

Rick Wormeli's Response to the *Metaphors and Analogies* Ning Contest Posts

General Response

Thank you to everyone who contributed to this event. I hope you will be inspired to use metaphors and analogies as one of the first tools in your unit planning from this point forward. In addition to several good submissions for the contest, there were a number of thought-provoking conversations, which has made this site a wonderful resource for teachers.

The winning submissions and my personal responses are posted below. All of the submissions were creative and thoughtful, but these entries stood out. Some of the other submissions didn't include an exploration of the metaphor's limitations or ways to improve it, as requested. And some didn't tie the metaphors back to specific instructional use in the classroom. Instead, they focused more on metaphor mindset than curriculum, and we really wanted those clear connections to instruction. Others seemed a bit complicated for classroom use, and were likely to create confusion for students. I have fallen into this trap on many occasions, and have since learned that too much complexity can ruin a good comparison.

One of the big themes that emerged from the submissions was the importance of test-driving the metaphors we use in the classroom. Take your best ideas out for a spin – explore all the connections and lack thereof. Consider the potential misconceptions, and see if there are ways to avoid them by revising the metaphor.

Another theme was the importance of modeling comparative thinking and critique. Many of our students are not accustomed to thinking abstractly or across multiple domains. They need regular opportunities to observe and practice thinking metaphorically in order to feel safe in their own intellectual risk-taking.

Finally, the biggest message from all the entries was that thoughtfully incorporating metaphors and analogies into instruction works. Let's recognize this in our deliberations about education, as we revisit current metaphors and create new ones. Metaphors are not happy abstractions for the literary elite, but practical workhorses of sound instruction. Let's continue seeking useful metaphors for classroom use, not leave them to chance, and then let's share our discoveries with colleagues who may not be aware of the great potential metaphors have for teaching. As shown in these submissions, such conversations can open minds. I hope this contest will be the launching pad for your own metaphorical pursuits!

Rick Wormeli

Winning Submissions and Rick's Commentary

Submission by Elma Torres:

When introducing a new concept to elementary students, I usually tell them we will have to practice to learn. Eventually, they will have to show what they have learned. Sometimes they don't understand why they have to listen and follow closely as I model and work with them step by step whether it is to learn how to solve a math problem or to learn a strategy for reading or writing. I tell them that they're on a tricycle with training wheels at the beginning. When I feel they are ready to move on with less help, they are on a bicycle with two wheels, but I'm still there to help steady them when necessary. Finally, when they need to show what they have learned (a test, a final copy, or another assessment), it will be like flying down the street on their two wheeler showing how well they can ride on their own.

Limitations: Of course, if students do not own or have not gone through the process of learning how to ride a bike, they may not be able to relate. However, many stories read in the lower grades include children's bicycles, riding bicycles, and so on. I could always improve the metaphor by using learning how to walk without help. It's a simple metaphor, but it works, and the answer to the "When can I do this by myself?" question is better understood.

Rick's Response:

The instructional scaffolding demonstrated by the tricycle/bicycle and training wheels metaphors is a natural fit for primary and elementary students. This shows Elma's insight into her students' background and developmental level. This metaphor could be referenced throughout the school year, perhaps resulting in a Bicycle Rodeo at the end of the term to symbolize mastery in academics and personal growth. There are many bicycle associations that could help teachers conduct such a rodeo, if Elma is interested.

Just imagine the ongoing connections we could make between content and things like: braking, wearing a helmet, the chain falling off, greasing the gears, uphill climbs, coasting downhill, changing gears, using the horn to signal trouble, inflating/deflating a tire, puncturing a tire, breaking/replacing a spoke, pedal and pedaling, training wheels versus no training wheels, kickstands, reflectors, Lance Armstrong and the Tour de France, bike tune-ups, staying balanced, and so on.

I also like Elma's sensitivity to students who may not have the cycling frame of reference. She could either provide the context through reading experiences, as she mentioned, or change the metaphor to learning to walk, if that better serves her young students. Both options provide a path to the same goal: students' independence. Elma's submission is a foundational metaphor that opens many possibilities for development. This is a Schwinning entry!



Submission by Sarah Bernhardt:

How is downhill skiing like choosing a just-right book? The skiing/just-right book metaphor is one I have used with kindergarteners, first graders, second graders, AND their parents in the classroom and at school-wide literacy nights/parent-teacher conferences to teach kids about choosing just-right, easy, and difficult books for independent reading.

