Embracing Student Mistakes in Teaching

Presenter: Colin Mathers (CLA)
Wednesday, May 15 | 1-1:50PM | Wallace, Room 3420

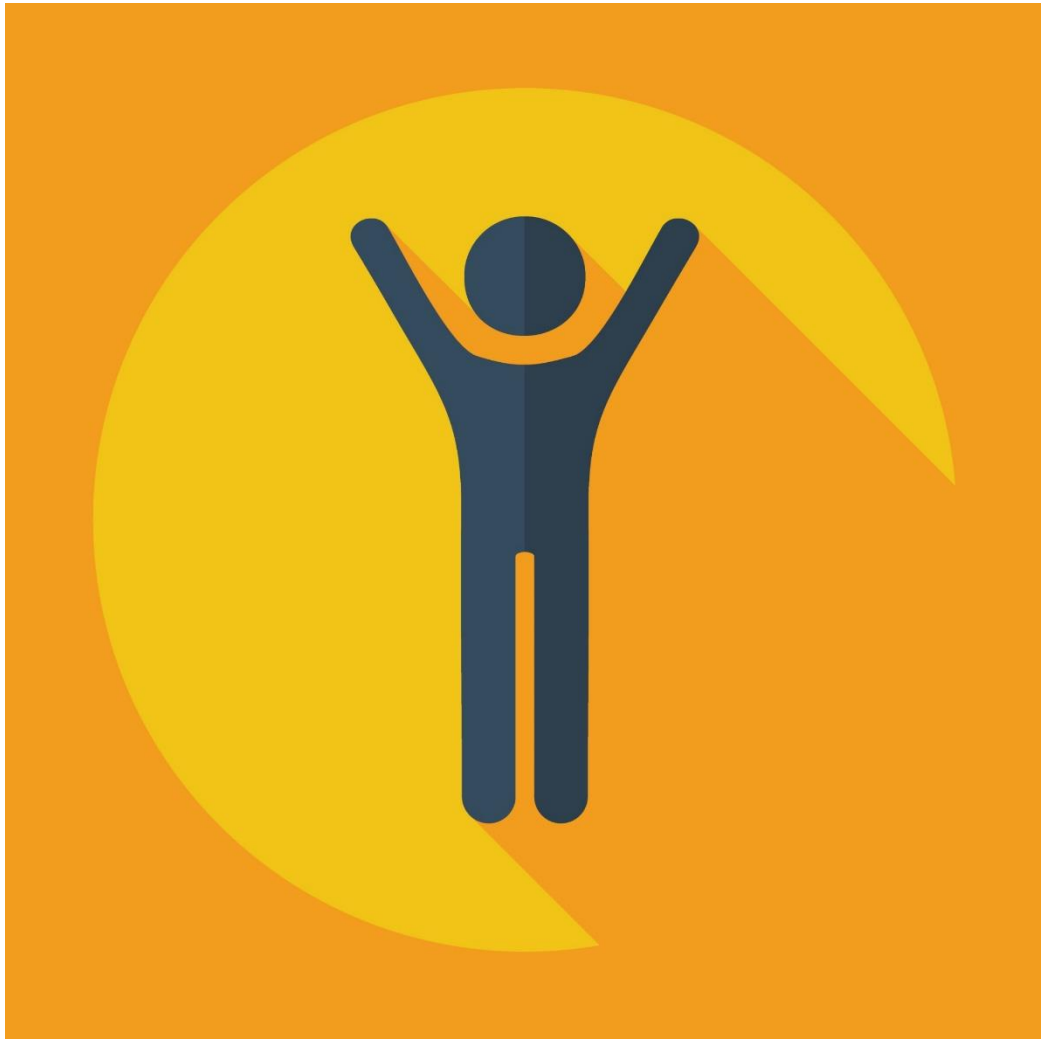
Welcome! Please take a seat.

Empowerment Promises

1. You will understand what mistakes-based teaching is.

2. You will start thinking hard about why mistakes-based teaching is good practice.

3. You will receive helpful pointers about how to adopt mistakes-based teaching into your own practice.



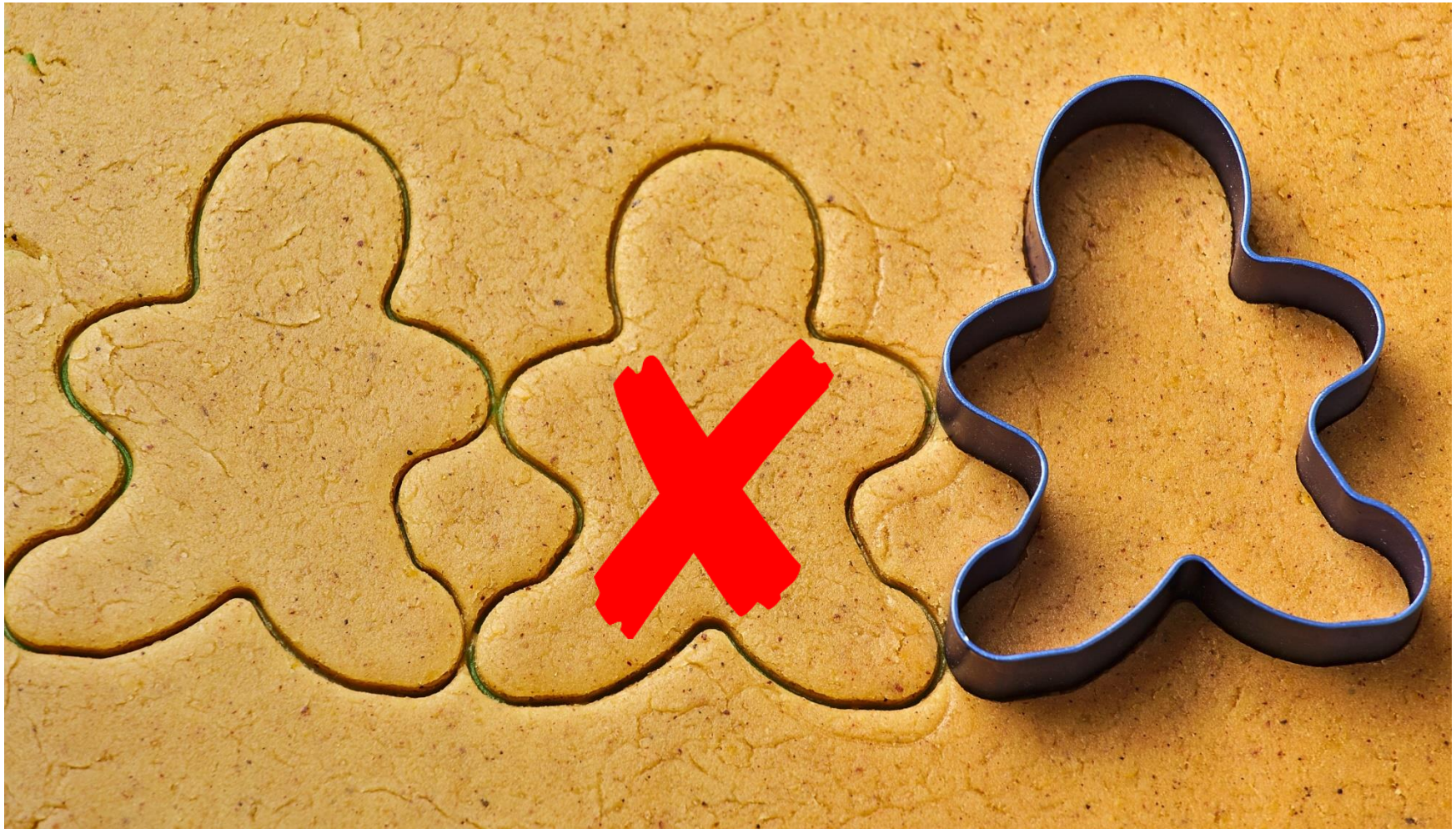
WHAT?

