1

Preparing for Level 2

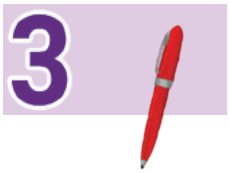
Start Here!

To prepare for teaching *All About Math* Level 2, you can either watch our short videos or follow the checklist on the subsequent pages. Do whichever works best for you!

Option 1: Watch the Videos

Go to www.aalp.tv/math-level-2 on your phone, tablet, computer, or scan the QR code to be taken directly to the videos.

Let us show you how to get set up for success!



After watching the videos, turn to page 33 of this teacher's manual to start teaching the first lesson.

Option 2: Read the Following Pages

Check off each as you complete it.

Is Your Student in the Right Level?

If your student did not complete *All About Math* Level 1, use this checklist and the *Dash into Math!* activity book pages 395 to 400 to verify placement in Level 2. Your student should get all items in a question correct in order to checkmark that question.

☐ 1. Your student can count in the following ways:

- **count to 100, starting with the number 1**
- **count to 100 by tens**
- **count backward from 10 to 0**
- **count on from a number other than 1, such as starting from 12 and counting on to 28**

☐ 2. Your student can identify numbers up to 100. To test this, have your student point to each number on her student activity page and say its name.

7 **89** **36** **25** **40**

☐ 3. Your student can write numbers that are given orally. To test this, call out the following numbers, one at a time, and have your student write them.

13 **97** **26** **40** **58**

☐ 4. Your student understands that a teen number is made of a group of 10 and some more ones. For example, 16 is made of a group of 10 and 6 more. To test this, have your student complete question 4 on her student activity page.

☐ 5. Your student understands place value and can use it to describe a number. Have your student color the tens and ones on her student activity page to represent each number

12  **52**  **36** 

☐ 6. Your student can solve addition and subtraction story problems and provide an expression to match each. To test this, read the story problems in question 6 aloud, one at a time. Your student can use objects or drawings to help solve the story problems and write matching expressions. (An expression is like an equation without an equal sign, such as 10 + 0.)

Answers: cats 7, 3 + 4; deer 3, 8 - 5

☐ 7. Your student can identify all the ways to compose 10 and write expressions for each. Your student can use objects or drawings to help make 10.

Answers: 10 + 0, 9 + 1, 8 + 2, 7 + 3, 6 + 4, 5 + 5, 4 + 6, 3 + 7, 2 + 8, 1 + 9, 0 + 10.

☐ 8. Your student can solve equations with the unknown number in any position. Have your student solve each equation on her student activity page. She can use objects or drawings to help solve the equations.

5 + 4 = ___ *(Answer: 9)* **___ + 2 = 7** *(Answer: 5)* **3 + ___ = 9** *(Answer: 6)*

☐ 9. Your student understands place value and can use it to tell you the value of each digit in a number. For example, the value of the 3 in the number 39 is 30 and the value of 9 is 9. To test this, follow the scripting example shown below.

"What is the value of the 2 in the number 23?" (*Answer: 20*)

"What is the value of the 3 in the number 23?" (*Answer: 3*)

Continue to test your student using the following numbers:

47 (*Answer: 40, 7*)

36 (*Answer 30, 6*)

☐ 10. Your student can solve two-digit addition story problems and equations by using either base-10 blocks or drawings of tens blocks and ones cubes. To test this, read the story problem in question 10 aloud, and then have your student solve the equations.

Answers: flowers 21; 73 + 4 = 77; 7 + 45 = 52; 28 + 6 = 34

☐ 11. Your student can mentally identify the number that is 10 more and the number that is 10 less than a given number. To test this, have your student identify 10 more and 10 less for each number on her student activity page:

13 *(Answer: 23, 3)* **77** *(Answer: 87, 67)* **52** *(Answer: 62, 42)*

☐ 12. Your student can compare 2 two-digit numbers by using comparison symbols (>, <, =) to show greater than, less than, or equal to. To test this, have your student compare each pair of numbers on her student activity page:

Answers: 29 < 51, 95 = 95, 84 > 64, 72 > 27

☐ 13. Your student can compare the lengths of 2 objects to determine which is longer and which is shorter. To test this, have your student compare the lengths of 2 objects on her student activity page.

