AROUND THE THICKET NEWSLETTERS

Mathematics

AMY FISCHER



AMY FISCHER

Letters from Around the Thicket

Mathematics

Copyright © 2021 by Amy Fischer

All rights reserved. No part of this publication may be reproduced, stored or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning, or otherwise without written permission from the publisher. It is illegal to copy this book, post it to a website, or distribute it by any other means without permission.

First edition

This book was professionally typeset on Reedsy. Find out more at reedsy.com

Contents

Preface		iv
1	How to Breathe Life into Math Lessons	1
2	Making Math Fun in the Charlotte Mason Homeschool	4
3	Troubleshooting Math Lessons: Principles Help	
	Solve Problems	7
4	Two Kinds of Struggling Math Students (and How	
	to Help Them)	10
5	How do You Know a Math Lesson is Living?	13
6	Three Reasons Why Your Child Should Narrate in	
	Math Lessons	16
7	How to Make Peace with your Math Curriculum	18
About the Author		20
Also by Amy Fischer		21

Preface

I started my blog, Around the Thicket, in 2016 as a place to write about life as a mom of very young children. My blog has grown with me and my children and I now write about teaching those same boys at home, as well as my own self-education, as Charlotte Mason would put it.

As an extension of my blog, I have long sent email updates to subscribers. Only in this last year, however, have I started to focus on emails as ways to develop a writing habit and to communicate more casually with people interested in my thoughts and experiences. In each email I have hoped to give, at the very least, food for thought, and have often tried to give practical insight into practicing the Charlotte Mason philosophy.

The following chapters come from emails I sent in 2020. I have removed announcements and updates that were time-sensitive, but the content is otherwise the same. I hope they give you a taste for what I send to subscribers each week.

If you would like to receive these emails yourself, please visit https: //aroundthethicket.com/subscribe. 1

How to Breathe Life into Math Lessons

Good morning!

To go along with my recently published <u>Charlotte Mason and Living Math</u>, my emails this month will focus on some of the most important principles I've taken from Charlotte Mason's writing on the subject.

Last week, my email concluded with encouragement to invite the Holy Spirit into our math lessons. But once we recognize His role in the education of our children, of His presence in the math lesson, what do we do next? Charlotte Mason reminds us to *cooperate* with the Holy Spirit. In *Parents and Children*, she writes:

Our co-operation appears to be the indispensable condition of all the divine workings. We recognise this in what we call spiritual things, meaning the things that have to do more especially with our approaches to God; but the new thing to us is, that grammar, for example, may be taught in such a way as to invite and obtain the co-operation of the Divine Teacher, or in such a way as to exclude His illuminating presence from the schoolroom. We do

LETTERS FROM AROUND THE THICKET

not mean that spiritual virtues may be exhibited by the teacher, and encouraged in the child in the course of a grammar lesson; this is no doubt true, and is to be remembered; but perhaps the immediate point is that the teaching of grammar by its guiding ideas and simple principles, the true, direct, and humble teaching of grammar; without pedantry and without verbiage, is, we may venture to believe, accompanied by the illuminating power of the Holy Spirit, of whom is all knowledge.

While Charlotte Mason chooses grammar for her example, we could substitute math here (or any subject). We teach math by its guiding ideas and simple principles. We are true, direct, and humble, "without pedantry or verbiage".

Let's look at this more closely.

True: Math as a subject is lawful and reasonable. It is a black and white subject, and we should not represent it in any way that ignores or minimizes its truthfulness. This is why Charlotte Mason encouraged her readers to declare a child's answers 'right' or 'wrong'. There is nothing in the middle. While this passage in *Home Education* can read a bit harsh, we do our children a disservice if we allow them to think that 'nearly right' or 'almost there' is the true, accurate answer. So in practice, be quick to declare correct answers as 'right' or even 'true'. When our children get an answer wrong, help them discover that the answer is 'not true'. ("So, you wrote the answer is 5. Let's check that. The other side of the equation equals six. So 5 is not the right answer.)

Direct: Sometimes when my children ask me to explain something (in any subject, not just math), I really flounder to give a clear, direct answer.