WHY?

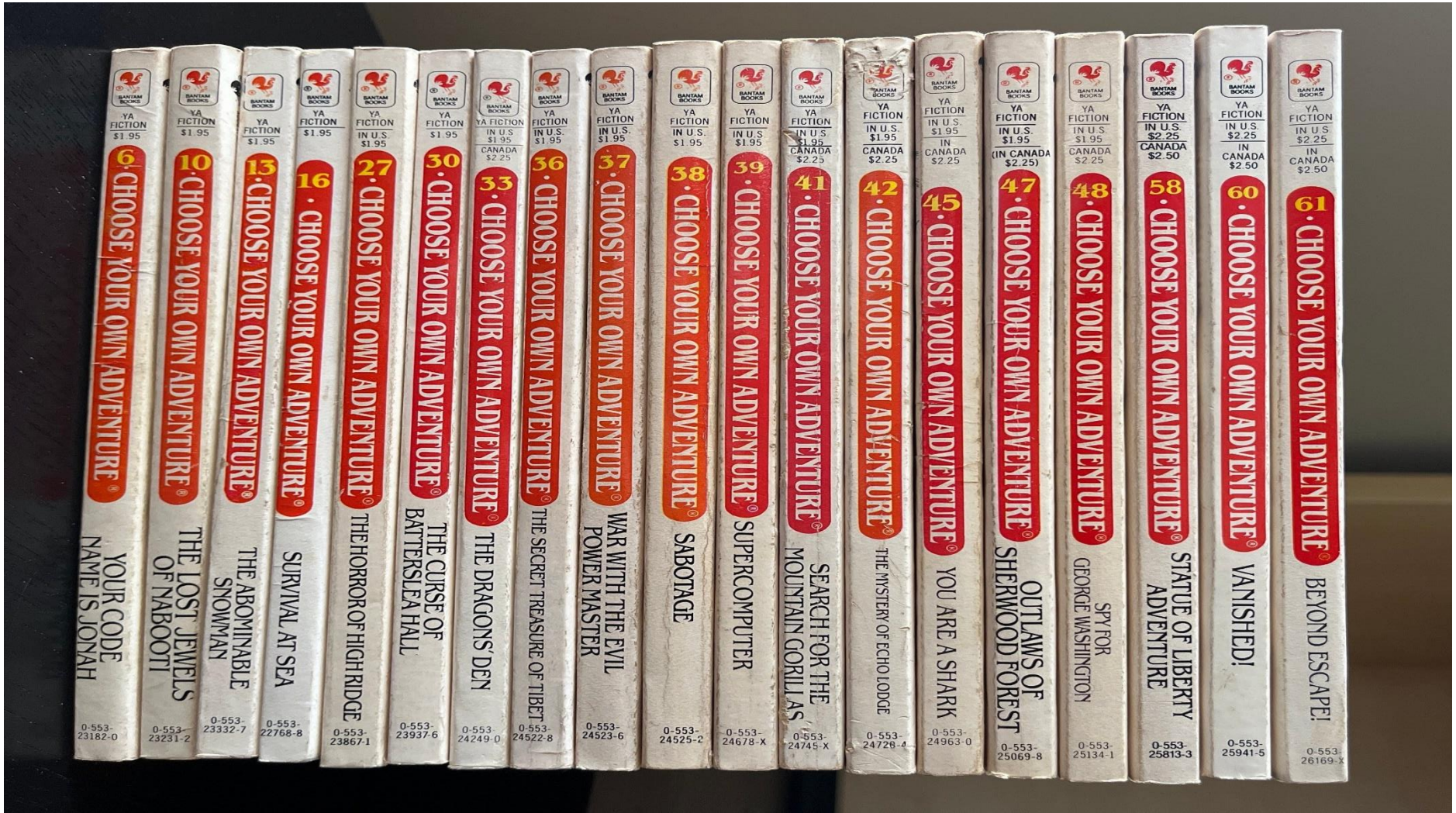
HOW?

What is mistake-centered teaching?

It is NOT a cookie-cutter approach where every section taught is the same.



Instead, it resembles a Choose Your Own Adventure book, where student input becomes part of the content of the course.

