

# A Guide to Using Math Lab™



FUNDAMENTALS OF LEARNING

**VTECH**®

**Dear Parent:**

You know how important learning is to your child's future. No matter what path your child chooses in life, learning fundamental skills provides the building blocks for future success. A solid foundation is absolutely essential.

That is why VTech® designed the **FUNDamentals of Learning™** system. This integrated line of learning products focus on one of three key subject areas - Reading, Math or Language. VTech®'s multi-sensory approach to diverse learning styles (incorporating auditory, visual and tactile stimulation) reinforces and complements the subject matter your child is learning, or will learn, in school. The **FUNDamentals of Learning™** system provides your child with interactive toys that stimulate, engage, and reward your child in productive play.

Above all, VTech® puts FUN into fundamentals! Children think they're playing, but they're actually learning. So their confidence grows, their self-esteem grows and their appetite for learning grows, too.

As a parent, you take the most critical role in establishing an active learning environment. We encourage you to participate in the **FUNDamentals of Learning™** system together with your child. You'll see first hand the progress your child is making. Have fun!

For 25 years, millions of parents, just like you, have trusted VTech® with the most important job in the world, helping their children learn and grow. As your child grows, count on VTech® to be there with fun, innovative, learning toys to help your child do his or her best every step of the way.

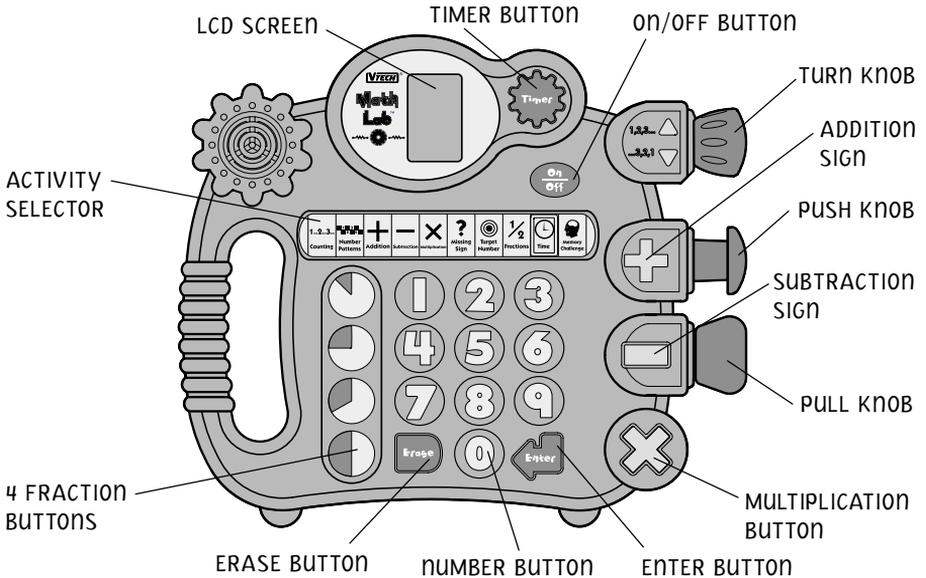
We thank you for entrusting us with the responsibility of helping prepare your child for his or her future successes. We look forward to developing your child's fundamental skills further while encouraging a lifelong love of learning.

Sincerely,

Your Friends at VTech®

To learn more about the **FUNDamentals of Learning™** system and other VTech® toys, visit [www.vtechkids.com](http://www.vtechkids.com).

# Math Lab™

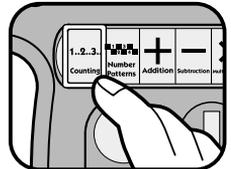


## TO BEGIN PLAY

1. To begin play, press the **ON/OFF** button to turn the unit on. You will hear a short tune followed by “Gear up!”



2. Slide the activity selector left or right to select one of the ten activities. A friendly voice will guide you through each of the following activities:

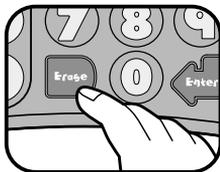


1. **Counting**
2. **Number Patterns**
3. **Addition**
4. **Subtraction**
5. **Multiplication**
6. **Missing Sign**
7. **Target Number**
8. **Fractions**
9. **Time**
10. **Memory Challenge**

3. To turn the unit OFF, press the **ON/OFF** button again. You will hear a short tune followed by “Bye-bye.”



4. Use the **ERASE** button to delete any answers inputted before the **ENTER** button has been pressed. Use the **ENTER** button to confirm all answers.

