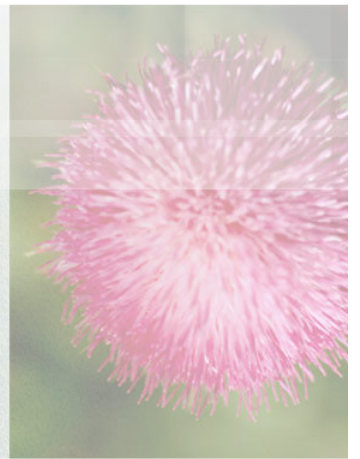




# How to think about learning:

## Bloom's Taxonomy



# Who is Bloom?



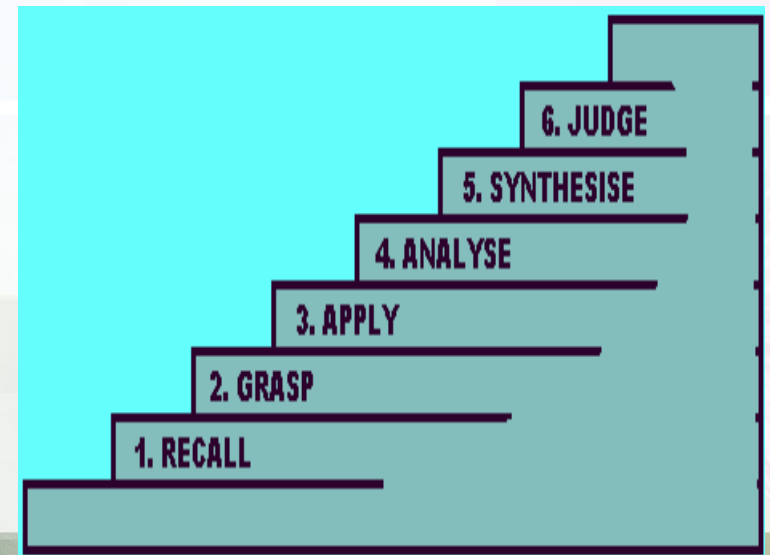
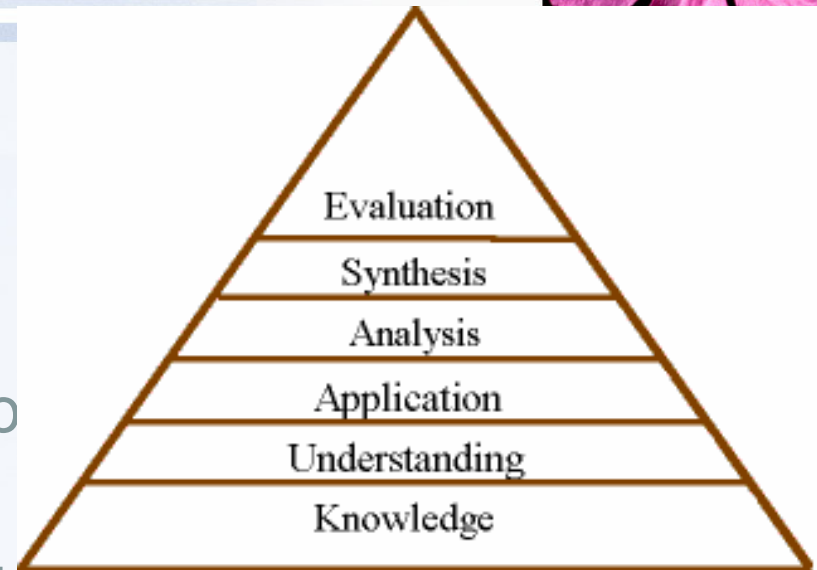
- Benjamin Bloom (1913-1999)
- Educational Professor at Chicago University
- Classified educational learning
- There are increasingly subtle and complex educational levels to master as we develop cognitively



# Bloom's Taxonomy- Overview



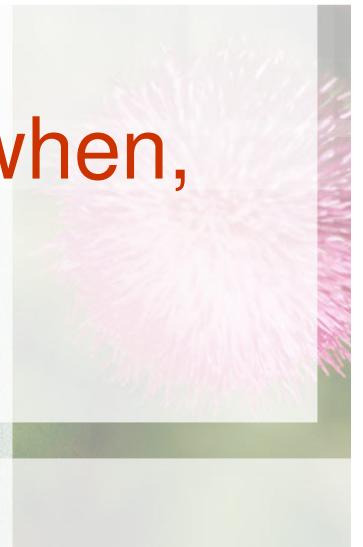
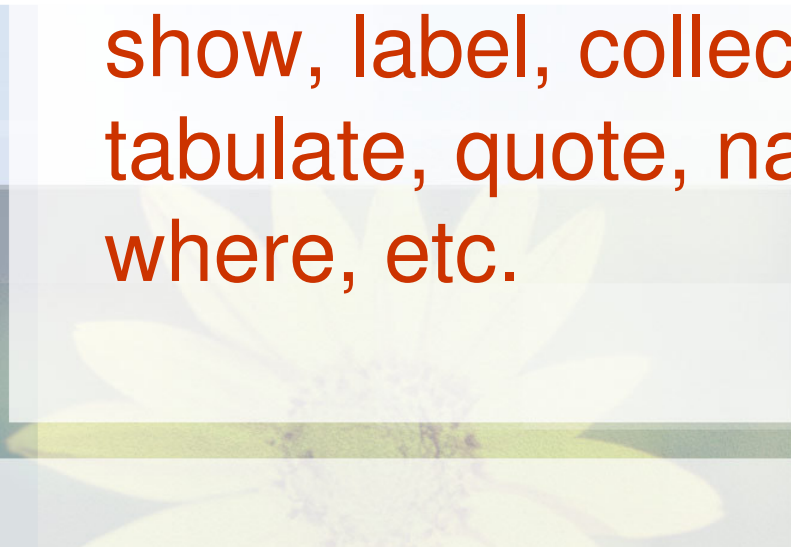
- Taxonomy for categorizing level of learning.
- There are six levels of knowledge according to Benjamin Bloom et al.
- The levels are thought to build on one another.
- The higher levels of learning have to do with brilliance and getting well educated.