The metaphor goes something like this: I share that I am not a very strong downhill skier (I've only done it a handful of times!) and that when I do go skiing, I LOVE those bunny hills . . . they are easy and fun, I don't have to work very hard at it, I enjoy it, and I don't get anxious or nervous about falling. I avoid the black diamond hills because they are just too difficult for me! I will most likely get seriously injured if I even attempt a black diamond hill because I don't have the experience or skiing skills to make it down in one piece.

But I've noticed that when I only stick to the easy bunny hills, I don't really improve as a skier. I need to practice on some medium-sized hills that are just the right amount of challenge for me in order to get better and improve my skiing. And sure enough, the first time I go down a medium-sized hill, it's challenging but I learn to balance and weave back and forth and use the edges of my skis to make it down without crashing into other skiers or completely wiping out. And the more I go down that medium-sized hill, the more comfortable I start to feel and the more I improve as a skier.

Choosing just-right books is the same as going down those medium-sized hills . . . when kids choose a just-right book, there should be just enough challenge to support their progress in becoming a stronger reader, but not too much challenge that they will not be able to comprehend what they are reading. Likewise, although easy books are fun and enjoyable (just like those bunny hills!) they may not necessarily help kids

become stronger readers. A healthy balance in your reading diet (I smell another reading metaphor!) is essential.

One limitation to this metaphor is that reading books that are too difficult are not necessarily "dangerous" to kids in the same ways that skiing black diamonds are dangerous to inexperienced skiers. When kids are interested in chapter books or other texts that are too difficult, I usually tell them to spend a little bit of time with the text or ask a grown-up or older reader to read it aloud to them. They might be able to go back to that difficult text later on in their reading lives and find that it will be a just-right book several months or years down the road.

Although on further reflection, I guess that an unbalanced reading "diet" of too many difficult books (especially if parents are pushing their kids to read at too-difficult levels) could be potentially "dangerous" to their child's reading growth if the child is experiencing anxiety about reading. Kids who are only reading challenging and difficult books may begin to feel like reading is always a chore, and that it involves heavy amounts of concentration, focus, and hard work. For younger readers especially, it is so important for them to see reading as fun and enjoyable, and in this way, I suppose that reading difficult books can be dangerous to supporting kids' positive attitudes toward reading if they feel like reading is something that is always hard for them.

A way to improve the skiing metaphor is to expand it to include the concept that skiers and readers come in all different levels of experience and ability. A hill that is easy for one will be difficult for another, and books are the same: a just-right book for me will be different than a just-right book for one of my students, as different readers have different experiences and background knowledge that they bring to a text.

I think it's also worth reinforcing to parents especially that reading and re-reading easy books, in addition to being fun and enjoyable, can be useful for kids to improve their reading fluency. Like many things in life, it's all about balance - you wouldn't want to eat just one kind of food in your diet, just as you wouldn't want to read just one kind of book. But that's a completely different metaphor . . . :)

Rick's Response:

One of the first things I noticed about Sarah's posting was her revelation to students that she is not good at something. Such open vulnerability challenges the common misconception that struggling to learn is a sign of weakness, instead of the mark of persistence. Each of us has to become comfortable with how much we reveal to students, but Sarah's example is one we should all consider. The ski slopes provide perfect analogies for the thrills and risks involved when we descend into new learning, especially as I sit here and watch the Vancouver Winter Olympics on television.

Sarah really explores multiple attributes of the suggested comparison. In the cognitive linguistic world, we would say that she's mapping many points – targets and analogs — between the domains. Sometimes teachers use just one element or comparison in their metaphors, missing other connections. Sarah used skiing as the ramp to multiple possibilities – always a good sign for a strong metaphor.

Even better, she considers tools and advice to give students as they move from one level of comfort to another. Best of all, she revises her thinking about the metaphor after reflecting about its possible limitations. This is one of the key themes in *Metaphors & Analogies*: we should take time to hold the metaphor up to our teaching expertise and, as with a prism, determine where it shines, where it refracts, and how we might want to shape it differently to be more effective. I've spent hours in silent jubilee over a new metaphor that I planned to use with students only to see my hopes dashed when careful analysis showed me that it wouldn't work as well as I thought. I considered the mapping points more thoroughly and found them wanting or potentially distorting to students' understanding, and so revised my opinion. Every time I do this, I adjust the original metaphor or come up with a different one (now that I recognize the truly important aspects I want to convey) that improves my instruction.

I also love Sarah's emphasis on balance and re-reading books, just as we return to the slopes, improving with practice. For exploring the comparison in so many ways and for demonstrating the reflective practice of highly accomplished teachers, Sarah's contribution is particularly effective – a gold medal!