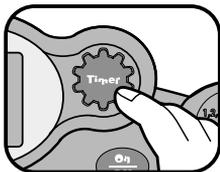


5. In each activity, you will be asked to pick a level. You can enter the numbers 1, 2 or 3 to choose the level. You can also use the twisting knob. Once the level you want is highlighted, press the **ENTER** button to select it.

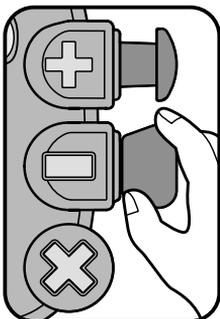


6. The unit will automatically go into Normal Mode. In this mode, once you have successfully answered 10 questions in a round, you will advance to the next level.

7. If you wish to enter the Timer Mode, press the **TIMER** button at any time. While in the Timer Mode, you will hear “4,3,2,1, Ready, go!” There are 3 different grades in the TIMER mode and you will advance to the next grade after you complete a round. Each round consists of 10 questions. Your time to complete each round will be recorded and displayed. If a round is completed faster than the previous one, you have made a new record and this time will be displayed. You will advance to the next grade once you answer all the questions in the round correctly. The higher the grade and the faster you complete a round, the shorter your time will be to complete the next round. Once you have completed the third grade, you may choose to play again. While in TIMER Mode, you may choose to play different activities but in order to return into Normal Mode, you must press the **TIMER** button.



8. Each of the knobs located on the right-hand side of the unit perform a specific mathematical function. The count knob represents “counting”, the push knob represents “addition (+)”, the pull knob represents “subtraction (-)” and the push button represents “multiplication (x).”



# MATH LAB™ ACTIVITIES

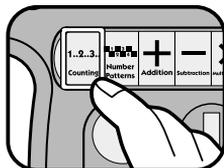
## ACTIVITY 1 - COUNTING

This activity develops your child's understanding of numbers, and by adding more objects, these numbers represent the concept of counting. Your child will be asked to count the number of objects he or she sees on the LCD screen.

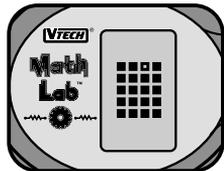
**Learning Benefits for Your Child** - Counting helps to show your child the basic concept of adding one by one in order to find the total number in a collection. This foundation allows children to begin the basic understanding of number usage in addition and subtraction.

### ACTIVITY INSTRUCTIONS:

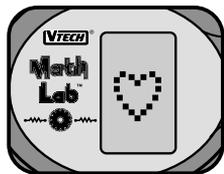
1. Slide the activity selector to "Counting." You will hear a short tune and a friendly voice will say "Pick a level."
2. After selecting a level, you will hear the level repeated followed by "Count the dots." In this activity, all answers need to be inputted from left to right.



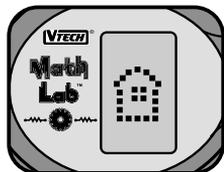
3. In Level 1, the square animations on the LCD screen will flash and the unit will repeat the number of squares displayed. You will hear "Input your answer." If you answer correctly, you will hear "You've got it!" You will then advance to the next question. You have three chances to answer each question, but if you answer incorrectly on your third try, you will hear an incorrect sound effect and the answer will be shown.



4. In Level 2, count and enter the number of dots arranged in a shape shown on the LCD screen.



5. In Level 3, count and enter the number of dots arranged as an object shown on the LCD screen.



6. If you answer correctly in Levels 2 and 3, you will hear "You've got it!" If you answer incorrectly, you will hear "Oops, try again" and you will be able to answer again. If you answer incorrectly on your third try, you will hear an incorrect sound effect and the unit will count the dots. You will hear "This is the answer" and the answer will be shown on the LCD screen.

