



Constructivist Teaching by Heart

Newsletter, November 2024

"Putting the child at the center of their learning."

What Leads to Results

Recently, I (Dana) saw an advertisement from the sports car company McLaren that caught my eye. The ad said, "We don't focus on results; we focus on what leads to results." That idea intrigued me. When I consider what we tend to do in schools, I wonder how often we focus on results when we should think more about what leads to results.

Schools put a lot of emphasis on results. We use tests to review data and decide what children know and how they are ranked. We have meetings to review data from the test. We discuss how many students are reading below grade level. We look at data to determine if children are proficient or below proficient in math. We report data to administrators, school leadership, and the public. There are many meetings focused on the results from standardized tests. Typically, these tests are required by the school district, the state, or the curriculum program that the school or the district has adopted. Standardized tests are designed to compare children to another group of children at the same grade level. Curriculum tests are written by the company that produced the product. None of these assessments were written by anyone who knows your students. They are only helpful in providing you with results – a snapshot of the child at the time they were taken. I agree with McLaren; we should focus on what leads to results.



I was working with a school where the first-grade team was reviewing the data from a recent curriculum math test at the end of a unit on addition. We discovered that about half of the children still needed help to add successfully. The results told us what students could not do. It did not tell us what we should do next. The curriculum simply moved on to the next unit on subtraction. It feels like we do this often. We just move along in the curriculum and hope that, by some miracle, the child will be able to make up for what they were unable to do at the time of the assessment. The assessment did nothing for us except to provide results.

However, at this school, the culture is to discuss results, uncover what they are showing, and explore options for what will lead to success for their students. We decided that it made little sense to move those children who need support to be able to add successfully into a unit on subtraction.



When we discussed child development, we realized that it is a big leap for first graders to move from putting numbers together to then being able to take them apart. After more investigation into the students' work during the addition unit, the teachers and I discovered that several students did not understand numbers. They did not have number sense. In the sequence of mathematical/logical thinking, number sense develops first, followed by addition and subtraction. We confirmed this with an informal assessment. We placed five small tiles (pennies, beans, or any small manipulative) in a shallow box lid and asked the children, one at a time, "How many tiles do you see in the

box?". Each student counted the tiles by pointing to them as they counted. Then the teacher added two more tiles and said, "Now, how many tiles do I have?" All seven of these children needed to recount the original five and include the two new tiles to arrive at the answer of seven. When a child cannot look at the five tiles and see they have five or remember the five when two more are added, they need more understanding of number sense.

We placed the students into new informal math groups. The group ready for subtraction, moved on to the next unit in the curriculum with one teacher. Another teacher planned and conducted a revised unit in addition with an emphasis on work in small groups using manipulatives. A third teacher took the seven children they had determined needed number sense.

For the next three weeks, each day, the teacher worked with the seven children who needed number sense and followed a simple lesson plan. She would begin the lesson by reading or re-reading a book about numbers. So many excellent counting books are available, and the children love them. After the read-aloud, the teacher would play simple counting games like giving each child a random number (less than ten) of objects and asking the students, "Who has more?" They counted and recounted everyday objects. They debated who had the most.

She kept the emphasis on counting and avoided paper and pencil-type tasks.



After three weeks, the teachers retested the students using an assessment they had written themselves. The teacher working with the seven children conducted the same assessment as before with the tiles in the lid. At the end of the three weeks, the subtraction group made good progress, as did the addition group. In the number sense group, they determined that four students had developed number sense well enough to move into the addition group. The other three students continued working on number sense in their small group, receiving additional support from a resource teacher.

What did we learn from this experience? We decided it was best to teach the students the concept they were ready to experience next. The groups were flexible, allowing children to move to a new group when ready.

Our teacher discussions about assessments are powerful because they put the focus on what leads to results. We can ask ourselves questions, such as: “What is best for students? What can we do now that will help students gain success? What do the students need to learn next (rather than moving them forward in the curriculum when they are not ready)? Now we are meeting students where they are. We become free from labeling students. We don’t just repeat the same unit or move students on no matter what. Rather, we create engaging, hands-on activities that will help them learn and grow.

