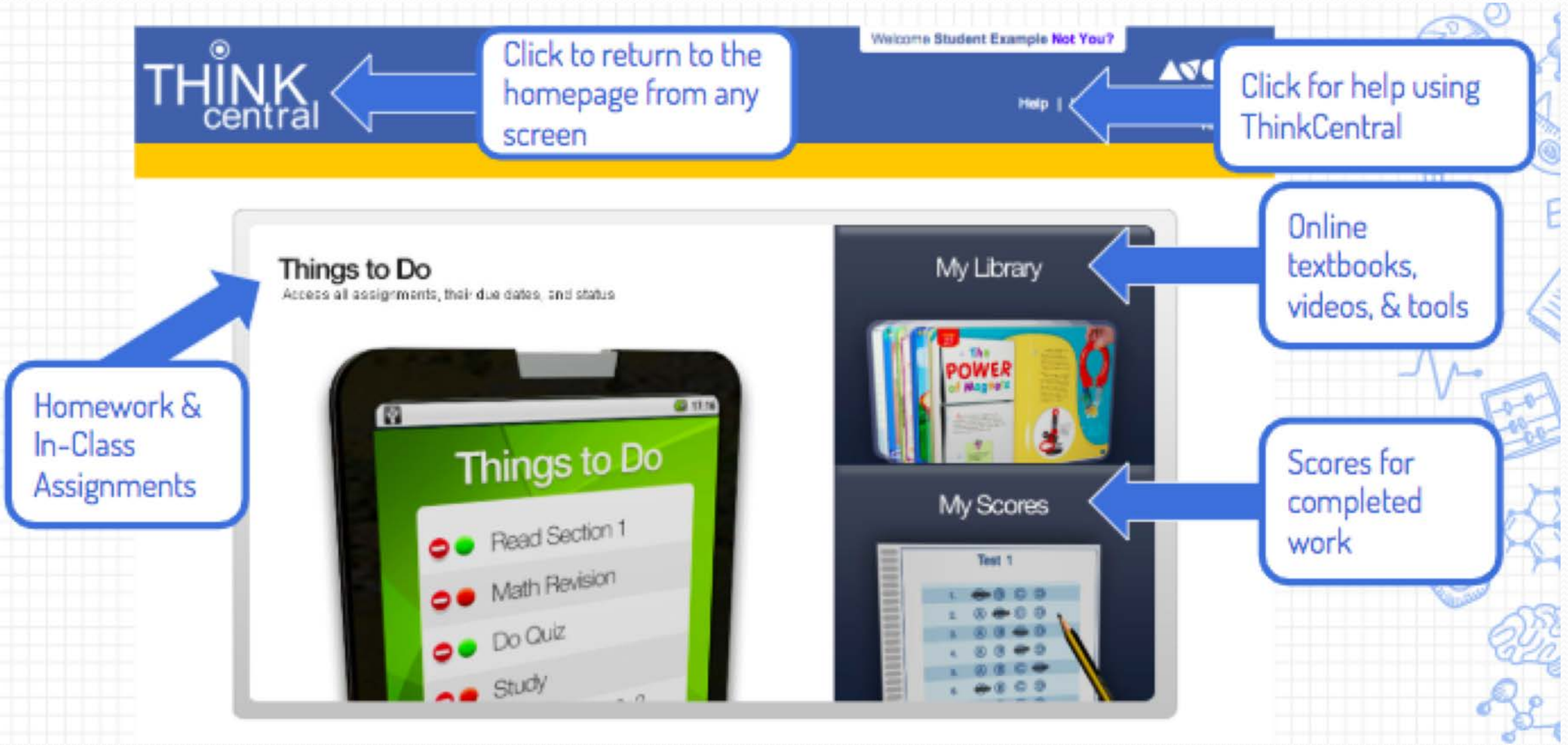
NOTE: if another user is logged into a computer with their personal Google account, the student may NOT be able to log into Clever.

# Student Welcome Page

The student Welcome Page has three areas:

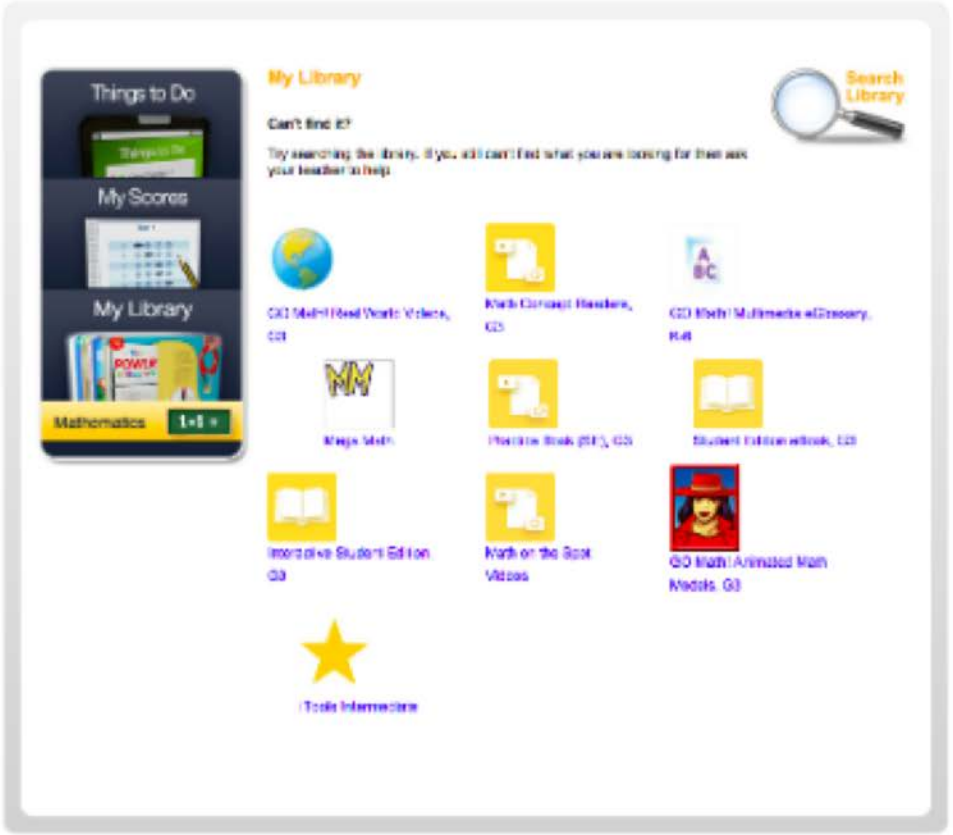
- My Library
- My Test Scores
- Things to Do




THINK central
Click to return to the homepage from any screen
Welcome Student Example Not You?
Help
Click for help using ThinkCentral
Online textbooks, videos, & tools
Homework & In-Class Assignments
Things to Do
Access all assignments, their due dates, and status
Things to Do
Read Section 1
Math Revision
Do Quiz
Study
My Library
My Scores
Test 1
Scores for completed work

# My Library

In the Library, students can view the student editions (both interactive and not), watch lesson videos, use virtual manipulatives, and much more.




Click on any resource (library item) to open it.
It will open in a resource window.
When you close the resource window, you will still be in My Library.

# GO Math Resources

## Math on the Spot Videos

Models good problem-solving thinking in every lesson

Engages students through interesting animations and fun characters

Builds student problem-solving proficiency and confidence

Builds the skills needed for success on the Common Core assessments

# GO Math Resources

To access **Math on the Spot** videos…

1. Click Math on the Spot
2. Click Grade Level
3. Click Chapter
4. Click Lesson

Or, you may scan the QR code in the book on any mobile device for direct access to the video.

# GO Math Resources

**Interactive Student Edition**

Allows students to access their math book online

Enhances learning with scaffolded, interactive instruction and just-in-time feedback

Provides audio reinforcement for each lesson

Makes learning a two-way experience, using a variety of interactive tools

# GO Math Resources

**Personal Math Trainer**

Creates a personalized learning path for each student

Provides opportunities for practice, homework, and assessment

Includes worked-out examples and helpful video support

Offers targeted intervention and extra support to build proficiency and understanding

# GO Math Resources

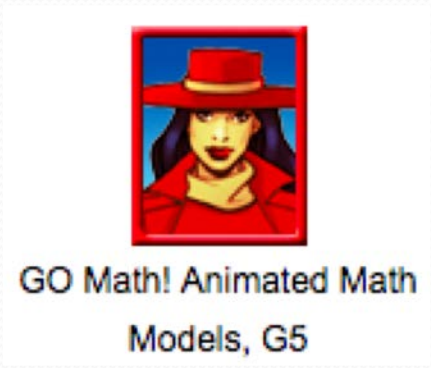
To access **Personal Math Trainer**…

1. Click on the Interactive Student Edition
2. Click on the Chapter
3. Click on the Lesson

Students will progress through the activity by clicking on different colored bullets on the bottom of the screen.

# GO Math Resources

## Animated Math Models




Animated Math Models is a great way for students to learn a new skill or revisit a prior topic, before developing it further

This module is split into skills; with each skill talking about 15-20 minute to complete

4 Steps

- Learn The Math
- Do The Math
- Independent Practice
- Quiz

# GO Math Resources

## Mega Math Games

Mega Math has dozens of animated computer games to attract students' likes.

Each game allows the student to pick from a variety of different math standards

- This allows the students to play the same games they like with the different topics of instruction

# GO Math Resources

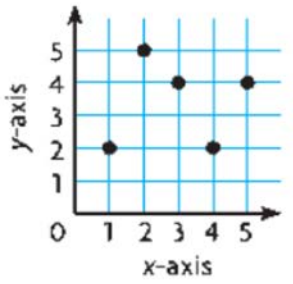
## Multimedia eGlossary

This online glossary provides written, auditory, and visual examples of all vocabulary terms taught throughout the year.
Students have access to the glossaries for the grades below and above them to help build their mathematical vocabulary.