## MATH LAB™ ACTIVITIES

### ACTIVITY 2 - NUMBER PATTERNS

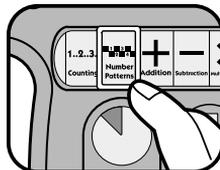
This activity develops your child's number patterning skills. It will present your child with number patterns and ask your child to find the next number within the pattern presented.

**Learning Benefits for Your Child** - Number Patterns helps to show your child that numbers follow a certain pattern. It allows him or her to identify and work with patterns in the number system. Number patterns serve as the basis for multiplication and division.

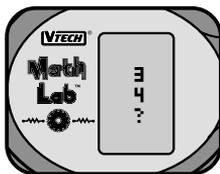
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#### ACTIVITY INSTRUCTIONS:

1. Slide the activity selector to "Number Patterns." You will hear a short tune and a friendly voice will say "Pick a level." In this activity, all answers need to be inputted from left to right.



2. You will be shown a set of numbers and you must figure out what the number pattern is between the three numbers.



3. You will need to input the missing number from the pattern. Your answer will be repeated and if you answer correctly, you will hear "You've got it!" You will then advance to the next question. If you answer incorrectly, you will hear "Oops, try again" and you will be able to enter your answer again. If you answer incorrectly on your third try, you will hear an incorrect sound effect followed by "This is the answer." The answer will be shown on the LCD screen and it will also be repeated.

# MATH LAB™ ACTIVITIES

## ACTIVITY 3 - ADDITION

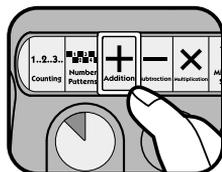
This activity will allow your child to demonstrate his or her knowledge of addition skills. Your child will have a chance to add objects together through the display of square animations and to add by viewing a numeric equation.

**Learning Benefits for Your Child** - Addition helps your child understand the concept of adding numbers to obtain a sum, or the whole amount. By understanding this concept, your child will begin to apply his or her knowledge by solving problems.

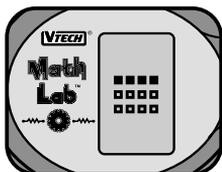
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### ACTIVITY INSTRUCTIONS:

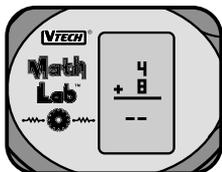
1. Slide the activity selector to “Addition.” You will hear a short tune and a friendly voice will say “Pick a level.” In this activity, all answers need to be inputted from right to left.



2. In Level 1, the LCD screen will display square animations to represent an equation.



3. Next, a numeric equation that represents the squares previously shown will be displayed. The unit will say “Input your answer.”



4. If you answer correctly, you will hear “You’ve got it!” You will then advance to the next question. If you answer incorrectly, you will hear “Oops, try again!” The square animations will be shown on the LCD screen and you will be able to enter your answer again. If you answer incorrectly on your third try, you will hear an incorrect sound effect followed by “This is the answer.” The answer will also be repeated.

5. In Levels 2 and 3, you will not be given the square animations, only the numeric equations to solve.

## MATH LAB™ ACTIVITIES

### ACTIVITY 4 - SUBTRACTION

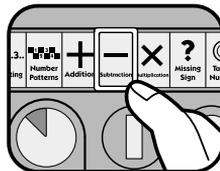
This activity will allow your child to demonstrate his or her knowledge of subtraction skills. Your child will have a chance to subtract objects from a total through the display of square animations and to subtract by viewing a numeric equation.

**Learning Benefits for Your Child** - Subtraction helps your child understand that to take away a number or deduct, he or she is subtracting. By understanding this concept, your child will begin to apply his or her knowledge by solving problems.

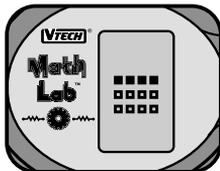
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#### ACTIVITY INSTRUCTIONS:

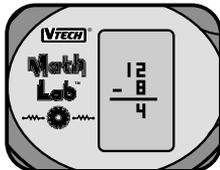
1. Slide the activity selector to “Subtraction.” You will hear a short tune and a friendly voice will say “Pick a level.” In this activity, all answers need to be inputted from right to left.