I waffle around for the right words, and often end up referring them to their dad who delights in explaining things well. The heart of my problem is usually that I don't understand the topic nearly as well as I thought I did. It's true that if you can teach something, you know it. That's why narration is such an amazing educational tool. So when it comes to math, we need to be in a position to directly and clearly relate the living ideas of the lesson. Lots of talking and roundabout explanations only serve to confuse our children, and sometimes even ourselves. The simplest way to prevent this is to spend some time preparing the lesson. Just as we preread the books we are using in our other lessons, math deserves its own time to prepare. Use the teachers' guide that goes with your curriculum choice to help you identify the key ideas of the lesson and to ensure your own understanding.

Humble: It is the Holy Spirit who takes the living ideas presented in the math lessons and brings them into fruition in the minds of our children. This alone should humble us. But it is still easy to rest on our own laurels. To believe that when we do understand the math lesson well, that when our children are enlivened by the subject, that it is our own doing. It is not so. We become puffed up, self-centered, and we fail to give God the glory for His hand in our homeschools. Instead, let's develop a habit of humble gratitude for His work, and when our children suddenly grasp a concept or work a challenging problem, let's turn to Him in praise.

All the best,

2

Making Math Fun in the Charlotte Mason Homeschool

Good morning!

This month, I'm writing about math – beginning with inviting the Holy Spirit into our math lessons, and continuing with Charlotte Mason's advice to teach the subject 'by its guiding ideas and simple processes'. She believed math should be taught directly, with humility, and in a way that reflected the lawfulness of the discipline.

What is missing from her writing on math (and, in fact, any other subject) is how to make math *fun*.

This question comes up so frequently, whether it is homeschoolers or parents supplementing at home, that I think it is helpful to address it head on. Why doesn't Charlotte Mason worry about making learning fun? But first, let's think about why this is a concern for us in the first place. Here are some reasons I can think of – I'd love to know if you know of any others.

- We had a negative or neutral experience with math ourselves. When we think back to our own education, we remember boredom, drudgery, pressure to attain, negative comparisons with others, anxiety or even failure. We want math to be fun so that our children don't have to go through the same thing.
- 2. **Our child is struggling or reluctant, and we are worried about their success.** With the cultural focus on STEM (science, technology, engineering, mathematics), messages abound that say our children must excel in math in order to succeed in life. If we can make math fun, we will win them to the discipline, and they'll do well later.
- 3. We do math because we have to, but we don't really see the point or value of it. When will we ever use calculus in real life? (Speaking as a math major who is now a stay at home mom, pretty much never). We need math to be fun in order to motivate us and our children to get the box ticked.

The reason why Charlotte Mason never writes about making math *fun*, in my opinion, is that she held a higher view of children a higher view of math.

Children are born persons, with an appetite for knowledge and an ability to grow on a diet of living ideas. Will math come naturally for every child? No. But every child can find math wholesome, nourishing, and life-giving.

Charlotte Mason believed that math is true and beautiful, and therefore a worthwhile discipline of study for children. It doesn't matter about 'getting ahead in life'. Learning mathematics widens the room in which our children find their feet (to use Charlotte Mason's metaphor), and gives them yet another way of growing to care about the world and to

LETTERS FROM AROUND THE THICKET

care about God.

When we take a high view of math, we don't need to make the subject fun, because the subject can speak for itself. When we take a high view of children, we don't need to make math fun, because we don't need to trick them or distract them into learning. They already crave knowledge.

None of this is to say that a math lesson should be somber. But Charlotte Mason would have us put our efforts toward something deeper than fun: she would tell us to make math *living*. Where there is life in a subject, there will be joy, levity, and a positive relationship between our children, ourselves, and the subject.

Don't forget to check out **my entire guide to living math** (which is also available as PDF/Kindle/eReader files – find the link to download in the intro to the blog post).

All the best,

Troubleshooting Math Lessons: Principles Help Solve Problems

Good morning!

In a previous email, I mentioned inviting the Holy Spirit to bring life to your math lessons. Charlotte Mason also encourages us to teach math humbly and directly, and we know to strive to make math living, and worry less about making math fun.

But when math lessons are a battle, when our child struggles, is there more we can do? Yes, I certainly think that we can troubleshoot our math lessons and, principles in hand, we can make changes to take us closer to where we want to go.

