

Brain Myths

Improving your practice by
understanding what is NOT true.



thelearninghawk.com
beth@thelearninghawk.com

Fashion

Need Fads to Survive



VintageDancer

Education

Fashion Need Fads to Survive.

Education Doesn't.

Find out what works that.

Rows vs. pods

Flip

Classroom

Gamification

F

Personalized Curriculum

Learning

Treadmill

Arts

Passion Projects

W

Integration

Guide on the Side

he



Obstacles to Doing What Works

1. Administrative Initiatives

2. Our Own Mistaken Beliefs

You Don't Know Until You Know

Some of these myths:

- Were taught to us in teacher school.
- Were logical at the time they were proposed.
- **Begin with some kernel of truth.**



**“Every heresy is a truth taught
out of proportion.”**

- G.K. Chesterton

Myth 1

**The brain does not change
after the age of 10.**

Where Did It Start?

The Kernel of Truth

1. Groundbreaking Discovery - Sensitive Periods
 - Language - 6 months to 3 years
 - Patterns - 2 years to 6 years
2. Mundane Observation - a decreased rate in learning new things in adults

How Did the Kernel of Truth Become the Myth?

1. Sensitive periods got misinterpreted to mean the ONLY time someone could learn specific things.
2. General trends were over-interpreted
3. Exceptions were neglected

