

USERS' GUIDE and LESSON PLANS



Super Star Online by Help Me 2 Learn

www.helpme2learn.com

Games of Math 2 Subtraction & More

Adding and Subtraction Blocks, Basic to Advanced Subtraction,
Subtraction Word Problems,
Express the Length of an Object as a Whole Number of Length Units,
Identifying Squares, Rectangles, Circles,
Half Circles, Triangles and much, much more

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Games of Math 2 – Subtraction & More - Overview/Helpful Tips

(Target grades 1, 2, 3)

Dear Teachers:

Games can be a powerful instructional tool. Games of Math 2 – Subtraction & More was developed to help reinforce early math skills while making learning fun and engaging.

By playing Games of Math 2 – Subtraction & More, your class will learn about:

- Relate counting to addition and subtraction
- Basic to advanced subtraction
 - Subtract 5 from multiples of 5
 - Subtract 10 from multiples of 10
 - Subtract 100 from multiples of 100
 - Subtract 1000 from multiples of 1000
- Complete subtraction problems in multiple steps
- Subtraction word problems
- Measure objects using small blocks that you line up
- Measure in both inches and centimeter
- Estimate the length of an object in inches or centimeter
- Measure weight or volume of a liquid
- Identify: squares, rectangles, circles, half circles, quarter circles, triangles, trapezoids, pentagons, hexagons, octagons, cubes, rectangular prisms, circular cones, spheres, pyramids, and circular cylinders
- Add up all the side length of a shape to find the perimeter
- Read an analog clock and a digital clock
- Determine how much time has passed
- And more!

Our user-friendly software uses a variation of our Super Star Motivation and Tracking System. This is a simple and effective way to keep track of your students as they progress through the game. It keeps track of their right and wrong answers! By using positive reinforcement and the gold star system, students are provided with incentives to get the correct answers. The goal of the program is to complete each level of each game and win a gold star certificate of completion for each game and a gold star certificate for completion of all the levels of the program.

This program features 3 stages, each stage has 5 levels.

Stage 1 was designed for 1st grade.

Stage 2 was designed for 2nd grade.

Stage 3 was designed for 3rd grade.

When students begin the course, they will be asked to identify which stage they want to start on. In most cases, this will be their grade as listed above. Teachers also have the option of setting the stage for students or the class. Teachers can also change the stage for students or a class.

While we pride ourselves on making our courses easy-to-use and user friendly, we believe that our courses are most effective when used with the guidance of a teacher or a parent.

Games of Math 2 includes all the components necessary for effective learning:

1. Instruction - in the form of animated lessons.
2. Math Practice – to build fluency and skills needed to complete the games.
3. Engaging Games – a fun way to practice and use math skills.
4. Pre-Test and Post-Test – proof of progress and mastery of the lessons.
5. The Gold Star Progress and Data Tracking System.
6. Teacher Features – to give teachers the controls and reports they need.

Instruction – Games of Math 2 features ten animated instructional videos that cover the concepts of the lessons. Videos include: comparing numbers, place value, rounding numbers, coin values, and more. These videos (Math Rules) can be found in the practice lessons and on the main screen of the games.

Practice Lessons - Teachers (or parents) can be most useful in helping kids with the parts of the lessons that are most difficult or not as much fun. Some kids find that our practice section may not be as much fun as the games. These practices can help build their skills. In most cases, they are similar to flash cards except there are many settings which allow you to customize the practice activities.

Here are some suggestions and tips for using our “Practice Lessons”:

- If possible, make the practice lessons a whole class activity (you may want to create a new user account for the class; you can make this account active or inactive as needed). If you can project the practice lessons to a screen and lead the class through the lessons, you will find that the kids will be more engaged.

Engaging Games – We hear it all the time how much the kids love Super Star and our games are the reason why. Another reason that our games are among the best is that we offer a wide variety of games and game types. Our games not only require knowledge of the lesson objectives, but also require problem solving and critical thinking. If a student is unable to complete a level on the first try, they can repeat until they do pass that level. Games of Math 2 is progressive by default, students must complete games to unlock other games. Teachers have the option to open all the games using our student management features.

We also suggest that whenever possible, the practices and games also be used as a whole class activity or competition. We make several suggestions in our lessons to encourage teachers to use different methods of using our games as a whole class activity. When teachers are able to do this, it takes our lessons to a much higher level of engagement and fun, making the class and school exciting.

The main objective the games is to engage the student in learning and give the student a way of applying and using the knowledge they have gained in the lesson. We love to hear that students are learning when they think they are just playing games. "Your kids will love learning with Super Star!" Isn't that what is all about, developing a love of learning?

Pre-Test and Post-Test: This program is really two programs; the instructional and game program and a Pre-Test and Post-Test program. We highly recommend that you take advantage of our Pre- and Post-Tests. Ask your students to click on the Pre-Test Post-Test button found on the main menu page.

We recommend that most students complete all of the Pre-Tests before they begin using the program. If they score high on the Pre-Test, this would be a strong indication that they have already mastered this material. If they score low, this is a good indication that this material will help them.

Each test has multiple choice questions and is usually timed for a maximum of 3 minutes. Since there are 8 tests, it should take about 24 minutes to complete all of the tests. Upon completing a test, you will see a check mark by that test. You can see the report for the tests in the Student Management section of the program.

If you want the students to complete all of the tests, we recommend that you lock the Post-Tests from the Student Management section. You can also make sure that the students can access only the tests by locking the students from the program from the Student Management section.

Once a Pre-Test is taken, that pre-test cannot be changed or erased without deleting the student's name. The next test taken for that subject will automatically be the Post-Test. If a student repeats a Post-Test, only the last attempt will be recorded in the Post-Test report.

We recommend that a student take the Post-Test once the program has been completed or at the end of the school year. Some teachers prefer to have students take a pre-test before beginning a section and then take the Post-Test upon completing that section. The ultimate goal of the pre-test and Post-Test is to show progress and mastery of the material covered in the program.

Gold Star Progress and Tracking System - This is a simple and effective way to keep track of your students as they progress through the games. As students play each game, our system keeps track of the right and wrong answers and the points that they earn. By using positive reinforcement and a level and star system, students are provided with incentives to get the correct answers. If students complete the game to the required level, they will can move to the next level. When they complete level 5 of each game, they will earn a gold star for that game and they can print (with you approval) a Gold Star Certificate of Achievement. When the complete level 5 of all the games, they earn a Gold Star Certificate of Achievement for that stage of Games of Math 1.

Teachers or students can access the "Progress Page" by clicking on the "Progress" button at the bottom center of any screen. A "Details Report" is also available from the Details button. More information is available in the back of this guide.

Teacher Features

Navigation:

With you, the teacher, in mind, we have created a simple and intuitive program. Although math can be difficult and confusing, we have broken the process into easy to learn steps. We developed the program so that almost any child can use the program successfully with a minimum amount of supervision. However, the program is most effective when teachers supervise their class while using this program.

Simply use the "Next" and "Back" buttons to navigate through the program. You can also use the buttons on the Menu screen. You can always return to the main page of the Table of Contents by clicking on the "Menu" button. While we have provided these "easy to use" navigation systems, most students will eventually learn that they can easily navigate the program by using our "Progress" page, by clicking on the Progress button in the bottom center of the page and then clicking a game.

Class Management System:

In most cases, teachers are allowed (managed by the site administrator) to manage their classes. Teachers can then add or remove the courses that are assigned to the class and add or remove students assigned to the class. Teachers can also create sub-classes and add students and courses to the sub-class so that students can have access to the courses that are most appropriate to them. Teachers may also have the ability to add new students to their class or make students inactive if they leave the class.

Student Management System: The Student Management features can be accessed from the Teachers & Admins button found on the main menu screen of Games of Math 2. You must sign-in using your teacher account to access these features. From the Student Management screen, you have several options:

- Class Progress Course Report

- Class Pre-test and Post Test Report
- Feature Locks
- Users' Guide and Lesson Plans

You can read a complete explanation of each of these features in the Student Management section of this guide found near the end of the guide.

- Using your Super Star Online teacher account, be sure to explore our Teacher & Admins Resource course which has written and video tutorials of our teacher features.

Have fun!

We congratulate you for your dedication in teaching children through the wonders of technology! We know how much you will love this title, so please try some of our other Help Me 2 Learn courses:

Letters and Numbers

Beginning Reading with Phonics

Silly Pictures

Silly Sentences

Phonics 1a – Vowel Sounds

Phonics 1b – Consonant Sounds

Phonics 2a – Intermediate Level

Phonics 2b – Intermediate Level II

Language Arts Review 3a – Advanced Level, with Sports

Language Arts Review 3b – Advanced Level II, with Sports

Spanish 1a with Phonics/ Inglés 1a con Fonética

Games of Math 1 – Addition & Mone

Games of Math 3 – Multiplication

Games of Math 4 – Division and Fractions

Super Star Movies

Teachers and Admins Resources

Thank you,

The Help Me 2 Learn team

Contact us at:

www.helpme2learn.com

info@helpme2learn.com

toll free: 800-460-7001 fax: 888-391-8415

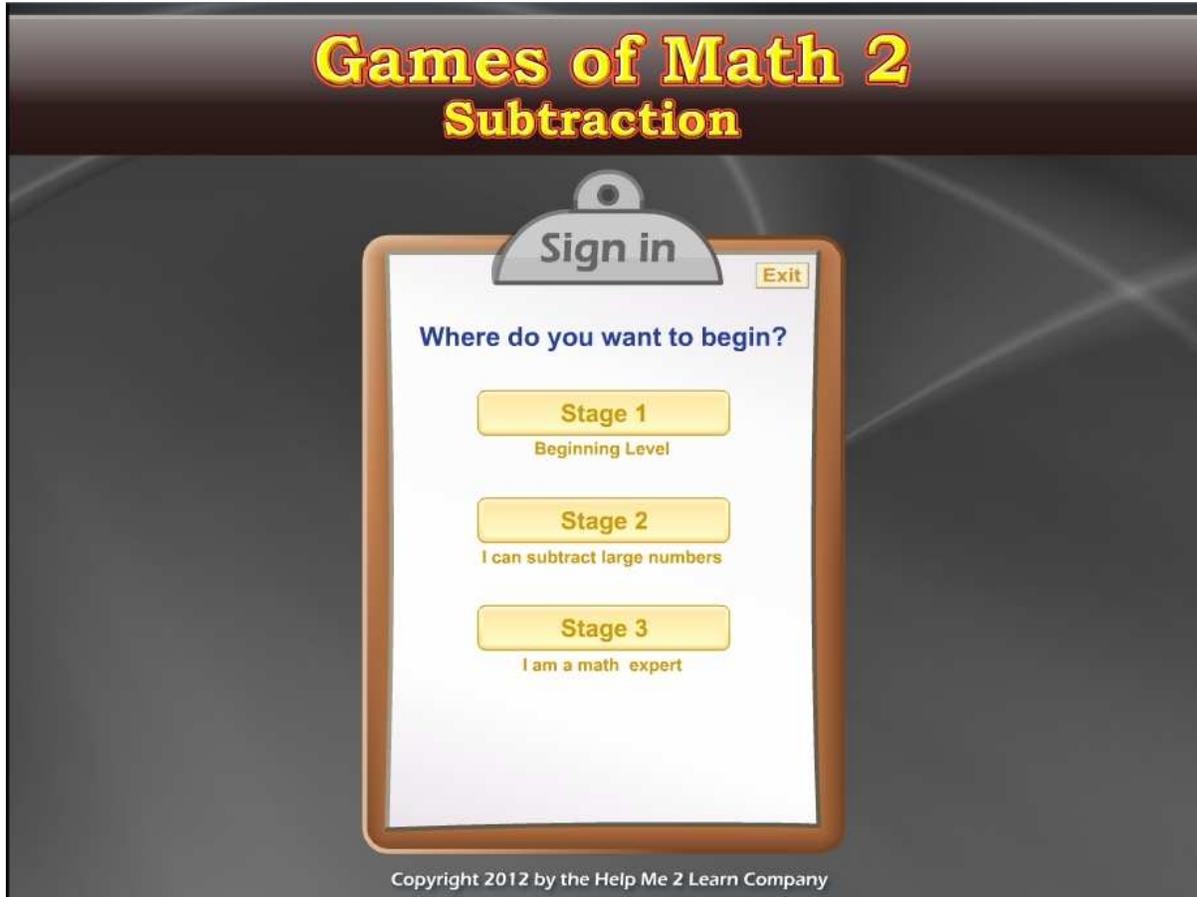
You may also want to use our app which is designed to make it easier for students to login to Super Star Online. Download our free app at:

<https://helpme2learn.com/school/apps> .

Getting Started

Once a student enters their name or clicks on their name (for the first time) on the sign in screen, they will be given the option of choosing where to begin in the program (Getting Started - Figure 1).

Getting Started - Figure 1



- Stage 1 was designed for 1st grade students using 1st grade Common Core standards.
- Stage 2 was designed for 2nd grade students using 2nd grade Common Core standards.
- Stage 3 was designed for 3rd grade students using 3rd grade Common Core standards.
 - If a student chooses a stage that is too high or low for them, the teacher can use our student management tools to change their stage level.
 - It is usually better to start too low than to start too high.

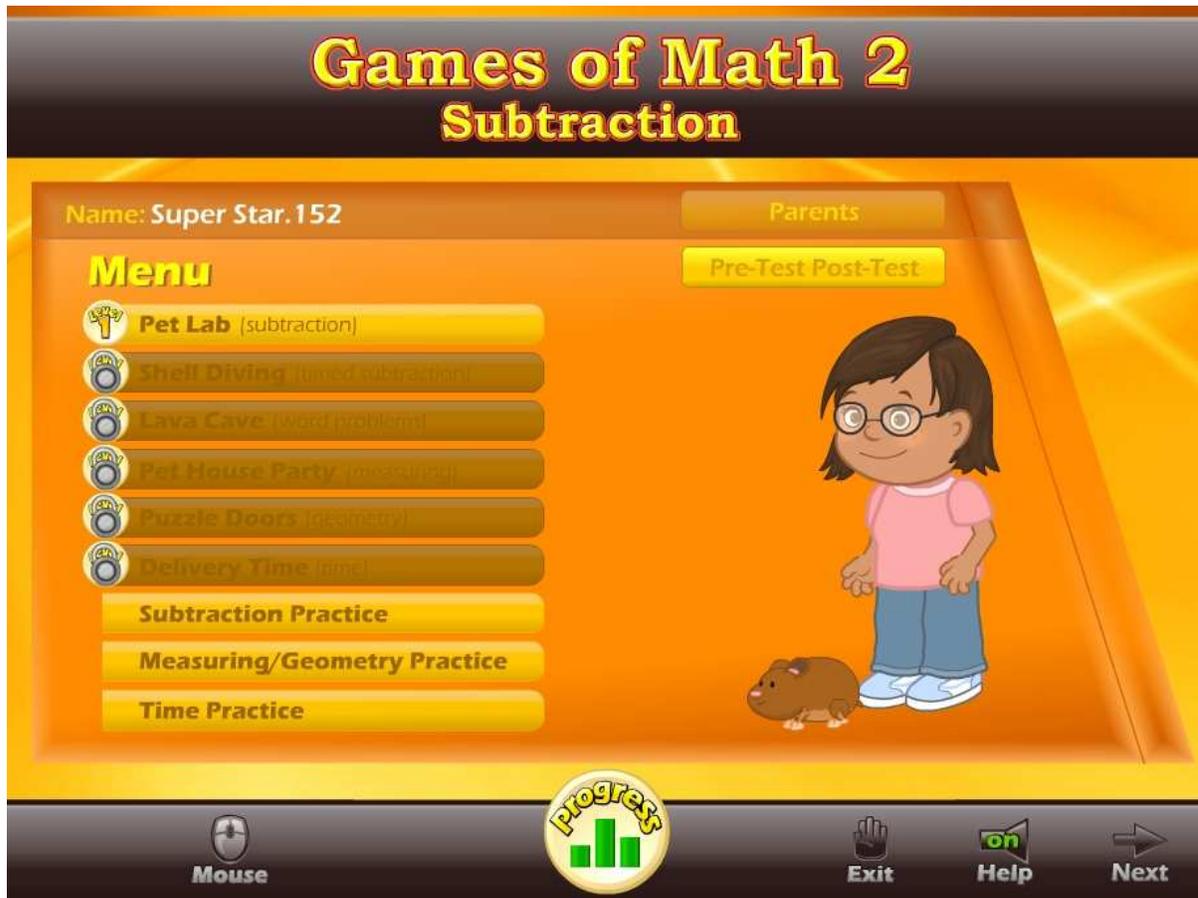
The goal of the program is to advance through all of the levels through each game in the program and earn a Gold Star Certificate of Completion for each game. A student who completes all the levels for all the games earns a Gold Star Certificate of Completion for Games of Math 2 - Subtraction & More. This simple system does wonders for motivating a student to complete each level and each game. This is a variation of our "Super Star Motivational and Data Tracking System". The student progress is also displayed on the Progress screen (Getting Started - Figure 2), which can be accessed by clicking on the Progress button in the lower center portion of the screen.

