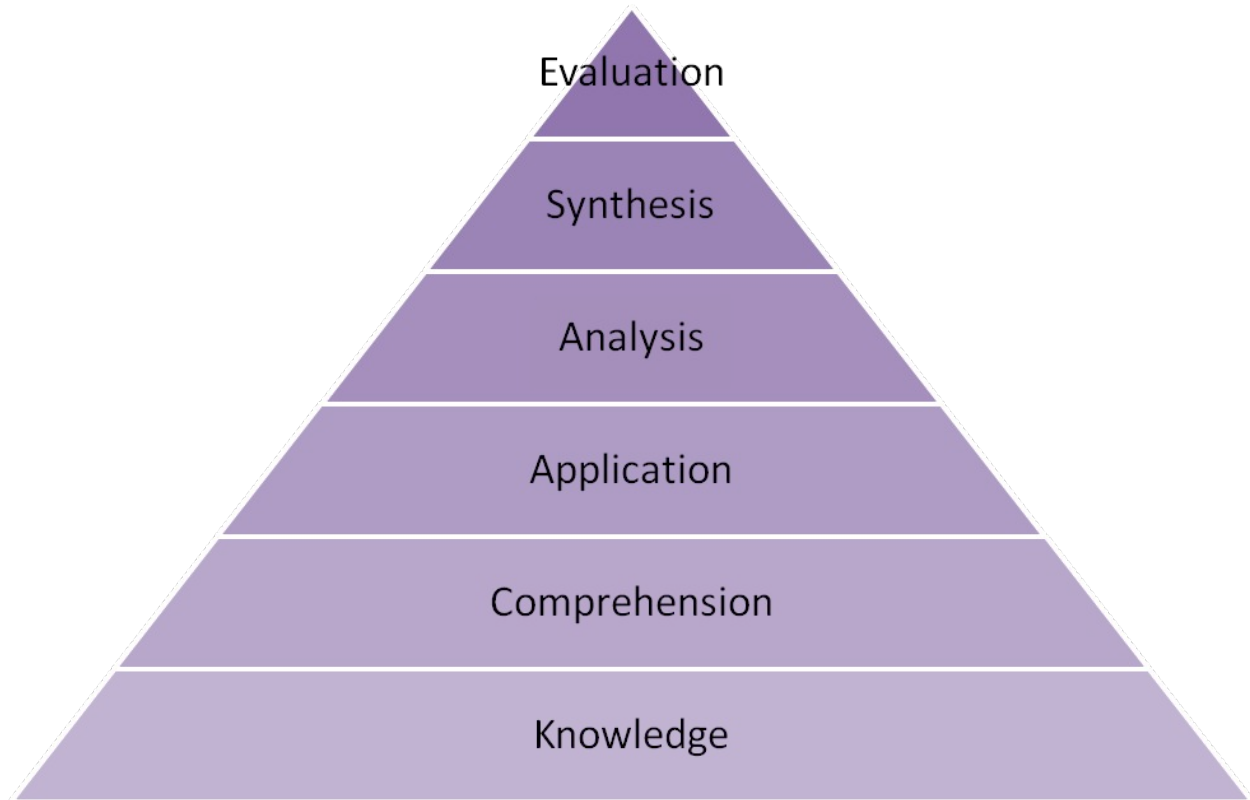


# Bloom's Taxonomy (original)



In pyramid form, this is Bloom's original taxonomy. The cognitive process levels increase in complexity from knowledge at the bottom to evaluation at the top. Each level includes all the skills required at lower levels. You can think of application as knowledge + comprehension + a little extra. When writing class objectives, you want to vary the upper limit of the cognitive processes involved. Some objectives should be the relatively simple levels of knowledge and comprehension, while others should force the students to apply what they have learned at more intense levels.

## **Examples of Activities at Each Level**

(adapted from University of Central Florida, n.d.)