**coordinate grid**

A grid formed by a horizontal line, called the *x*-axis and a vertical line called the *y*-axis

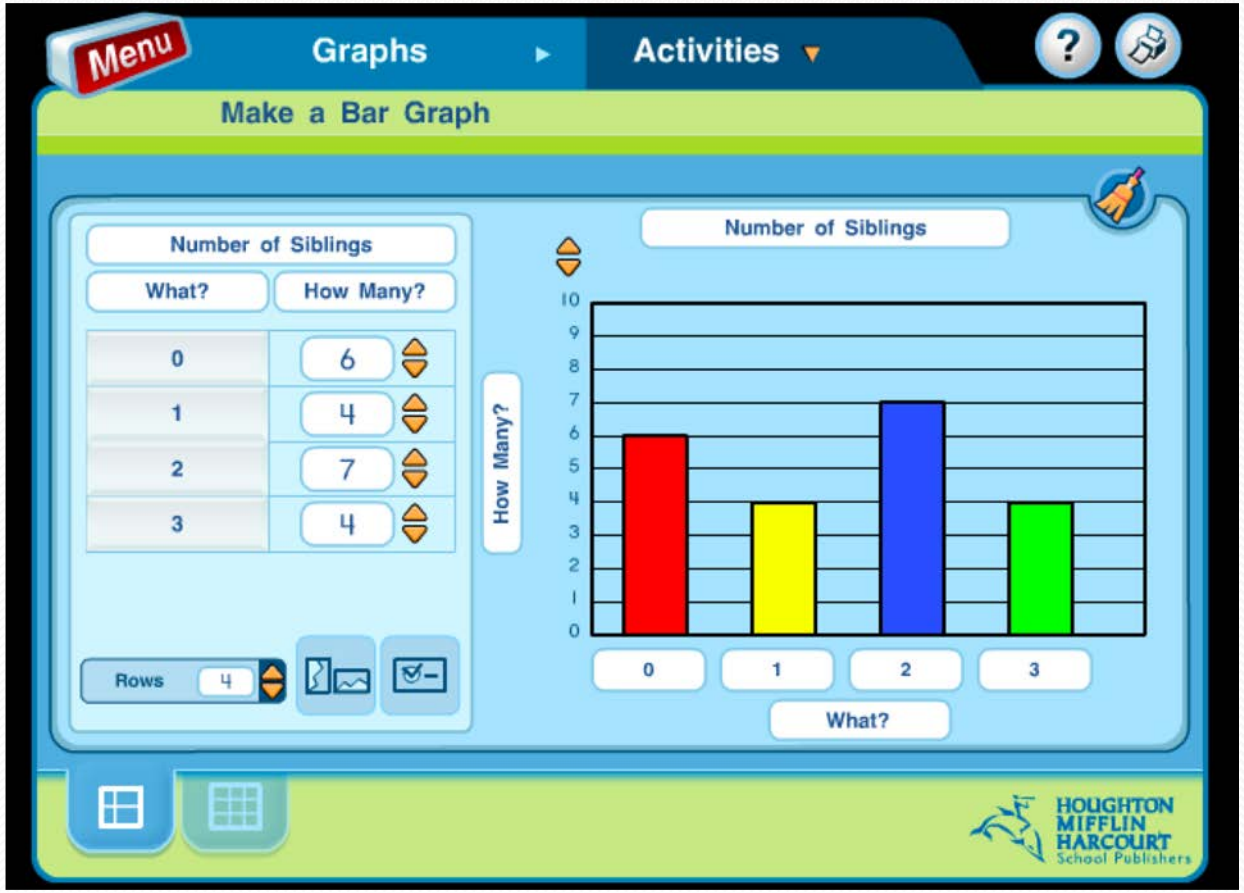
*Example:*



# GO Math Resources

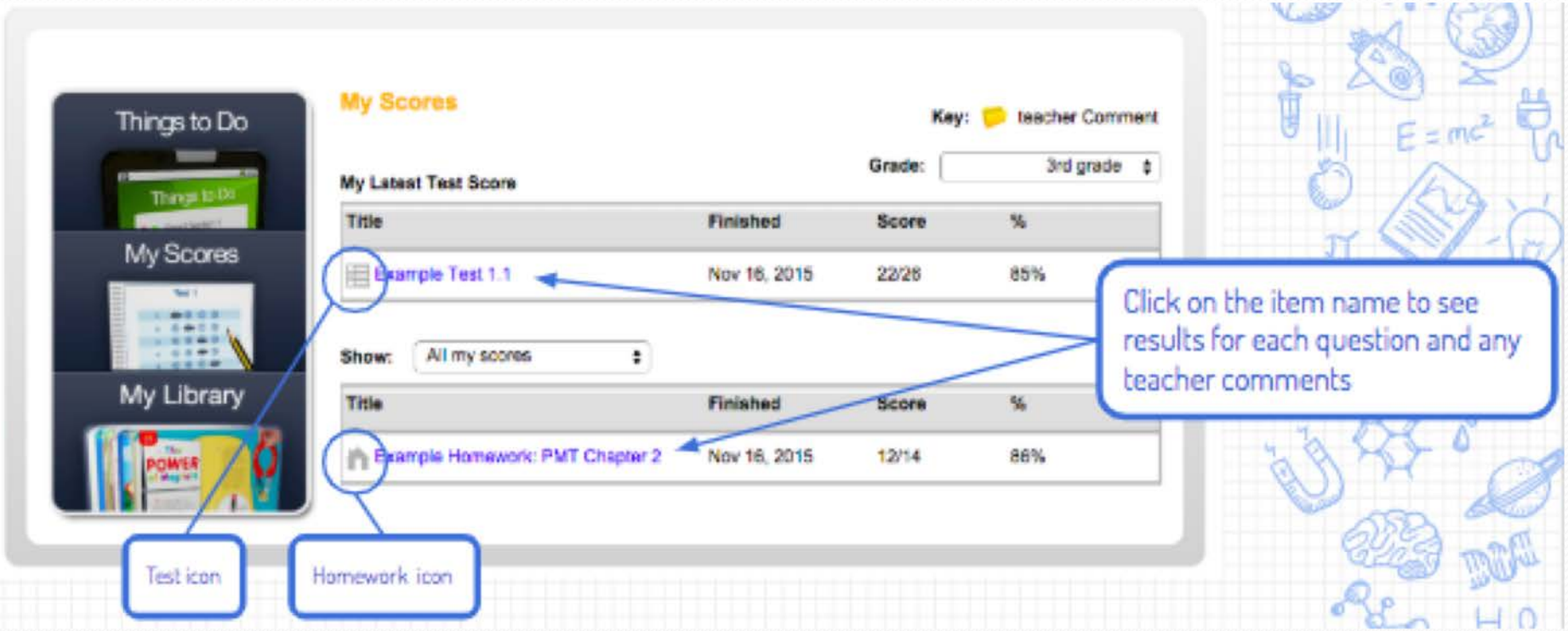
## iTools

This digital manipulatives library allows students to access dozens of