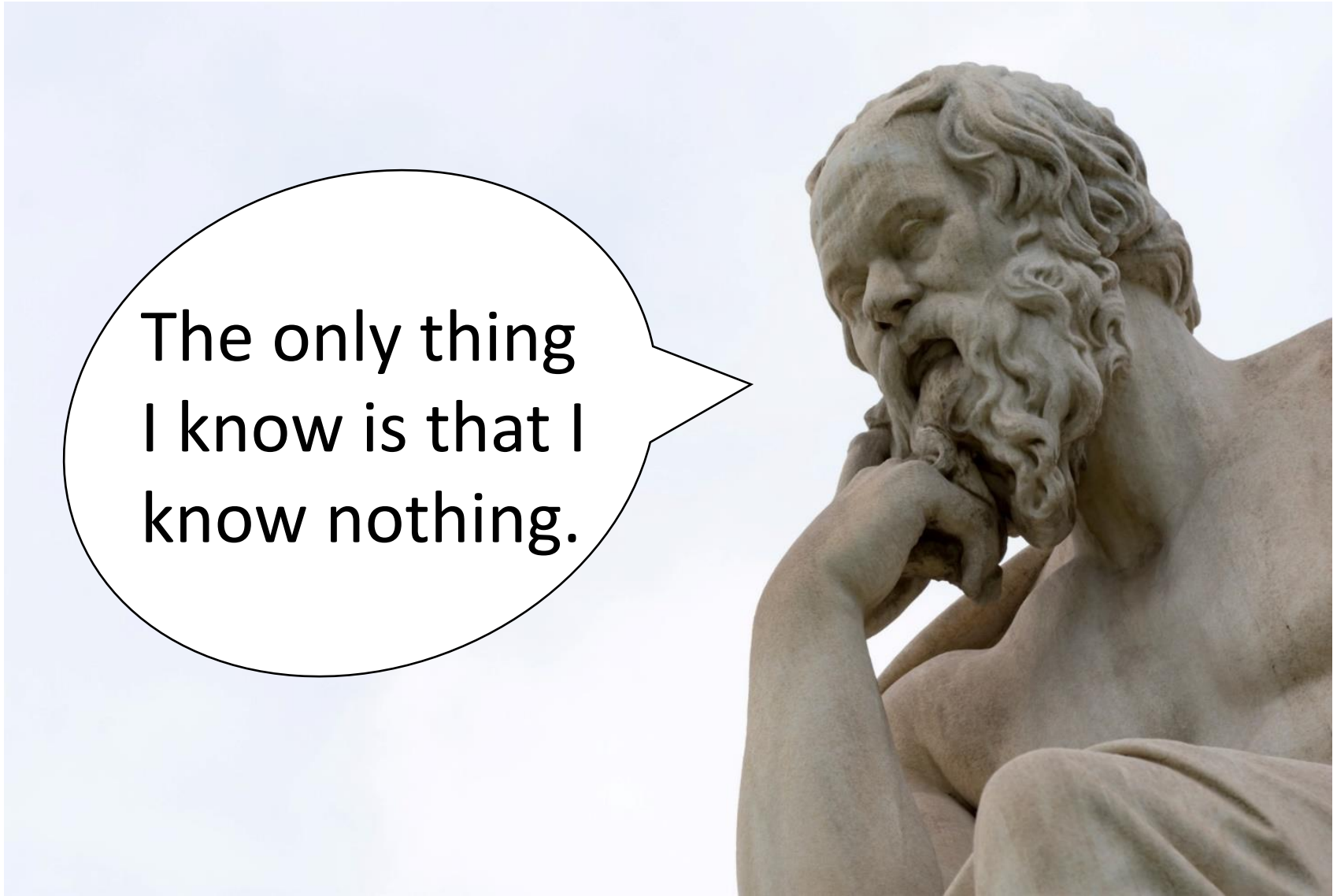


It is NOT a competition where students are sorted into winners and losers. (No score keeping.)

Instead, it is a collaboration where students decide together how ideas stack up against each another.

It is NOT a classroom where the instructor shares their encyclopedic knowledge.

Instead, it is a classroom where the instructor models themselves after Socrates.