How did your student do?

- If your student could easily complete 11 or more of the 13 skills, begin Level 2.
- If just one or two areas were difficult, you can remediate in those areas as you start Level 2.
- If 10 or fewer boxes were checked, start with Level 1 to build a strong foundation for math.

If you have any questions about the program or would like to learn how to adapt certain aspects of the program to accommodate your student's needs, feel free to call us at 715-477-1976 or email us at support@allaboutlearningpress.com. And if you need ideas on how to help your student build skills, just let us know—we are always happy to help!

Gather the Materials

In addition to this teacher's manual, you will need the following items:

1 Student Packet

The Student Packet contains:

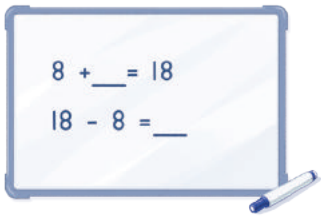
- *Dash into Math!* activity book
- Stickers for the Progress Chart
- Flash's Math Tools (see page 25, Preview *Flash's Math Tools*, for more details)

2 *All About Math* Manipulatives Kit

The manipulatives kit includes hands-on materials to support learning. See page 23, Learn about Manipulatives, for more details about the manipulatives for Level 2.

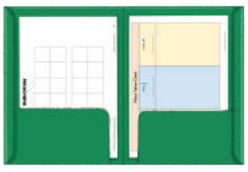
3 Dry-erase board and Markers

You can use any size. We recommend a hand-held dry-erase board for ease in demonstrating concepts. However, if you already have a dry-erase board for *All About Reading* or *All About Spelling*, you can also use your existing board.



4 Folders (Optional)

It's helpful to have a folder for storing Flash's Math Tools. You may also want a folder for storing Flash's Math Fun! games so they can be replayed.



The *All About Math* Method

First of all, you can do this! *All About Math* is a scripted, open-and-go program developed for busy parents, teachers, and tutors who want to teach mathematics in the most effective way possible. This program doesn't require long periods of study, you don't have to develop your own lesson plans, and you don't have to stress over what to teach next—because everything is laid out for you, step-by-step. You'll get a solid grounding in how to teach mathematics without being overwhelmed.

Your student will be actively involved in the learning process. This is a truly multisensory program; your student will learn through sight, sound, and touch. Everything is taught in context, and your student will apply what he has learned right away. Your student will be engaged in thinking, processing, comparing, and learning.

Students who use the *All About Math* method tend to feel a sense of excitement in learning. And, they should! They are learning how to think, explore, and grow in their abilities. They will feel successful as they see continual progress.

There are no gaps in this program. *All About Math* teaches your student everything he needs to know to build a strong foundation of numeracy, operation, and algebraic thinking. Each concept builds upon the previous one, ensuring a comprehensive understanding that leverages existing knowledge.

All About Math acknowledges the diverse needs of learners and addresses the five key components of effective instruction:

1. Strong Conceptual Understanding: We connect mathematical concepts, fostering a deeper understanding that transcends memorization.

2. Procedural Fluency and Skills: Students master essential skills like addition, subtraction, multiplication, and division through practice and application.

3. Communication and Collaboration: We encourage students to explain their reasoning, fostering collaboration and clear communication through discussions and activities.

4. Assessment and Differentiation: Our program offers regular assessments so you can see how your student is doing. It allows you to cater to individual needs by offering differentiated instruction; instruction that allows you to adjust the pace, complexity, and activities to your student's needs.

5. Positive Learning Environment: We encourage students to believe in their ability to learn and grow through perseverance and effort.

***All About Math* is a mastery-based program.** As such, the levels don't necessarily correspond to grade levels. In mastery-based learning, students master foundational concepts before moving on to more advanced concepts, regardless of age or grade level. Some concepts will take many lessons to master. The instructions in each lesson help you know whether to move on, while the concept reminders on the *Daily Review Tracker* help you continue to work toward mastery.