**Knowledge & Comprehension:** Students will identify, describe, tell in their own words

- Written tests and essays
- Oral tests
- Reports
- List

**Application:** Students will apply, demonstrate, solve

- Problem scenario
- Demonstration of skill
- Role play
- Lab report

**Analysis:** Students will categorize, examine, persuade

- Case study
- Conduct experiment/test hypothesis
- Observations

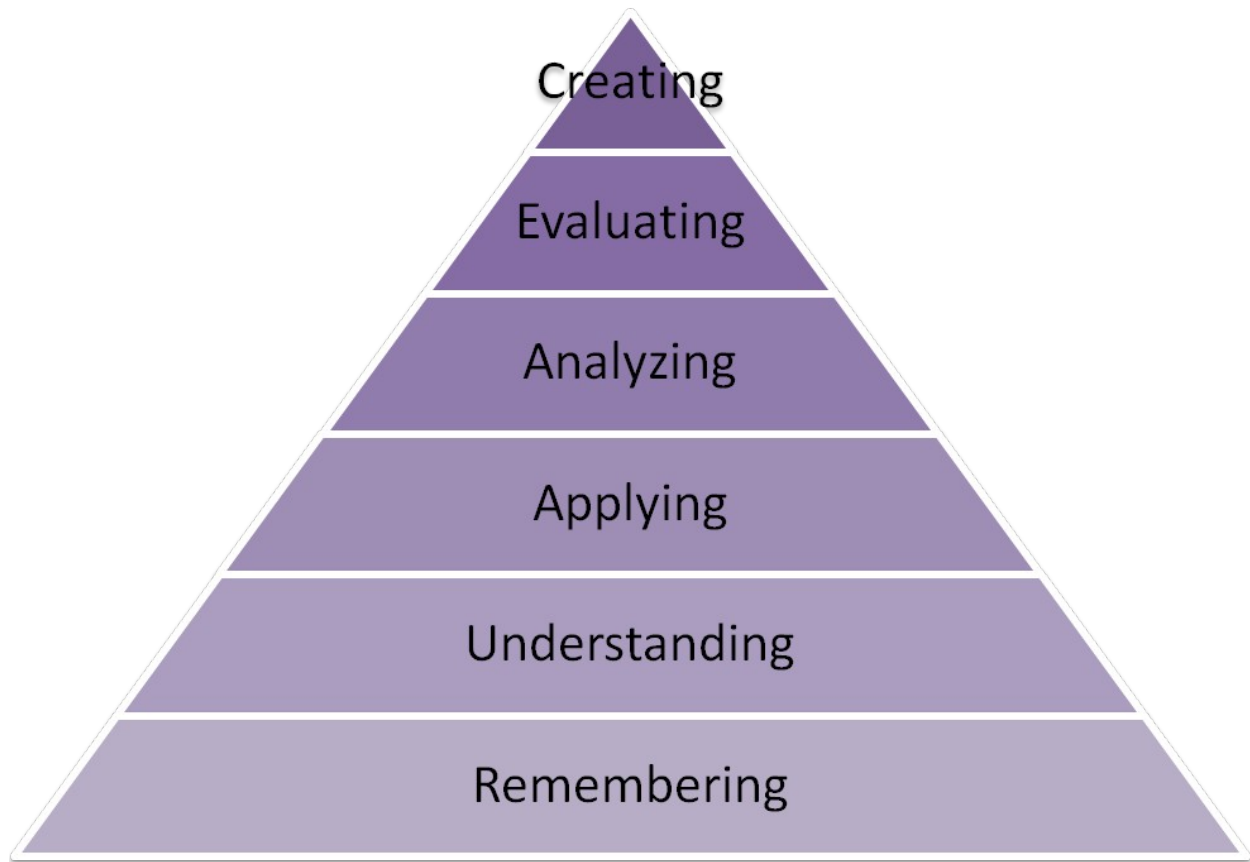
**Synthesis:** Students will design, integrate, relate

- Project
- Thesis
- Essay
- Design an experiment
- Create a video or poster
- Portfolio

**Evaluation:** Students will conclude, critique, justify

- Debate
- Essay
- Report
- Write an editorial/position paper
- Book review
- Prepare a briefing paper

# Bloom's Taxonomy (revised)



In 2001, a revision of Bloom's Taxonomy was published by one of his students, Lorin Anderson, working in conjunction with cognitive psychologists and education researchers. The original taxonomy has been used for a lot of purposes for which it was never intended. This new version is meant to be more general. I personally find the revision less confusing, but it doesn't seem to be as widely embraced so far as the original. In this version, all of the process stages have been converted to gerunds, and there has been quite a bit of renaming.

The new taxonomy is based on a framework of four general types of knowledge (Anderson & Krathwohl, 2001, pg 27):

- **Factual:** Knowledge of isolated content elements like terminology and specific details
- **Conceptual:** Knowledge with more complexity and organizations such as theories, models, and classifications

- **Procedural:** Knowledge of how to do something such as skills, techniques, and methods, as well as how to know when to do what within specific domains and disciplines
- **Metacognitive:** Knowledge about one's own cognition and cognition in general. This is strategic knowledge, contextual knowledge, and self-knowledge

### Revised Stages

(Anderson & Krathwohl, 2001, pp. 67-68 from Forehand)

1. **Remembering:** Retrieving, recognizing, and recalling relevant knowledge from long-term memory.
2. **Understanding:** Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.
3. **Applying:** Carrying out or using a procedure through executing, or implementing.
4. **Analyzing:** Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing.
5. **Evaluating:** Making judgments based on criteria and standards through checking and critiquing.
6. **Creating:** Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing.

### References

- Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing*. New York: Longman.
- Forehand, M. (2007, July). *Bloom's Taxonomy*. Retrieved August 6, 2007 from [http://projects.coe.uga.edu/epltt/index.php?title=Bloom%27s\\_Taxonomy](http://projects.coe.uga.edu/epltt/index.php?title=Bloom%27s_Taxonomy)
- University of Central Florida. (n.d.). *Assessment for optimal learning: Classroom assessment*. Retrieved July 23, 2007 from <http://www.fctl.ucf.edu/assessment/selectingmethods.html>