This is where I think metaphor can be very helpful. Metaphors are not perfect, and they do break down, but a good metaphor can help us step outside of our own immediate concerns, remind us of the big picture, and help us think creatively about solutions. With Charlotte Mason, the best metaphor for math comes in her fourth volume, *Ourselves*:

3

LETTERS FROM AROUND THE THICKET

Another realm open to Intellect has an uninviting name, and travelling therein is difficult, what with steep faces of rock to climb and deep ravines to cross. The Principality of Mathematics is a mountainous land, but the air is very fine and health-giving, though some people find it too rare for their breathing. It differs from most mountainous countries in this, that you cannot lose your way, and that every step taken is on firm ground. People who seek their work or play in this principality find themselves braced by effort and satisfied with truth.

When we sit down for a math lesson with our child, we are leading them into a lovely, but challenging, terrain. The views from the summits are worth every effort, but it requires skill and an excellent guide to get there. I can think of so many parallels between hiking with my children and teaching math.

- 1. **I keep my eye on our pace.** I can't walk too fast, or my child will tire out. Walking too slow and my child fails to build up momentum and experience the joy of progress.
- 2. If one path proves perilous, I look for another way up. There is usually more than one way up a hill, and there is more than one way to teach a math problem.
- 3. **Half of my job is to encourage a good attitude.** The mountain feels a lot steeper if I, or my child, is grumpy. I need to guard against bringing my negative feelings on the hike, and move my child's attention away from grumbling.
- 4. **If I am out of my depth, I will find my child a better guide.** One piece of advice I see from veteran homeschool moms is, 'Hire a math tutor'. If we ever find ourselves out of our depth, in a terrain we cannot manage, there is no shame in finding another guide for our child, whether it's Dad, a tutor, or an online resource.

What are the current pain points in your homeschool math lessons? Does this metaphor help you see what might be done? Let me know!

Don't forget to check out **my entire guide to living math** (which is also available as PDF/Kindle/eReader files – find the link to download in the intro to the blog post).

All the best,

Two Kinds of Struggling Math Students (and How to Help Them)

Good morning!

Some kids seem to have a natural affinity with mathematics. They pick up new concepts quickly and confidently. They even seem to like the subject – even if they wouldn't say it's their favorite.

But other children have a harder time. On one hand, we have what I would consider 'reluctant learners'. These children are capable of mathematics and are successful when they try, but they drag their feet around lessons, complain that math is 'boring' or 'too hard', and struggle to give the subject the effort it needs.

On the other hand, we have children who are actually lost. Their struggle isn't due to lack of effort, but due to lack of understanding and even when they do put forth a fantastic effort, they often can't quite get their heads wrapped around new concepts.

Fortunately, Charlotte Mason gives us principles to help us in both of

these situations.

What to do with a reluctant learner:

From my perspective, there are a couple of things going on with a reluctant learner. First, our student has probably picked up a habit of grumbling and approaching lessons with a poor attitude. Yes, a habit. *Education is a discipline*, after all. We can leverage habit training to reach a solution. I think grumbling in this case is something we should stop in its tracks. We hear the grumble and we give a gentle reminder that, 'It's not time to complain, it's time to start math.'

This brings me to the second thing we can do for our reluctant learners: be ready to 'generate interest' and begin the lesson. I've noticed that we don't always talk about the role of interest in a Charlotte Mason education, but it does feature in her *Method of a Lesson* that she discusses in her first volume. Practically speaking, this could look like saying, 'This week we're learning about the number fifteen.' We could give our child a prompt to think about a relevant math problem, such as, 'If you have three pennies, two nickles, and a dime, how many different ways could you pay for a candy that costs 7 cents?' There are many ways we can do this.

Our job isn't to make our children like math. We need to trust, as Charlotte Mason did, that math is intrinsically interesting and worthwhile. Our responsibility, then, is to bring our child's attention to math, and allow math to speak for itself.

LETTERS FROM AROUND THE THICKET

What to do with a lost learner:

When our child is truly lost in math, we need to take a different approach. One essential part of educating a born person (which all children are, as Charlotte Mason asserts in her first principle), is that we *begin with where our children are.* We need to begin with what they know and all further learning must grow from there.