Submission by Trish Tripepi:

In American Literature, I find that metaphors showing barriers or obstacles are common and are easily understood by my 11th grade students. For example, when exploring the theme that the American Dream means different things to different people, we read a short story titled "And Beyond, More Walls."

Written by Filipino author Bienvenido Santos, this autobiography uses a wall to symbolize how immigrants face never-ending challenges in their pursuit of the American Dream. A brief but meaningful discussion of walls they have had to climb over (or have failed to surmount) leads us into the next unit, *Fences* by August Wilson. This play uses the metaphor of an unfinished fence to show the protagonist's dissatisfaction with his marriage and his life.

Because students have already viewed a wall as a symbol of obstacles, it's easy for them to make this leap and understand how, as the character Bono points out, "Some people build fences to keep people in. Other people build fences to keep people out." They then produce an assignment that asks them to consider the figurative fences they have erected or torn down in their lives. Depending how crunched I am for time, they either write a reflective essay, or they create a white picket fence on which they visually represent limitations they have built or eliminated. Once those pickets are displayed around the room, it makes for a very powerful visual!

The main limitation is that students sometimes have a difficult time recognizing how the metaphor applies to their particular situation. Does the wall encircle them and those they love, or does it stand between them and someone else? Have they taken a fence down or have they put one up?

One way I hope to improve the use of this metaphor in the future is by bringing in pictures of real, possibly historic walls and fences, and talking about the purposes they serve. I also plan to find relevant literature that allows me to continue this metaphor throughout the entire school year.

Rick's Response:

Wow. Any metaphor that is so useful across disciplines, literature, and life, especially one that works so well physically as well as figuratively, has to be good. The wall/barrier comparison will speak to many students, demonstrating how Trish is in tune with the teenagers she teaches. She also indicates a rising complexity, moving from the initial, concrete wall or barrier to the unfinished fence and extrapolating to marital unhappiness. This is a beautiful example of scaffolding in the secondary classroom.

Trish's metaphor is easy to turn upside down or inside out, as she demonstrates so well. Is the wall keeping something out or something in? Is it a barrier or simply a way to keep the peace between neighbors? Does it keep you safe or prevent connection? Trish's idea about bringing in visual representations of walls and the stories behind them is appropriate, especially in this age of YouTube and Web 2.0 technology. I wonder if she would let students launch into tangential thinking such as: What about membranes instead of walls? What connections can we make between the encounters in the literature, students' lives, and semi-permeable membranes; diffusion, osmosis, and construction of those membranes (or walls)? Does their makeup affect their cause? Let's talk about societal changes when walls come down (East and West Germany). Do walls ever become bridges, and under what conditions? What can become a wall to individuals: Statistics? Hopes? History? Art? Physics? Love? Online games? How are windows also like walls?

I know these extensions might seem indulgent and perhaps extraneous contemplation, but this is the kind of idea-play that author Daniel Pink and so many others have linked to marketability in the 21st century. I hope we haven't drifted so far away from these idea generators in our standardized-test-score chase that we can't probe abstract connections and imagination. Trish's wall metaphor opens doors.



Submission by Jill Dillard:

Recently, I was facilitating a study group of teachers. We were reading and studying a book that contains instructional strategies that have been researched and proven to yield high success. One of the ideas is identifying similarities and differences and metaphors are listed as a very valuable instructional technique to use in doing this.

To help teachers see that metaphors are everywhere, I invited them to think about their own teaching over the course of our study group sessions and to share a metaphor that represented it in one of our final discussions. I modeled and provided a sprig from the pine tree in my backyard. I told how I was extremely durable and how I varied in softness and hardness, but that I was most importantly "evergreen." I felt that I was always learning. I would never get ripe, but wanted to always stay fresh and keep growing professionally.

During our final session, teachers came in with little props, pictures, and enthusiasm. Everyone took a turn sharing. One teacher compared her teaching to a vitamin pill. She said she was full of energy and always trying to have the right nutrients and healthy combinations to be responsive to any and all teaching

situations that came her way. Another brought in a photo of a pretty rustic-looking black truck. He explained how he was faithful to his practice, durable, still working and doing the job. He said he carried many loads and had been down many highways, yet he was always moving forward when it came to learning and teaching. There was a rooster who was a morning person and wanted to wake everyone up to school and a bright day. One teacher brought each of us a Black-eyed Susan plant from her garden. She was deep rooted and bringing about prolific growth and abundant inventiveness. I found this metaphor-seeking activity to be very meaningful. It helped all the participants to see the value in using metaphors in the classroom as well as with making an abstract yet personal connection with their own teaching.

