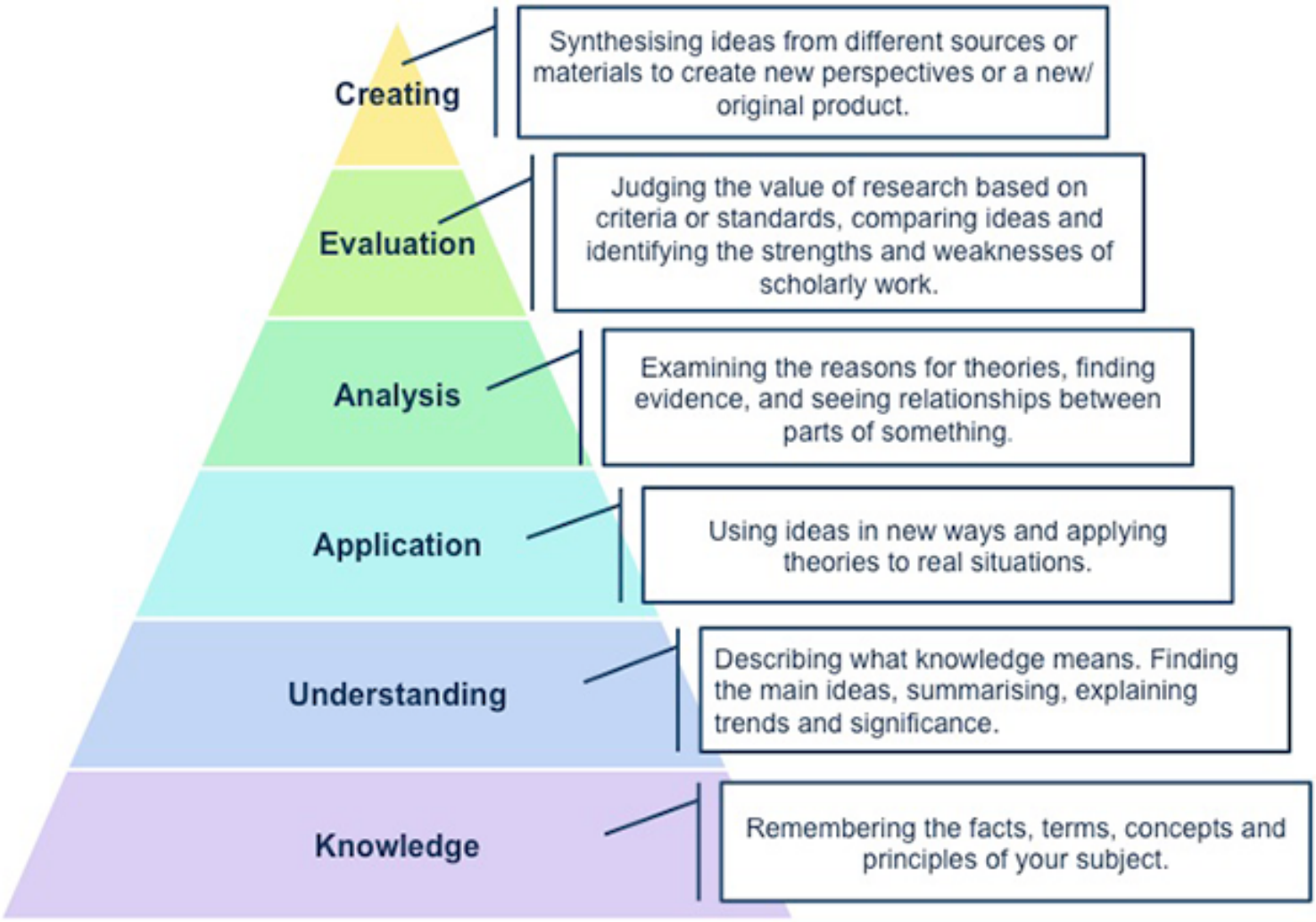
LEVELS of THINKING



What are levels of thinking? : They're a way of categorizing and ranking the types of thinking we do from simplest to most complex. They are a reworking of a famous list by a psychologist named Harold Bloom ("Bloom's Taxonomy"). In this diagram, the simplest levels are at the bottom and the deepest levels are at the top. So if we think in terms of , say, math, memorizing basic multiplication tables like we do in elementary school might be at the KNOWLEDGE level. An engineer using complex equations and formulas to design a more aerodynamic and fuel efficient automobile may be at the top. In music, a clarinet player learning the proper fingering to play a C note might be KNOWLEDGE. Playing a piece of music might be APPLICATION. Writing an original score would be CREATING.

Why do we care about this stuff? : The best research we have about how humans learn suggest that "META-COGNITION" (thinking about our thinking) helps to make us more effective learners. Understanding the types of thinking that we do makes it easier for us to think about our thinking. This translates to all subject areas.

What does this mean for school? : The more schools can help students think at the higher levels of thinking, the more opportunities students will have to improve their thinking and these improvements tend to carry across subjects. So learning how to write a poem in English class or creating a multi-media presentation in History class can also make us better students and thinkers in biology etc. In general, daily work and the stuff we do at the beginning of units when learning new concepts are at the knowledge/understanding levels but the products (tests, projects etc) should be at the top levels of thinking.