

The Dimensions of Understanding



The Dimensions Framework includes four dimensions and four levels of understanding. The "dimensions" are four categories, each with two to three "features," each described at four "levels," that were created to help educators think systematically about understanding disciplinary topics. They can help to guide planning, instruction, and assessment/evaluation.



Knowledge is the "stuff" of the topic, or the "what." It includes both facts/information and relations among them. If someone understands a topic better, they conceive of it more systematically and with a richer array of facts/information and connections among them.

Methods is the "how" of understanding. Not the "how" of TEACHING ABOUT the topic – it's NOT pedagogical methods, so don't get confused. It is how *disciplinarians* act upon knowledge in their discipline. It's disciplinary processes. It's what the experts do to build understanding and check on the quality of information. Methods, generally, are verbs.



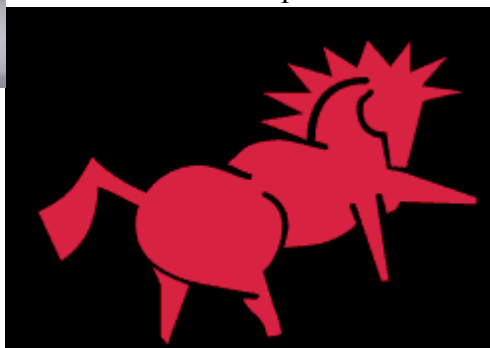
Purposes is the "why" of understanding, the reasons why the topics matter. I think it's the dimension kids most long for –



evidenced in their plaintive pleas of "Why do we have to do this?" If we take purposes seriously, kids will come to understand why studying the topic matters – to them, to experts, to others – and how information and processes of this sort have or

lets a topic take us somewhere, like horse's back. And purposes keep us places we don't mean to go – like an oncoming train!

Forms are the "expressions" of understanding: the evidence, the products. They are how experts in the discipline communicate their thinking to each other – what genres they use, what symbol systems, and how those change depending on audience. Forms result from methods – so if methods are verbs, forms are nouns. Like "recording" is a method (verb), but the "record sheets" and "lab notebooks" that hold that recording are the forms (nouns). They'll be particularly useful to us as we think about a pedagogical necessity later: assessment.



might be used. Purposes riding on a from going directly into

works, the