online manipulatives and visuals for more hands on practice in the classroom and at home.

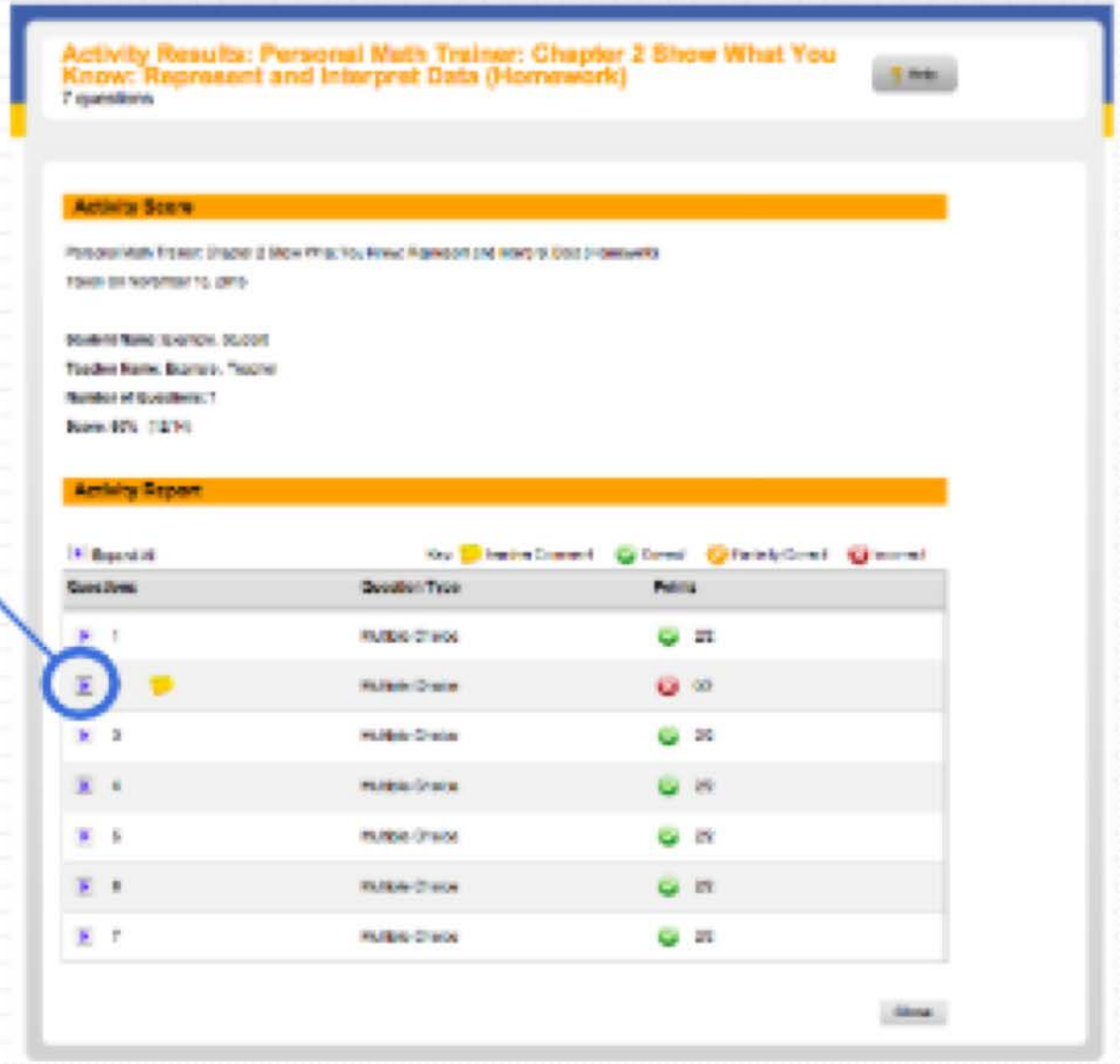


# My Test Scores

My Test Scores provides students with the opportunity to see their scores for assignments and to review test items; comparing their answers to the assessment answers.

