

# Head-First into Learning

*Teach it Backward*

The [Understanding by Design model](#) teaches us how to create our *curriculum* backward from big ideas to activities...but what about *teaching* backward?

## START BIG. END SMALL.

Traditional teaching techniques involve a progression building from small fact or act to larger and larger until your goal is reached.

Head-first learning starts with the big stuff, such as playing a scale by sounding it out or thinking about the causes of a particular global conflict. Only then, based on brainstorming, exploring and experimenting with and around the goal do learners derive, with your guidance, the small stuff.

## EXAMPLE: SCALES

Think about a musical scale: listening to a scale being played and then experimenting to duplicate it by ear teaches students many skills at once and deeply involves them with the instrument. After that we can discuss smaller concepts such as intervals, the physical aspects of the instrument and how their work relates to musical notation...the things that traditional teachers often start with.

## EXAMPLE: GLOBAL CONFLICT

Or consider teaching about the Iraq War: students could brainstorm characteristics and effects of the war, then attempt to reason backward as to the causes. Then we can discuss how their explanations fit (or don't fit) the facts, or explore the alternate realities that might result from their ideas, consciously bringing in the details that need to be taught in more traditional ways, or memorized.



## EXAMPLE: ENGINEERING

You can teach students how small, particularly shaped pieces may be combined into self-supporting, strong arches. Or you might let them create their own structures with pieces of various shapes, then analyze how the structures might be altered, why their structure is strong or not...and derive further principles from there.

## IT'S NOT EASY

Teaching head-first is demanding! Students may be conditioned to traditional models or be resistant to the idea and the hard work involved. Teachers spend significant amounts of time devising goals, guiding students and exploring context that may be a lot fuzzier than before.

## BUT IT'S FUN

Exploration and discovery can be fun—even exhilarating—for everyone. Students develop confidence and improve retention, and you can share in the excitement of rediscovery of the living issues in your subject...the very things that might have

invited you to the discipline in the first place.

## REMEMBER

Head-first learning is:

- Roomy (for exploring and brainstorming)
- Challenging
- Guided, not taught
- Resistant to rubrics
- Visual and/or hands-on
- Surprising
- Conversational