Getting Started - Figure 2



When the student first begins the program, only one game is available to the student (Getting Started - Figure 3). Once a student completes a level of a game, the next game will be unlocked. All the games can be locked or unlocked from the Student Management area of the Teachers' and Parents' section. Once a student completes a stage, they can go on to the next higher stage.

Getting Started - Figure 3



The goal of each game is to achieve the required number of points (while building math skills). The goal for each level is posted at the beginning of the game and usually in the game. The beginning levels of the game are much easier than the higher levels, in both the problems presented and number of problems presented. Usually, more gaming skills are also required. Students who complete a game level have the option of advancing to the next level of that game.

We have given the teacher a lot of control over the way this program operates. You can find these controls in the Student Management section of the Teachers' and Parents' section. These controls allow you to make the game goal level harder or easier and lock or unlock any of the games. You will also find progress reports in this section. To review the Student Management section in more detail, go to the Student Management section of this guide.

Lesson 1: Pre-Test/Post-Test

OBJECTIVE

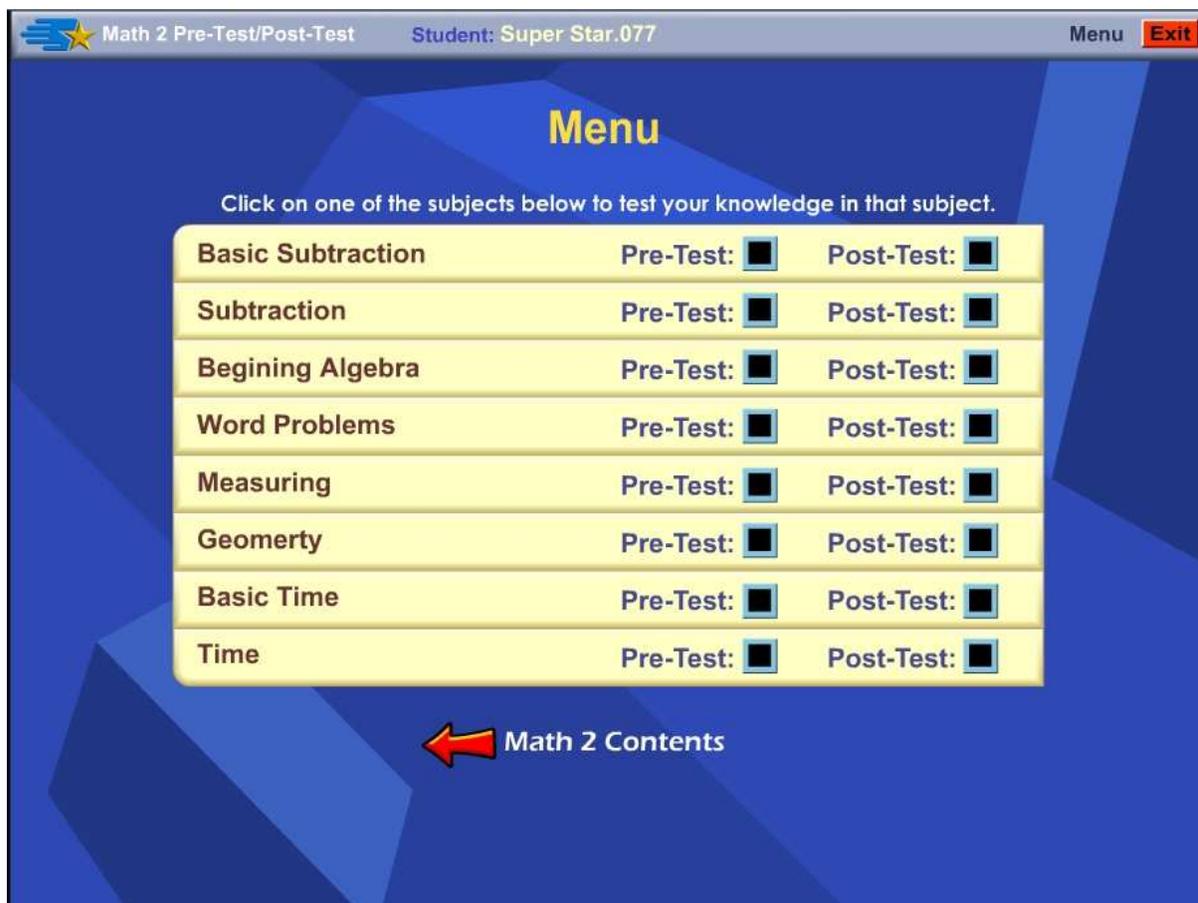
Students should take a pre-test to determine their level of their skills before using Games of Math 2 - Subtraction & More.

ACTIVITY

It is recommended that each student take the pre-test on a classroom or lab computer and not on a computer displayed to the class.

Click on the "Pre-Test Post-Test" button from the Menu screen (we suggest that you lock the post-test portion of the program from the Student Management section of the Teachers & Parents section). Let the students do as many of the pre-tests as you feel appropriate (Lesson 1 - Figure 1).

Lesson 1 – Figure 1



The test takes a maximum of 3 minutes to complete and is made up of 25 randomly selected multiple-choice problems. When all the questions are answered or the time is up, the test will end. The number of right and wrong answers are displayed (Figure 2) and will be recorded in the Class Test report, found in the Student Management portion of the Teachers' and Parents' section.

Lesson 1 – Figure 2

The screenshot shows a software interface for a math pre-test. At the top, it says "Math 2 Pre-Test/Post-Test" and "Student: Super Star.077". The main title is "Basic Subtraction Pre-Test". In the center, a yellow-bordered box displays a subtraction problem:
$$\begin{array}{r} 7 \\ - 1 \\ \hline \end{array}$$
. To the left of the box, it shows "Question: 8 of 25" and "Time: 2:28". To the right, it shows "Right: 7" and "Wrong: 0". Below the box, there are five green buttons with the numbers 2, 0, 4, 3, and 6. At the bottom, there is a blue instruction: "Click on the correct answer below the question."

The first test for each of the subjects is always recorded as the pre-test and will display with a check mark in the pre-test box. When the test is taken a second time, it will always be recorded as the post-test. If the test is taken again, the previous post-test will be overwritten by the last test.

Lesson 2: Subtraction Practice

OBJECTIVE

Students will prepare for the games by practicing subtracting objects and numbers in a timed or a non-timed test similar to flash cards. Present this lesson when appropriate, not necessarily in the order of lessons.

ACTIVITY

Click on the "Subtraction Practice" button near the bottom of the main menu. Click on the Math Rules for a short animated lesson on each subject. Click on the "Subtraction" button or the "Puzzle" button.

You will have the option of choosing easy, normal, hard or custom subtraction questions.

The custom option allows you to pick the numbers you want to work with on the number table from one to twenty. The numbers on the top of the chart represent the minuend (top number) and the numbers on the left of the grid represent the subtrahend (bottom number). Click on the ON/Off button next to a column or row to quickly select the numbers. (Lesson 4 – Figure 1). Select as many problems as you wish to practice those problems.

Lesson 4 – Figure 1

Subtraction Practice
Select the numbers you want to use and click "ok"

Math Rules

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
2		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
3			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
4				0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
5					0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
6						0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
7							0	1	2	3	4	5	6	7	8	9	10	11	12	13	
8								0	1	2	3	4	5	6	7	8	9	10	11	12	
9									0	1	2	3	4	5	6	7	8	9	10	11	
10										0	1	2	3	4	5	6	7	8	9	10	
11											0	1	2	3	4	5	6	7	8	9	
12												0	1	2	3	4	5	6	7	8	
13													0	1	2	3	4	5	6	7	
14														0	1	2	3	4	5	6	
15															0	1	2	3	4	5	
16																0	1	2	3	4	
17																	0	1	2	3	
18																		0	1	2	
19																			0	1	
20																				0	

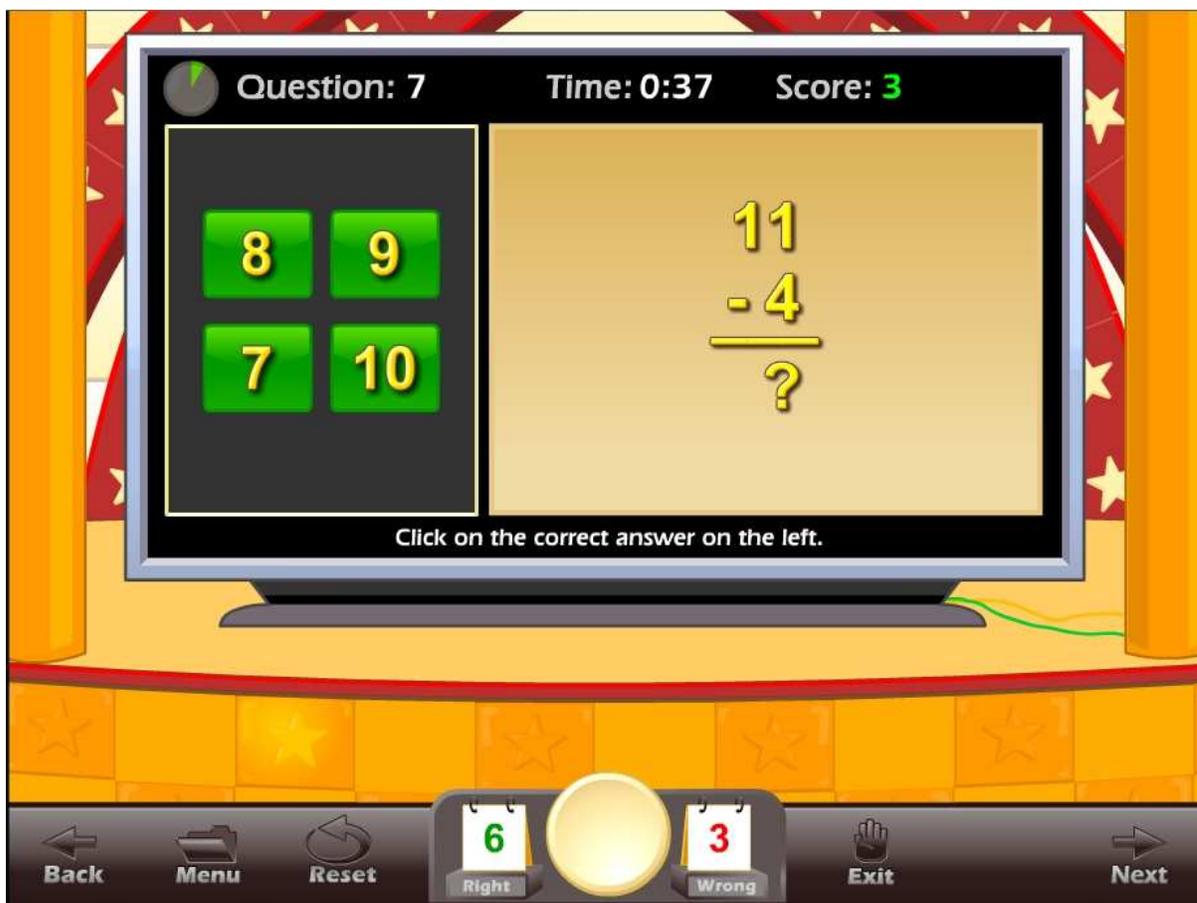
Navigation: Back, Menu, Reset, Right (0), Wrong (0), Exit, Help, Next

If you don't want to practice some of the problems in a row, you can click on those problems to unselect them. When you have selected the problems you want to use click on the "OK" button at the top.

You can set the time limit you want for the test or you can set the number of questions. This system allows you to build a test of almost any length that you want. You can also select how long the student will have to answer each question. When the question time limit is up, the question will be marked as wrong and it will move on to the next question. Click on the Start Practice button to begin.

Once a timed test begins, click on the correct answer. If a student clicks on a wrong answer, that answer will be grayed out and the student can try another answer (Lesson 4 - Figure 2). The time remaining is displayed at the top center of the screen along with the total score. The number of right and wrong answers is displayed at the bottom of the screen.

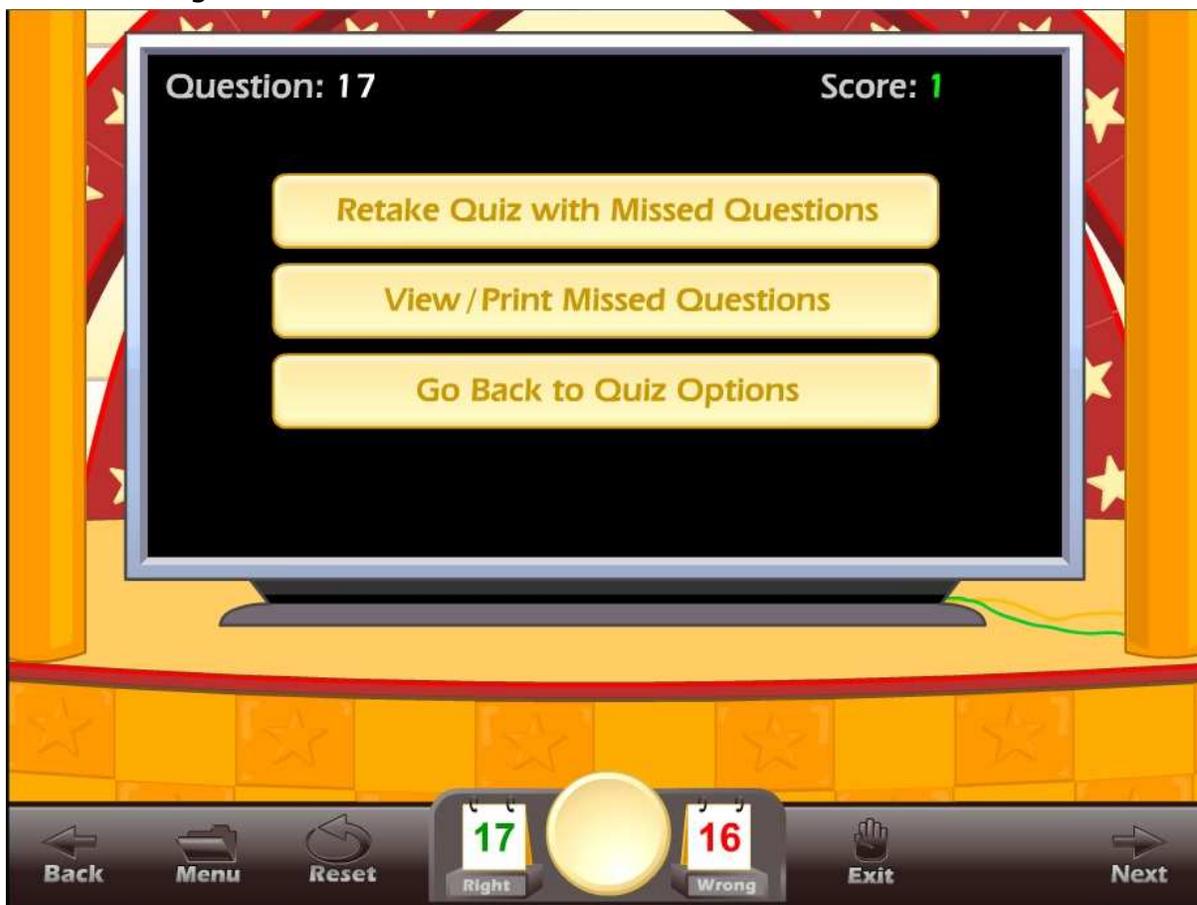
Lesson 4 – Figure 2



Once the test is over and if the student missed 4 or more questions, a screen will appear with the following options (Lesson 4 - Figure 3):

- Retake Quiz with Missed Questions – this allows the student to retake the quiz and work on only the problems they missed.
- View/Print Missed Question – this allows the student to view and print, with your permission, a list of problems they missed. You can include this in their records or use this for additional work on paper. Note: you can lock printing from the Student Management section of the Teachers' and Parents' section.
- Go Back to the Subtraction Table or menu – where the student can select problems for another test.