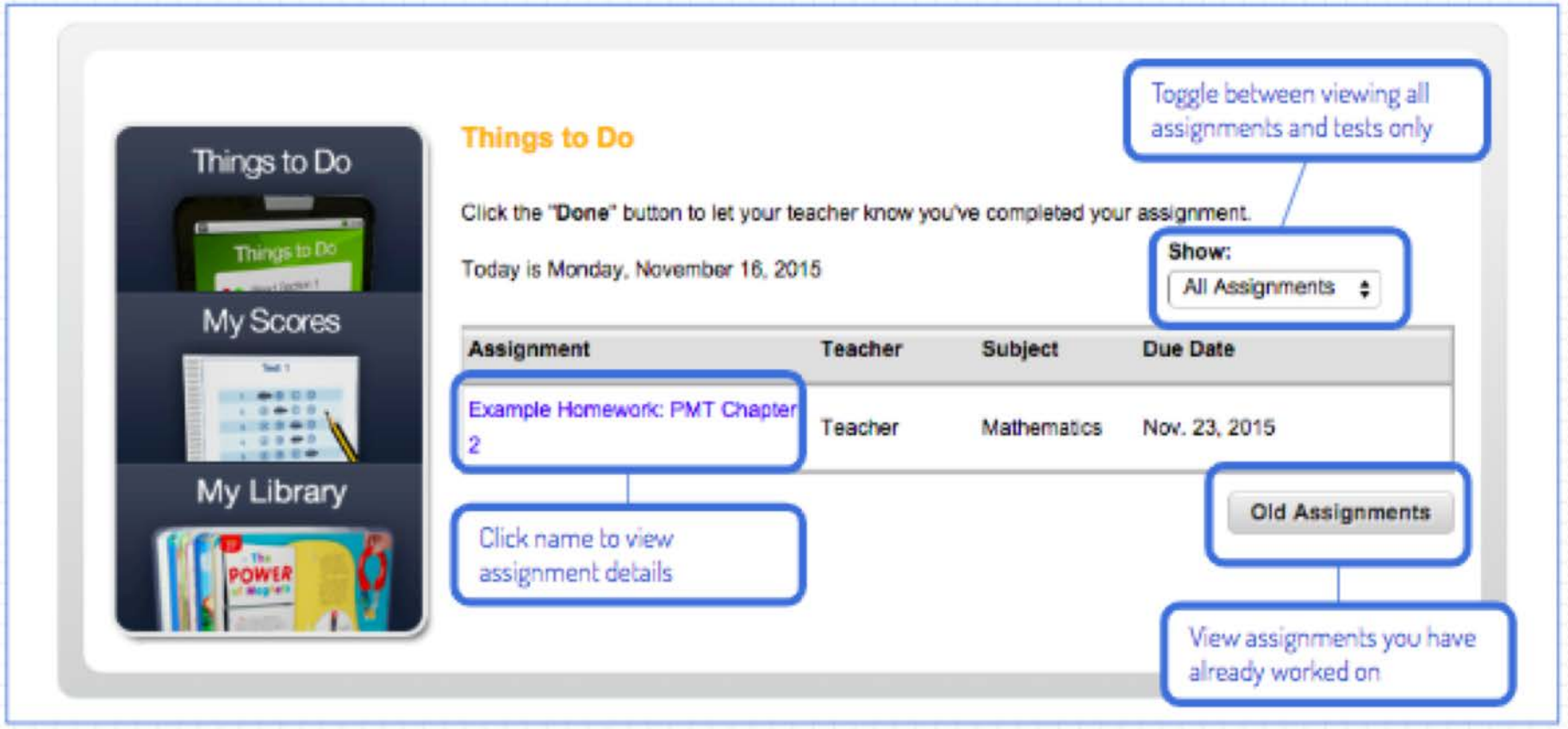


Click on the arrow next to any question to see the question, the correct answer, your answer (if different), applicable standards, and any teacher comments.



# Things To Do

Things To Do is where students can view any assignments that the teacher made for them, including old assignments.