What Leads to Results Reflection Questions:



When do you, as a team of teachers and administrators, discuss what leads to results?



How do assessment results help you make informed decisions about what a child or group of children are ready to learn next?



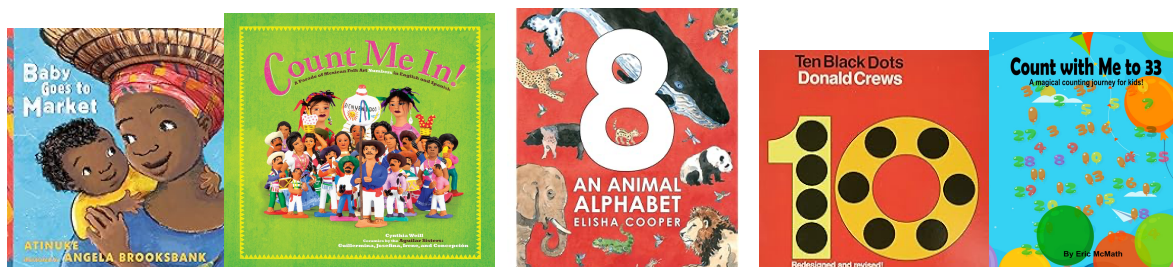
How have you used literature in your math instruction?

We want to hear from you! Share your comments about this newsletter topic, What Leads to Results, [here](#).

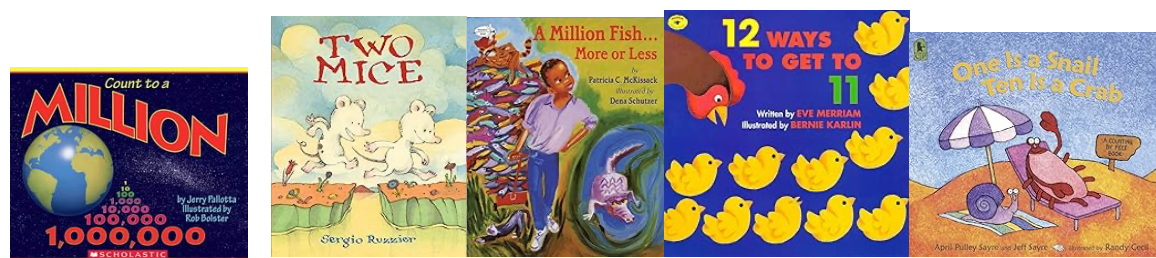


Teaching with High-quality Children's Books

Books for teaching counting!



Books for teaching number sense!



Recommended Teaching Resource for Math Instruction:

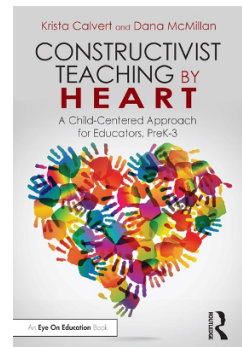
For more information, recommended children's books, professional books, and math ideas for reaching children where they are, visit this useful website from the Erikson Institute:

<https://earlymath.erikson.edu/the-best-childrens-books-for-early-math-learning/>



PONDER BOX

“Constructivist teachers consider child development and recognize that each child’s development is unique. Every child is on their own journey in all areas of development: cognitive, social, emotional, and language. Therefore, comparing one child to another offers no useful information for instruction.” pg. 24, **Constructivist Teaching by Heart**



Q & A: Ask Krista & Dana...

Q: My math curriculum mostly consists of whole group instruction. I know my students need differentiation, but how do I manage small groups in math and get it all in?

A: You may want to try a math workshop model for your math instruction. Math workshop can be implemented at any grade level and consists of a general structure of starting with a number talk, then a whole group focus lesson, guided math groups, and a final student reflection time to reflect on learning (possibly an exit ticket, math journals or turn-and-talk). Implementing a workshop model can offer more opportunities for student ownership and engagement.



Thanks for reading! Do you have comments, ideas, or questions for the newsletter? We'd love to see a picture of your classroom. Submit [here](#)!

