# Imitating Consistency: Math as Character Formation

*by Charlie Dowers, The Oaks: A Classical Christian Academy*

The other night I took my family to the park. It was a warm, Sunday evening for fall and our only goal was to enjoy the outdoors together. My two-year-old son loves such outings: long paths for running, a water fountain, and of course, big, open, grassy spaces. This particular Sunday, we happened to bring a soccer ball with us as well. The water fountain was interesting and the paths adventurous, but the grass became the playground. "Do again, please!" my toddler laughed as I kicked the soccer ball up into the air as many times as possible before letting it hit the ground. To say that my son enjoyed watching me run around, trying to keep a ball in the air, sells his response short. One time, after the ball hit the ground just out of my reach, I looked at my son expecting another "do again!" and wondered if I could keep going. Instead, I saw him doubled over, laughing so hard that the sound had stopped. We had both proved G. K. Chesterton right: I was not strong enough to exult in monotony, but my son loved it. Chesterton, in praise of the child's delight in repetition, gives the example of the sunrise: "It is possible that God says every morning, 'Do it again,' to the sun."[1] God's childlike glee in continually exhorting the sun to shower the earth with its rays results in both "flakes of flame" in the sky—to borrow again from Chesterton—and the time-keeping precision of a new day's sunrise.

As math teachers, we desire to cultivate this same love for the creation in our students. We hope that through our instruction in math class they will delight in the world God has created in new and deeper ways. In other words, we hope our lessons "soak into their bones" and change them.

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Our goal in every class is to effect character changes in our students. But for us as teachers, there seems to be a rift between instruction in math class and changes in character. Stating that education is character formation sounds right, but how are we supposed to be forming the delights of our students while teaching trigonometry identities, fractions, and functions? How do we go beyond "getting the right answer"?

A right answer is a worthy goal and deserves full credit on a test; however, the value in the problem extends further than mere credit towards a grade. The value includes how that correct answer changes us. We have gone beyond valuing the right answer as the ultimate good when doing math starts shaping our character. So what is there in a math problem that affects who we are? The answer makes a lot more sense when it is connected to a concrete illustration. One thing Chesterton highlights in a sunrise is the repetition of the event. And while we usually associate a sunrise with fantastical colors and poetry, math dials in on this marvel at another frequency. Math elaborates on the precision in God's glee-filled command that the sun rise again. Think for a moment about how consistent God's command to the sun to "do it again" actually is. We don't have to contemplate for long before we reach for numbers to express the level of precision. Expressing precision may in fact be what math does best. And in so doing, math underscores a very particular aspect of God's fingerprint by showcasing the depths of God's consistency. And this line of thinking propels us past mere accurate calculations. We begin to see more than numbers and logic; we see a facet of the very character of God made manifest.

Applying math to a sunrise—or any aspect of the real world—reveals God's consistency. In an ironic twist, though, it not just the physical world that is real; abstract math is real. Consider, for example, trigonometry. As a branch of mathematics, trigonometry primarily describes how triangles work. Most of our lives, we walk around confident that a triangle is merely a three-sided polygon. And even though the definition of a triangle never changes, understanding how those three sides relate to one another holds potential for endless study.

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All over the Scriptures we read of God having made the world and all things therein (*e.g.*, Gen. 1; Acts 17:24). If God made the world, and if God made triangles, then it follows that He made the relationships between the sides of the triangle as well. Trigonometry is real because God fashioned and upholds these relationships; we can study them as God-breathed works. When we believe that math is a work of God just like the next sunrise, when we believe that math shows His consistency, when we expect that it has divine fingerprints all over it, math becomes another chapter of God's grand story to reveal Himself to us.

The expectation then, entering a math classroom, is that we are studying real works of God in the concepts before us. Think about a twelfth-grade math class; by that point, the students have spent at least ten years of their lives studying the subject. It has been one extended exercise in highly precise applications of consistency. Homework problems, one after another, have assumed Christ holds relationships constant. The students are saturated with consistency. So how could the study of these works of God shape them? If education is really more about formation than information, how could ten years of math problems shape students more into the image of Christ? Illustrations of consistency applied to our lives are plentiful in Scripture. Psalm 15 describes a righteous man as one who follows through on a promise even when it hurts. Keeping our word manifests consistency. Consistency is required when, in the fourth commandment, we are told to honor the Lord by resting one day out of every seven. Even general principles of Christian living like the spiritual disciplines presume consistency. Ten years in a math class can equip students with the training and skills necessary for calculus and it can also open up their hearts and affections to lovingly embrace consistency itself as a characteristic of God which they want to imitate. In essence, the students' character can be refashioned by studying math this way.