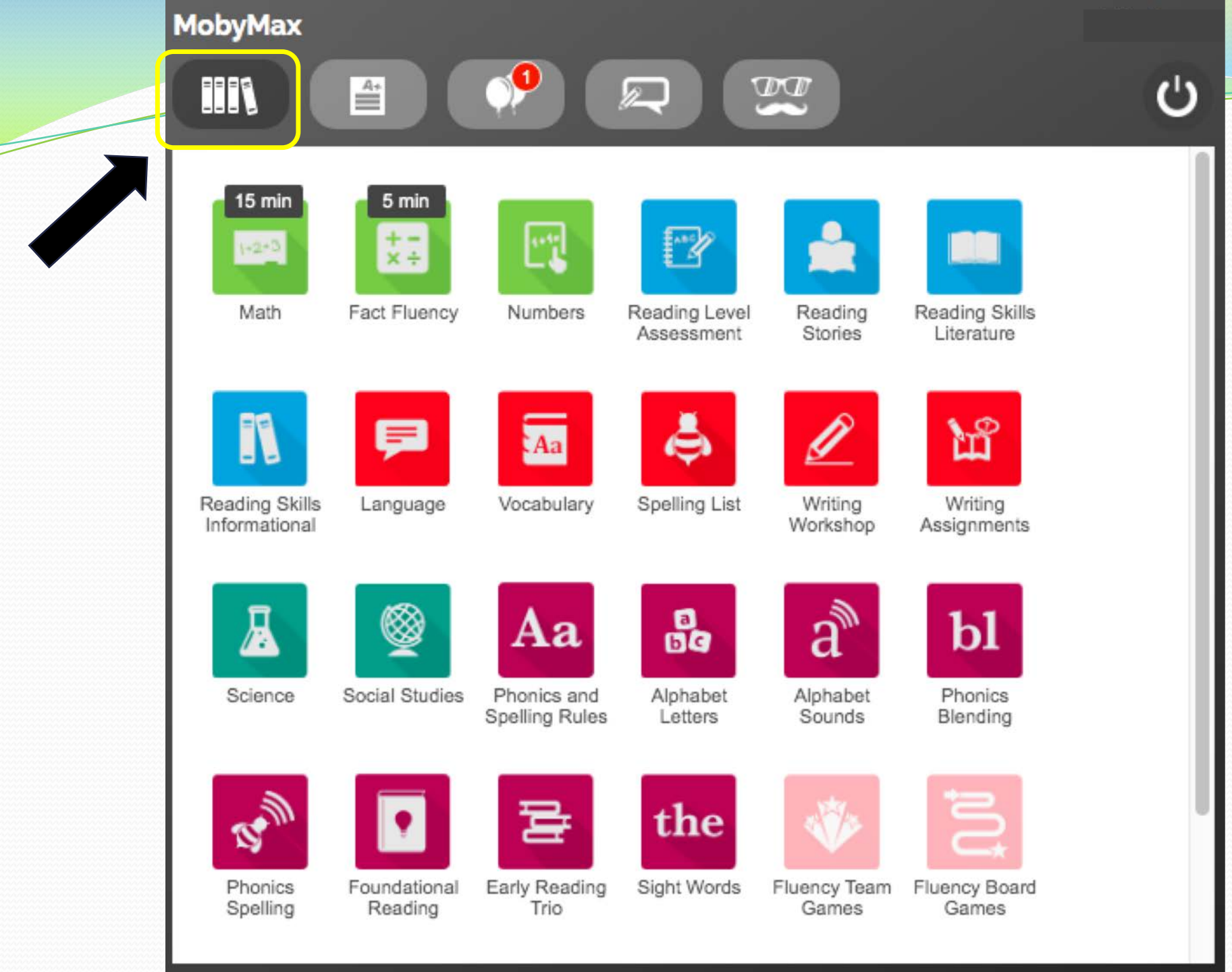
# Additional Resources

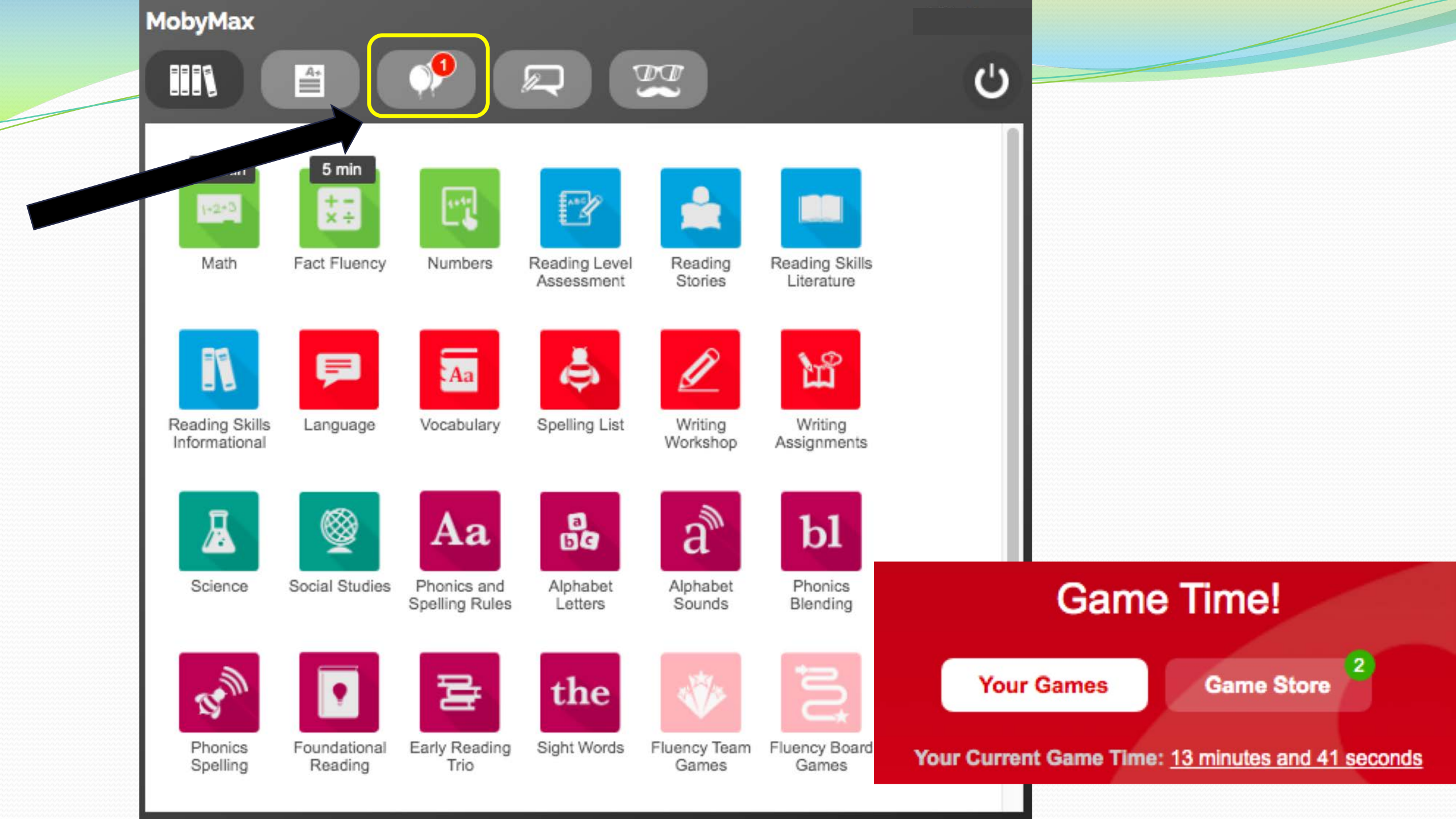
# Moby Max - finds and fixes learning gaps with adaptive differentiation

Diagnostic test assesses student proficiency on each standard, letting teachers know exactly where gaps in student knowledge exist - including gaps from previous grade level standards

Automatically assigns lessons to target missing skills or build upon mastered skills

Includes timed fact fluency practice, progressing from addition to division


MobyMax
1
15 min
Math
5 min
Fact Fluency
Numbers
Reading Level Assessment
Reading Stories
Reading Skills Literature
Reading Skills Informational
Language
Vocabulary
Spelling List
Writing Workshop
Writing Assignments
Science
Social Studies
Phonics and Spelling Rules
Alphabet Letters
Alphabet Sounds
Phonics Blending
Phonics Spelling
Foundational Reading
Early Reading Trio
Sight Words
Fluency Team Games
Fluency Board Games


MobyMax
1
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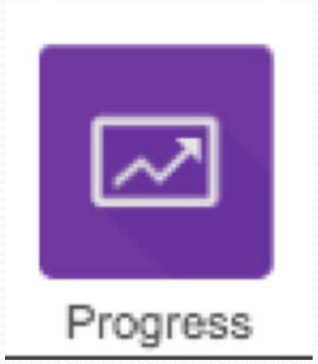
Writing Workshop
Writing Assignments
Science
Social Studies
Phonics and Spelling Rules
Alphabet Letters
Alphabet Sounds
Phonics Blending
Phonics Spelling
Foundational Reading
Early Reading Trio
Sight Words
Fluency Team Games
Fluency Board Games
Game Time!
Your Games
Game Store
2
Your Current Game Time: 13 minutes and 41 seconds