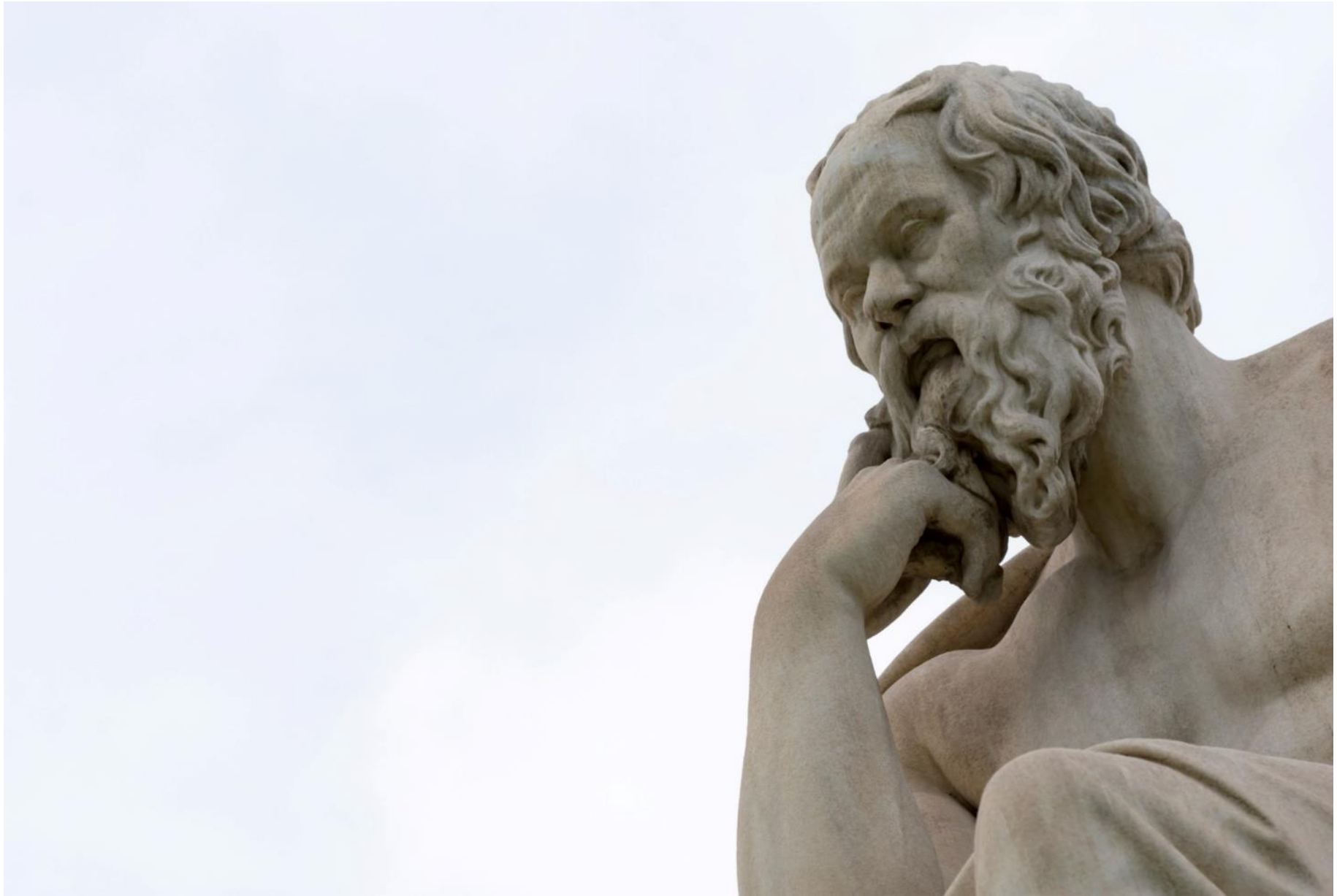


The Socratic method

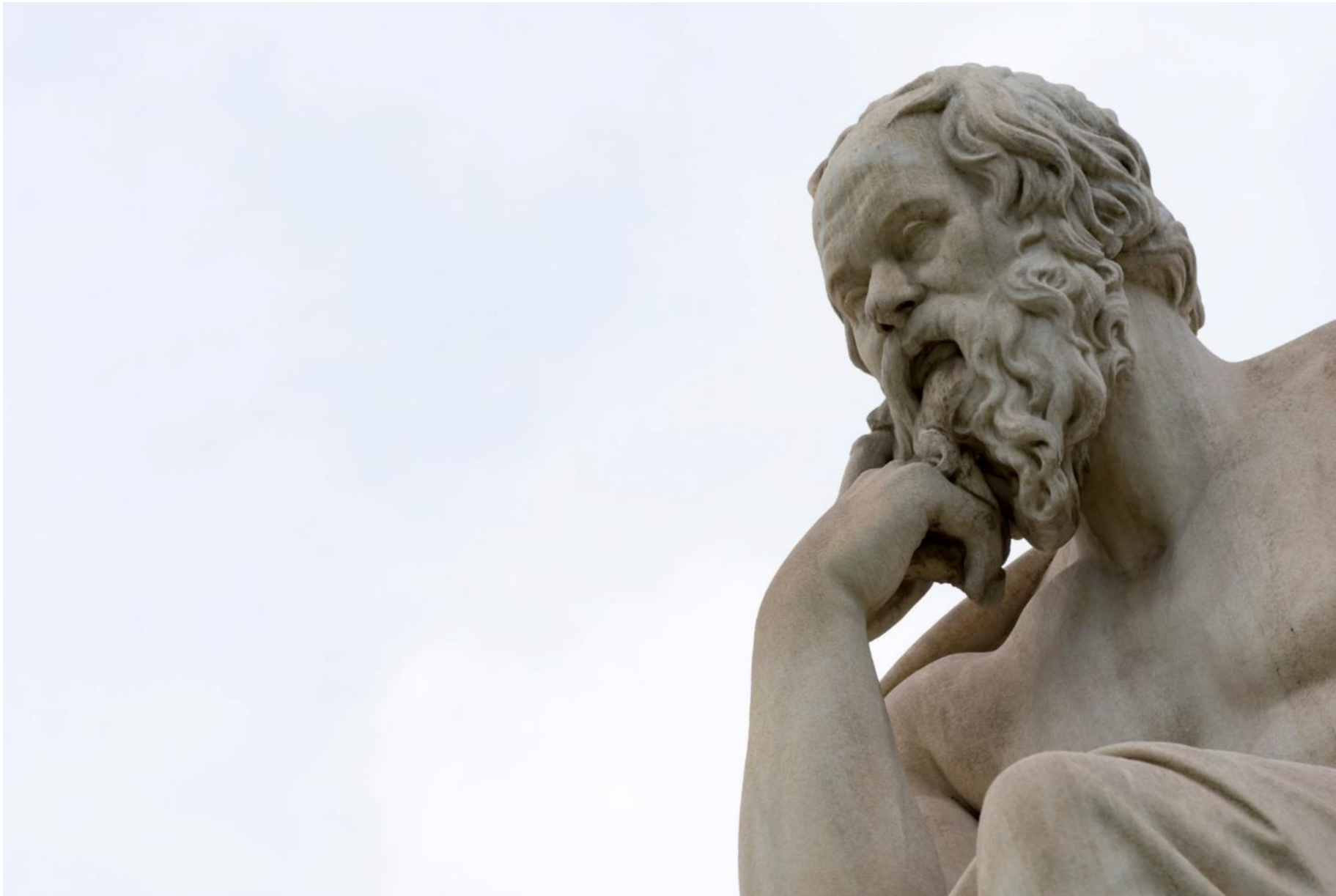
Reverse-Engineered Socratic Method: Tell them what they need to know and then have them break down and analyze.

The Journey > Destination

Plato's *Euthyphro*



Socrates: Which acts are morally right?



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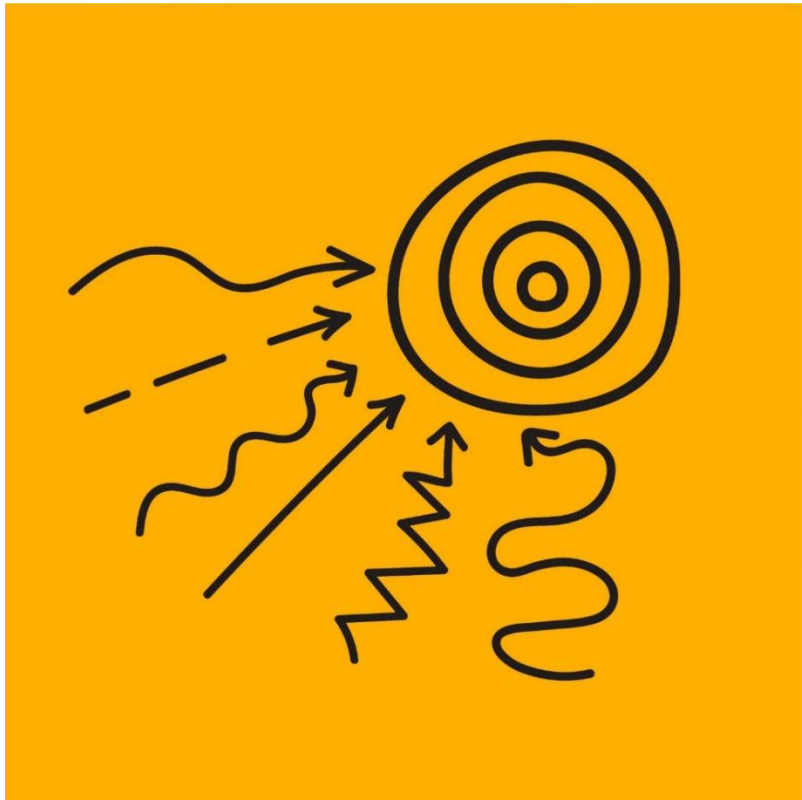

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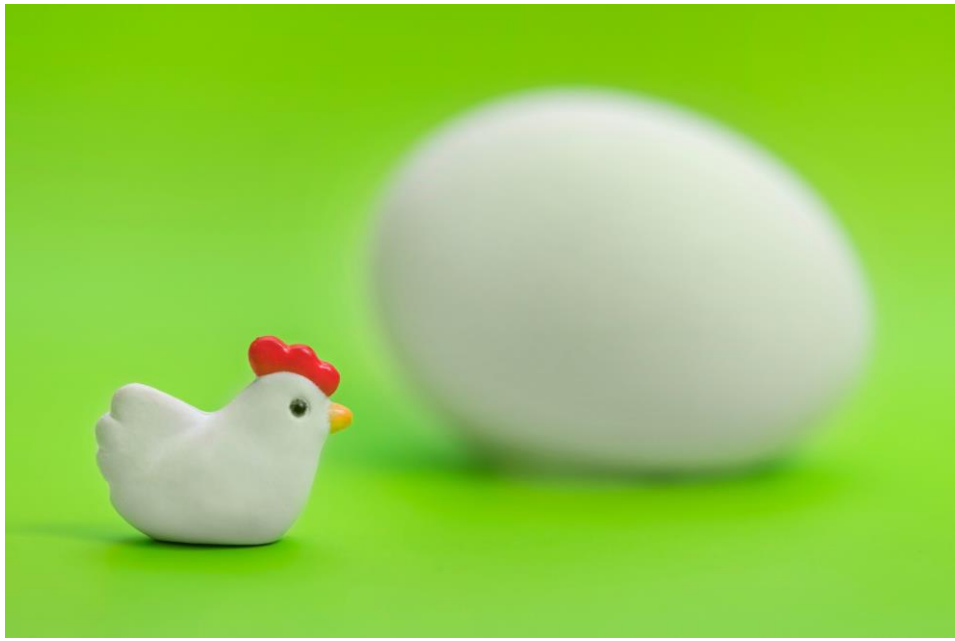