2. In Level 1, the LCD screen will display square animations to represent a numeric equation. The squares that are not completely filled in are what are being taken away. The solid squares are what you have remaining.



3. Next, a numeric equation that represents the squares previously shown will be displayed. The unit will say “Input your answer.”



4. If you answer correctly, you will hear “You’ve got it!” You will then advance to the next question. If you answer incorrectly, you will hear “Oops, try again!” The image will be shown on the LCD screen and you will be able to enter your answer again. If you answer incorrectly on your third try, you will hear an incorrect sound effect followed by “This is the answer.” The correct answer will then be shown on the LCD screen.

5. In Levels 2 and 3, you will not be given the square animations, only the numeric equations to solve.

# MATH LAB™ ACTIVITIES

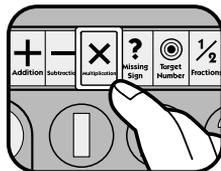
## ACTIVITY 5 - MULTIPLICATION

This activity asks your child to solve a variety of multiplication questions by entering answers using the number buttons.

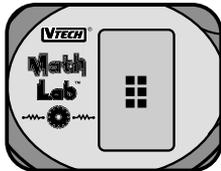
**Learning Benefits for Your Child** - Multiplication allows your child to begin understanding a short way of finding out what would be the result of adding a figure the numbers of times indicated by another figure. It provides an opportunity for your child to solve problems and advance their math knowledge.

### ACTIVITY INSTRUCTIONS:

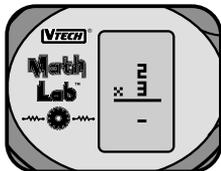
1. Slide the activity selector to “Multiplication.” You will hear a short tune and a friendly voice will say “Pick a level.” In this activity, all answers need to be inputted from left to right.



2. In Level 1, the LCD screen will display square animations to represent an equation.



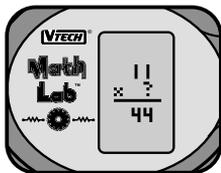
3. Next, a numeric equation that represents the squares previously shown will be displayed. The unit will say “Input your answer:”



4. If you answer correctly, you will hear “You’ve got it!” You will then advance to the next question. If you answer incorrectly, you will hear “Oops, try again!” and you will be able to enter your answer again. If you answer incorrectly on your third try, you will hear “This is the answer” and the answer will be repeated.

5. In Level 2, you will be given a series of numeric equations to solve.

6. In Level 3, you will be given a numeric equation with a denominator missing. You must determine and enter what the missing number is so it equals the answer given.



7. If you answer correctly, you will hear “You’ve got it!” You will then advance to the next question. If you answer incorrectly, you will hear “Oops, try again!” and you will be able to enter your answer again. If you answer incorrectly on your third try, you will hear “This is the answer” and the answer will be repeated.

## MATH LAB™ ACTIVITIES

### ACTIVITY 6 - MISSING SIGN

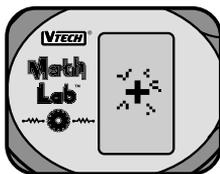
This activity asks your child to solve various numeric equations by selecting the correct operation sign. Your child will be asked to find the missing sign to make the equation correct.

**Learning Benefits for Your Child** - Missing Sign allows your child to connect the symbols of + (plus), - (minus) and x (times) with the operations of addition, subtraction and multiplication. This activity provides an opportunity for your child to solve problems using mathematical input devices by connecting a physical motion with a conceptual idea.

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#### ACTIVITY INSTRUCTIONS:

1. Slide the activity selector to “Missing Sign.” You will hear a short tune and a friendly voice will say “Pick a level.” In this activity, all answers must be entered through the mathematical input devices.



2. In all three levels, you will see a numeric equation displayed on the LCD screen. You will hear “What’s the missing?” You will need to determine what operation sign makes the equation correct and enter the sign with the input devices. If you are correct, you will hear “You’ve got it!” You will then advance to the next question. If you are incorrect, you will hear “Oops, try again!” and you will be able to enter your answer again. If you answer incorrectly on your third try, you will hear an incorrect sound effect followed by “This is the answer” and the operation sign will be shown with the equation.
3. If by accident you select the wrong sign, you may enter an additional sign instead of using the ERASE button.