Our first step, then, with a lost learner, is to figure out where he or she got lost and move back to that point. Math, especially within specific branches like arithmetic and geometry, is consecutive and the rules and principles build from one another. If one is missed, nothing that follows will make sense. It is worthwhile to go back until you find your child's missing piece, and move on from there. Your curricula may have an assessment that you can use to help you identify where your child needs to begin, or you might just pick up last year's lesson plans and make an educated guess.

Address the missing piece. Get it fitted back into place. Don't let worries about completing calculus in high school keep you from taking the time to do this step. Once your child has firmed up their understanding, keep moving forward, remembering to review as you go along. As your child reviews concepts, he or she will gain confidence, and you'll also be reassured that those previous blocks are firmly in place.

All the best,

How do You Know a Math Lesson is Living?

Good morning!

'Living' is a word you hear a lot from Charlotte Mason educators. 'Education is a life', a 'Living Education', 'Living Books', 'Living Ideas', and so on. Why is life such an essential part of a Charlotte Mason education?

Charlotte Mason herself writes in her second volume, that "We are told that the Spirit is life; therefore, that which is dead, dry as dust, mere bare bones, can have no affinity with Him, can do no other than smother and deaden his vitalising influences".

Because the Holy Spirit is the Divine Teacher, any education that respects the personhood of our children (and recognizes the Holy Spirit as their own Teacher), must be living. Charlotte Mason goes on to write that " all the thought we offer to our children shall be living thought; no mere dry summaries of facts will do; given the vitalising idea, children will readily hang the mere facts upon the idea as upon a peg capable of sustaining all that it is needful to retain". We know that we need to center our lessons on living thoughts and ideas, and that this goes for *all* subjects, including math. But how do we know we're getting it right? How do we know that we're succeeding in our goal to give our children *living* lessons?

For literature-based subjects, this is relatively straightforward. Are we using living books? Can our children narrate them? These are sure-fire signs that we've offered our children living thoughts. But let's consider for a moment the subject of mathematics which, as Charlotte Mason says, 'depends upon the teacher rather than the textbook'.

I think we should look for three things to confirm that we're giving our children living math lessons:

- 1. **Our children spend time thinking.** Where there is life, there is activity. Math lessons should put our children's minds into motion, thinking about mathematical concepts, patterns, and rules. This doesn't mean that we shouldn't have our children memorize math facts, but it probably shouldn't be the *only* thing we do in a math lesson.
- 2. Our children can demonstrate what they've learned. Narration, simply put, is telling back what has been read. We should look for this same principle in our math lessons. Can our children put a new concept or idea to work for them in their math problems?
- 3. **Our children make connections.** 'Education is the science of relations', and mathematical concepts and patterns are rife with those relationships. We should see our children see patterns and rules repeat themselves, appear in other places, and find application in daily life.

Our children don't have to love math in order to have a living education

in the subject. In fact, it's better if we put our focus on the outcome of living lessons rather than their emotions.

All the best,

Three Reasons Why Your Child Should Narrate in Math Lessons

Good morning!

Narration: asking a child to 'tell-back' what they've read, in their own words. This deceptively simple tool of a Charlotte Mason education builds upon what children do naturally all the time, telling stories, events, and ideas they've encountered. My three year old currently likes to tell me his dreams. They usually involve a cat or a dog going on a walk!

In Charlotte Mason's writing, we usually see narration as part of our literature based lessons. Whenever we read a living book, we ask our children to narrate for us. This happens in many subjects like literature, history, geography, and nature-lore.

But what about math? Does this tried-and-true tool for learning history and science have a place in mathematics.

I say, 'Absolutely'. Here are three reasons why we need to use narration in our math lessons.