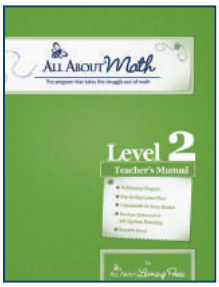
Most importantly, *All About Math* is committed to results. The *All About Math* program has a very focused mission: to enable you to teach your student mathematics while guaranteeing retention and enjoyment. Our approach to mathematics focuses on enabling students to become confident, fluent mathematicians who can absorb and retain new information.

If you ever have a question as you are teaching, please feel free to contact us at support@allaboutlearningpress.com or 715-477-1976.

We're here to help!

Preview the Teacher's Manual

As you flip through the teacher's manual, you'll notice that all the lessons are laid out for you step-by-step. You'll also find two types of lessons:



•**New Concept Lessons:** In these lessons, your student will learn new skills and concepts. You can see an example of a typical "New Concept" lesson in Lesson 2 on page 43.

•**Progress Monitoring Lessons:** In the Show What You Know! lessons, your student will review and practice the new concepts taught in the previous lessons. You can see an example of a typical Progress Monitoring lesson in Lesson 19 on page 177.

Each new concept lesson consists of six parts:

1. **Before You Begin:** This cream-colored box contains an overview of the lesson and is meant only for you, the teacher. Reading it takes only a few minutes, after which you'll be well-equipped to teach the lesson confidently.

2. **Review:** You will begin the lesson by reviewing concepts learned previously, giving your student a quick review of skills or concepts essential to the new learning. Starting with lesson 5, you will need your student's *Daily Review Tracker* for this part of the lesson.

3. **New Teaching:** This is the hands-on, multisensory portion of the lesson. Your student will work with the manipulatives as you gradually introduce new concepts. Scaffolding techniques such as modeling, guided practice, and feedback help students progress at their own pace and achieve deeper understanding.

   Then, your student will use activity sheets as she continues to practice the new concepts. The activities encourage teachers to highlight connections, helping students see the bigger picture and develop a more coherent understanding of mathematical concepts.

   Finally, Math Reflections encourage your student to ask questions and express her understanding. This allows the teacher to identify any misconceptions and address them directly.

   (See page 19, Math Reflections and Dialog, for more details.)

4. **Extended Practice:** Optional activities are included for students who need more practice. By revisiting and practicing the skills in different ways if needed, students develop fluency and automaticity, allowing them to solve problems and perform calculations with greater accuracy and speed.

5. **Flash's Math Fun!:** Fun and engaging activities provide opportunities for your student to use and apply the new concepts she has learned in a meaningful context. This helps her move the information from short-term to long-term memory, strengthening her understanding and

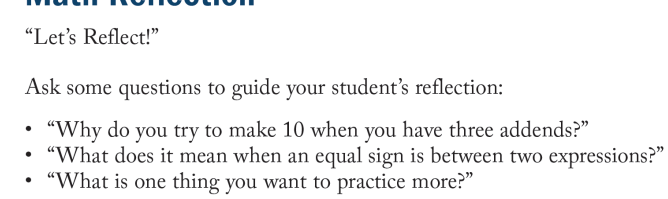
improving her ability to recall and apply concepts later. These activities are designed to encourage playing more than once to reinforce concepts and skills.

6. **Track Your Progress:** At the end of each lesson, record your student's progress on the Progress Chart.

Take a few minutes to flip through the Appendices section, starting on page 509. The Appendices include a few extra resources to help you and your student get the most out of your math lessons.

Math Reflections and Dialogue

It's incredibly important for children to talk about what they are learning in math. Verbalizing their thinking helps deepen their understanding, build critical reasoning skills, and strengthen their ability to communicate complex ideas. That is why you will find "Math Reflection" sections in every *All About Math* Lesson, and you will also see dialogue encouraged throughout. Here are some key benefits of encouraging math discussions:



Math Reflection

"Let's Reflect!"

Ask some questions to guide your student's reflection:

- "Why do you try to make 10 when you have three addends?"
- "What does it mean when an equal sign is between two expressions?"
- "What is one thing you want to practice more?"

This section is located after the Complete Activity Sheet section in each New Concept Lesson and after the last question in each Progress Monitoring lesson.