Lesson 4 – Figure 3



USING THIS ACTIVITY IN CLASS

This activity can be used individually or it can be used as a great warm-up for the class, working on specific problem sets. There are many ways to make this an exciting class activity. Some of the ways to use this activity as a whole class activity are:

Teacher-led –

- Teacher clicks on the correct answer for the class, requires that the class come to a consensus on the answer.
- Teacher clicks on the correct answer, teacher calls on a student for the answer.
- Teacher divides the class into teams, the team leader answers for the team, the teacher clicks on the answer for the team.

Student-led –

- Students line up and take turns answering for the class. Each student answers one question.
- Teacher divides the class into teams; the teams compete for the highest score, the team captain clicks on the answers for the team.
- Students line up and take turns answering for the class. Each student answers as many questions as they can until they get a wrong answer.

Lesson 3 – Pet Lab

OBJECTIVE

Students will work on non-timed subtraction skills as they earn points that they can spend to build and customize a pet.

Stage 1 - 1st GRADE STANDARDS

Concepts

- Level 1 - Adding and subtraction blocks - small numbers to 10.
- Level 2 - Counting on number line to add and subtract to 6
- Level 3 - Counting on number line to add and subtract to 12, then just addition or subtraction equation within 12.
- Level 4 - Subtraction equation with numbers within 15
- Level 5 - Subtraction equation with numbers within 20

Standards by level

- Level 1 - **1.OA.5.** Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
- Level 2 - Introduction – critical areas (1). They use a variety of models, including discrete objects and length-based models (e.g., cubes connected to form lengths), to model add-to, take-from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two).
- Level 3, 4 and 5 - **1.OA.6.** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).

Stage 2 - 2nd GRADE STANDARDS

Concepts

- Level 1 - Subtraction equation with numbers within 20 (the number you subtract is always single digit).
- Level 2 - Subtract 5 from multiples of 5. Subtract 10 from multiples of 10. Subtract 100 from multiples of 100. Subtract 1000 from multiples of 1000.
- Level 3 - Subtract two, two digit numbers with no regrouping. Do problems in multiple steps. Numbers (10-50).
- Level 4 - Subtract two, two digit numbers with regrouping. Do problems in multiple steps. Numbers (10-50).

- Level 5 - Subtract two, two digit numbers with regrouping. Do problems in multiple steps. Numbers (10-99).

Standards by level

- Level 1 - **2.OA.2.** Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
- Level 2 - **2.NBT.8.** Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
- Level 3, 4 and 5 - **2.NBT.5.** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
 - **2.NBT.6.** Add up to four two-digit numbers using strategies based on place value and properties of operations.

Stage 3 - 3rd GRADE STANDARDS

Concepts

- Level 1 - Subtract two, two digit numbers with regrouping. Do problems in multiple steps. Numbers (10-99).
- Level 2 - Subtract two, three digit numbers with regrouping. No "0" regrouping with a "0" in middle spot of top number such as 202 -155. Do problems in multiple steps. Numbers (100-999).
- Level 3 - Subtract two, four digit numbers with regrouping. No "0" regrouping with a "0" in middle spot of top number such as 2022 -1555. Do problems in multiple steps. Numbers (1000-9999).
- Level 4 - Subtract two, three digit numbers with regrouping. With "0" regrouping with a "0" in middle spot of top number such as 202 -155. Do problems in multiple steps. Numbers (100-999).
- Level 5 - Subtract two, four digit numbers with regrouping. With "0" regrouping with a "0" in middle spot of top number such as 2022 -1555. Do problems in multiple steps. Numbers (1000-9999).

Standards by level

- Level 1, 2, 3, 4 and 5 - **3.NBT.2.** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

ACTIVITY

Click on the "Pet Lab" button from the main menu. The Pet Lab main screen displays the goal for the game, usually, no more than 2 wrong answers.

Click on the "Math Rules" button at each level to see an animated instruction for that game or level.

Click on Start to begin the game.

The game problems and difficulty will change depending on the stage and level of the game. There are five levels of play in each of the three stages.

The objective of the game is to answer each of the problems to gain points that you can spend to build a pet that you will use for the remainder of the games. You can choose a boy or girl character for this program and you get to select the look of that character.

After you answer the first question, in level one, you will only be able to choose a hamster as your pet. In level two, you should be able to select a turtle or a bird, in level three you should be able to select a cat, in level four you should be able to select a dog, and in level five, you should be able to select a monster. As you answer questions correctly, you gain points and you can spend those points to choose a variety of colors, eyes, tails, and other options for your pet.

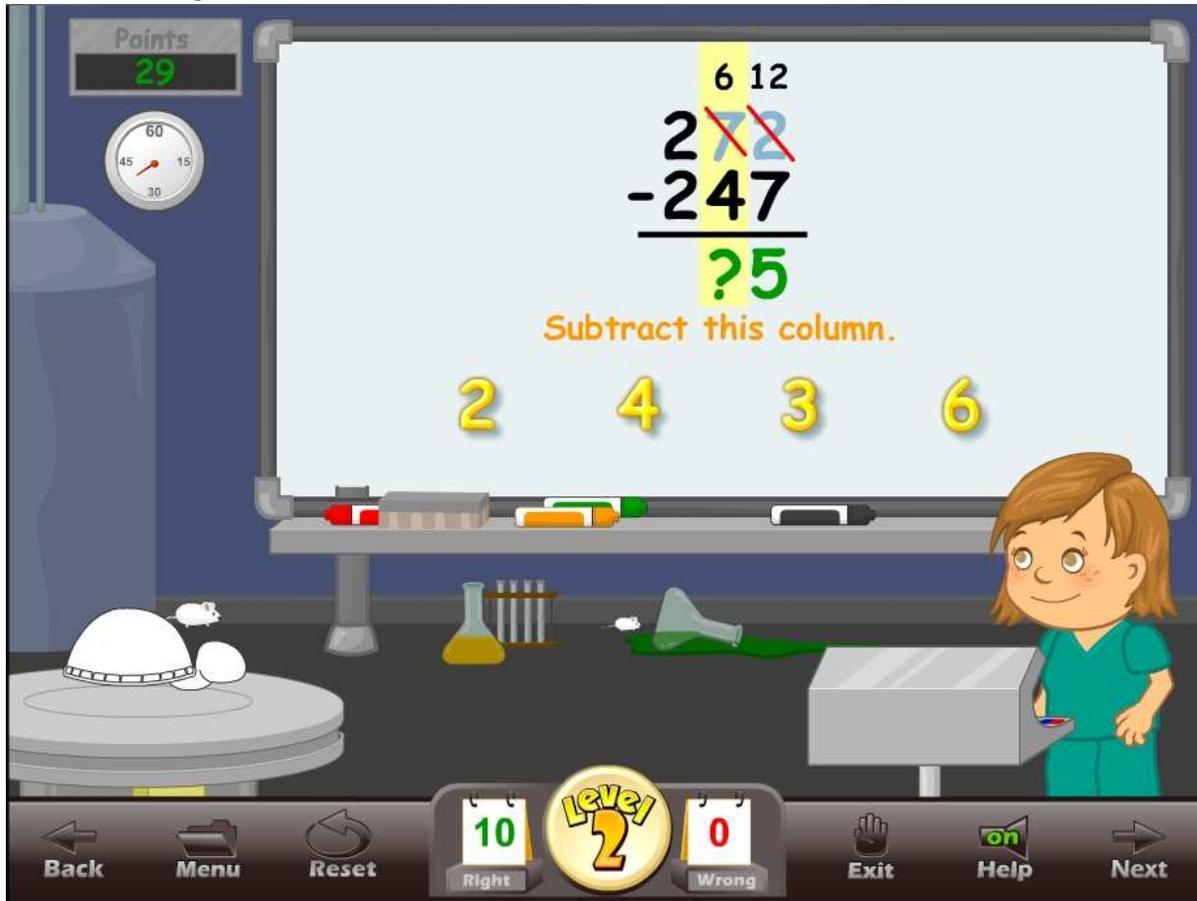
Lesson 3 – Figure 1



On Stage 1 - Level 1, the problems are very visual and simple (Lesson 3 - Figure 1). In this example, students should be able to see the number of dots and find the correct number. Click on the correct answer to answer the problem.

The program shows the character and the pet. As the pet is customized, the changes will show on screen.

Lesson 3 – Figure 2

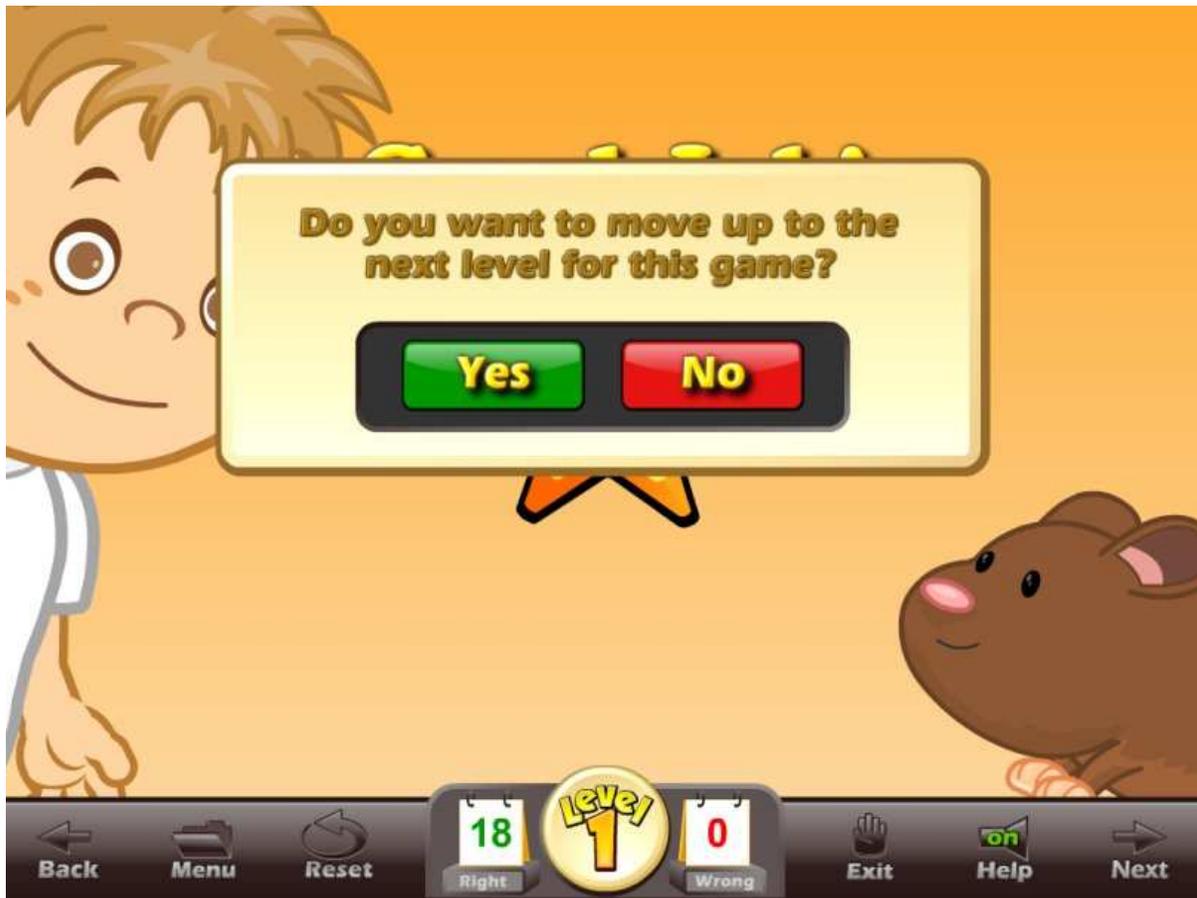


As the student progresses through the stages (Lesson 3 – Figure 2) and the levels, the problems will become increasingly more difficult.

At the end of the game, the student will have the option of printing a picture of their character and the pet. If you do not want to allow printing, you have the option of turning printing features off from the student management section.

If a student has met the level goal, they will be able to move up to the next level (Lesson 3 – Figure 3). Students should be encouraged to move up to the next level. The goal of the program is to complete all of the levels of all of the games.

Lesson 3 – Figure 3



Tips:

- The beginning levels are meant to be easy. Our goal is to move the student through the levels -- particularly through the lower levels -- as quickly as possible. As the student progresses through the levels, the student will have to answer more and more difficult questions.
- Be sure to click on the "Math Rules" button to see the lesson for that level.

USING THIS GAME IN CLASS

Teacher-led –

- Generally, the teacher should only show a few examples of this game to the class. The class will pick up the game almost instantly.
- The teacher should use the "Math Rules" and the "Subtraction Practice" as often as needed.
- Use the Subtraction Practice as a competition, the highest score out of groups of two or three get to play the "Pet Lab" game for the class.

Student-led –

- Students line up and take turns answering for the class. Each student gets one turn to answer the questions and customize the pet. You may want the class to help with the answers, or you may want them to be silent.
- Students line up and take turns answering for the class. Each student answers as many questions as they can until they get a wrong answer.

Lesson 4: Shell Diving

OBJECTIVE

Students will build subtraction fluency as they answer timed addition and subtraction problems while diving for shells.

Stage 1 - 1st GRADE STANDARDS

Concepts

- Level 1 - Timed subtraction. Numbers within 5. Relationship between addition and subtraction problems ($3+2=5$ so $5-2=3$) ($5-2=3$ so $3+2=5$). Unknown number is always at the end.
- Level 2 - Timed subtraction. Numbers within 10. Relationship between addition and subtraction problems ($8+2=10$ so $10-2=8$) ($10-2=8$ so $8+2=10$). Unknown number is always at the end.
- Level 3 - Timed subtraction. Numbers within 10. Relationship between addition and subtraction problems ($8+2=10$ so $10-N=8$) ($10-2=8$ so $8+N=10$). Unknown number is always in middle position of second equation.
- Level 4 - Timed subtraction. Numbers within 5. Subtraction or addition equations with a symbol for the unknown number ($2-N=1$ or $1+N=2$). Unknown number is always in middle position of the equation.
- Level 5 - Timed subtraction. Numbers within 10. Subtraction or addition equations with a symbol for the unknown number ($10-N=1$ or $7+N=10$). Unknown number is always in middle position of the equation.