# Bloom's Taxonomy- Knowledge



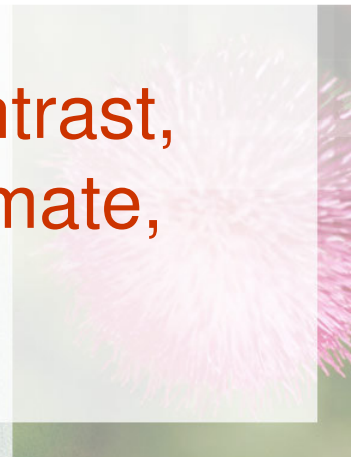
- Observation and recall of information
- Knowledge of dates, events, places
- Knowledge of major ideas
- Mastery of subject matter
- *Question Cues when evaluating:*  
list, define, tell, describe, identify,  
show, label, collect, examine,  
tabulate, quote, name, who, when,  
where, etc.



# Bloom's Taxonomy- Comprehension



- Understanding information
- Grasp meaning
- Translate knowledge into new context
- Interpret facts, compare, contrast
- Order, group, infer causes
- Predict consequences
- *Question Cues when evaluating:*  
summarize, describe, interpret, contrast,  
predict, associate, distinguish, estimate,  
differentiate, discuss, extend



# Bloom's Taxonomy- Application



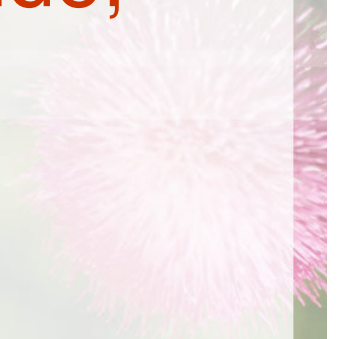
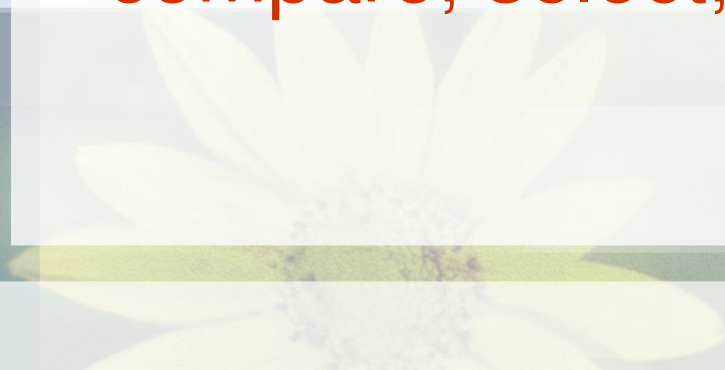
- Use information
- Use methods, concepts, theories in new situations
- Solve problems using required skills or knowledge
- *Question Cues when evaluating:*  
**apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover**



# Bloom's Taxonomy- Analysis



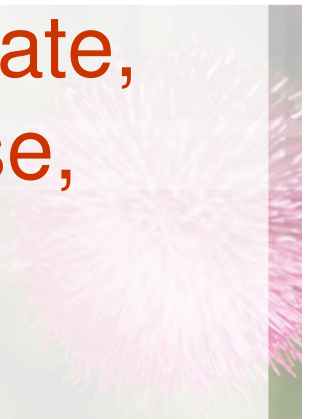
- Seeing patterns
- Organization of parts
- Recognition of hidden meanings
- Identification of components
- *Question Cues when evaluating:*  
analyze, separate, order, explain,  
connect, classify, arrange, divide,  
compare, select, explain, infer



# Bloom's Taxonomy- Synthesis



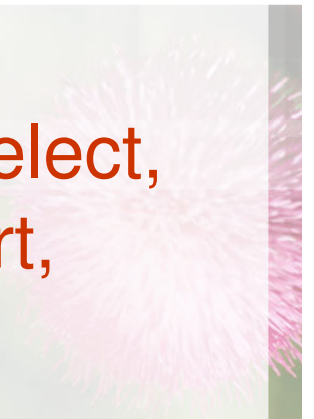
- Use old ideas to create new ones
- Generalize from given facts
- Relate knowledge from several areas
- Predict, draw conclusions
- *Question Cues when evaluating:*  
**combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if, compose, formulate, prepare, generalize, rewrite**



# Bloom's Taxonomy- Evaluation



- Compare and discriminate between ideas
- Assess value of theories, presentations
- Make choices based on reasoned argument
- Verify value of evidence
- Recognize subjectivity
- *Question Cues when evaluating:*  
assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize



# References



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