Deepens Understanding: When your student talks through a problem, he is forced to clarify his thinking. Explaining his reasoning helps solidify the concepts in his own mind, making it easier for him to understand and retain the material. Talking through math problems can also reveal misunderstandings or gaps in knowledge. If he is unable to explain his thinking, it may highlight areas where he will need further instruction or support.

Encourages Active Engagement: Math discussions help your student move from passively receiving information to actively engaging with the material. When he verbalizes his thought processes, he is more likely to take ownership of his learning and develop a deeper connection to the content.

Promotes Critical Thinking and Problem Solving: Talking about math encourages your student to reason logically and justify his thinking. Discussing different strategies and approaches fosters critical thinking and can lead to deeper insights and a broader range of strategies for solving problems.

Enhances Mathematical Vocabulary: Talking about math helps your student develop and expand his mathematical vocabulary and encourages him to use specific, accurate language, which reinforces his understanding of the terms and concepts involved.

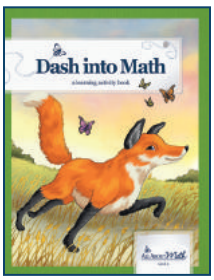
Improves Memory and Retention: When your student talks about math, he is engaging both the verbal and cognitive centers of the brain, which enhances memory and understanding. Explaining concepts to others forces him to organize and articulate his knowledge in a coherent way, and reinforces learning and retention.

Encourages a Positive Attitude Toward Math: By encouraging your student to talk about his learning, you help him see math as a subject he can engage with and discuss rather than a subject that is difficult or intimidating. Positive discussions about math help develop a healthy attitude toward the subject and can reduce math anxiety.

Talking about math in real-world contexts or through stories can help him see the relevance and practical applications of what he is learning, making math more engaging and meaningful.

Preview the Activity Book

The *Dash into Math!* Activity Book contains:

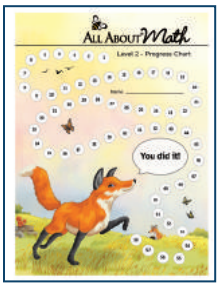


- Progress Chart
- *Daily Review Tracker*
- Activity Sheets
- Flash's Math Fun!
- Certificate of Achievement

The lesson plans in the teacher's manual will tell you which pages you need for each lesson. The pages in the activity book are perforated for easy removal.

Let's take a quick look at each part of the activity book.

Progress Chart



The *Progress Chart* can be found on page 5 of the activity book.

This chart is a fun and encouraging way to help students see their progress as they work toward understanding mathematics.

Remove the chart along the perforation and find a special spot to display it. You might choose a bulletin board, the refrigerator, a folder, or any other place that is easy to access and see.

After finishing each lesson, have your student color in or place a sticker over the corresponding circle on the chart. It is a great way to celebrate her hard work!

Daily Review Tracker

The *Daily Review Tracker* can be found on pages 7 to 8 of the activity book.

This *Daily Review Tracker* is a tool for you to use with your student during the review section of each lesson. It helps build a strong foundation in mathematics by supporting concept retention and reinforcing understanding, while also tracking mastery of each skill.

Starting in Lesson 4, you will be prompted to enter the date next to skills that have been introduced. This will help you track which skills have been taught and should be included as part of your daily review.

In Lesson 5, you will begin using the tracker to identify areas where your student may need more practice to reach mastery. You will know she has achieved mastery when she can perform the skill

consistently without assistance. Once she has demonstrated mastery, record the date in the 'Date Mastered' column.

As always, you are welcome to revisit any skill marked as mastered for a refresher or extra practice as needed.

Activity Sheets

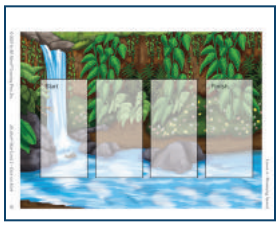
The activity sheets are highly motivating for most students, offering a variety of ways to practice the new concepts introduced in each lesson. They often include engaging themes, colorful visuals, and hands-on interactive elements that make learning both fun and meaningful.