Standards by level

- Level 1 and 2 - **1.OA.3.** Apply properties of operations as strategies to add and subtract. Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)
 - **1.OA.4.** Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8. Add and subtract within 20.
 - **1.OA.6.** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).
- Level 3 - **1.OA.8.** Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$.

- **1.OA.3.** Apply properties of operations as strategies to add and subtract. Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)
- **1.OA.4.** Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8. Add and subtract within 20.
- **1.OA.6.** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).
- Level 4 and 5 - **1.OA.8.** Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$.
- **1.OA.6.** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).

Stage 2 - 2nd GRADE STANDARDS

Concepts

- Level 1 - Timed subtraction. Numbers within 10 ($10 - 8 = N$).
- Level 2 - Timed subtraction. Numbers within 20. Second number is always single digit. ($20 - 9 = N$).
- Level 3 - Timed subtraction. Numbers within 20. Second number can be double digit. ($20 - 13 = N$).
- Level 4 - 5 number patterns. Subtract 5 from multiples of 5 ($45 - 5 = N$ or $50 - 5 = N$). Subtraction 10 100 or 1000 from any number ($23 - 10 = N$ or $345 - 100 = N$ or $2340 - 1000 = N$).
- Level 5 - Timed subtraction. Numbers within 20. Subtraction equations with a symbol for the unknown number ($20 - N = 8$ or $15 - N = 7$). Unknown number is always in middle position of the equation.

Standards by level

- Level 1, 2 and 3 - **2.OA.2.** Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
- Level 4 - **2.NBT.8.** Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
- Level 5 - **2.OA.2.** Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
 - **2.OA.1.** Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Stage 3 - 3rd GRADE STANDARDS

Concepts

- Level 1 - Timed subtraction. Numbers within 20. Subtraction equations with a symbol for the unknown number ($20-17=N$ or $15-N=7$). Unknown number is at the end or in middle position of the equation.
- Level 2 - Timed subtraction. Numbers within 50. Subtraction equations with a symbol for the unknown number ($50-37=N$ or $42-N=14$). Unknown number is at the end or in middle position of the equation.
- Level 3 - Timed subtraction. Subtract 1,20,100, or 200 and unknown number is in a random position. ($995-1=N$ or $523-N=513$ or $N-100 = 345$).
- Level 4 - Timed subtraction. Numbers within 20. Use Subtraction and addition with an equation with three numbers ($20-5+3=N$). Unknown number is at the end of the equation.
- Level 5 - Timed subtraction. Numbers within 20. One operation on each side of the equation ($15-5 = N+5$ or $N-5 = 5+5$). Unknown number in a random position.

Standards by level

- Level 1, 2, 3, 4 and 5 - **3.NBT.2.** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

ACTIVITY

Click on the "Shell Diving" button from the main menu. The Shell Diving main screen displays the goal for the game, the personal best score, today's best score and the High Scores list (Lesson 4 – Figure 1).

Lesson 4 – Figure 1



Click on the Start button to begin the game. Click on normal, hard, or extreme to play the game (Lesson 4 – Figure 2). Only the difficulty of the game changes, not the questions. The extreme game is much more challenging and can be more fun.

Lesson 4 – Figure 2



Lesson 4 – Figure 3



After you review the instructions, you will see your pet and your character in a boat. (Click on the Skip button if you want to skip the instructions.) Move the mouse to move the boat. You will see a subtraction problem near the bottom of the screen as well as shells with numbers above them. These are multiple choice questions so the numbers above the shells are the possible answers to the problem. In the upper right hand corner is an arrow with a number, this number represents the speed of the current of the water. Move your boat above the shell that has the correct answer and click to release your pet who will dive for the answer to the problem. The current will move the pet in the direction the arrow is pointing. If your pet lands on the correct shell, the pet will return quickly giving you more points. If you land near the shell, your pet will swim to the shell (Lesson 4 – Figure 3). If the student makes a mistake aiming their pet, they can click the mouse again to call their pet back to the boat before it hits the wrong answer.

The objective is to earn enough points to meet the level goal so you can go on to the next level. Your score comes from answering the problems quickly and correctly. The student can also collect the small colorful fish and shells to earn

bonus points. At the end of the game if the student has only made two mistake or less, they will get to play a bonus round to help them earn more points.

USING THIS GAME IN CLASS

Teacher-led –

- Shell Diving can be used to create an exciting whole class activity. It will be assumed that the teacher can display the game to the whole class and make the mouse available to the students. The teacher would then prepare the students for the game by going to the Subtraction Practice and choosing the subtraction problems appropriate for the level of Shell Diving the class is working on. The teacher would start the practice and call on students to give the correct answer.
- Once the class is prepared for the subtraction problems, the teacher would start the game and ask the class to vote on each answer as the correct answer. The teacher would then click on the answer with the highest number of votes. The teacher would play the game and ask the class to say “dive” when they want the teacher has positioned the boat in the correct position.

Student-led –

- The teacher divides the class into teams of 3. Sign the team in on the sign in page or under an account. The teams compete for the highest score. The team members alternate between diving attempts. As the game is played over several days or weeks, the team high scores will be shown in the high score list.
- Students line up and take turns answering for the class. Each student gets one dive attempt. You may want the class to help with the answers or you may want them to be silent.
- You can have a dive off. Each student takes one turn at diving. The teacher records the highest score for the round on a piece of paper. At the end of the tournament, the student with the highest points in a round wins.

Lesson 5: Lava Cave

OBJECTIVE

Students will learn to solve math problems as presented in word problems. Students will understand that math is used to solve real life problems.

Stage 1 - 1st GRADE STANDARDS

Concepts

- Level 1 - Word problems. Simple subtraction or addition. Number sentence. Use numbers in sentences. Numbers within 5. "3 subtracted from two equals?" "What is 5 minus 2?"
- Level 2 - Use numbers in sentences. Numbers within 5. Use different terms for subtraction like: lost, spent, ate, and sold. Use different terms for addition like: grew, baked, earned, bought, and made. Decide if you should add or subtract. "Scooter has 5 frogs. He sells 4 frogs. How many frogs does he have now?"
- Level 3 - Use numbers in sentences. Numbers within 8. Decide if you should add or subtract. More logic required. "Scooter has 7 frogs and 3 turtles. How many pets does he have all together?"
- Level 4 - Use words for numbers in sentences. Numbers within 10. Decide if you should add or subtract. There is extra information in questions that is not needed to solve the problem. "There are ten carrots in the garden. Three rabbits ate four carrots, and two turtles ate three carrots. How many carrots are left in the garden?"
- Level 5 - Use words for numbers in sentences. Numbers within 10. Some problems require both adding and subtracting. "Jo's chicken laid ten eggs. Jo gave seven eggs to Penny. Penny did not want that many eggs, so she gave one egg back to Jo. How many eggs does Jo have now?"

Standards by level

- Level 1, 2, 3, 4 and 5 - **1.OA.1.** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
 - **1.OA.6.** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).

Stage 2 - 2nd GRADE STANDARDS

Concepts

- Level 1 - Use numbers in sentences. Numbers within 10. Simple addition or subtraction word problems. "Buzz has 10 hamsters. He sells 4 of his hamsters to Jo. How many hamsters does Buzz have now?"
- Level 2 - Use words for numbers in sentences. Numbers within 10. Simple addition or subtraction word problems. Problems use units of measurement: cent, minute, inch, foot, ounce, pound. "Jo's snake was ten feet long in April. The next month, the snake grew three feet. How many feet long was the snake in May?"
- Level 3 - Use words for numbers in sentences. Numbers within 15. Decide if you should add or subtract. There is extra information in questions that is not needed to solve the problem. "Sissy has fifteen dollars and walks seven miles to the pet store to buy cat food for her three cats. She spends ten dollars on cat food. How many dollars does Sissy have now?"
- Level 4 - Use words for numbers in sentences. Numbers within 15. Some problems require two steps to solve and have extra information. "Jo has nine snakes with black stripes, ten lizards with yellow spots, six snakes with red spots and nine lizards with orange stripes. How many pets does Jo have with spots?"
- Level 5 - Use words for numbers in sentences. Numbers within 20. Up to three steps required to solve problems and there may be extra information. "Buddy won twenty dollars from a dog contest. He spent three dollars on soda, four dollars on dog treats, and two dollars on a red dog scarf. How many dollars does Buddy have left?"

Standards by level

- Level 1, 2 and 3 - **2.OA.1.** Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
 - 2.OA.2.** Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
- Level 4 and 5 - **2.OA.1.** Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
 - 2.OA.2.** Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
 - 2.NBT.6.** Add up to four two-digit numbers using strategies based on place value and properties of operations.

Stage 3 - 3rd GRADE STANDARDS

Concepts

- Level 1 - Timed subtraction. Numbers within 20. Subtraction equations with a symbol for the unknown number ($20-17=N$ or $15-N=7$). Unknown number is at the end or in middle position of the equation.
- Level 2 - Timed subtraction. Numbers within 50. Subtraction equations with a symbol for the unknown number ($50-37=N$ or $42-N=14$). Unknown number is at the end or in middle position of the equation.
- Level 3 - Timed subtraction. Subtract 1, 20, 100, or 200 and unknown number is in a random position ($995-1=N$ or $523-N=513$ or $N-100 = 345$).
- Level 4 - Timed subtraction. Numbers within 20. Use Subtraction and addition with an equation with three numbers ($20-5+3=N$). Unknown number is at the end of the equation.
- Level 5 - Timed subtraction. Numbers within 20. One operation on each side of the equation ($15-5 = N+5$ or $N-5 = 5+5$). Unknown number in a random position.

Standards by level

- Level 1, 2, 3, 4 and 5 - **3.NBT.2.** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

ACTIVITY

Click on the "Lava Cave" button from the main menu. The Lava Cave main screen displays the goal for the game, the personal best score, today's best score and the High Scores list (Lesson 5 – Figure 1). This game is a obstacle maze game.

Lesson 5 – Figure 1



Click on the Start button to begin the game. After you review the instructions (click on the Skip button to skip the instructions), you will see your pet and the maze (Lesson 5 – Figure 2). Your objective is to capture the "blue blobbies" (which have the numbers you will need to answer subtraction word problems) and to earn enough points to move

to the next level of the game. The game starts with very little movement. You will notice gold coins and keys which help you earn extra points. As you progress through the rooms of the maze, you will see new elements including some that may chase you.

Lesson 5 – Figure 2



Once you have captured all of the "blue blobbies" the door of the room will open and you can move your pet into the hallway where you will be presented with a subtraction word problem.

Lesson 5 – Figure 3



Read the word problem (Lesson 5 – Figure 3). Answer the word problem by dragging the correct number into the answer box. Click on OK when the answer is correct. When your answer is correct, you can collect bonus gold and keys as you continue toward the next room.

You will then have a choice of rooms (Lesson 5 – Figure 4). If you have enough keys, you can pick a room that is more difficult and more fun. You can also use the keys to unlock the mystery chest to get a few bonus points. Your goal is to earn enough points to move to the next level of the game.

Lesson 5 – Figure 4



USING THIS GAME IN CLASS

Teacher-led –

- Because there are so many elements to the Lave Cave, we recommend that the teacher become familiar with this game before letting the students lead. However, some teachers may feel more comfortable allowing the “gamers” take the lead. Teachers may need to help with the reading portion of the game.

Student-led –

- This game is not usually good as a class competition because some rooms have more points available than other. It is suggested that teachers not worry about the score, but rather let groups of students work together to complete the rooms and levels. Some students in the group can be assigned to move the pet, some to answer the word problem and some to select the room. Students can be rotated in the group so that they complete each task at some point.

Lesson 6: Measuring Practice

OBJECTIVE

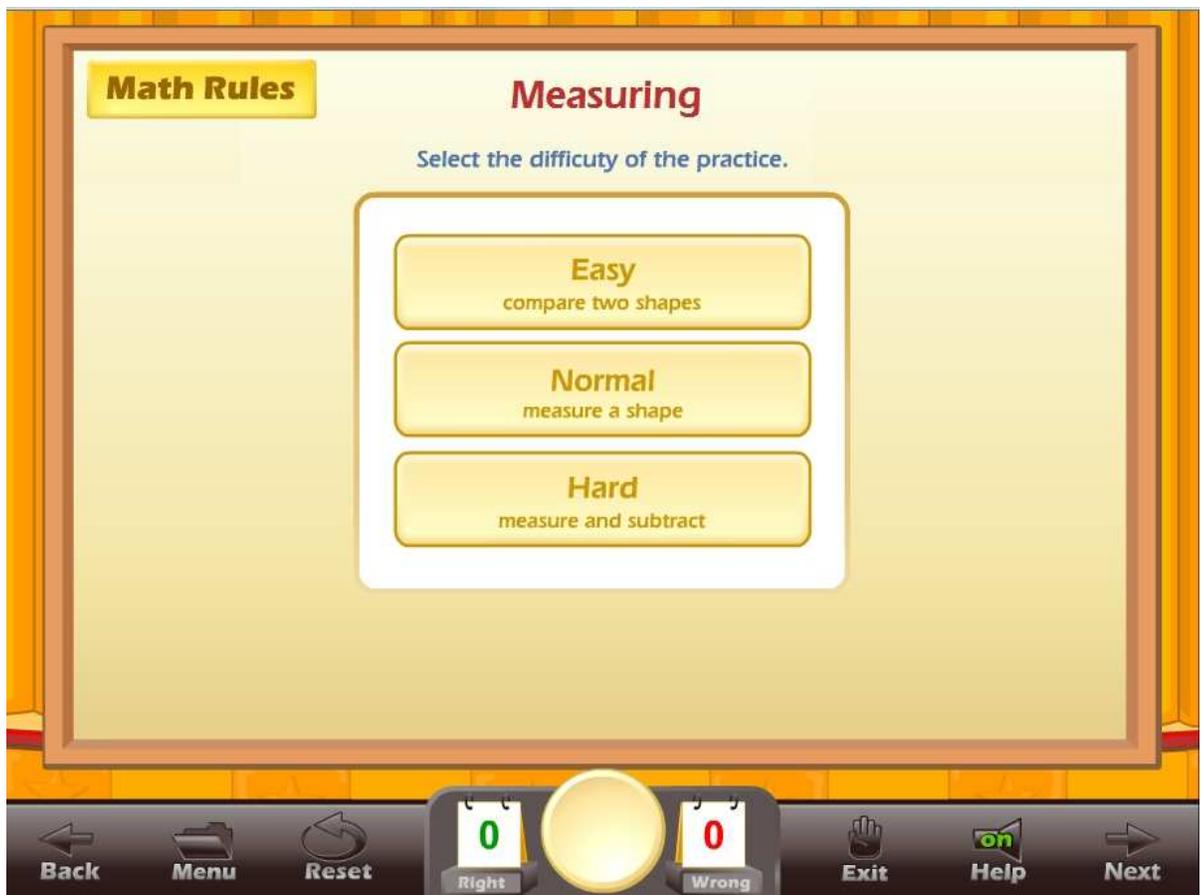
Measuring Practice will prepare students for the Pet House Party game by practicing basic measurement, graphing, measuring liquid volume, measuring mass, subtracting volume and subtracting mass in a timed or non-timed test similar to flash cards.

ACTIVITY

Click on the "Measuring/Geometry Practice" button from near the bottom of the main menu. Click on the "Measuring" button. Click on the Math Rules for a short animated lesson on each subject.

Click on the type of Measuring Practice you want to do. The menu will vary according to the stage that you are on.