# My Math Progress

## Lesson Topics

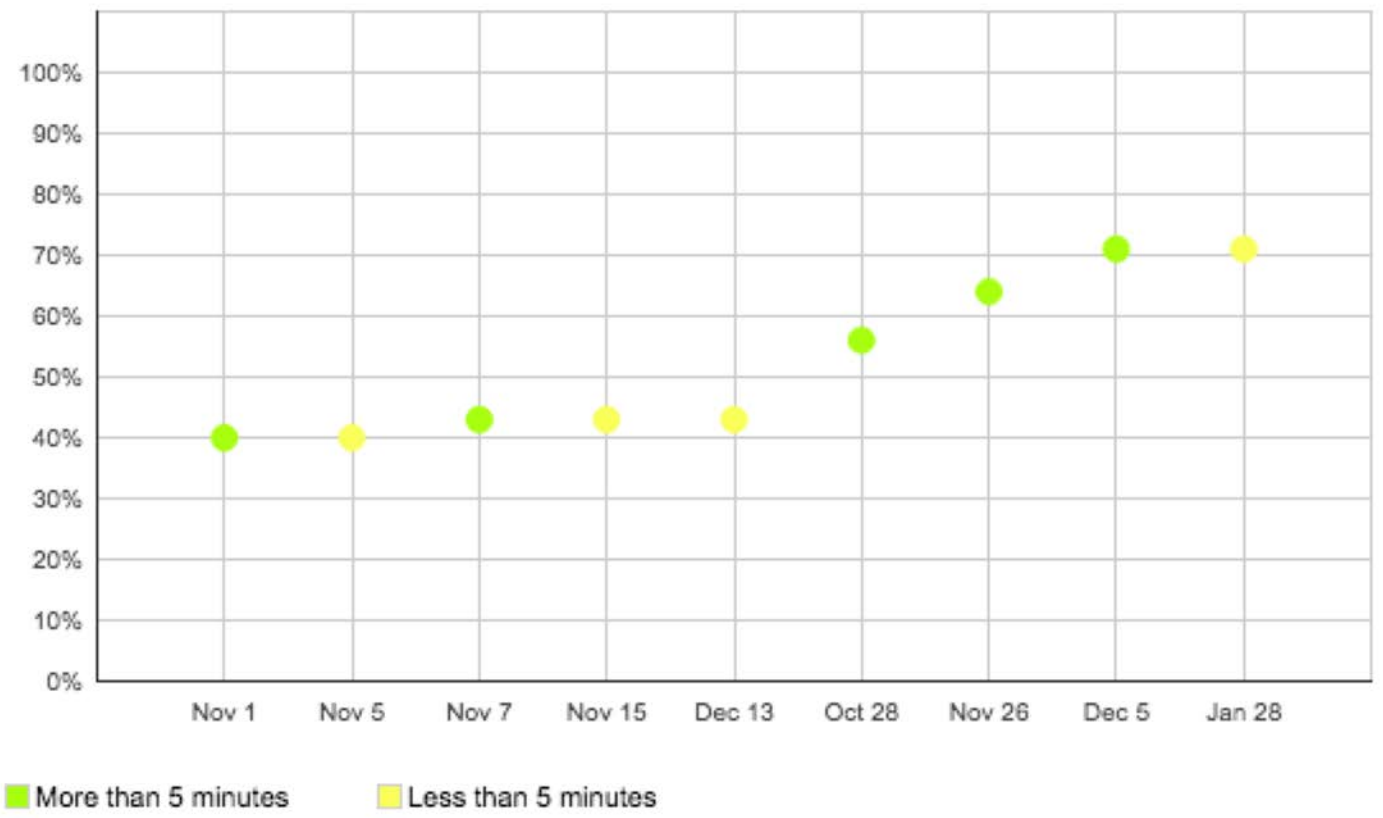
| | Add three digit numbers | In Progress |
|---|---|---|
| Jan 13 | Add three-digit numbers with r | 100% |
| Jan 13 | Add three-digit numbers with r | 100% |
| Jan 13 | Add with expanded form | 85% |
| Jan 6 | Add with two-digit numbers wo | 85% |
| Jan 2 | Add a two-digit number and a | 85% |
| Dec 18 | Add with regrouping ones | 70% |
| Dec 18 | Add two-digit numbers with no | 100% |
| Dec 18 | Add with expanded notation | 80% |
| Dec 11 | Subtract using a number line u | 70% |
| Dec 9 | Subtract using a number line u | 100% |
| Dec 9 | Add using a number line | 85% |
| Dec 5 | Add and subtract 100 word pro | 80% |

## Fact Fluency Table - Subtraction

Show all sessions

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0-0 | 1-0 | 2-0 | 3-0 | 4-0 | 5-0 | 6-0 | 7-0 | 8-0 | 9-0 | 10-0 | 100% |
| 1 | 1-1 | 2-1 | 3-1 | 4-1 | 5-1 | 6-1 | 7-1 | 8-1 | 9-1 | 10-1 | 11-1 | 100% |
| 2 | 2-2 | 3-2 | 4-2 | 5-2 | 6-2 | 7-2 | 8-2 | 9-2 | | | | |
| 3 | 3-3 | 4-3 | 5-3 | 6-3 | 7-3 | 8-3 | 9-3 | 10-3 | | | | |
| 4 | 4-4 | 5-4 | 6-4 | 7-4 | 8-4 | 9-4 | 10-4 | 11-4 | | | | |
| 5 | 5-5 | 6-5 | 7-5 | 8-5 | 9-5 | 10-5 | 11-5 | 12-5 | | | | |
| 6 | 6-6 | 7-6 | 8-6 | 9-6 | 10-6 | 11-6 | 12-6 | 13-6 | | | | |
| 7 | 7-7 | 8-7 | 9-7 | 10-7 | 11-7 | 12-7 | 13-7 | 14-7 | | | | |
| 8 | 8-8 | 9-8 | 10-8 | 11-8 | 12-8 | 13-8 | 14-8 | 15-8 | | | | |
| 9 | 9-9 | 10-9 | 11-9 | 12-9 | 13-9 | 14-9 | 15-9 | 16-9 | | | | |
| 10 | 10-10 | 11-10 | 12-10 | 13-10 | 14-10 | 15-10 | 16-10 | 17-10 | | | | |

## Fact Progress - Subtraction



# NJ Digital Item Library- NJDOE resource

Search by subject (ELA or Math) and Grade Level (Grades 3 and up)

Lists sample questions by standard, including number and description

Includes multiple choice questions as well as short answers with the equation editor

# Questions and Comments

Is there something you have a question about?

Is there something you would like to see?

# Thank you for being an important part of your child's education!