Take a look at the activity called "Soccer Matchup" on page 81 of the activity book. When you get to Lesson 12, the lesson plan will prompt you to cut apart the *Soccer Matchup* cards. Your student will match each soccer ball expression card to the goal expression card that has the same value. Then, she will solve the expressions and match each to the jersey that has the value of both expressions.

If you are working with an older student who does not need the additional practice for a certain concept or does not want to do "kid" activities, feel free to skip that particular activity sheet. But you may find that even adult learners enjoy the mental break that the activity sheets provide.

Flash's Math Fun

Math games make learning math exciting by turning practice into play, allowing students to explore concepts in a fun and interactive way. They will build confidence and fluency with math concepts while keeping your student engaged and motivated.



Flash's Math Fun! can be found at the end of each new concept lesson. You can choose to play these games directly after the lesson or at another time. These games are designed to be played multiple times and are a great way to practice skills that are still developing.

Remove the Flash's Math Fun! games along the perforations. Once you have completed a game, place it in a safe spot or folder for easy access for later play.

Certificate of Achievement

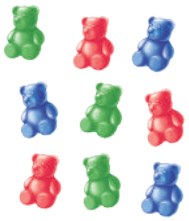
The *Certificate of Achievement* can be found on page 393 of the activity book.

Presenting your student with a certificate upon completing the Level 2 program is a wonderful way to celebrate her hard work and achievements. It will boost her confidence and give her a sense of pride in reaching an important milestone.

Learn about the Manipulatives

We will be using four types of manipulatives. Below is an introduction to some of their uses.

Counting Bears are colorful, plastic, bear-shaped manipulatives that can be used for counting and number recognition, basic addition and subtraction, spatial awareness, and game markers.



Connecting Cubes can be snapped together to form longer chains or structures. They can be used for:

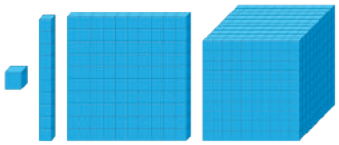
- **Counting and Number Recognition:** By stacking cubes, students can understand one-to-one correspondences, visualize numbers, and relate them to physical quantities.
- **Addition and Subtraction**
- **Place Value:** Connecting cubes can be stacked into tens to represent place value. A group of 10 cubes can represent "10," and children can build numbers by combining different groups. This helps them understand the concept of tens, ones, and place value in a tangible way.
- **Measurement:** Children can compare the lengths of different objects by counting the number of cubes it takes to match the length or height of each object.
- **Patterns and Sequences:** Children can create repeating patterns, such as "black, green, black, green,.." which promotes the understanding of patterns and sequencing.

Two-Color Counters are small, circular discs that are red on one side and yellow on the other side. They can be used for:

- **Addition and Subtraction:** Students can combine groups of different colors to find the total or remove some counters to show the difference.
- **Comparing Numbers and Greater Than/Less Than**
- **Understanding the Structure of 10:** Students can place some counters of one color in a 10-frame and then fill the 10-frame with the other color to identify pairs that make 10. Students can visualize teen numbers as the sum of 10 and some more.

Base-10 Blocks, also known as **place value blocks,** represent units of 1, 10, 100, and 1000. They can be used for:

- **Understanding Place Value:** By physically grouping different blocks together, students can see how numbers are built up from ones and tens, and they can better understand how place value works. Each type of block represents a different place value:



  - **Unit (ones):** Small cubes that represent the number 1.
  - **Rod (tens):** Long rods that represent groups of 10.
  - **Flat (hundreds):** Square flats that represent groups of 100.
  - **Cube (thousands):** A cube that represents a group of 1000.
- **Addition and Subtraction:** Using the various base-10 blocks helps students visualize the process of addition and subtraction, and makes abstract concepts like borrowing and regrouping easy for kids to understand.
- **Understanding the Concept of Larger and Smaller Numbers:** By using base-10 blocks, students can easily compare numbers based on their sizes. For example, 30 is represented by 3 rods, while 20 is represented by 2 rods, making it easy to visually see which number is larger.

Ruler a straight tool with two sides: one marked in centimeters (cm) for metric measurements and the other in inches for standard measurements. Rulers are used to measure length and draw straight lines, helping students understand units of measurement, like inches and centimeters.