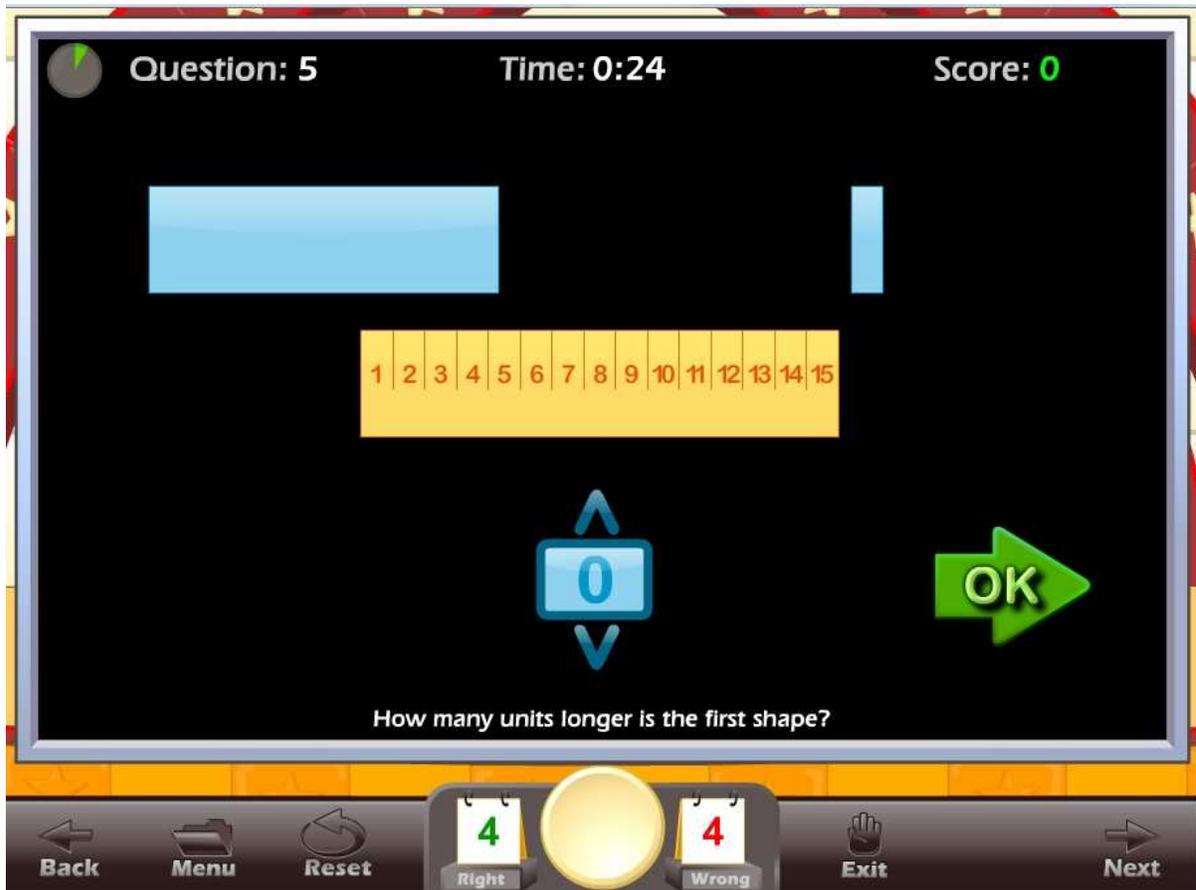
Lesson 6 – Figure 1



You can set the time limit you want for the test or you can set the number of questions. This system allows you to build a test of almost any length that you want. Click on the Start Practice button to begin.

Once a timed test begins, you should click on the correct answer. If a student clicks on a wrong answer, that answer will be grayed out and the student can try another answer (Lesson 6 - Figure 2). The time remaining is displayed at the top center of the screen along with the total score. The number of right and wrong answers is displayed at the bottom of the screen.

Lesson 8 – Figure 2



Lesson 6 – Figure 3



Once the test is over and if the student missed 4 or more questions, a screen will appear with the following options (Lesson 6 - Figure 3):

- Retake Quiz with Missed Questions – this allows the student to retake the quiz and work on only the problems they missed.
- Go back to the Measurement Practice – where the student can select problems for another test.

USING THIS ACTIVITY IN CLASS

This activity can be used individually or it can be used as a great warm-up for the class, working on specific problem sets. There are many ways to making this an exciting class activity. Some of the ways to use this activity as a whole class activity are:

Teacher-led –

- Teacher clicks on the correct answer for the class, requires that the class come to a consensus on the answer.
- Teacher clicks on the correct answer, teacher calls on a student for the answer.

- Teacher divides the class into teams, the team leader answers for the team, the teacher clicks on the answer for the team.

Student-led –

- Students line up and take turns answering for the class. Each student answers one question.
- Teacher divides the class into teams; the teams compete for the highest score, the team captain clicks on the answers for the team.
- Students line up and take turns answering for the class. Each student answers as many questions as they can until they get a wrong answer.

Lesson 7: Pet House Party

OBJECTIVE

Students will build measurement and graphing skills as they answer measurement, graphing, measuring liquid volume, measuring mass, subtracting volume and subtracting mass problems while diving for building a house for their pet.

Stage 1 - 1st GRADE STANDARDS

Concepts

- Level 1 - Order two squares you can move. Then order three squares you can move. Then 4.
- Level 2 - Compare two squares. You can only move a third object used to compare the other two. The third object will be equal to or between the other two objects' length.
- Level 3 - Measure objects using small blocks that you line up.
- Level 4 - Measure objects using a group of joined blocks.
- Level 5 - Measure objects using a simple ruler, then asked how much bigger is Block "a" than block "b".

Standards by level

- Level 1 and 2 - **1.MD.1.** Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- Level 3 and 4 - **1.MD.2.** Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.
- Level 5 - **1.OA.6.** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).
 - **1.MD.2.** Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

Stage 2 - 2nd GRADE STANDARDS

Concepts

- Level 1 - Measure object with inches ruler. Then centimeter. No rounding needed.
- Level 2 - Measure in both inches and centimeter. They must round to the nearest inch or centimeter.
- Level 3 - Asked to measure a shape in inches or centimeters. They must pick the correct ruler to use and round the measurement if needed.
- Level 4 - You can not move the rulers. They must pick what units a measurement should be given in. They are told a shape is 12__ long. Estimate the length of an object in inches or centimeter. The estimation can be off by one number.
- Level 5 - Subtract the two objects' lengths to get the difference. Measure two objects tell difference in length in centimeters or inches. No rounding needed.

Standards by level

- Level 1 - **2.MD.1.** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- Level 2 - **2.MD.1.** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
 - **2.MD.2.** Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
- Level 3 - **2.MD.1.** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- Level 4 - **2.MD.3.** Estimate lengths using units of inches, feet, centimeters, and meters.
- Level 5 - **2.MD.1.** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
 - **2.MD.4.** Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
 - **2.OA.2.** Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
 - **2.MD.5.** Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

Stage 3 - 3rd GRADE STANDARDS

Concepts

- Level 1 - Numbers to 20. Measure five shapes and chart their lengths on bar graph. Then answer five questions with the information on the graph. What shape is the longest, how much shorter is shape one than shape two and how much longer is shape three than shape one.
- Level 2 - Measure ten shapes with an inch ruler marked halves and fourths of an inch and chart them on a line plot.
- Level 3 - Mass and volume of liquids. Measure volume or weight of liquid. Add liquid to the container until it reaches the desired volume or weight.
- Level 4 - Measure weight or volume of a liquid. They must pour the correct volume or weight of liquid into a container. They are given four cups each with different amounts of liquid in them. They must figure out what combination of cups would give them the correct amount of liquid when added to the big container.
- Level 5 - Figure out how much liquid was taken away or added to a container by using subtraction. Subtract the starting amount of liquid from the ending amount of liquid to get how much liquid was added. Subtract the ending amount of liquid from the starting amount of liquid to get how much liquid was removed.

Standards by level

- Level 1 - **3.MD.3.** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
- Level 2 - **3.MD.4.** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.
 - **3.NF.1.** Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.
- Level 3, 4 and 5 - **3.MD.2.** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

ACTIVITY

Click on the "Pet House Party" button from the main menu. The Pet House Party main screen displays the goal for the game, the personal best score, today's best score and the High Scores list (Lesson 7 – Figure 1).

Lesson 7 – Figure 1



Click on the Start button to begin the game. You will hear an explanation of the problem.

The type of activity or problem will vary greatly depending on the stage and level you are on. In this example (Lesson 7 – Figure 2) from stage 3, the problem involves using a ruler to measure an object and then finding the measurement on a graph. Connecting the measurements by a line, creates a graph.

Lesson 7 – Figure 2

Measure the shape and chart it on the line graph.

The image displays a game interface for a math activity. At the top, the instruction "Measure the shape and chart it on the line graph." is shown. Below this, a ruler is used to measure a blue square labeled "6". To the right, a line graph is plotted on a grid with a vertical axis from 0 to 5 and a horizontal axis from 0 to 6. The graph shows a blue line connecting points at (1, 2.5), (2, 0), (3, 0), (4, 3.5), and (5, 0). Below the graph are numbered boxes 1 through 6. The bottom section features a character, a level goal of 4038, a score of 1800, four hearts, and an OK button. The bottom-most navigation bar includes buttons for Back, Menu, Reset, Right (5), Level 2, Wrong (1), Exit, Help, and Next.

Once you have completed the quiz portion, you get to play the balloon popping game. In this game you try to earn points by moving your pet to the balloons to pop as many as required in each portion of the game. You earn more points by popping the same color balloon in a row. (Lesson 7 – Figure 3). Once you have popped as many balloons as you can, your points are added together to see if you qualify to move to the next level.

Lesson 7 – Figure 3



USING THIS GAME IN CLASS

Teacher-led –

- Pet House Party can be used to create an exciting whole class activity. It will be assumed that the teacher can display the game to the whole class and make the mouse available to the students. The teacher would then prepare the students for the game by going to the Measurement Practice and choosing the problems appropriate for the level of Pet House Party the class is working on. The teacher would start the practice and call on students to give the correct answer.
- Once the class is prepared for the measurement problems, the teacher would start the game and ask the class to vote on each answer as the

correct answer. The teacher would then click on the answer with the highest number of votes. The teacher would play the balloon popping game and ask the class to shout the color of balloons to be popped.

Student-led –

- The teacher divides the class into teams of 2 or 3. Sign the team in on the sign in page. The teams compete for the highest score. The team members alternate between answering the questions and throw attempts. As the game is played over several days or weeks, the team high scores will be shown in the high score list.
- Students line up and take turns answering for the class. Each student answers one problem. You may want the class to help with the answers or you may want them to be silent.

Lesson 8: Geometry Practice

OBJECTIVE

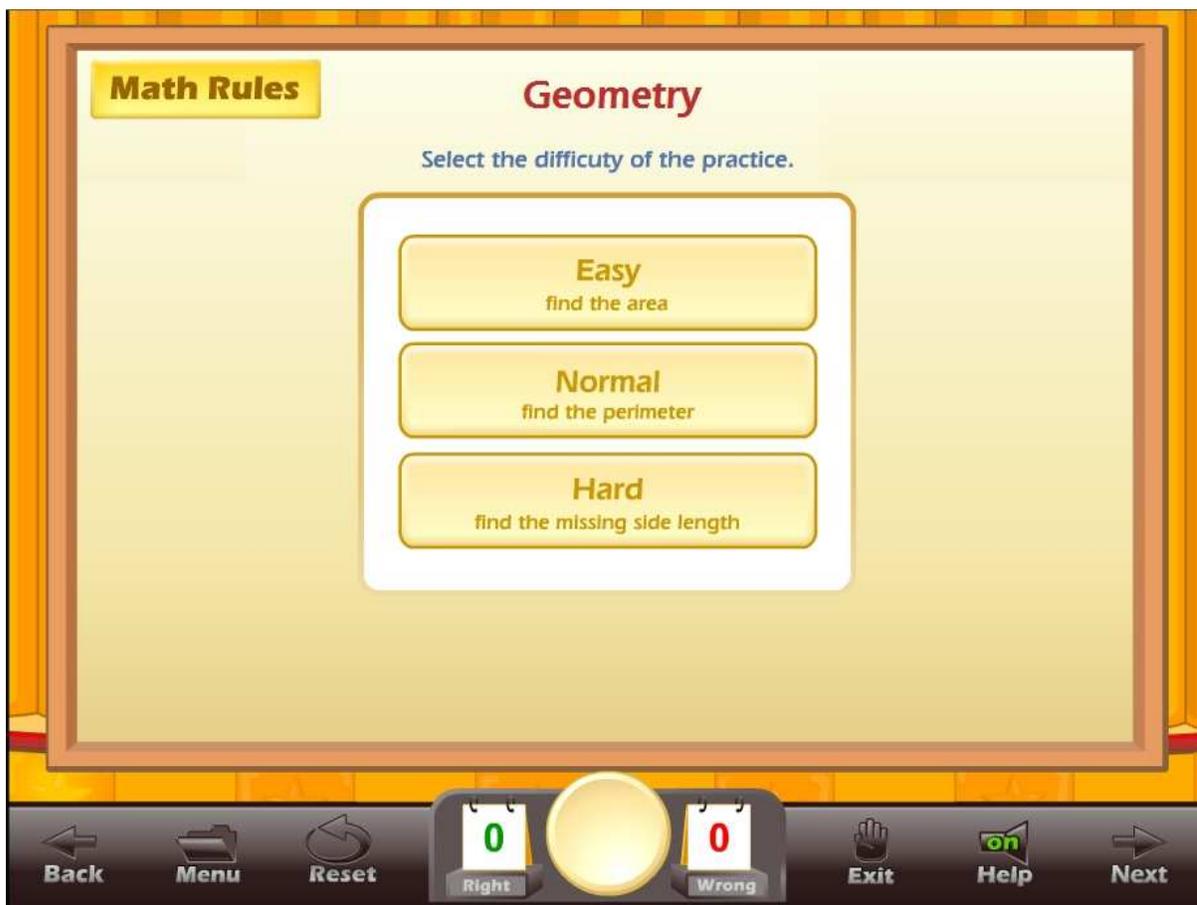
Students will prepare for the Puzzle Door game by practicing the name of shapes, finding the mathematical properties of shapes, and finding the perimeter and area of shapes in a timed or a non-timed test similar to flash cards.

ACTIVITY

Click on the "Measurement/Geometry Practice" button from near the bottom of the main menu. Click on the Math Rules for a short animated lesson on each subject. Then click on the "Geometry Practice" button.

Click on the type of geometry practice you want to do (the practices that are available will be determined by the stage you are on).

Lesson 8 – Figure 1



You can set the time limit you want for the test or you can set the number of questions. This system allows you to build a test of almost any length that you want. Click on the Start Practice button to begin.

Once a timed test begins, click on the correct answer. If a student clicks on a wrong answer, that answer will be grayed out and the student can try another answer (Lesson 8 - Figure 2). The time remaining is displayed at the top center of the screen along with the total score. The number of right and wrong answers is displayed at the bottom of the screen.

Lesson 8 – Figure 2

The screenshot shows a math test interface. At the top, it displays "Question: 5", "Time: 0:39", and "Score: 2". The main area features a green polygon on a grid. The polygon's side lengths are labeled: 6 (top), 1 (top-right), 1 (right), 2 (bottom-right), 5 (bottom), and 3 (left). Below the grid are three yellow buttons with the numbers 18, 17, and 16. Below these buttons is the instruction: "Find the perimeter by adding all the side lengths." At the bottom of the screen is a navigation bar with buttons for "Back", "Menu", "Reset", "Right" (with a green "4"), "Wrong" (with a red "2"), "Exit", and "Next".

Lesson 8 – Figure 3

Question: 15 Time: 0:04 Score: 6

2 3 3 4 5

?