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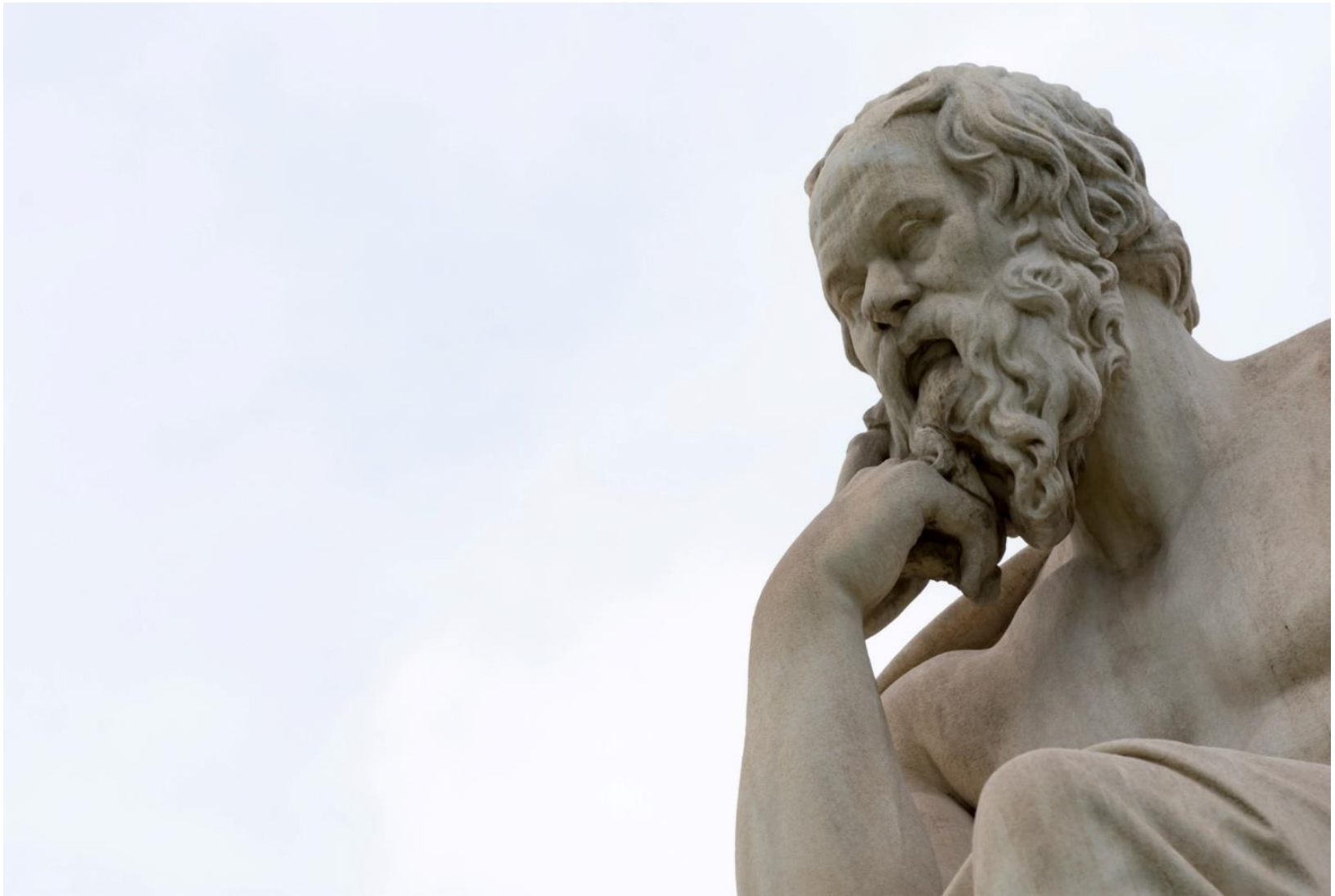
Euthyphro: Being loved by *all* the gods.

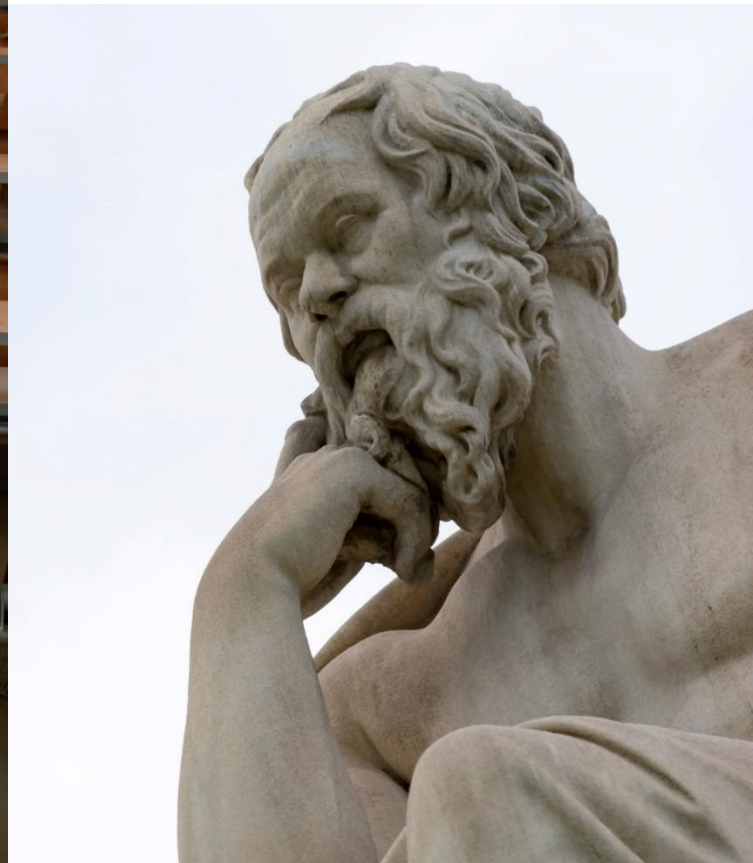
Socrates: Are morally right acts loved by all the gods because they are morally right? Or are they morally right because they are so loved?

Who or what can you use as a model of the process of discovery in your discipline?



Why make student mistakes central to the learning process?

PROBLEM: What are the biggest pros and cons of using the Socratic method (that is, teaching modelled on Plato's Socratic dialogs) in an ethics class.



PROBLEM: What are the biggest pros ~~and biggest cons~~ of critically analyzing student contributions in the classroom.

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TAKE NOTES ON THESE PROS.

1. Increased student participation

2. Deeper understanding

3. More perspectives are heard

Knowing vs. Understanding

https://treetopsecret.com/18-problem-solving-strategies-for-all-subjects/

Using the Socratic method for general class discussions made class discussions very interesting and really helped with learning the inner workings of different moral philosophies. I felt encouraged to think through the questions. (Spring 2024)

Students need our feedback every step of the way.

A Choose Your Own Adventure book gives the reader ownership over the narrative.

A mistakes-centered course gives students ownership over the content of the course.

Two sources of insights sought by my exam prompts:

Videos (Choose 5 of 6)