Though character formation cannot be achieved by checking off a box, any math lesson can provide fodder for a new love. Let's look at a math lesson about the Side-Angle-Side property of triangles. Often the goal for this lesson culminates in successfully completing homework problems. But if we stop there, we are neglecting much of what God has created in these relationships. As C.S. Lewis said, "Education without values, as useful as it is, seems rather to make man a more clever devil."[2] A lesson on the Side-Angle-Side (SAS) property of triangles must be mastered by the student both in application to the homework problem and in relation to the glory of God. This is a "both/and" scenario: math proficiency and biblical worldview. Why would we want to stop short in either category—be it not understanding what God has made or not giving Him credit for it? What if our students could learn the Side-Angle-Side property, know that this too is a work of God, explain how it shows His fingerprint, and get their homework problems right? What might that kind of learning look like? Suppose in the last five minutes of class students wrote a paragraph explaining the SAS property in which they accurately utilized their math terms and clearly described an application of the principle. What if they then went on to cite Acts 17:24 to explain why this property existed, thanked God for His example of consistency, and asked for the strength to imitate God's character in this way? Might not such a request to imitate God's character suggest a new love or desire in the heart of the student?

As we know in our own walks with the Lord, imitating God is difficult because it requires us to change. Last summer, I remodeled my home. One of my least favorite parts of the project was insulating the walls and ceiling—I found it tedious and tiresome. After completing the project, I talked with a fellow teacher about building houses. He told me of a man he met who worked full-time insulating houses. When my teacher friend had asked the man what it was that he most loved about his job, he replied, "The variety." Granted, I have only insulated the walls in my own house, but to me, the job had no variety—measure, cut, staple, repeat. For many math students, hearing the statement "God is consistent, logical, and orderly," or even simply working on a math problem elicits the same response as I have to insulating walls. Even with conscious efforts on my part to the contrary, once I begin to insulate and my arms start to itch, my patience evaporates and I just want to get the job done. Have students ever described a math assignment to you in comparable terms? For me to overcome this negative reflex requires that the old thinking be replaced by a new habit. In other words, I need to be reshaped and to develop a new love. In math class, we labor to

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challenges here. Nevertheless, we believe that it is beneficial to offer some of these courses in Christian classical schools. They stretch conceptual learning and force students to face tests that represent the current standards—standards they will have to deal with in the science and technology industries—under the supervision and care of a mature Christian teacher.

Indeed, for any of these strategies to enable participation for the sake of blessing, our entire curriculum must pass along a Christian worldview. Christian teachers must prepare students to decide—like Joseph and Daniel—when to function within the current system and when to oppose it. Our goal is not industry leadership at any cost: Christ is King. Nevertheless, when God opens the doors, some of our students should be ready to bring the lordship of Christ to bear as leaders in science and technology.

Notes:

1. Abraham Kuyper, "Sphere Sovereignty" in Abraham Kuyper: *A Centennial Reader*, ed. James D. Bratt (Grand Rapids, MI: Eerdmans, 1998), 488.

2. Quoted from Schaeffer's address at the University of Notre Dame in 1981 in the book by Nancy Pearsey, *Total Truth: Liberating Christianity from Its Cultural Captivity* (Wheaton, IL: Crossway Books, 2005), 15.

3. Dorothy L. Sayers, "The Lost Tools of Learning," a paper read at a Vacation Course in Education, Oxford, 1947. You may read this at accsedu.org/The_Lost_Tools_of_Learning.ihtml?id=633752.

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help our students understand concepts like the SAS property and eventually they get them. But how does that process shape them if it does not point them to God's eternal power and divine nature as Romans 1:20 proclaims? Can that mathematical concept begin to bear sweet fruit in their lives? Perhaps the better question is: does our life provide an example of the sweet fruit produced by going beyond the right answer?

As teachers we are keenly aware of the areas in which we fall short. Our lives are marred by sin and twisted by bad habits, so, not surprisingly, our example is flawed, too. And yet, Christ's incarnation interrupted history and gives us new life and new hope. Christ is not only the reason our marred efforts to teach have a chance of impacting hearts, but He is also the perfect embodiment of the consistency of God and the source of creation's consistency. "For from him and through him and to him are all things. To him be glory forever" (Romans 11:36 ESV). As we sit in Christ's classroom, we see that the God who is the same yesterday, today, and forever still never ceases to surprise. His consistency is perfect, but not routine. Children are conceived through the union of man and woman, yet once a baby was born of a virgin. A sunrise time can be predicted, but for Joshua one day the sun stood still. And even death, the end of all men, was conquered by one man. As we wrestle with bringing Christ's consistency to bear in our lives, we do so in a world charged with God's grandeur "shining forth like shook foil."[3] God throws himself into a sunrise, and as one man said, "Man was not made in God's image for nothing."[4] We will echo the delight of toddlers and the gratitude of the insulation installer because in the process of discovering and imitating God's consistency, His character will become ours.

Notes:

1. G.K. Chesterton, *Orthodoxy* (San Francisco: Ignatius Press, 1995), 65.

2. C.S. Lewis, *Abolition of Man* (New York: HarperCollins, 2001).

3. Gerard Manley Hopkins, "God's Grandeur," *Hopkins: Poems and Prose* (New York: Alfred A. Knopf, Inc, 1995), 14.

4. Robert Farrar Capon, *The Supper of the Lamb: A Culinary Reflection* (New York: Random House, 2002), 19.