## MATH LAB™ ACTIVITIES

### ACTIVITY 7 - TARGET NUMBER

This activity asks your child to solve various questions by using the concepts of addition, subtraction and multiplication learned in the previous activities.

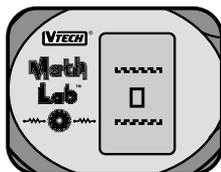
**Learning Benefits for Your Child** - Target Number gives your child the opportunity to apply the skills of adding, subtracting and multiplying by targeting a specific number. This demonstrates the ability for your child to test his or her memory of these math concepts.

#### ACTIVITY INSTRUCTIONS:

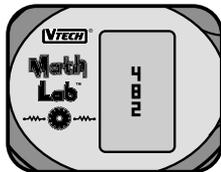
1. Slide the activity selector to “Target Number.” You will hear a short tune and a friendly voice will say “Pick a level.” In this activity, all numbers must be selected by pushing the ENTER button once your number is highlighted. All operation signs must be selected by using the mathematical input devices.



2. You will hear a target number first and three numbers will be shown on the LCD screen. You may only use each number once to reach your target number. Any combination of these numbers and operation signs can be selected but you must use all three numbers. For example, you will hear “Use 4, 8 and 2 to reach 0.”



3. If by accident you select the wrong number or sign, you may use the ERASE button to delete your answer.



4. If you answer correctly, you will hear “You’ve got it!” You will then advance to the next question. If you answer incorrectly, you will hear “Oops, try again!” and the target number and numbers available will be repeated. You will be able to enter your answer again. If you answer incorrectly on your third try, you will hear an incorrect sound effect followed by “This is the answer.” The correct combination of the numbers and operation signs will be repeated.

## MATH LAB™ ACTIVITIES

### ACTIVITY 8 - FRACTIONS

This activity introduces your child to the concept of fractions ( $1/8$ ,  $1/4$ ,  $1/3$ ,  $1/2$ ) by asking him or her to use the pie fraction buttons to answer questions.

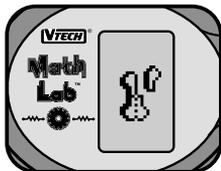
**Learning Benefits for Your Child**—Fractions allows your child to begin learning that a fraction is a part of a whole. It also tests his or her ability to understand that a number ( $1/4$ ) indicates one or more equal parts of a whole or group.

#### ACTIVITY INSTRUCTIONS:

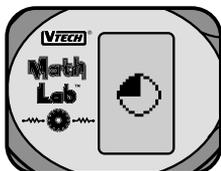
1. Slide the activity selector to “Fractions.” You will hear a short tune and a friendly voice will say “Pick a level.” In this activity, all answers need to be entered by selecting one of the pie fraction buttons located on the cabinet.



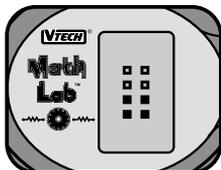
2. In Level 1, you will see an object on the LCD screen that is divided equally into sections. You will hear “Find the fraction” and you must press the pie fraction button that matches the section of the object that is flashing.



3. In Level 2, you will see a pie on the LCD screen and the target fraction will be repeated. You will hear “Add fractions to match the pie” and you will need to select two or above fraction buttons that add to the pie section or target fraction.



4. In Level 3, you will see square animations displayed on the LCD screen. There will be some squares that are not filled in and some that are solid. This is to display the correct fraction amount. The unit will ask you what number is what fraction of another number. For example, you will hear “4 is what fraction of 8?”



5. If you answer correctly, you will hear “You’ve got it!” You will then advance to the next question. If you answer incorrectly, you will hear “Oops, try again!” and you will be able to enter your answer again. If you answer incorrectly on your third try, you will hear “This is the answer” and the answer will be shown on the LCD screen.

# MATH LAB™ ACTIVITIES

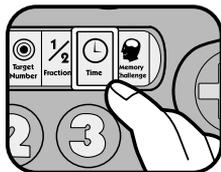
## ACTIVITY 9 - TIME

This activity introduces your child to the concept of time, and by using the turning knob, he or she will match the analog time with a digital representation.