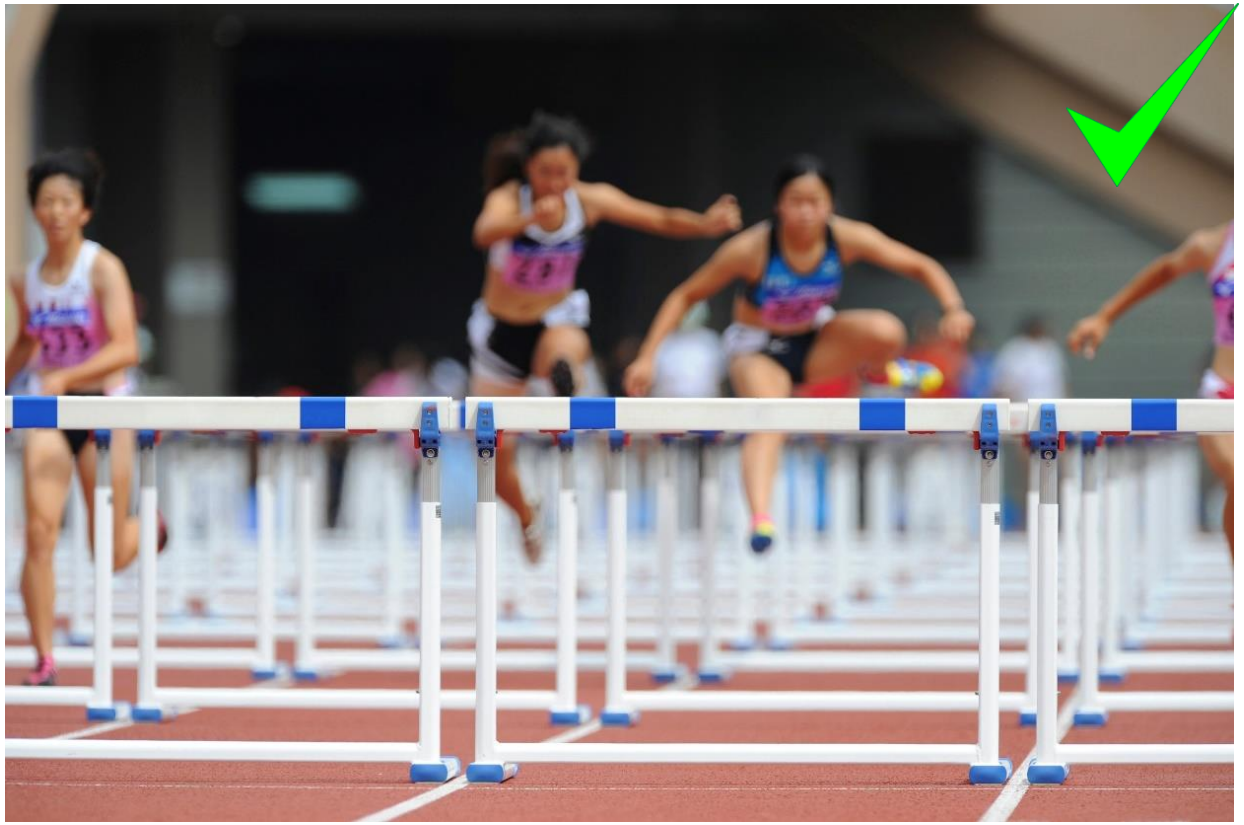
Student Contributions (Choose 2 of 3)

Also encouraged students to think on their own and reach their own conclusions (especially well done with the tests having student examples, which means the students strongly affect the course itself). (Spring 2024)

How do we want students to perceive life's challenges?

As Obstacles to Avoid

As Opportunities for Growth



We want to foster a growth mindset.

… people who believe that their intellectual ability is fixed at birth, wired in their genes, tend to avoid challenges at which they might not succeed, because failure would appear to be an indication of lesser native ability. – *Make It Stick: The Science of Successful Learning* (2014)

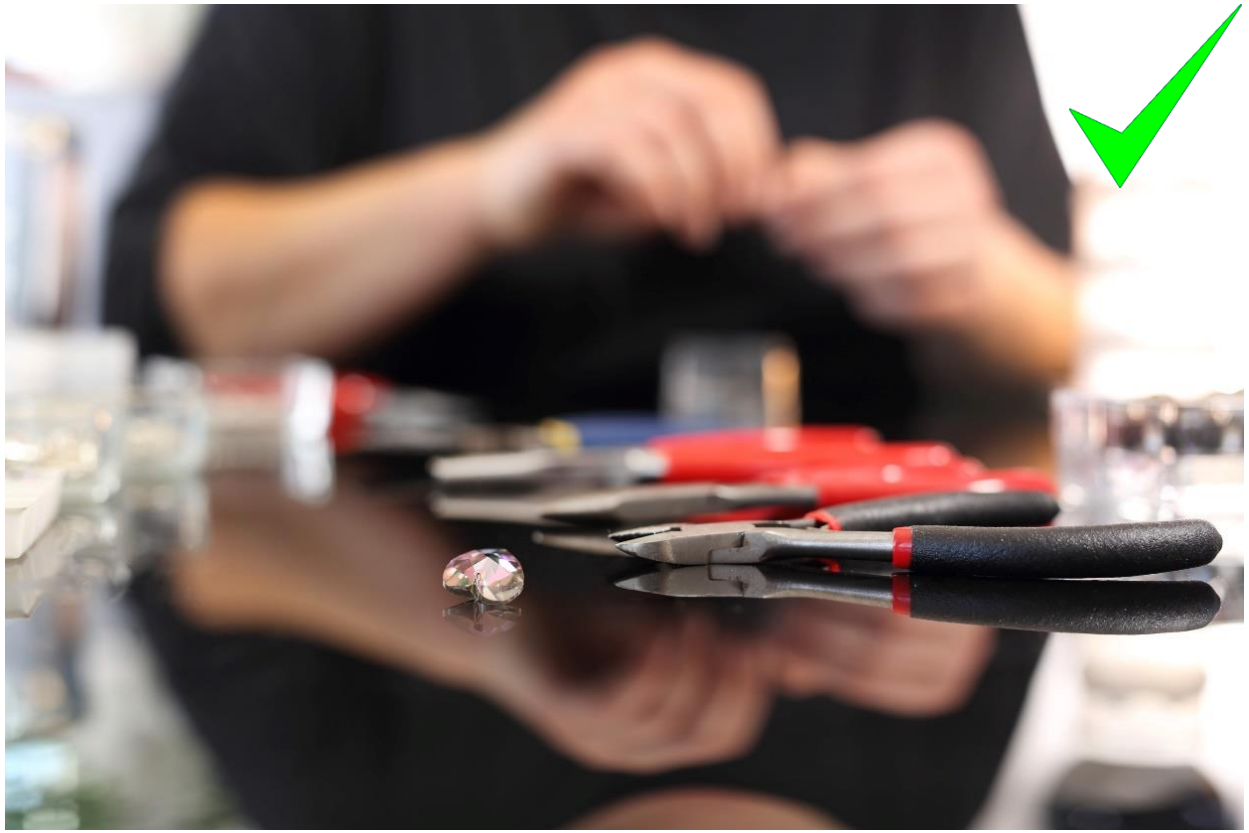
…people who are taught that learning is a struggle that often involves making errors will go on to exhibit a greater propensity to tackle tough challenges and will tend to see mistakes not as failures but as lessons and turning points along the path to mastery. –*Make It Stick: The Science of Successful Learning*

We want our students to be ready to take fully take the reins, after the course comes to an end.

The Five-Years-Later Standard

Knowledge That

Knowledge How



How can one optimally make student mistakes central to the learning process?

Set the stage, before you raise the curtains.