The *All About Math* Manipulatives Kit also includes:

- **Dry Erase Pocket:** a transparent-plastic pocket that turns any Math Tool or activity page into a dry-erase board.

The remaining items, Fraction Tiles and Protractor, will be used in higher levels.

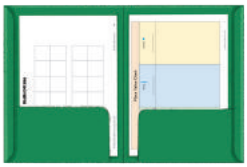
The *All About Math* Manipulatives Kit comes in a plastic storage bin for ease and convenience.

Preview Flash's Math Tools

Math Tools are printed resources that can be used in numerous ways to support student learning. In Level 2, Math Tools are primarily used to support operations and algebraic thinking. These tools include:

- 10-Frame
- Double 10-Frame
- 3 Read Strategy
- Number Cards 0 to 20
- Number Mat 1 to 120
- Tens and Ones Chart
- Shape Cards
- Place Value Chart (Hundreds)
- Comparison Mat
- Open Number Line
- Analog Clock
- Analog Clock Mat
- Money Cards
- Coin Values
- Six-Digit Place Value Chart
- Place Value Disks (One-Inch Squares on back)
- Tens Rounding Mat
- Hundreds Rounding Mat
- Fraction Circles
- Fraction Mat
- Fraction Shapes

Math Tools are reused for many lessons, so once you use them, be sure to save them for future use.



Consider keeping the materials in a folder and storing them in a binder or in the manipulatives storage bin.

Learn about the *All About Math* Number Style

The *All About Math* number style in Level 2 reduces the likelihood of reversals or number confusion. Students do not have to write numbers the way the teaching materials show. Feel free to follow your own handwriting preferences and curricula. *All About Math* will transition to a standard number style in Lesson 48 on page 417.

Other Number Styles	*All About Math* Number Style
6 9 6 and 9 are rotations of each other.	6 9 6 is composed of curves; 9 is composed of a circle and a line.
2 5 The circular parts of numbers 2 and 5 have a similar size and shape, making these numbers prone to vertical reversals for some children.	2 5 The curve of the 2 is more elongated and has a much wider opening. The curve of the 5 has a circular shape and a much narrower opening to distinguish it from a 2.
1 7 The extension at the top of the 1 mimics the 7.	1 7 The 1 is a straight line to distinguish it from a 7.
4 9 A closed 4 is easily mistaken for a 9.	4 9 The open 4 prevents confusion with a 9.

How Much Time Should I Spend on Math?

All About Math lessons are designed so that you can work at your student's pace. Here are some general guidelines.

Spend 20 minutes per day teaching math.

We recommend spending about 20 minutes per day, five days a week, on math instruction, but you can adjust this to meet your particular student's needs.

It can be helpful to set a timer. When 20 minutes are up, consider whether you have reached a logical stopping point in the lesson; you may want to complete the task or part of the task before stopping. Then, mark the spot in the lesson where you stopped. If your student is still engaged at the end of 20 minutes, feel free to extend the time if you wish.

When you begin teaching the next day, start with 1 or 2 items from the *Daily Review Tracker*, briefly review the New Teaching from the previous day, and then pick up in the teacher's manual where you left off previously. If your student struggles to remember previous learning, you can begin from an earlier point in the lesson.

Short daily lessons are much more effective than longer, less frequent lessons. Your student's attention is less likely to wander, and you can accomplish more when your student is actively engaged in the lesson.

If you aren't done with the lesson when the 20 minutes are up, don't worry! The next tip is for you.

Lessons often take more than one day to complete.

Please know that the lessons in *All About Math* are **not** meant to be completed in one day.

A number of variables, including your student's age, attention span, prior experience, the difficulty of the concept being taught, and the length of the lesson, all play a part in how quickly a lesson can be completed.

Teaching your student can be a wonderful way to show him that he has great value in your eyes. You can view this as an opportunity to build him up and help him develop skills and character. Can you see yourself as a calm, uncritical coach with the worthy goal of helping this child fulfill his natural potential? Imagine the type of teacher you would want: friendly, supportive, with a you-can-do-it attitude. Smile. Point out what your student has done right more often than you point out his mistakes. Treat lesson time as a special time between the two of you.