9 7 12

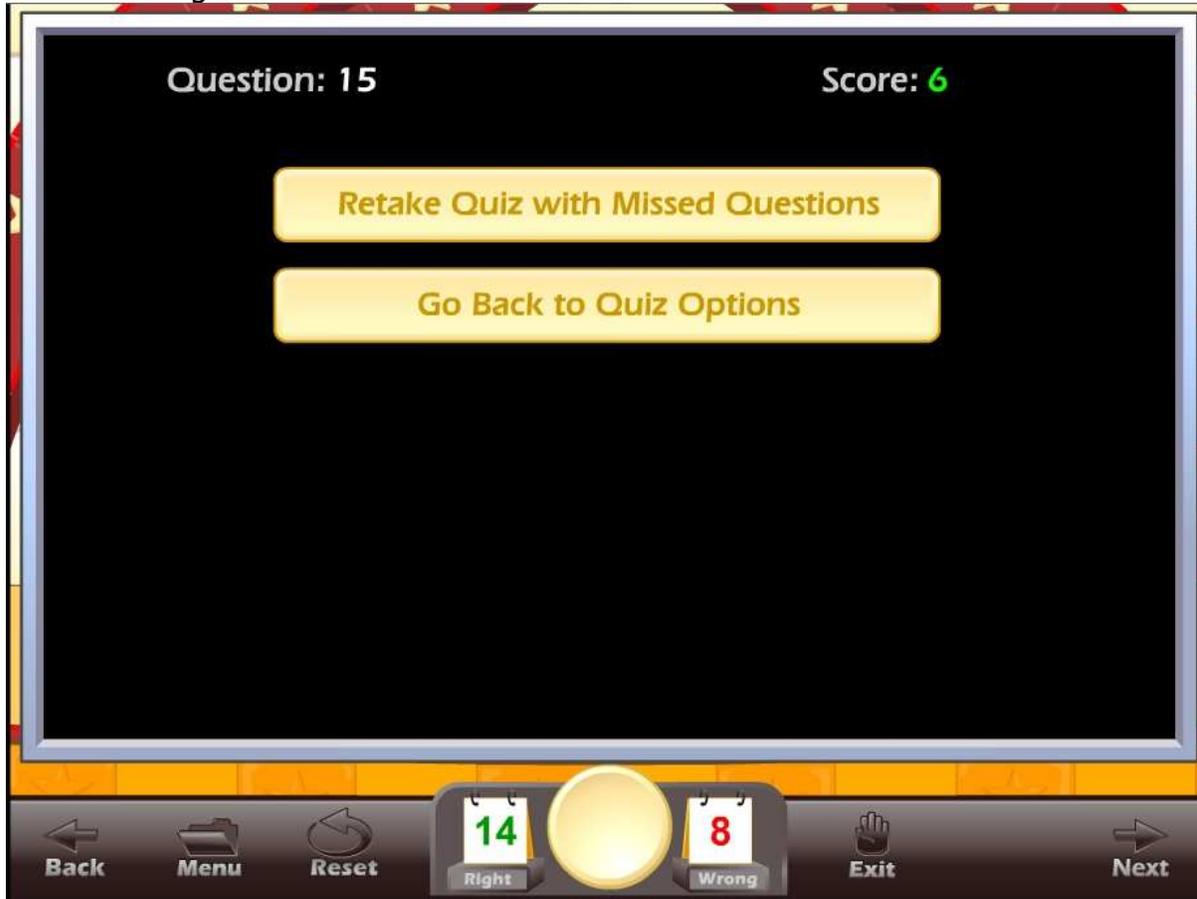
Find the missing side length.

Back Menu Reset 14 Right 8 Wrong Exit Next

Once the test is over and if the student missed 4 or more questions, a screen will appear with the following options (Lesson 8 - Figure 4):

- Retake Quiz with Missed Questions – this allows the student to retake the quiz and work on only the problems they missed.
- Go back to the Geometry Practice – where the student can select problems for another test.

Lesson 8 – Figure 4



USING THIS ACTIVITY IN CLASS

This activity can be used individually or it can be used as a great warm-up for the class, working on specific problem sets. There are many ways to making this an exciting class activity. Some of the ways to use this activity as a whole class activity are:

Teacher-led –

- Teacher clicks on the correct answer for the class, requires that the class come to a consensus on the answer.
- Teacher clicks on the correct answer, teacher calls on a student for the answer.
- Teacher divides the class into teams, the team leader answers for the team, the teacher clicks on the answer for the team.

Student-led –

- Students line up and take turns answering for the class. Each student answers one question.

- Teacher divides the class into teams; the teams compete for the highest score, the team captain clicks on the answers for the team.
- Students line up and take turns answering for the class. Each student answers as many questions as they can until they get a wrong answer.

Lesson 9 – Puzzle Doors

OBJECTIVE

Students will learn to solve geometry problems as they explore an ancient ruin. Students will understand that math is used to solve real life problems.

Stage 1 - 1st GRADE STANDARDS

Concepts

- Level 1 - Click on the shape that fits in the hole. The shapes are: squares, rectangles, circles, half circles, quarter circles, triangles, and trapezoids. They do not need to know the name of the shape. And all the shapes are the same color and they are not rotated.
- Level 2 - Click on the shape that fits in the hole. The shapes are: squares, rectangles, circles, half circles, quarter circles, triangles, and trapezoids. Now the shapes are all different colors and are rotated.
- Level 3 - You will be given a name of a shape and asked to click on all of the objects that are that shape. The shapes are: squares, rectangles, circles, half circles, quarter circles, triangles, and trapezoids. The shapes are all different colors and are rotated.
- Level 4 - You will be asked to finish a shape by clicking on the piece that will correctly finish the shape.
- Level 5 - You will be asked to finish a shape by dragging the two pieces that will correctly finish the shape. This requires more logic and thinking ahead because some pieces will fit in one spot but will not allow the second piece to finish the shape.

Standards by level

- Level 1, 2 and 3 - **1.G.1.** Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes.
- Level 4 and 5 - **1.G.2.** Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.

Stage 2 - 2nd GRADE STANDARDS

Concepts

- Level 1 - Shape name. You will see a group of shapes and be asked to click on all the: squares, rectangles, circles, half circles, quarter circles, triangles, trapezoids, pentagons, hexagons, octagons, cubes, rectangular prisms, circular cones, spheres, pyramids, and circular cylinders. The shapes will be different colors and will be rotated.

- Level 2 - You will have a large group of shapes and be asked to click on all the shapes that are three dimensional or two dimensional.
- Level 3 - You will be asked to click on the shape that is made up of halves, thirds or quarters. Near the end you will be asked to click on the piece that is half, a third, or a fourth of a given shape.
- Level 4 - You will be asked to click on the shape that is broken up into "N" number of equal pieces. "N" will be a number between 2 and 30.
- Level 5 - You will have a large group of shapes and be asked to click on all the shapes that have "N" number of: faces, sides, edges, corners or angles.

Standards by level

- Level 1 and 2 - **2.G.1.** Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
- Level 3 - **2.G.3.** Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.
- Level 4 - **2.G.2.** Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
- Level 5 - **2.G.1.** Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Stage 3 - 3rd GRADE STANDARDS

Concepts

- Level 1 - A shape will be girded of into equal pieces, square units. Find the area of a shape by counting the squares.
- Level 2 - Find the area of a shape by dragging 1square unit shapes on top of the shape.
- Level 3 - Add up all the side length of a shape to find the perimeter.
- Level 4 - You are given a shape and all of the side length except for one. Find the unknown side length of a shape.
- Level 5 - You are given a shape with two unknown side lengths and are asked to find the perimeter.

Standards by level

- Level 1 - **3.MD.6.** Measure areas by counting unit squares (square centimeter, square m, square in, square ft, and improvised units).
- **3.MD.5.** Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.

- **3.G.2.** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.
- Level 2 - **3.MD.5.** Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
 - **3.MD.7.** Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
- Level 3, 4 and 5 - **3.MD.8.** Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Lesson 9 – Figure 1



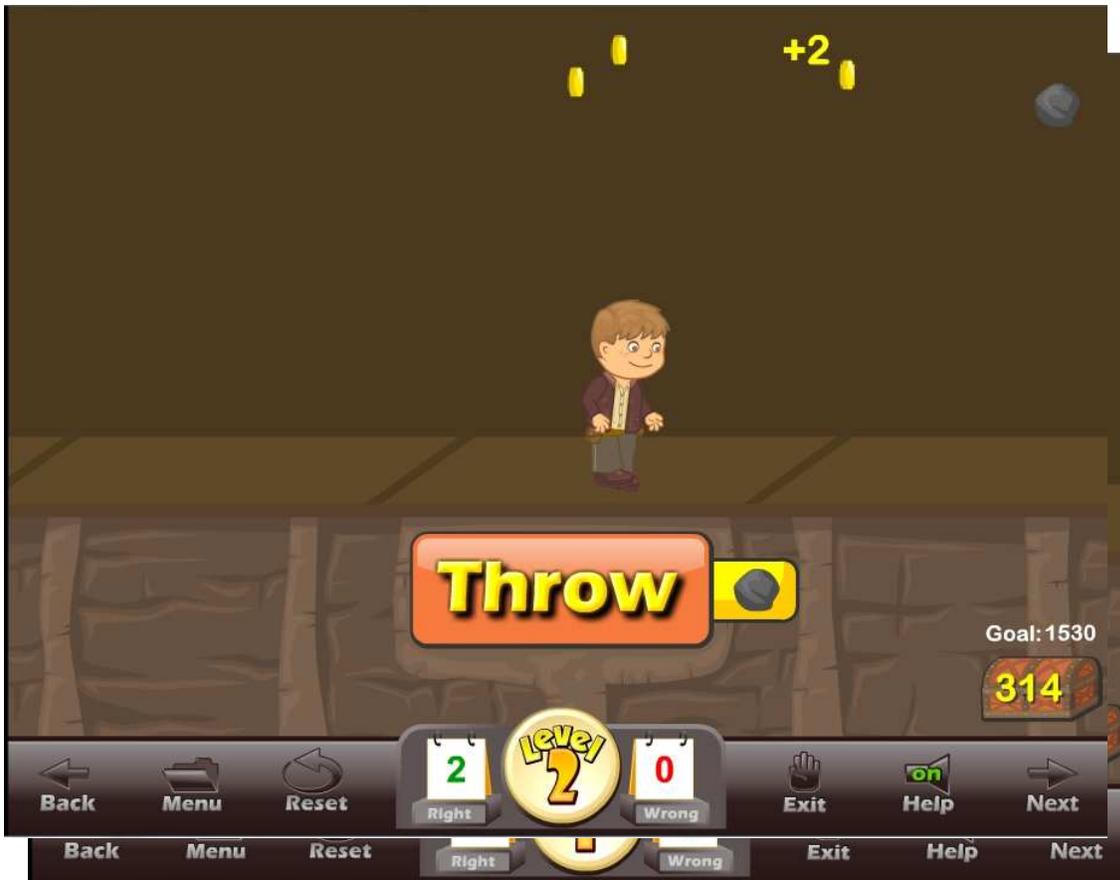
ACTIVITY

Click on the "Puzzle Doors" button from the main menu. The Puzzle Doors main screen displays the goal for the game the personal best score, today's best score, and the High Scores list (Lesson 9 – Figure 1).

Click on the Start button to begin the game. In this game you will be asked various geometry questions depending on the stage and level you are working on (Lesson 9 – Figure 2). Once you answer the question, you will move to the next area and capture gold coins and points by running, jumping or throwing (Lesson 9 – Figure 3 & 4). Meet the level goal to move up to the next level.

Lesson 9 – Figure 2





Lesson 9 – Figure 3 & 4

USING THIS GAME IN CLASS

Teacher-led –

- Generally, the teacher should only show a few examples of this game to the class. The class will pick up the game almost instantly.

Student-led –

- The teacher divides the class into teams. Sign the team in on the sign in page. The teams compete for the highest score. The team members alternate between the levels of the game. As the game is played over several days or weeks, the team high scores will be shown in the high score list.
- Students line up and take turns moving through the game and then answering the class. You may want the class to help with the answers, or you may want them to be silent.

Lesson 10: Time Practice

OBJECTIVE

Students will prepare for the Delivery Time game by practicing reading an analog clock, setting an analog clock and working with a time line in a timed or non-timed test similar to flash cards.

ACTIVITY

Click on the "Time Practice" button from near the bottom of the main menu. Click on the Math Rules for a short animated lesson on each subject.

Click on the type of Time Practice you want to do.

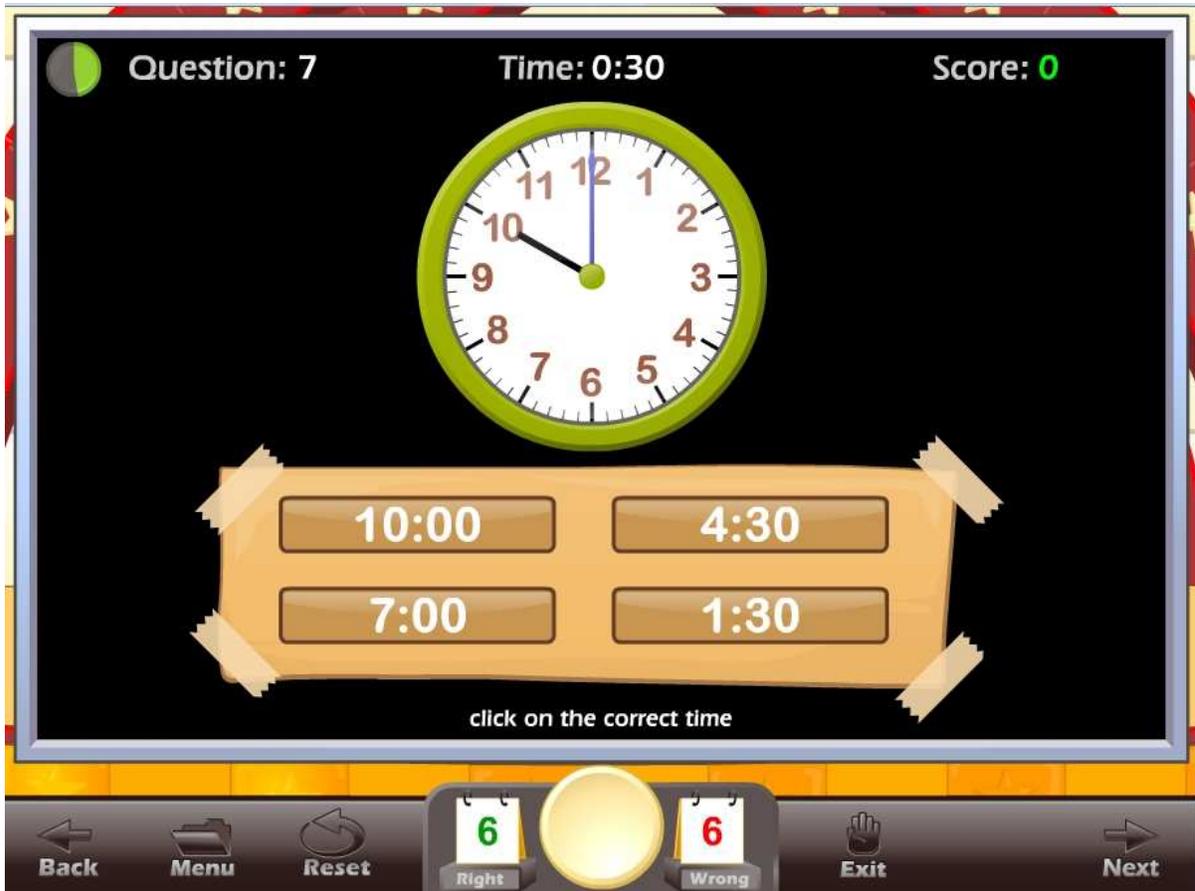
Lesson 10 – Figure 1



You can set the time limit you want for the test or you can set the number of questions. This system allows you to build a test of almost any length that you want. Click on the Start Practice button to begin.