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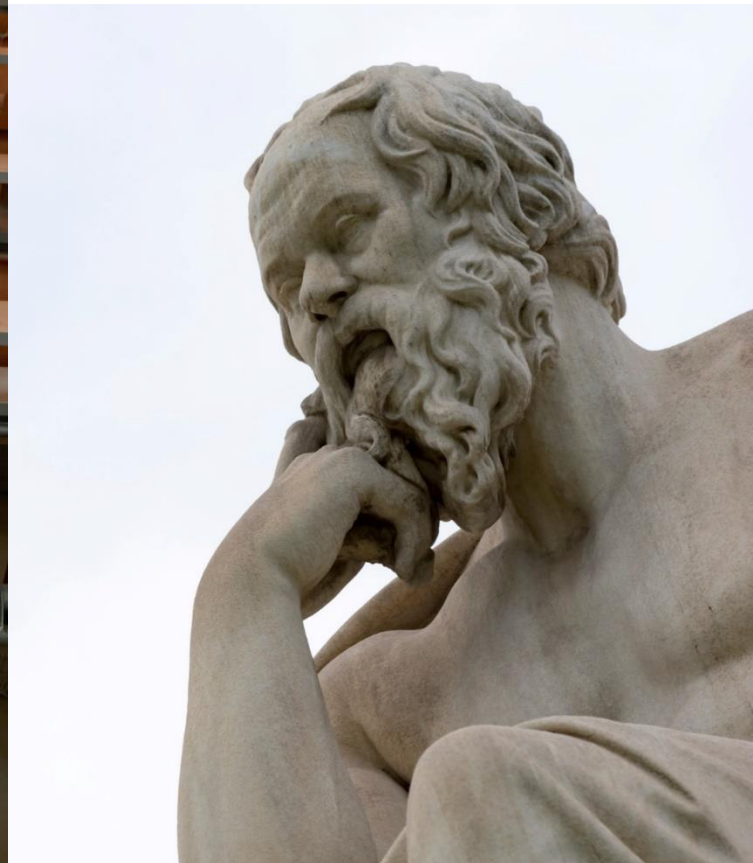
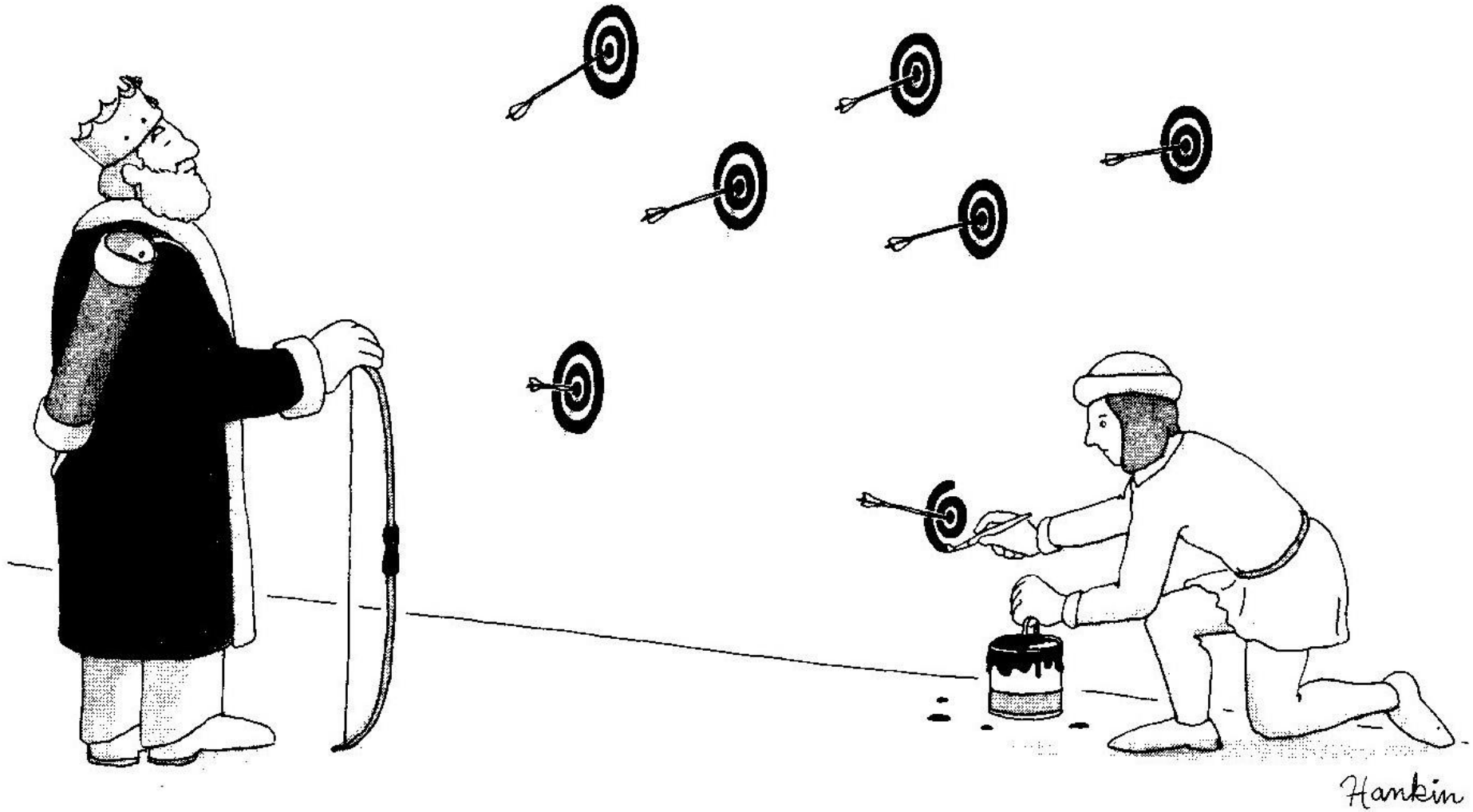


What not to expect from this course...



Source: The New Yorker

teamusa.org

Let me be your coach.

Ensure Onboarding: Create a separate myCourses grade category for either attending or submitting a report on drop/add-period classes.

OR

Tell them repeatedly about your own mistakes as a student and as a teacher.