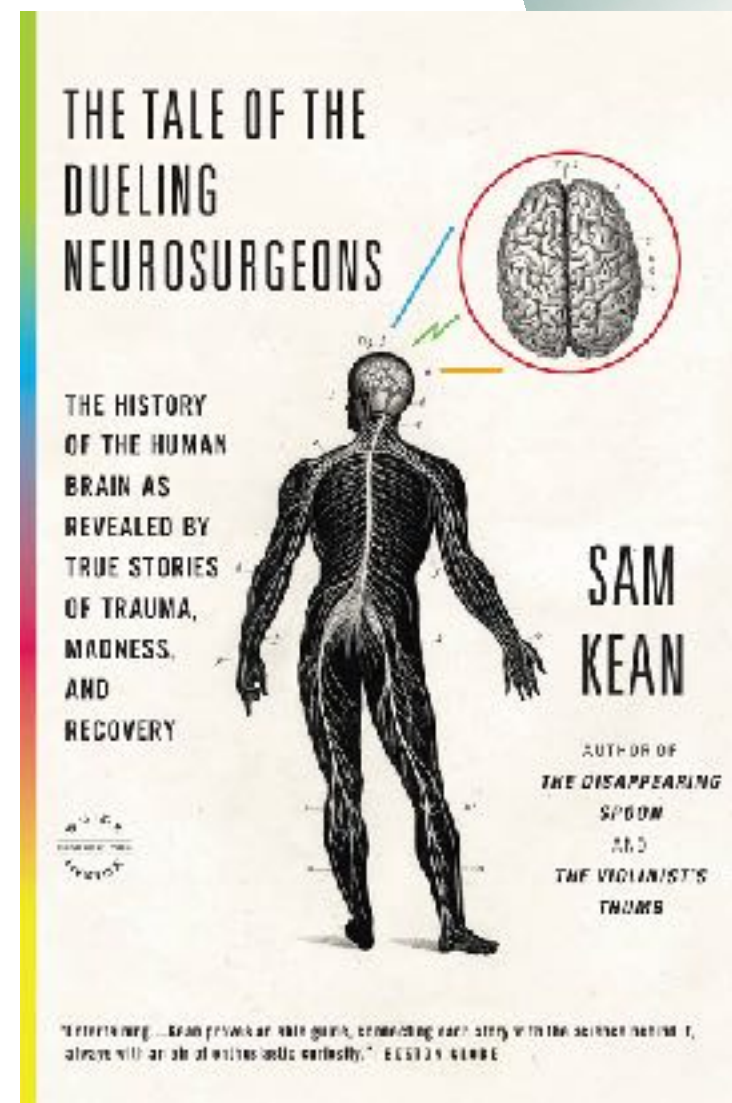
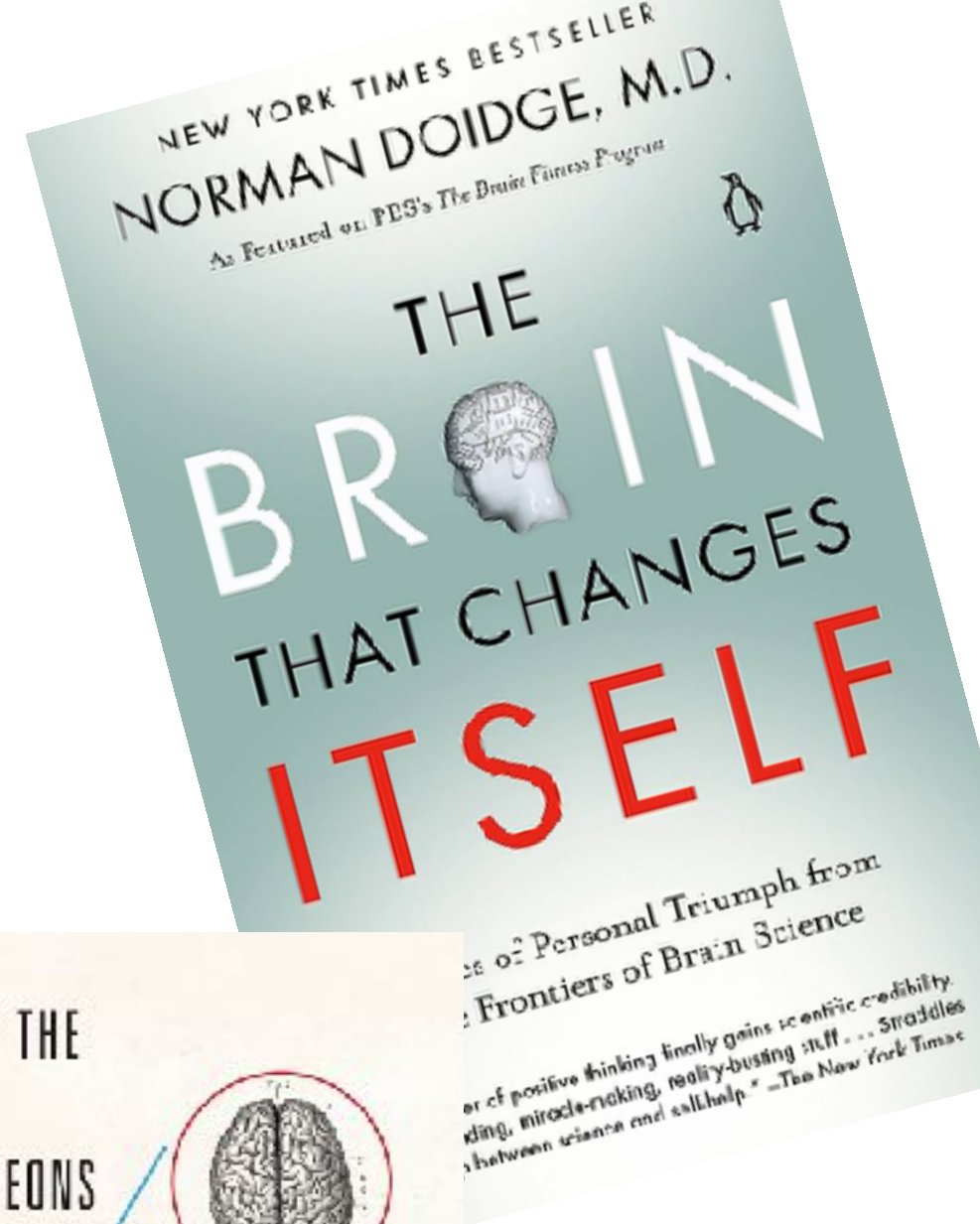
Exceptions like . . .

Brain Injury



What's the Reality?

- Experiences changes the communication between your neurons.
- This “rewiring” takes time, energy, and effort.
- Practice makes permanent.