LIMITATIONS: The main limitation is a teacher's ability to reflect on her practice. The deeper the reflection, the more careful the metaphor construction can be. I know that modeling is a good thing and that it is also important for a teacher to demonstrate that she is willing to do the work that the class is involved in. However, I have wondered if sharing my own metaphor limited some of the others. Having said this, all of the metaphors were different, but there were several related to seeds and recipes and my own did involve a tree.

IMPROVING THE ANALOGY: I wrestled with giving teachers time to discover a metaphor or whether they should respond immediately. I did opt to give them the course of six weeks, but have wondered if teachers are constantly analyzing their lessons and teaching, what would have happened if I would have given a few minutes for thinking and writing and then asked for a spontaneous response. One of my favorites was the platypus...an unusual creature made up of courses, lesson plans, experiences and students that comes together in a unique and creative way in the midst of teaching.

Rick's Response:

Yahoo! More evidence that metaphors are as valuable in adult education as they are in elementary and secondary education! Hats off to Jill for sharing this with us.

Another important feature of this submission is the way Jill used metaphors in her lesson to back up the research the teachers were studying. There was no instructional hypocrisy here, only credibility and consistency. And look at the buy-in from her adult students – enthusiasm, personalization, engagement. Don't we want that in all of our lessons? Look, too, at the depth revealed in her adult students' responses. We wouldn't get that depth by responding to simple comprehension questions or conducting typical class discussions.

I'm intrigued by Jill's concern about modeling the concept almost too well. If we demonstrate a skill too proficiently in front of our students, will it turn them off or will it inspire their own efforts? It's hard to say and may depend on the circumstances. Some of our students, both the perfectionists and those with low self-esteem, may tell themselves that they can't measure up to a sophisticated standard. We have to be careful to emphasize the process of climbing, not just reaching the pinnacle.

Having said this, I believe there are times when a teacher should present a well-done example, such as when we share a thorough response to a math problem or essay and ask students to analyze what makes it successful. Then we give them time to practice those strategies. Whenever we use models, we must offer hope to students. Given the tools and time to raise their performance, students will be motivated to continue trying. Hope is a palpable aspect of learning. Take it away and students become paralyzed; provide it and they build cognition.

Finally, I loved Jill's ruminations about whether it was wise to ask her colleagues to provide a metaphor immediately or give them time to percolate their ideas. Considering this question in the context of our classrooms, we might ask students to create and share a personal metaphor right away and then later ask them to revise the comparison in light of new thinking.

By reading Jill's post and writing this response, I've gained valuable insights and feel as enlightened as the participants in her professional development sessions. Thanks, Jill.



Submission by Tony Martin

As a way of introducing to my fifth graders the concept of strict and loose constructionism regarding the Constitution, I present them with the following scenario: You are babysitting at a neighbor's house. The mom has left this note in the kitchen:

"If you are hungry, there's some leftover soup in the microwave. There's also bread and crackers in the pantry if you want them - and some cookies in the

cookie jar. Please do not eat any of the cake. I'm saving it for Sharon's birthday party. Make yourself at home!"

After students read the note, I ask them, "Suppose you find some ham and cheese in the fridge and decide you'd like a sandwich. Using the note as your guide, is it OK to make one? What if you find some ice cream in the freezer? Can you help yourself to that?"

What follows is a lively discussion in which some students argue that you should only touch the items mentioned in the note while others think the phrase "make yourself at home" allows for more food options.

It's a pretty easy step from this scenario to Jefferson, Hamilton and the Constitution.

Limitations - Of course, the issues at hand in the constitution are more weighty than what looks good in the refrigerator - and in the analogy, the babysitter could call and ask the parent for clarification. For constitutional issues, especially in our day, we can't know exactly what the writers intended. The analogy also doesn't fit in that when it comes to the constitution, there are competing groups with different goals - rather than just one individual involved in the interpreting. And one more thing - the analogy doesn't take into consideration how past experiences or extenuating circumstances might alter one's interpretation. Jefferson, for example, became a loose constructionist when he felt he needed to make the Louisiana Purchase.

Improving the analogy: Hmm... After the introduction, and some exposure to the constitutional issues, perhaps you could return to the analogy with a few extra what ifs...

What if the kid you're babysitting wants some ice cream?

What if the parents are late getting back and you're really hungry?

What if the soup has gone bad and the crackers are stale?

What if the cheese is unopened and it's a really expensive kind?

What if there are other notes all over the house telling you things to do and not to do?

What if you called up a friend who has babysat there before and asked her opinion?

