

*Learning on Steroids:*

# Getting Started with Metaphors



by Scott Young

## Getting Started with Metaphors

If holistic learning were a tree, metaphors would be the trunk. Metaphors are one of the best rapid learning tactics I've uncovered, and in this guide I'm going to show you how to use it.

Before I start explaining how to use metaphors to learn rapidly, I want to discuss an obvious (but sometimes forgotten) point: **You're already using metaphors all the time.**

We use metaphors in *figures of speech*: "There's more than one way to skin a cat," or, "Time flies when you're having fun." Time cannot actually fly and nobody is suggesting pet mutilation.

We use metaphors when *explaining*: Evolution is often taught as "wanting" to select the fittest creatures. But as a mechanistic process, evolution doesn't "want" anything, at least not in the conventional sense of the word.

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We use metaphors when *making decisions*: reminding yourself that, “a ship may be safe in the harbor, but that’s not what ships were built for,” may help you drag your ass off the couch.

Before I start, let me point out you’re already using metaphors all the time without realizing it. Holistic learning isn’t inventing something new, just trying to get you to use metaphors deliberately.

### Do Metaphors Work for Subject \_\_\_\_?

This is a problem I see a lot. A student can see how metaphors may work for literature or history classes, but is certain it can’t work in technical fields like math or computer science. Or, a student sees how it may work in physics, but is certain it can’t work in a fact-based discipline such as law.

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Untrue on all counts. Metaphor (unlike many other methods) is applicable to almost every learning task. You may prefer other methods on specific subjects, but few topics are immune to its powers.

### The Metaphor Accuracy Problem

One reason people are hesitant to use metaphors in precise fields is because metaphors aren't precise. They can lead to incorrect inferences when used improperly, so "logical" people try to avoid them.

For example, ancient peoples used a metaphor of gods controlling the sun. The sun rose every morning because Apollo dragged it around the world in his chariot.

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Obviously, being inaccurate, this metaphor breaks down at more detailed levels. It can't explain the movement of the celestial bodies (which are consistent with a sun-centered solar system) or the seasons.

For these failings, many people like to point out that metaphors can't work (in principle) because they will lead to errors like the ancient Greeks. To these critics, I have two points:

First, when you make metaphors **you aren't equating the metaphor with reality**. When I describe programming variables as different shaped jars, I don't believe there are *actual* small jars inside the computer.

The metaphor is **only a memory aid**. It helps me remember the properties of variables, it isn't supposed to fulfill an accurate account of the inner workings of my computer.

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Second, this is why you can never rely on one metaphor or one connection. Because all metaphors have holes, you need to have many metaphors to connect to the original idea. These metaphors build your web.

When you go to apply the ideas you've learned, you don't try to remember the metaphors, you try to remember the subject. When I go into a calculus test, I'm not trying to remember how I made a metaphor between driving a car and derivatives, just the formulation.

Think of metaphors as just the scaffolding used when learning. You don't need to keep it there once the building is complete.

## Implementation Stages for Metaphors

Since the metaphor is such a key topic, I'll be writing about it again in future implementation guides. This doesn't mean you can't get started now, just that there is so much you can do to master your usage of the tactic.

I feel there are several rungs of the ladder you can cross in order to improve your metaphor ability. Which rung of the ladder you're at depends on how difficult the topic is (harder subjects = more difficult metaphors) and how much practice you've put into the technique.

## Stage One: Simple Metaphors

These barely qualify as metaphors at all, but I'm going to group them in because they are still fantastically useful. They don't have the same memory-enabling punch that deep metaphors have, but they make it far easier to understand a topic.

Stage One metaphors are boring, simple and narrow:

1. **Boring**, because they don't connect to any vivid imagery.
2. **Simple**, because they usually only relate one quality.
3. **Narrow**, because they stay within the same topic.

Stage One metaphors are the starting point. If you can't think of any good metaphors for a subject, start here until you feel more comfortable.

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As an example, if I'm trying to understand the difference between floating points and integers in computer programming, I might relate them to real numbers and integers in number theory.

Lacks excitement, but it is still useful. If I couldn't think of any other metaphors, this is still a valid start.

## Stage Two: Vivid Metaphors

The next stage is to create more interesting metaphors, even if they only help you relate one point, and don't interconnect different disciplines.

To create an interesting metaphor noticing the difference between floating points and integers in computer programming, you could imagine one as being water and another as being

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pebbles. You can count the pebbles, like integers, but the water would need to be weighed precisely.

The advantage of this metaphor is vividness. Water and pebbles are easier to visualize and remember than number theory.

## Stage Three: Robust Metaphors

The final stage of metaphor creation are metaphors that relate several points and may interconnect disciplines.

A robust metaphor for the difference between floats and integers might be a counter and a caliper. The counter can only count in whole units, and only up to a certain number (before it

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resets and starts back over). The caliper not only measures with precision, but it can also measure very large or very small quantities, if you held it at a distance or through a microscope.

This metaphor isn't just vivid, but it integrates additional ideas. Namely that integers will rollover, and floats can store large or small numbers, but only to a certain level of precision.

Once again, if you're stuck, start with Stage One. If you feel you understand a topic better, try the higher stages which will make the ideas more memorable.

### Practice Suggestions:

I could talk until I'm blue in the face about metaphors, but that won't make you one iota better at the skill. You need to practice.

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If you want to put metaphors into a 30 Day Trial, commit to a certain volume of metaphors per day. For example:

*I commit to creating 25 metaphors from my class notes every day.*

I prefer this to using a time-based approach (say 30 minutes per day) which is easy to squander and doesn't reward quantity (which is more important than quality).

You may want to leave a margin in your notes for creating metaphors after class. Once again, you don't need to form perfect, Stage Three metaphors your first day in. Even simple, boring metaphors are helping you link ideas together.

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Higher stage metaphors are better for subjects you understand, but have difficulty recalling. Lower stage metaphors are better for subjects you struggle to understand (not to mention, can't recall).

Good luck with the technique, and I'll see you on the other side!