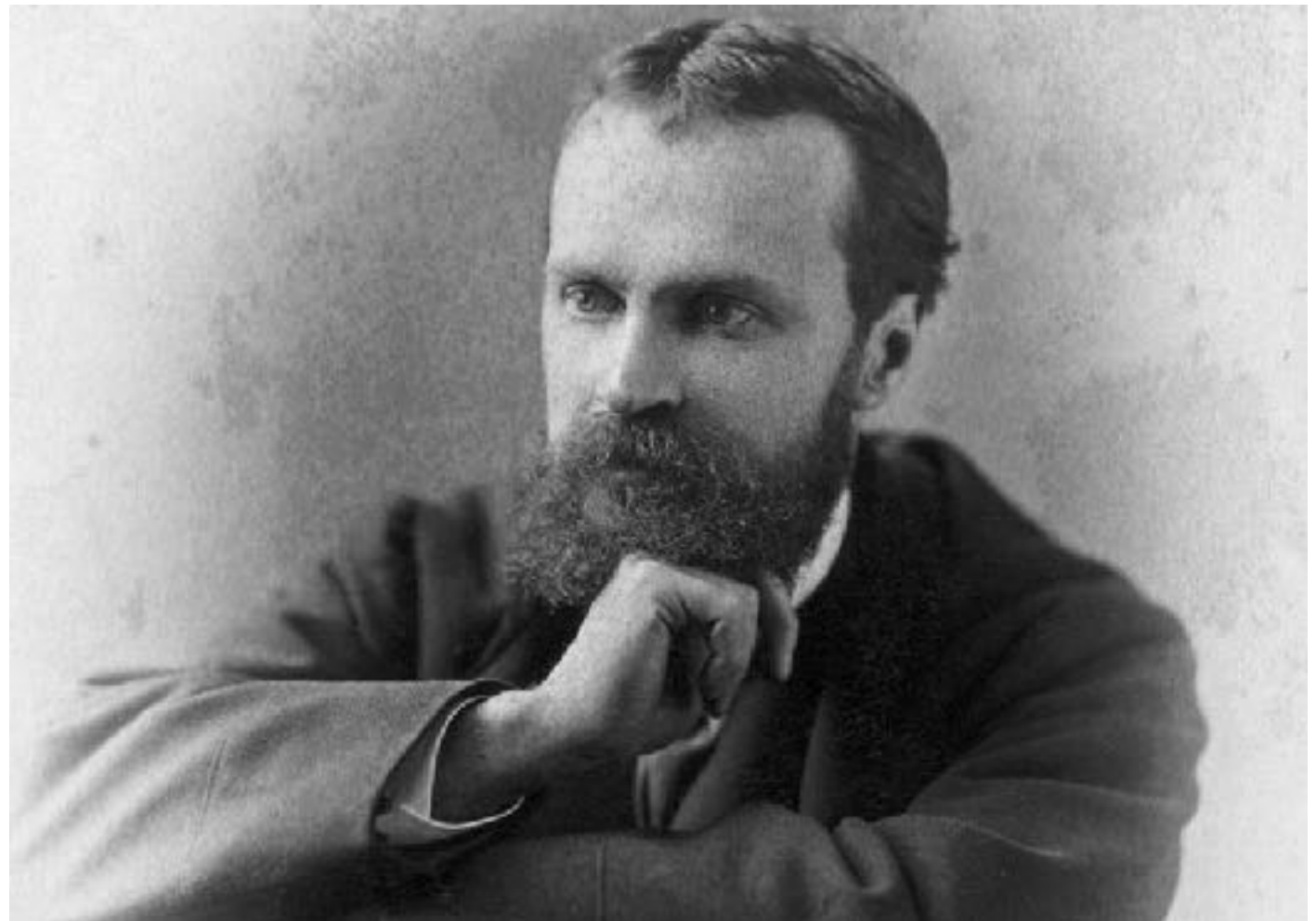
Myth 2

**You only use 10% of your
brain capacity**

Where Did It Start?

The Kernel of Truth

- A misinterpretation of a statement made by Harvard psychology professor, William James.
- “Most people only live up to a fraction of their mental potential.”



How Did the Kernel of Truth Become the Myth?