Once a timed test begins, you can click on the correct answer. If a student clicks on a wrong answer, that answer will be grayed out and the student can try another answer (Lesson 10 - Figure 2). The time remaining is displayed at the top center of the screen along with the total score. The number of right and wrong answers is displayed at the bottom of the screen.

Lesson 10 – Figure 2

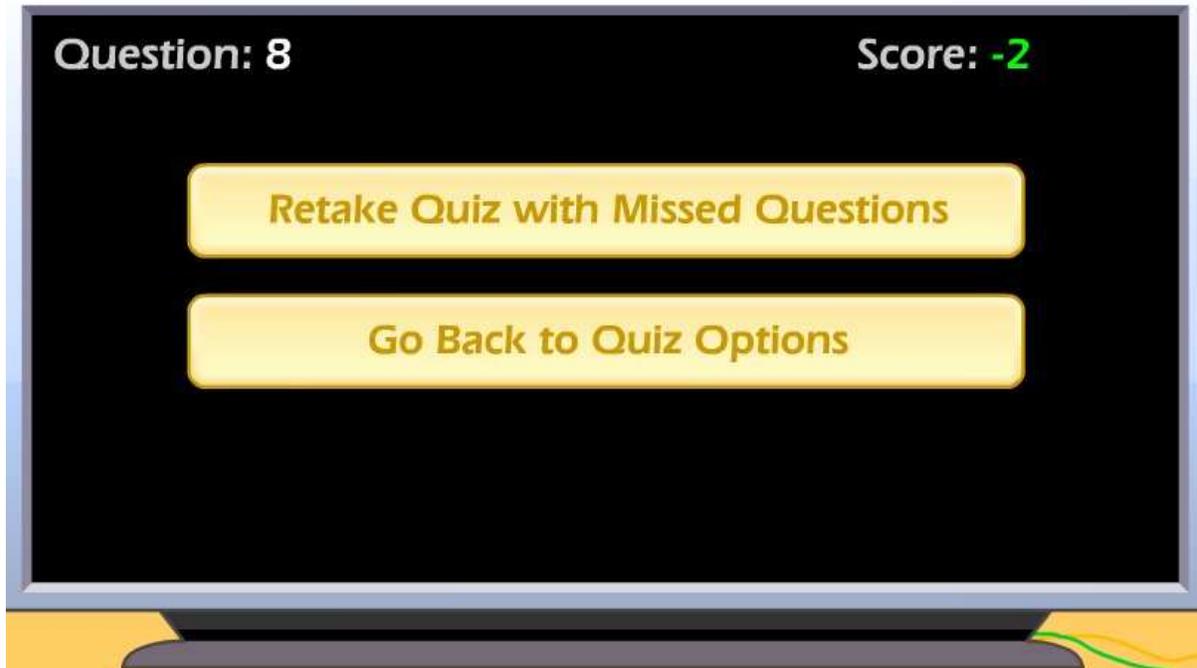


Lesson 8 – Figure 3



Once the test is over and if the student missed 4 or more questions, a screen will appear with the following options (Lesson 8 - Figure 3):

- Retake Quiz with Missed Questions – this allows the student to retake the quiz and work on only the problems they missed.
- Go back to the Time Practice – where the student can select problems for another test.



USING THIS ACTIVITY IN CLASS

This activity can be used individually or it can be used as a great warm-up for the class, working on specific problem sets. There are many ways to making this an exciting class activity. Some of the ways to use this activity as a whole class activity are:

Teacher-led –

- Teacher clicks on the correct answer for the class, requires that the class come to a consensus on the answer.
- Teacher clicks on the correct answer, teacher calls on a student for the answer.
- Teacher divides the class into teams, the team leader answers for the team, the teacher clicks on the answer for the team.

Student-led –

- Students line up and take turns answering for the class. Each student answers one question.
- Teacher divides the class into teams; the teams compete for the highest score, the team captain clicks on the answers for the team.
- Students line up and take turns answering for the class. Each student answers as many questions as they can until they get a wrong answer.

Lesson 11: Delivery Time

OBJECTIVE

Students will learn about AM and PM, how to read and set a digital clock and an analog clock and use subtraction with time. This game is designed to let students use problem solving and reasoning skills as they make decisions using time.

Stage 1 - 1st GRADE STANDARDS

Concepts

- Level 1 - AM and PM (am before noon, pm after noon). Events happen at different times of the day. The student is shown an event and asked if it happened in the first or second half of the day, AM before noon, PM after noon. Hint: a line graph representing the day is shown to help them see when the event took place.
- Level 2 - Read an analog clock with multiple choice answers shown as: 8 o'clock, 9 o'clock (with audio hints).
- Level 3 - Read an analog clock with multiple choice answers shown as digital times: 8:30 or 9:00.
- Level 4 - The student is shown a digital time and asked to click on the analog clock that shows that time.
- Level 5 - The student is shown a digital time and asked to set an analog clock to that time.

Standards by level

- Level 1, 2, 3, 4 and 5 - **1.MD.3.** Tell and write time in hours and half-hours using analog and digital clocks.

Stage 2 - 2nd GRADE STANDARDS

Concepts

- Level 1 - Read an analog clock with multiple choice answers shown as digital times: 8:05, 8:10 or 8:15.
- Level 2 - The student is shown a list of four events with times (go to store 11:30 am). They are asked to put the events in order by dragging them to a time line.
- Level 3 - The student is shown a digital time and asked to set an analog clock to that time. Time intervals of 5 minutes.
- Level 4 - Match the word sentence to the clock: e.g., five minutes after 9 o'clock.
- Level 5 - The student is asked how much time has passed? They are shown two clocks and must subtract the two times to see how much time has passed. Mix between digital and analog clocks.

Standards by level

- Level 1, 2, 3, 4 and 5 - **2.MD.7.** Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Stage 3 - 3rd GRADE STANDARDS

Concepts

- Level 1 - Read an analog clock with multiple choice answers shown as digital times e.g., 8:01, 8:03, 8:05.
- Level 2 - The student is shown a digital time and asked to set an analog clock to that time. Time intervals of 1 minute.
- Level 3 - The student is asked how much time has passed? They are shown two clocks and must subtract the two times to see how much time has passed. Mix Uses digital clocks.
- Level 4 - Time word problems: start at 9:15 work took 30 min. What time did they finish? Simple word problems. Find the starting time, end time or how long it took to do something.
- Level 5 - Time word problems: start at 9:15, work took 2 hours and 32 min. What time did they finish? Harder word problems. Find the starting time, end time or how long it took to do something.

Standards by level

- Level 1, 2, 3, 4 and 5 - **3.MD.1.** Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

ACTIVITY

Click on the "Delivery Time" button from the main menu. The Delivery Time main screen displays the goal for the game, the personal best score, today's best score and the High Scores list (Lesson 11 – Figure 1).

Lesson 11 – Figure 1



Click on the Start button to begin the game. You will be given a question about time. Click on the correct answer. If you answer the question without making any mistakes you will earn two packages. You will earn up to three water balloons per question by answering the question quickly. The next screen will explain the delivery game whereby you will deliver packages (Lesson 11 - Figure 2) and earn points. Your goal is to earn enough points to move to the next level.

During the delivering section of the game, your goal is to throw the package to one of the people. You will score more points the closer the package lands to a person. You can also use your water balloons to move obstacles out of your way and earn some extra points.

Lesson 11 – Figure 2



USING THIS GAME IN CLASS

Teacher-led –

- The teacher should demonstrate the game to the class (or ask a student to demonstrate the game). This is a fairly simple game that is sure to be one of the students' favorites.

Student-led –

- The teacher divides the class into teams. Sign the team in on the sign in page. The teams compete for the highest score. As the game is played over several days or weeks, the team high scores will be shown in the high score list.
- Students line up and take turns answering for the class and playing a turn at the game.

The Gold Star Progress Data Tracking System

- The Gold Star Progress page

The Gold Star Progress Page



Students (or teachers) can keep track of their progress by clicking on the Progress button from any page or screen.



Once you are inside a game, the progress button will display the level that you are working on. Click on the Progress button or Level button to go to the Gold Star Progress page.



The Gold Star Progress page displays the student's name and a graph showing the levels of achievement for each game. Click on the Details button to see a detailed view of the students' progress.

		Summary	Stage 1	Stage 2	Stage 3			
		Current Stage	Stage 1 Progress	Stage 1 Time	Stage 2 Progress	Stage 2 Time	Stage 3 Progress	Stage 3 Time
Super Star.061	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.062	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.063	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.064	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.065	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.066	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.067	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.068	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.069	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.070	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.071	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.072	Details	3	0%	0:00	0%	0:00	0%	0:00
Example Student	Details	1	3%	0:03	0%	0:00	0%	0:06
Super Star.074	Details	3	0%	0:00	0%	0:00	0%	0:00
Super Star.075	Details	3	0%	0:00	0%	0:00	0%	0:00

Click on the Details button to see a detailed view of the students' progress.

Our Gold Star Progress Motivational and Data Tracking System is a modified version of our Super Star Motivational and Data Tracking system used on our phonics courses. It serves as a way to reward students and motivate them to complete all of the levels of all of the games.

Most students love playing games and being challenged. Once they have "beat the level goal" for a few levels of a game, they want to continue to climb the levels until they have reached the Super Star level and received their certificate of achievement.

The Gold Star Progress page also serves as a guide to the teacher to all of the activities and games in the program.

Most students will use the Gold Star Progress page to navigate to the games. From the Gold Star Progress page, just click on the name of a game and you can go to that game.

Some teachers print the certificates and post them in the classroom. Other teachers create a Gold Star badge as an additional reward for students who have achieved a Gold Star Certificate.

Educational Application

- Uses
- Research and State Standards
- Instructional Design

Use of this Use of this program and this guide:

There are numerous ways to use Games of Math 2. This guide is primarily intended for the classroom teacher who is doing a whole class presentation. The guide assumes that you have some way of displaying the program to the entire class and that all of the students will be actively engaged in the presentation of the program.

Some of the other uses of the program:

Activity Centers: The program is certainly appropriate for use in activity centers because it is easy to use and students generally require very little assistance. Teachers can then use the progress page and reporting features to track the student's progress.

Some specific activity centers uses are:

1. Differentiated Instruction – working on specific and different skills needed by different students.
2. Remediation – working on specific below-grade-level skills.
3. Above Grade Level – working on skills not covered in class for students who require more challenge.

Besides the classroom, this program is also very appropriate for:

1. Computer Lab – site and network versions of this program are available to allow students to work at their own pace in a computer lab setting to build skills being covered in class or skills already covered above.
2. After-school programs – using after-school time to build and review skills required for advancement.
3. At-home Use – parents can purchase the program for additional reinforcement at home or schools can make the Super Star Online version available (at no additional cost) to students and parents for at-home use. Super Star Online features a special "Parent" button to encourage parents to work with their child at home.

Research and State Standards Correlations:

Games of Math 2 is research based. You can review our research and effectiveness studies at: <http://helpme2learn.com/school/research> .

State Standards Correlations – Games of Math 2 is correlated to the state standards of all 50 states. Each User's Guide and Lesson Plans contains the standards for that course. You can request standards for a specific state.

Instructional Design:

Instructional Theory – You expect a lot out of educational software and we try to deliver everything you expect and more. We subscribe to the theory of Multiple Intelligences as developed by Howard Garner. We believe that educational instruction is most effective when it is presented in a way that reaches as many intelligences and as many students as possible. Because we use multi-media, we can be very effective at doing that. This is not just a language arts program that appeals to the logical intelligences; this program appeals to almost every intelligence to develop reading skills and other skills at the same time.

Since you are using our software, it is obvious that you are committed to using all the tools available to you to make your class instruction more interesting and more multi-dimensional. We applaud your taking the extra effort to step away from the traditional lecture-only class instruction.

We also have the following objectives:

- Engaging and Fun - We try to make sure that our program will be engaging and fun. Our objective is to take the work out of learning phonics and make it play. Our objective is to change students' perception about language arts as being difficult and boring; turning it into something they love. We want language arts to become easy and understandable. We want our language arts games to be challenging, yet give a sense of accomplishment as students progress through the songs, activities and games. We believe that using our software can help change students' attitudes about learning and about school. Our programs are often the school activity that they look forward to the most.
- Educationally appropriate – This program was built on the topics as outlined in state standards. Our objective is to give you, the teacher, instructional support for the lessons you commonly teach in your classroom. Our goal is to help give your students a tool to master your lessons more quickly and retain the material longer. Our programs are particularly appropriate when students need a lot of repetitive practice. When students master the material quickly, you have more time to work on other or more advanced lessons.
- User-friendly – this is a buzzword that a lot of companies use. Our customers repeatedly tell us how user-friendly our software is and we are continually looking for ways to improve the user-friendliness of our software. We also believe that the software should be user-friendly to the teacher, so we give you additional controls in the Student Management section of the Teachers and Parents section so you can make it even more appropriate to your class, if you want to.

- Reporting – Besides our progress page, we offer printer-friendly reports that can be used to track the progress of the class or student. Our most detailed report is the Pre-Test and Post-Test report.
- Multi-cultural – we are committed to multi-cultural diversity and believe that it is important that kids recognize characters in the programs with similarities to them and other characters that are different. The main characters of this program are our “Super Star” kids which represent different races, skin and hair colors. We also include both male and female characters.

Whether your class is using this program in a computer lab with headphones, or you’re using an overhead projector to present lessons to the class, you’re sure to find the activities and games motivating and rewarding.

Super Star Online

- Overview
- Student Management System
- Parent Button
- At-home Use

Overview

Super Star Online is a web delivered subscription service to one or all of our Super Star titles.

Some of the other advantages of Super Star Online are:

1. Home use – There is probably no greater advantage than home use. Students will have access to the subscription anywhere they have access to the Internet. Many schools have days that are very full and they just don't have time to let students access the software as much as they would like. With our online version, students with a broadband connection can work in our courses at home and take as much time as they need to complete the lessons. Our online version even records how much time the students are in each lesson.
2. Parental Involvement – The next step with at-home use is to involve parents (or family members) in helping to motivate, track, and work with the child. One of the problems with parental involvement is that some parents don't know how to help their child with homework. **We make it easy for them.** We have added a special "Parent" button to help parents use Super Star Online. The "Parent" button allows parents to view the vocabulary words, activities and games without data tracking, so they do not affect the scores or data tracking of the child. Parents can review the lessons so they know what is required of the child. We offer a wonderful and enjoyable way for parents to work with the school to become involved in the educational success of their child.
3. Family Literacy – Some parents may not have the math skills needed to help their child. Our "Parent" button gives the parent an opportunity to improve their math skills along with their child. We believe that a better educated parent will be better prepared to help their child.
4. Easy IT – Our Online version makes it easier for the school's IT department. They don't have to maintain a server, they don't have to worry nearly as much about which operating system the software will run on, and they don't have to worry about security issues with their network. Our online system is supported by most modern operating systems and web browsers.

5. Quick Updates – When we make improvements to our course titles or add course titles, the updates will be available to all students as soon as we make them. You don't have to be concerned with which version you have or if you need to upgrade.
6. Quick Delivery – Once we receive your purchase order, we can get you online in a matter of hours.
7. Remote Administration – For districts or schools that stretch their IT department, our online version allows complete administration of the courses from any location.

Class Management System

Many of the features of Super Star Online are managed by the site administrator. Those features include: importing student names, assigning user names and passwords to the students and teachers, setting up classes and assigning students and teachers to those classes, assigning courses to the classes.

As a teacher, we encourage you to work with the site administrator to organize the system in the most effective way for your classroom. This may mean that you may request sub-classes for students with different program titles available to those in each group. For example, if your last name is Teacher, you might have a class called "Ms. Teacher A" with 14 students and access to Phonics 1a and Phonics 1b. You might also have a class called "Ms. Teacher B" with 8 students and access to Phonics 2a for more advanced students.