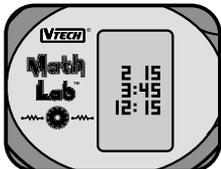
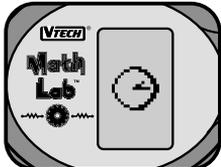
**Learning Benefits for Your Child** - Time gives your child the opportunity to test his or her ability of understanding different representations of time. This allows him or her to apply these practical applications in his or her daily life.

### ACTIVITY INSTRUCTIONS:

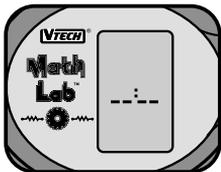
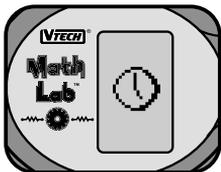
1. Slide the activity selector to “Time.” You will hear a short tune and a friendly voice will say “Pick a level.”



2. In Level 1, you will see a clock with a specific time displayed on the LCD screen. You will hear “What time is it?” and you will then see 3 different options displayed. Once the correct time is highlighted, press the ENTER button to select your answer.



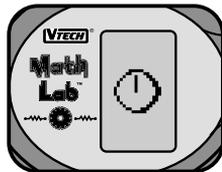
3. In Level 2, you will see a clock with a specific time displayed on the LCD screen. You will hear “What time is it?” Use your number buttons and enter them from left to right.



## MATH LAB™ ACTIVITIES

### ACTIVITY 9 - TIME (continued)

4. In Level 3, you will see a digital time displayed on the LCD screen. You will hear “What time is it?” and you will need to input the time by using the turning knob. For each 60-degree turn of the knob, the minute hand will move 15 minutes. Keep turning the knob until the correct time matches the digital time you were given.



5. If you answer correctly, you will hear “You’ve got it!” and you will advance to the next question. If you answer incorrectly, you will hear “Oops, try again!” If you answer incorrectly on your third try, you will hear an incorrect sound effect followed by “This is the answer.” The correct answer will be displayed.

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### ACTIVITY 10 - MEMORY CHALLENGE

This activity strengthens sequencing skills. Your child will have an opportunity to test his or her memory as he or she is asked to determine what operation sign to use.

**Learning Benefits for Your Child** - Memory Challenge allows your child to sharpen his or her listening skills while trying to identify operation signs in proper sequence. Your child will develop problem-solving strategies, as he or she creates a way of remembering the order in which the operation signs were presented.

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### ACTIVITY INSTRUCTIONS:

1. Slide the activity selector to “Memory Challenge.” You will hear a short tune and a friendly voice will say “Pick a level.” In this activity, you will need to enter your answer using all number and fraction buttons and mathematical input devices.

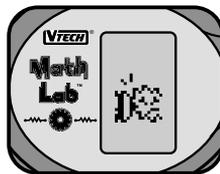


## MATH LAB™ ACTIVITIES

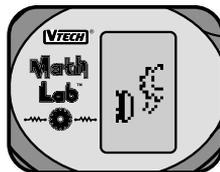
### ACTIVITY 10 - MEMORY CHALLENGE (continued)

2. You will hear “4,3,2,1, Ready, go!” and the unit will begin calling out commands for you to follow.

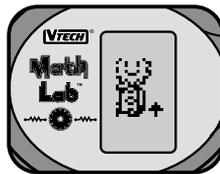
**Level 1:** You will only use the mathematical input devices. Each time you press, turn push or pull a device, you will hear the operation sign repeated.



**Level 2:** You will use a variety of buttons to answer the random commands. You will be asked to use operation signs, numbers and fractions in this level.



**Level 3:** You will use a variety of buttons to answer the random commands. Each command will call for an operation sign and either a number or fraction.



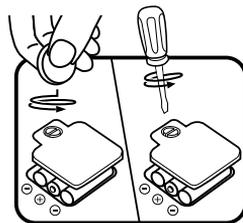
3. If you answer correctly, you will hear “You’ve got it!” and advance to the next level. If you answer correctly, you will hear a sound effect and be given the next command.