1. The self help movement of the 1920s

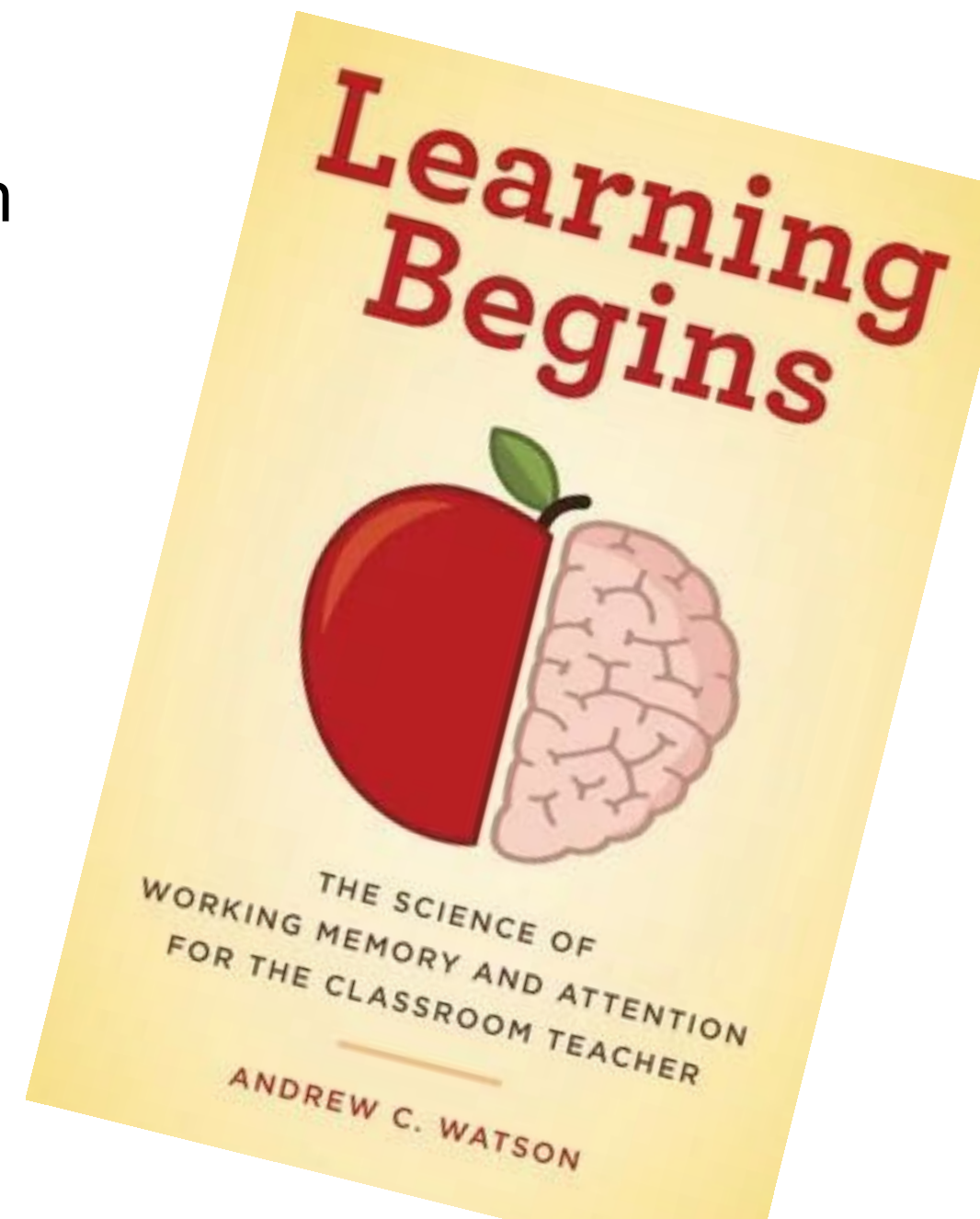
- “There’s no limit to what the human brain can do.”
- Science fiction writers