It is relatively easy for the site administrator to add or change the names of classes and assign students and programs to classes. But, depending on your school or district, it may not be so easy to get the site administrator to do these tasks for you.

We now offer teachers a way to do most of the class management tasks. The teacher will login to Super Star Online using their teacher account and:

1. Click on "Classes", to see the courses that are assigned to the class by the site administrator. The teacher can then click on "Edit Class" and add or remove the assigned courses by checking or unchecking the courses. The students will only have access to the courses that are assigned to the class.
2. The teacher can then scroll down to Members and check that all that all of the students have been assigned to the class. If the teacher sees the name of a student who should be included in the class, the teacher can check the name or the teacher can uncheck a name to remove the student from the class. Then click on "Update" to make the changes.
3. **Adding a Student.** If the teacher needs to add students that are not already in the system, the teacher can click on "Students". To add a student,

- the teacher would click on "Add Student". The teacher would enter the first name and last name of the student, would check the class, would enter a login name (note: read the instructions below Login Name – do not use a login name that is already in use and do not use capital letters), would enter a password, confirm, check Active? Click on "Create". (Note: the school has purchased a number of user seats and teachers cannot enter active students if that number has been exceeded).
4. Teachers can also remove a student from the class. Click on "Students", then I suggest next to "Arrange by" – click on the down arrow and click on Class to get a class list. Click on "Edit" by the name of a student and uncheck the name of the class and then "Update".

If a student is no longer at the school, the teacher can make that student inactive (making a student inactive means that the student will no longer take an active seat and will no longer be counted against the number of seats the school has purchased) uncheck "Active?" at the bottom of the screen, then Update.

Note: the user/login name and password was probably determined by the site administrator. If you find user name or password to be too difficult for your students or if a student cannot remember their password, you can change it. For security purposes, our system does not show the password, but you can change it by entering a new password in the box and confirm. Please coordinate any changes with your site administrator. If the courses are also used in a computer lab, please coordinate any changes with the computer lab instructor.

Teacher Resources

Teachers should have access to our Teacher Resources class and our Teacher & Admins Resources course. The teacher will sign in to Super Star Online using their teacher account. Click on Class and locate the Teacher Resources class. Open the class and locate the Teacher & Admins Resources course. Open the course to find video tutorials and printed instructions that will help you use the many teacher features of Super Star Online.

Also in the Teacher Resources class, you should find Super Star Movies which are movies of our songs and presentations. These movies are meant to be projected to the class as you would project any movie. You may want to play the songs without projection.

Student Management System

To access the Student Management System, click on the Teacher & Admins button found on the contents page.



Teachers & Admin button



The next screen shows the menu for the Teachers and Admin section. The Print Pages, Credits, and How To Use The Program sections are all very similar to the CD-ROM version and will not be covered.

Click on the Student Management button to enter the Student Management System.



1. Game Locks & Difficulty: contains the teacher controlled setting for the program. These controls allow the teacher to set the program to run in the progressive manner (meaning that students must complete each lesson, before moving on to the next lesson), controls for the difficulty level, assignment of stars, and activity locks.

2. Test Locks & Features contains settings to control access to the program and to the Pre-Test and post-test as well as printing.

3. Parent Mode: contains setting to control the Parent Mode features.

4. Reset Default Class Settings: allows the teachers controls to be reset to the default.



The Game Locks & Difficulty menu allows you to apply the setting to all the students in the class or to an individual student. Our programs are designed to be fun and to make learning fun. Our programs are made so that students can easily navigate through the programs and advance through the levels of each game. They will be motivated to earn all the Gold Star fore each game as they complete each level in that game. The ultimate goal is to complete all of the levels of each game and earn the Games of Math 1 certificate.



Individual Student Game Settings – click on the Individual Student Game Settings button to start. The first screen shows a list of the students in the class, click on the name of the student that you want to apply the individual setting to.



Game Locks & Difficulty - The next menu has a list of activities in the Game Name column. Scroll down to the game you want to control. The Starting Level column shows the current level the student has earned for each stage. The teacher can click on this button to change the starting level.



Set Level - It is possible that a teacher might want to set the level that the student is working on. Set the level higher to make the problems more challenging.



The Difficulty level setting can be changed to help make the course more appropriate for the student. The difficulty setting changes the points required to move up to the next level.



The final setting is the Lock. Here teachers can lock or unlock specific games. Click on an unlocked (open green lock) to lock it (turns red locked). Generally, you might rather use the class settings to set this lock for the entire class.



Click on the Class Game Settings button to apply settings to the entire class. These settings are similar to the individual settings only they will be applied to the entire class. The class settings will override individual settings.

Test Locks & Features – click on the Test Locks & Features button to see the Test Locks & Features menu.

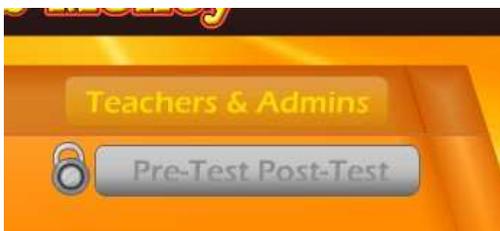


The Lock Printing button is unlocked by default. This means that anyone can use the print features within the program to print pages such as the Gold Medal Progress page reports, the Gold Medal Certificate of Achievement and any other print page. If you lock the printing, teachers will still be able to print the class and detailed reports.

To lock printing, click on the Lock Printing button. The button will turn red, the lock will show locked and the check box will be checked. Locking printing will help prevent students from printing pages that you did not want them to print, but you will need to turn this feature on if you want them to print their Certificates of Achievement.

To lock the program, click on the Lock Program button. This would prevent students from having access to any of the main program. This would typically be used if you want them to do the Pre-Test or post-test.

Click on the Lock Post-Test button to lock the post-test portion of the program. This is usually a good idea; however, if a student does do a post-test, it will be replaced the next time they do a post-test, so it generally isn't a problem.



Click on the Lock Pre-Test & Post-Test button to lock the test portion of the program. This will prevent students from taking the tests without your permission. If you click on the Lock Pre-Test & Post-Test the button will appear grayed out on the main contents page

and will show locked.

Click on the Lock Individual Tests if you want to lock any of the individual tests.

Parent Mode



Parent Mode – we believe that our Super Star Online presents a wonderful opportunity for parental involvement. Parents will now have an opportunity to take a more active role in helping their child. Parents can review the lessons, review the progress of their child and print a report as often as they would like.

When parents use the Parent Mode, think of it as a practice mode. Parents can play the games and activities and none of their scores are permanently recorded, their scores do not affect the scores of their child. Parents can become familiar with the lessons their child is working on, so they will be better able to help their child with those lessons. Parents can practice the games and activities with their child, then exit the Parent Mode and let their child do the work. Parents who need help with their literacy and phonics skills can use the Parent Mode to learn along with their child.

We believe that there are many benefits to having the school, the teacher, the student and the parents all working together as a team to insure the success of the student. We believe that Super Star Online can greatly improve the effectiveness of this team. But we recognize that encouraging parental involvement takes a bit of work. Many parents aren't used to being involved. We believe that Super Star Online makes it easy and fun for them to be involved and is a unique way to encourage their involvement. But it takes the school, the teacher, and the student to make sure that they know about Super Star Online and how they can be involved. Please make every effort to let the parents know about your subscription and encourage your students to involve their parents.

When the Parent Mode is enabled (by default), the student and/or parent will see a Parent button on the main contents screen of the course. Parents can then click on the Parent button to enter the course in the Parent Mode. Should teachers decide that they don't want to use this feature, they can disable it by clicking on the Parent Mode button. The Parent Mode button will then show locked, will turn red and will be checked. The Parent button will not be displayed to the student.



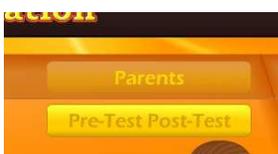
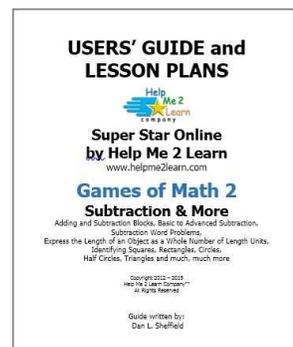
Write a Message to Parent – click on this button to display the write a message screen. This screen allows you to write a message that can be viewed by all the parents who use the Parent Mode. The idea of this screen is to allow you to communicate with parents something about what the students are working on and what is expected of them. You can use it anyway you want. You can type directly into the box or you can paste text into the box (keyboard command: control + V). You should remember that all parents will see the same message and that you will need to change the message from time to time. Don't forget to click on Save to save the message.

	Parent Program Time	Student Program Time	Student Program Progress
Super Star 061	0:00	0:00	0%
Super Star 062	0:00	0:00	0%
Super Star 063	0:00	0:00	0%
Super Star 064	0:00	0:00	0%
Super Star 065	0:00	0:00	0%
Super Star 066	0:00	0:00	0%
Super Star 067	0:00	0:00	0%
Super Star 068	0:00	0:00	0%
Super Star 069	0:00	0:00	0%
Super Star 070	0:00	0:00	0%
Super Star 071	0:00	0:00	0%
Super Star 072	0:00	0:00	0%
Example Student	0:00	0:11	1%
Super Star 074	0:00	0:00	0%
Super Star 075	0:00	0:00	27%

View Parent Mode Data – once you have your parents working with their children, you can run a report to see how much time the parents are spending in the Parent Mode. Click on this button to see a report of the total parent time, student time and student program progress.

The final button on this menu resets all of the class settings to the default. Use this button if you have made some settings that are giving you some problems or if you just want a fresh start for your class settings.

Users' Guide/Lesson Plans – click on this button to view our Users' Guide and Lesson Plans. This is an Adobe Acrobat (.pdf) file and you will need to have the free Acrobat reader (www.adobe.com) installed on your computer in order to be able to view this file. Once you can view this file, you can print any of the pages you want. This file contains some helpful tips, a lesson plan for each of the lessons in the course, the words to the words in the Learn the Words sections, and printable activity pages.

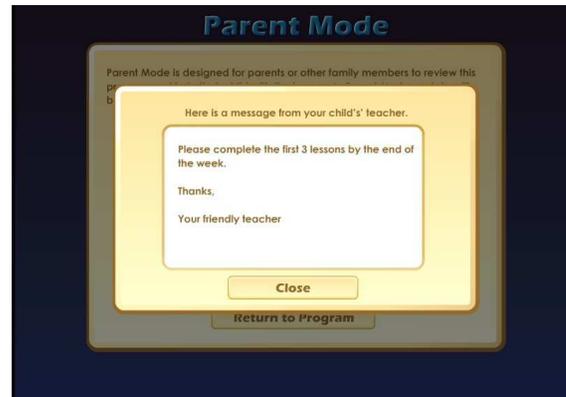


Understanding the Parent Mode

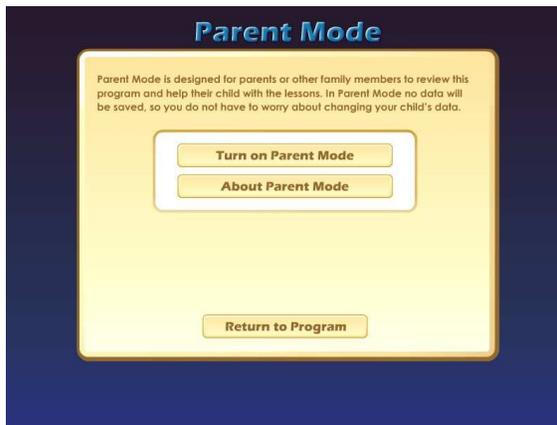
The Parent Mode – teachers can only see the Parent Mode if they look at it from a student account. Students and Parents will see a "Parent" button on the main menu or contents page

(the button is in the same location as the Teachers' & Admins' button from a teacher account. Click on the Parent button to enter the Parent Mode menu.

Message from the Teacher – if the teacher has written a message, the parents will see the message when they first enter the Parent Mode. If the teacher has not written a message, this screen will not appear. The purpose of this screen is to give parents some guidance as to what lessons the child is working on and what is expected of the child.



Parent Mode



Menu – the Parent Mode Menu is simple, there is a brief explanation of the Parent Mode, a button to start the Parent Mode and a button to read more about the Parent Mode. Parents can also return to the program without starting the Parent Mode.

Think of the Parent Mode as a practice mode. Parents can play any of the activities or games without affecting the reporting or the progress of the student. The only tracking that occurs is the total amount of time that the parent spends in the Parent Mode. This data is only available on a report to the teacher.



Parent Mode Menu 2 – when the parent clicks on the Turn on Parent Mode button, they will see the next screen that confirms they are now in the Parent Mode. They should notice the Parent Mode button at the bottom of the screen; this indicates that they are now in the Parent Mode. From this screen they can turn off the parent mode, read about the Parent Mode, view a progress report for their child or view the message from the teacher (if there

is one).

View Your Child’s Progress – click on this button to view or print a progress report. The top of the report will show the progress through the course and the bottom of the report will show the progress of the Pre-Test and Post-Test. Click on the Print button next to the Parent Mode button to print this report. Parents can also track the progress of their child from the Gold Medal Progress page; however they need to turn off the Parent Mode in order to be able to navigate to the Gold Medal Progress page.

Progress page – Parents can view and print progress pages for their child from the Progress page. There are two different views on the Progress page:

- the Chart view
- the Details view



Each view presents the progress in a different format and is designed to help track the progress of the student. Once a student has earned completed all of the levels of a game, the star at the top of the game will turn gold and the student can (with your permission) print a certificate of achievement, for that game. When a student completes all of the levels, the student can print a certificate of achievement for Games of Math 3.

Parent Mode Button – to begin using the course in the Parent Mode, the parent would click on the Return to Program button. When in the Parent Mode, the Parent Mode button will be displayed at the bottom center of the screen. Parents can click on the Parent Mode button to return to the Parent Mode screen and turn off the Parent Mode.

It is our hope that the Parent Mode will be a valuable asset to the school, the teacher, the student and to the parent. Super Star Online provides a unique opportunity for the school to provide an easy to use and fun way for parents to work with their child at home. The level of parent involvement will obviously vary greatly. Some parents will only occasionally check the progress of their child, while some parents will be actively involved. We also encourage parents to use Super Star Online to build their skills as they work with their child.

At-home Use

We have provided the tools to enable your students to use Super Star Online at home, however at-home use will need your support and encouragement to be used. Here are some suggestions for encouraging at-home use.

1. Send a letter home with your students advising the parents that Super Star Online is available and encouraging the parents to work with their child at home. We have a sample parent letter available at www.helpme2learn.com/support/online . Please use this letter as a guide. To complete this letter you will need the user name and password of each student, you should be able to get these from your school's site administrator. You will use the same URL (web address) that you use in your classroom.
2. Remind your students to ask their parents to work with them at home.
3. After a couple of weeks, run a report to see how many parents have logged in and are using the program in the Parent Mode. You may need to send a follow up letter to parents who are not working with their child at home.
4. Whenever you have an open house or meeting with parents, let them know about Super Star Online and how they can use it to work with their child.
5. Suggest to your school administration that they hold a special Super Star Online night where your school explains the use of the program to the parents. You might be able to incorporate this as part of a back to school night or PTA meeting.
6. Use the message center and write a message on a regular basis to your parents. Let them know what lessons you are working on and what to expect from their child.

Some students will not have access at home. Encourage these students to seek out alternative access sites such as the public library, after school programs or relatives who do have Internet access.

The goal of Super Star Online is to build a better bond between the school, the teacher, the student and the parents. This stronger bond will build a better team all working together. We call this the Super Star Strategy for Success.

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