4. This activity is the same in the Normal and Timer modes.

## MATH LAB™ BATTERIES

### BATTERY INSTALLATION

1. Make sure the unit is turned OFF.
2. Locate the battery cover on the back of the unit. Use a coin or screwdriver to open the battery cover. Insert 3 new “AA” (UM-3/ LR6) batteries following the diagram inside the battery compartment.
3. Replace the battery cover and tighten the screw to secure the battery cover.



### BATTERY NOTICE

- *Install batteries correctly observing the polarity (+, -) signs to avoid leakage.*
- *Do not mix old and new batteries.*
- *Do not use batteries of different types.*
- *Remove exhausted or new batteries from the learning toy when it will not be used for an extended period of time.*
- *Do not dispose of batteries in fire.*
- *Do not attempt to recharge ordinary batteries.*
- *Do not short circuit the supply terminals.*

**WE DO NOT RECOMMEND THE USE OF RECHARGEABLE BATTERIES.**

### AUTOMATIC SHUT-OFF

To preserve battery life, the **Math Lab™** learning toy will turn off automatically after 4 minutes. Turn the unit on again by pressing the ON button.

Note: If for some reason the program/activity stops working, then please follow these steps:

1. Please turn the unit off.
2. Interrupt the power supply by removing the batteries.
3. Let the unit stand for a few minutes, then replace the batteries.
4. Turn the unit on. The unit should now be ready to play again.

If the problem persists, please call our Consumer Services Department at 1-800-521-2010 in the U.S., 1-800-267-7377 in Canada, or 01235-546810 in the U.K.

**WARNING:** All packing materials such as tape, plastic sheets, wire ties and tags are not part of this toy and should be discarded for your child's safety

## MATH LAB™ MAINTENANCE

### CARE AND MAINTENANCE

1. Keep the unit clean by wiping it with a slightly damp cloth.
2. Keep the unit out of direct sunlight and away from any direct heat source.
3. Remove the batteries when the unit is not in use for an extended period of time.
4. Do not drop the unit on hard surfaces or try to dismantle it.
5. Do not expose the unit to moisture or water.

### IMPORTANT NOTE:

Creating and developing the Fundamentals of Learning product line is accompanied by a responsibility that we at VTECH® take very seriously. We make every effort to ensure the accuracy of the information, which forms the value of our products. However, errors sometimes can occur. It is important for you to know that we stand behind our products and encourage you to call our Consumer Services Department at 1-800-521-2010 in the U.S., 1-800-267-7377 in Canada, or 01235-546810 in the U.K. with any problems and/or suggestions that you might have. A service representative will be happy to help you.

**NOTE:** This equipment generates and uses radio frequency energy and if not installed and used properly—that is, in strict accordance with the manufacturer’s instructions—it may cause interference to radio and television reception. It has been type tested and found to comply within the limits for a Class B computing device in accordance with the specification in Sub-part J of Part 15 FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate this product with respect to the receiver.
- Move this product away from the receiver.

## Look for these additional products in the Fundamentals of Learning product line



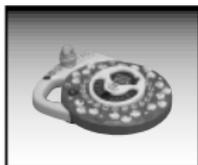
**Alphabet Apple™ Tree**  
3 years and up  
80-52300



**Flip For Phonics™**  
3-5 years  
80-29100



**Bubble Gum Phonics  
Fun™**  
4-6 years  
80-41300



**Fishing for Phonics™**  
4-6 years  
80-34500



**Alphabet and Sprocket  
The Ready To Read  
Robots™**  
4-6 years  
80-43900



**Phonics from A-Z!™  
Animated**  
3-6 years  
80-43700

**Our helpful Consumer Services staff  
is available to answer product  
questions and to assist in finding  
the retailer nearest you**

**USA**  
**1-800-521-2010**  
[www.vtechkids.com](http://www.vtechkids.com)

**CANADA**  
**1-800-267-7377**  
[www.vtechcanada.com](http://www.vtechcanada.com)

**UK**  
**01235-546810**  
[www.vtechuk.com](http://www.vtechuk.com)