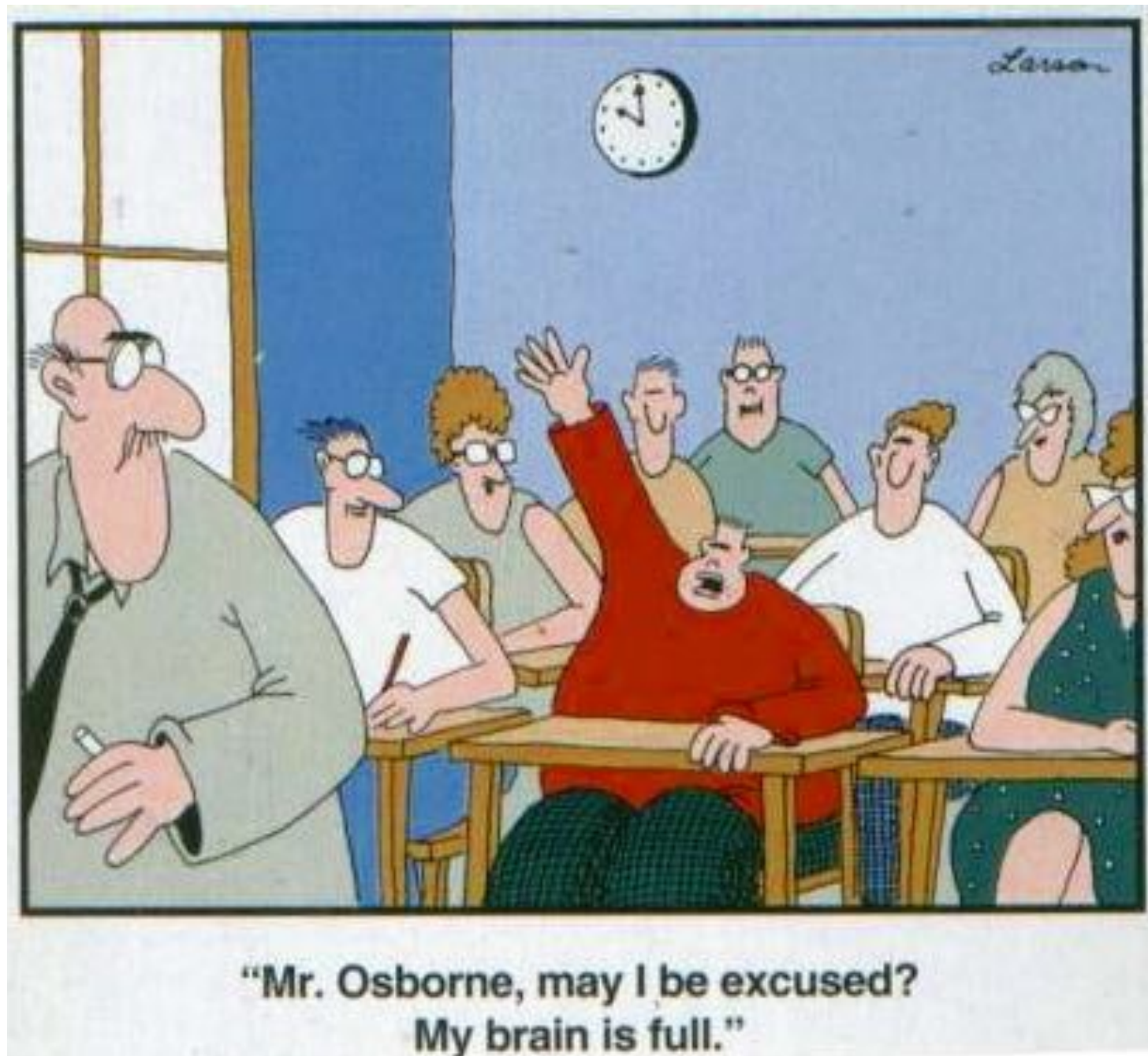
2. 1936 - *How to Win Friends and Influence People* by Dale Carnegie

- First to use the number 10%
- Insane popularity of the book made almost everyone buy into it.

What's the Reality?

- Some parts of our brain are limited, and some are not.
- We have limited working memory (what we can process at any given moment)
- As far as we know, we have no limitation on long term memory.
- Having information in our long term memory aids our ability to work with the limitations of our working memory.





So, what does that mean for your classroom?

- Recognize working memory limitations and lesson plan around them
- Reduce the constant stream of sensory input.
- Don't be afraid to have your students memorize basic content.

Myth 3

**You have a “learning style”
in which you best acquire
new learning.**

Where Did It Start?

The Kernel of Truth

- 1980s Neil Fleming observed 9,000 classes.
- Some teachers were more successful at reaching more students than others
- He observed that those successful teachers used multiple modalities.



How Did the Kernel of Truth Become a Myth?

- He concluded that each student must have a style in which they learn best.
- It was the 80s. Individual styles made you special.



What's the Reality?