- There is no education but self-education. Narration requires our children to do the work of learning by processing through the ideas presented in the lesson, on their own. Our children need to do the same in math, thinking back through the concepts they know and understand and using them to move thoughtfully and reasonably through solving math problems.
- 2. Narration brings life to the mind. When our children narrate, they are actively thinking, and as they assimilate new ideas, they are growing. This means life. Like I said in my last email, this is precisely what we want in our math lessons.
- 3. Narration builds relationship. When our children are telling us what they know, they get more familiar with it, their understanding deepens, and they are in a better position to remember the ideas later, and even make connections between that knowledge and other disciplines. Mathematics is a highly connected field of study. Narration helps our children see the patterns and make connections *for themselves.*

Narration in math lessons doesn't have to be difficult or timeconsuming, but it does require a mindset that says, 'I'm going to let my child do the work of learning. Even if it takes a bit longer, even if it feels a bit tedious, even if he's really close and just needs a little nudge in the right direction.'

All the best,

How to Make Peace with your Math Curriculum

Good morning!

"What math curriculum do you use?"

As I've started sharing about Charlotte Mason math over the past year, this is one question I am starting to hear more often.

My answer?

"It probably doesn't matter as much as you think it does."

This sounds a bit cheeky, but I really mean it. A math curriculum isn't going to suddenly bring you confidence in teaching math. A math curriculum can't guarantee that your child will receive a *living* math education as Charlotte Mason desired. A math curriculum can't make your child love math. So while I'm happy with our math curriculum, and we plan to continue with it, switching to what *I'm* doing isn't necessarily the best solution for *you*.

With math, and with homeschooling in general, we want the 'sure thing' curriculum. The one that will be beautiful, inspiring, and lead our children to love the Lord, all while remaining manageable, budget-friendly, and easy to implement on a day to day basis. But as Leah and I discuss in a recent *Thinking Love* podcast, there is no magic bullet when it comes to curriculum. But what's more, "The Holy Spirit isn't going to quit on you if you choose the wrong curriculum". **I hope you'll take some time to listen to the episode.**

So if there are no perfect curriculum choices, what do we do about math?

Far more than picking out the right math program is understanding and applying the right principles behind teaching math. We need to understand our *why*, and when we do that, the *how* becomes more clear. And when we have trouble, we can pinpoint our issues and make reasonable decisions about whether it's time to switch things up in the curriculum department.

All the best,

About the Author

Amy is a wife and a mom of three boys. Originally from Indiana, she now lives in the northwest of England. She holds a BSc in Applied Mathematics and an MA in Education. She worked for a number of years in higher education before leaving the workforce to care for her children. Her hope for her children is that they grow to be curious, thoughtful, self-motivated problem solvers, who can teach themselves anything they want to know.

Amy shares the practical working-out of her parenting and education philosophies at her blog, Around the Thicket. She regularly writes about mother culture, parenting, and the Charlotte Mason philosophy of education.

You will also find her on the Thinking Love podcast, where she is a cohost on the show, chatting about Charlotte Mason, the early years, and more.

You can connect with me on:

- https://aroundthethicket.com
- https://thinkinglove.education

Subscribe to my newsletter:

https://aroundthethicket.com/newsletter

Also by Amy Fischer



Charlotte Mason and Living Math

https://aroundthethicket.com/math

Math shouldn't feel like a strange outlier in a beautiful, living education. Find out what Charlotte Mason says about keeping the life and love in math in this complete guide to her approach.

VIDEO TRAINING How to Teach a Living Math Lesson



How to Teach a Living Math Lesson https://aroundthethicket.com/teach-livingmath

Breath life into homeschool math with the Charlotte Mason's *Method of a Lesson*. Learn simple ways to increase interest in math and give your child a strong, vibrant mathematical education in this on-demand video training session.



Before Curriculum: How to Start Practicing the Charlotte Mason Philosophy in Your Home https://aroundthethicket.com/before-curriculum Unsure where to start. Overwhelmed with options. Spinning your wheels.

Bring simplicity to your Charlotte Mason journey and root yourself in the essentials: deep principles of education that will set your focus, build your

confidence, and give you practical tools to educate the Charlotte Mason way.

Instead of tick boxes and to-do lists, Charlotte Mason's broad principles show us how to give our children a beautiful, well-rounded education. With this book, you will learn some of the most action-oriented of these principles: the educational 'tools' of atmosphere, discipline, and life.

You will be able to apply these tools in your home right away and build your confidence as a Charlotte Mason educator – even if you are just starting out.