Do any of these things change how carefully you read the note?

Rick's Response:

After reading this, I'm sure you will be as eager as I am to observe Tony's class! This is a particularly vivid metaphor because it resonates so well with students' lives and their sense of rule-interpretation and fairness. Plus, who hasn't wondered whether they should eat something in the refrigerator? Situational ethics and awareness of social context are powerful hooks for young adolescents. Tony is really drawing us into the conflict between legal principles and political pragmatism - the very issues that members of the Constitutional Congress considered. If you have studied the Constitutional Congress, watched HBO's series about former President John Adams, or read any of the books detailing the deliberations of the designers of our American government, you will quickly see the many mapping points between and among personal, political, legal, social, and ethical principles.

One of the best things Tony does is think through the limitations of using this analogy with students. He's right on target with his concerns, but that doesn't make the metaphor a bad one to use. The keenest moment in this lesson would be his facilitation of students' discovery of these limitations. If Tony had not considered the limitations in advance or been open to them in the course of instruction with his students, he might have missed this teachable moment. Sometimes the best learning results when students see how a metaphor falls short. When students have to identify critical attributes and publicly defend their choices, they deepen their understanding of terms and issues. In this posting, Tony makes it safe for us to be less than brilliant when creating instructional metaphors (though his is a particularly good one!) as long as we are smart enough to invite students' critique.

His follow-up questions about how he might improve the metaphor provide great catalysts to clarify thinking. He sets an inviting table for substantive content and student interest.



Submission by Marsha Ratzel

I've used the notion of a conveyor belt to explain how the crust and mantle "recycle" rock material through convection currents. I picked this because most kids have seen a conveyor belt in the grocery store or on a treadmill so they are familiar with how it works. What stumps them in studying convection currents is that they don't think something can go under the surface and come back up again. Well, the conveyor belt

does just that...and once you tell them that, it makes so much sense for them.

You can also use a conveyor belt to help students understand how the ocean current work in cycling water from deep current to surface currents and back again.

Since I work with 6th grade students, they are still very concrete learners. When you first talk about this conveyor belt idea, they think the rock literally attaches onto some invisible belt and drags the rock material through the crust and mantle. So I have to be careful to explain how not to take the idea too far.

I'm not sure. I know from the first time I taught it I was trying to explain what a conveyor belt was. So the next time and after that I've gathered small video clips to show them different kinds of conveyor belts. That helped to get them to understand that not all conveyor belts are the same and how it just gets the idea across...it's not a perfect model.

Rick's Response:

Marsha's metaphor works well for a couple of reasons. First, it refers to something vivid in students' background: a treadmill or the conveyor belt at the grocery store. Students can picture this, and a big part of meaningful metaphor-making is creating a clear image in students' minds. Marsha is right that students in 6th grade are particularly concrete in their thinking, so this kind of metaphor is needed. Second, and perhaps more importantly for many students, the suggested metaphor presents a concept that at first glance seems incongruent, even impossible. The ground moves? It goes down then comes up again, and not just in volcanoes? *It looks stationary to me when I walk home*, students might think. This creates wonderful curiosity in students — *How can something so still be moving?* — and leads to engaged learning.

Marsha's cautions reflect her experience, too. As a science teacher, she does not want to create or reinforce misconceptions, such as rocks sticking to the conveyor belt. I wonder: would large tank or tractor treads made of actual rocks provide a more helpful explanation? She'll also have to teach students about geologic time, which is a hard concept for any of us to grasp. It's like trying to imagine a million dollars in stacks of dollar bills. After a while, we blur it all together and think, "Okay, it's just a lot."

Also, Marsha may want to propose the conveyor belt metaphor to her students as a learning experience and ask them to find all the faults (no geologic pun intended) with it. The idea to incorporate small video clips is also wise, given the need for concrete examples. A range of possibilities for building conceptual metaphors occurs to me:

- *The theory was grounded in physics.*
- *There's a fault line in our thinking.*
- *I think I can crack this.*
- *This is a layered approach.*
- *Are we at a statistical precipice?*
- *What's at the core and what's at the surface?*
- *Let's test the soil here.*
- *The concept is arid, without life.*
- *Like shale, this idea seems brittle.*

Metaphors get us thinking. Thanks to Marsha for being so developmentally appropriate and vivid as well as scientifically accurate. I appreciate her acknowledgement that, like many of our ideas, "It's not a perfect model." Humility is a powerful factor in good teaching. Doubt makes us curious and helps us consider alternative views. When we remain open to revision, we strive for excellence rather than settle for ordinary.