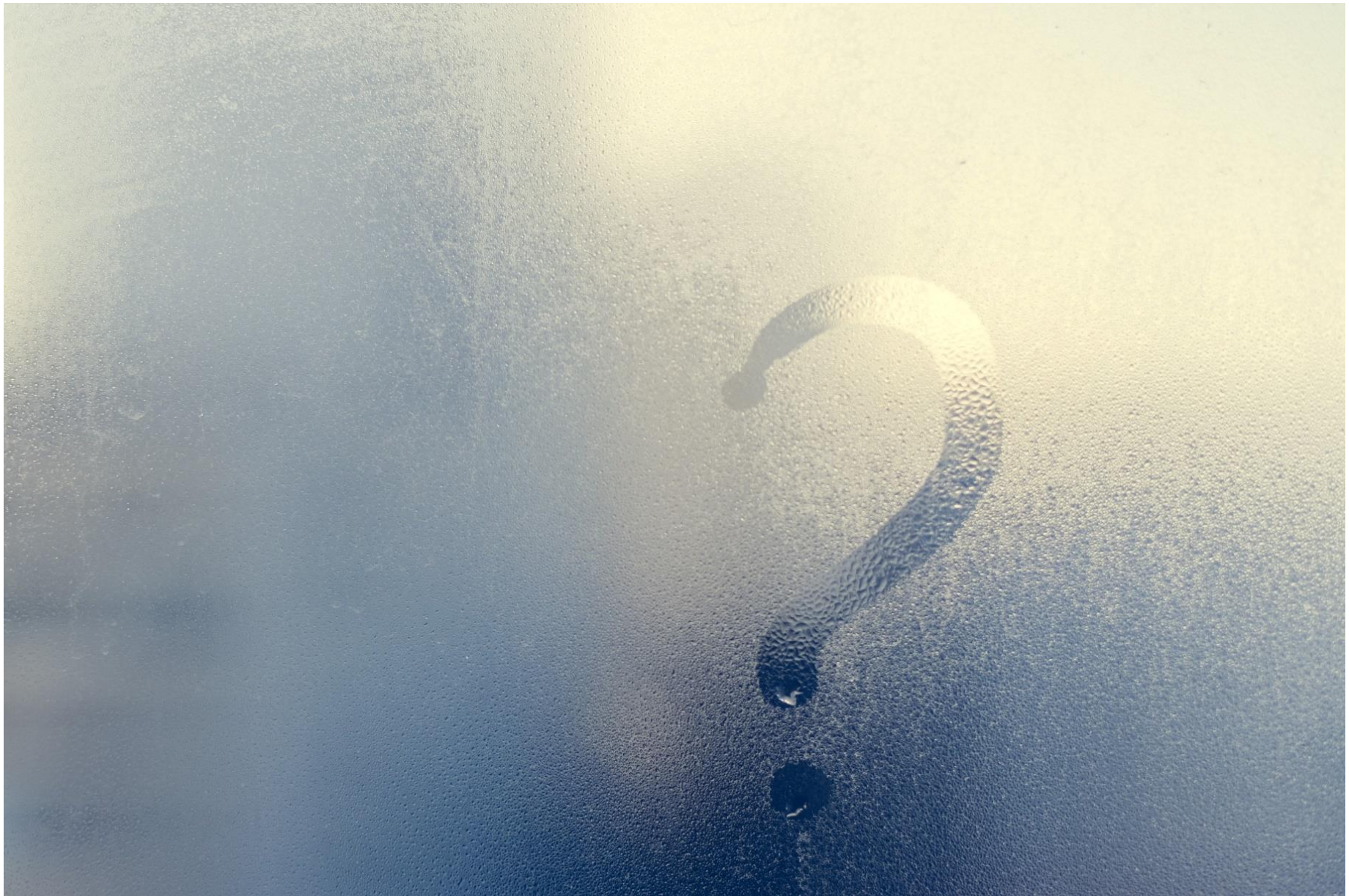
After The Stage Has Been Set

Remove the distractions: Teaching focused on the learning process requires students' undivided attention.

Me

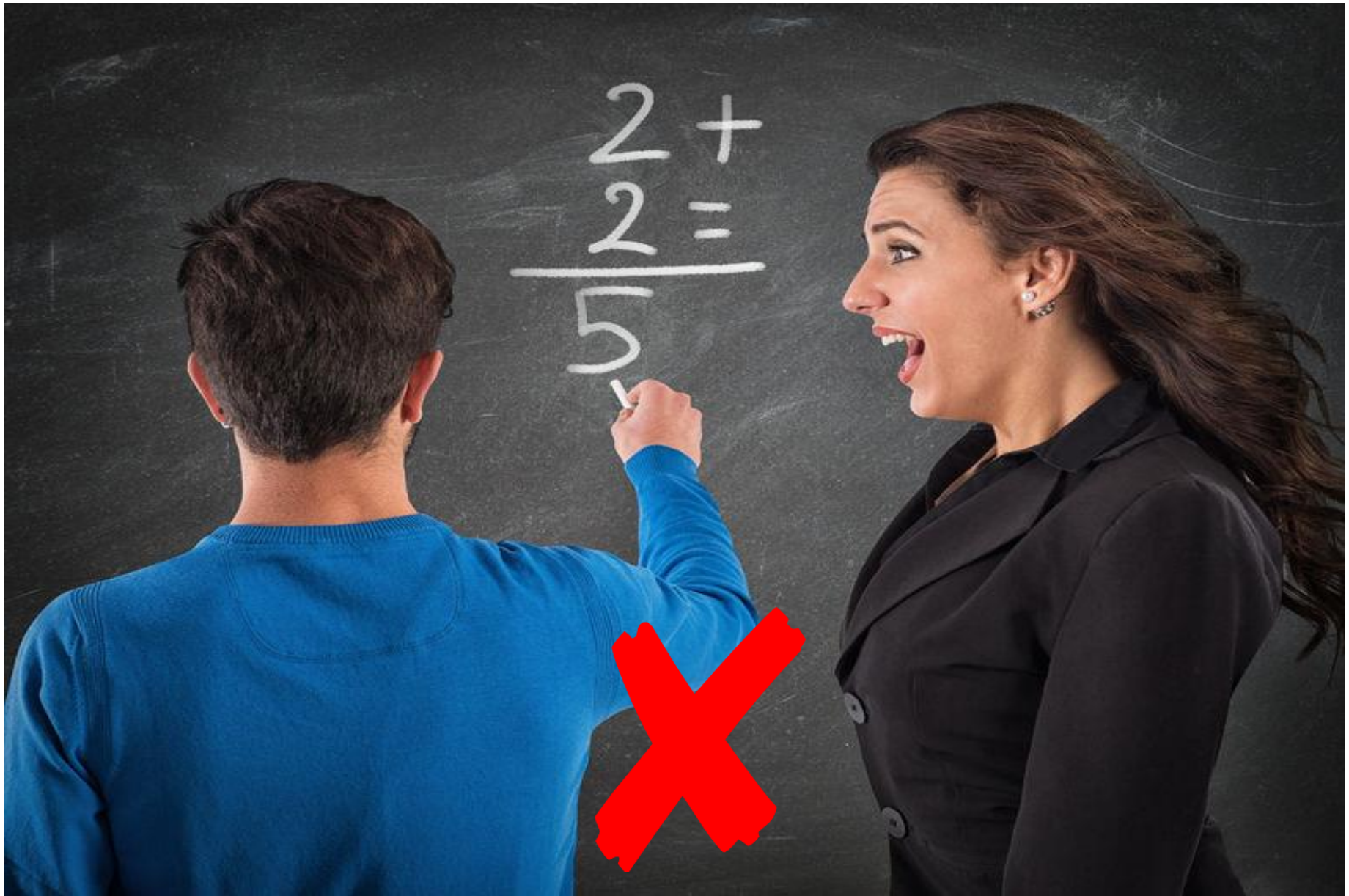
My students when I permitted electronics during the pandemic.

What kind of prompts?



New Challenges Only

Avoid "you should know better" prompts.



Team Results Only (Avoid Personal Mistakes)

“Ace of spades, what did your team come up with?”

Let's start with some folks who aren't feeling too sure about their answer.

PROBLEM: What is the best way to <u>start</u> a response to a less-than-brilliant student contribution in the classroom?

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TAKE NOTES ON THESE PROPOSALS.

1. Seek agreement/disagreement or follow up.

2. That’s a great idea, but…

3. That’s a good starting point…

How I respond to all student contributions, brilliant or otherwise:

"Thank you" serves as a signal that contributing to the learning process, rather than being right, is what really matters in your classrooms.

“Thank you” works great for all conversational contributions.

That was helpful.

What a great opportunity you've given us.

Let's talk about how to make this good start even better.

There's a kernel of a great idea here. Let's build on it.

You put us on the path to finding an important insight. Let's explore.

Hola!

Como te llames?

Me llamo Brad OR

Mi Nombre es Brad.

~~Me llamo Brad~~ OR

~~Mi Nombre es Brad.~~

Mi llamo Brad.

Great. Your pronunciation is good, and a native Spanish speaker will understand you just fine...

...but let's use this opportunity to talk about the difference between "mi" and "me."

Trial & Error

Beg your students for helpful feedback.

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