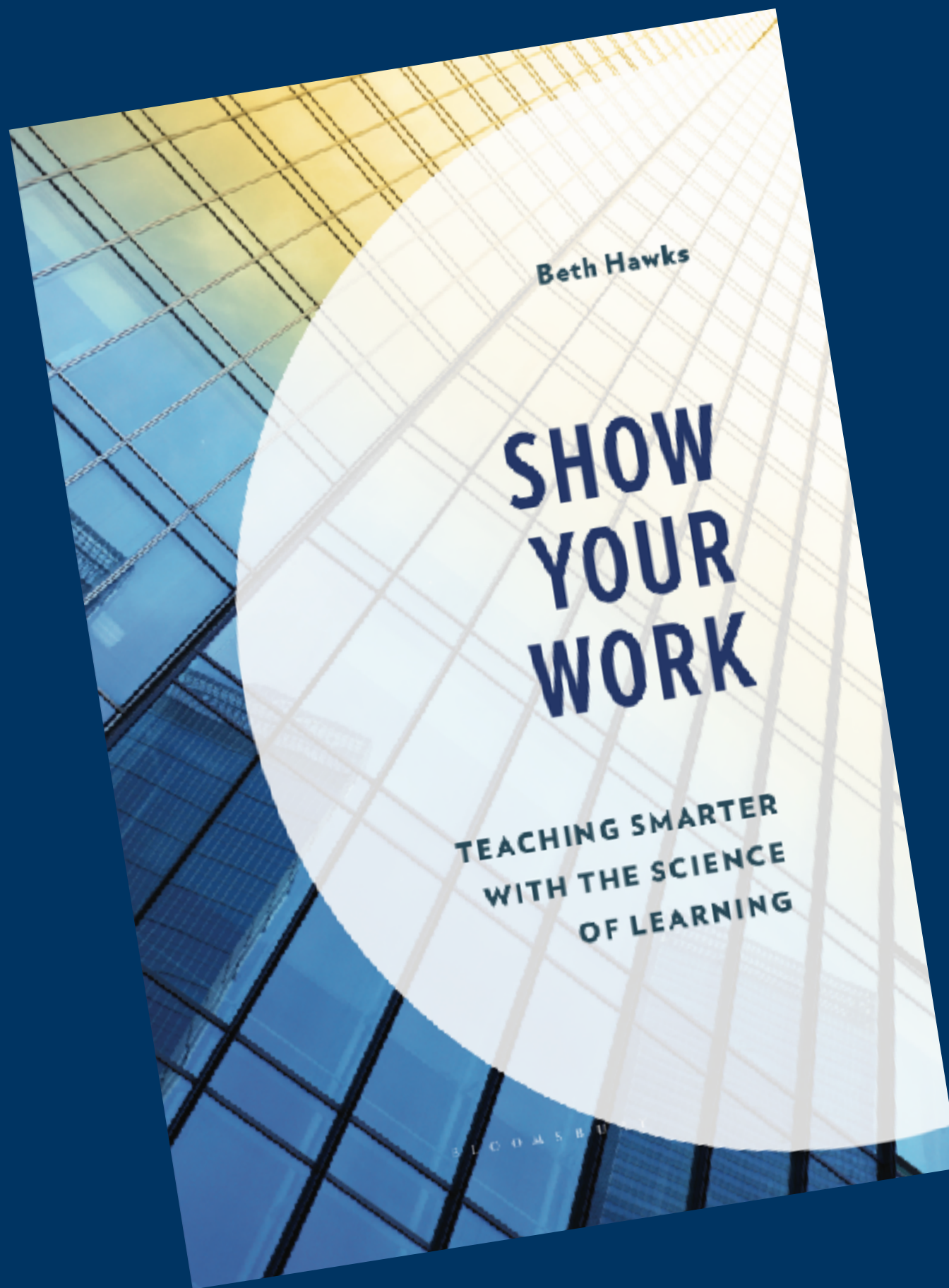
- After 40 years of research studies, not one has produced better results for students when they are taught in their preferred style.
- ALL STUDENTS learn better when verbal information is paired with high quality images (dual coding).

So, what does that mean for your classroom?

- You can stop trying to make 3 lesson plans.
- You can pair high quality visuals with verbal lessons
- You can match the presentation style with the material, not the student.
 - Poetry = primarily auditory
 - Geometry = primarily visual
 - Dance = mostly kinesthetic (but probably some auditory)
 - Atomic structure = visual
 - Piano = kinesthetic (and some auditory)

Resist Myths and Fads

**Keep Seeking Good
Research**



Available now on
Amazon
and
[bloomsbury.com](https://www.bloomsbury.com)



thelearninghawk.com

beth@thelearninghawk.com