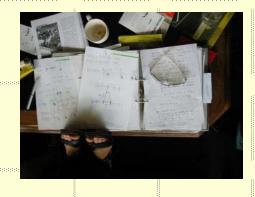
# Think like your professor: Thinking & learning levels







### Level of thinking

 Knowledge and ability grows from basic to advanced level





- Always need and use the basics, but move beyond them as you become more skilled
- It's the same with tests and assignments in college.

### Thinking & learning levels

Your professor teaches the basic facts so you learn the subject.

 She also teaches the concepts and theories that are underneath the facts.

Professors want you to know the Whats as well as the Whys? Hows? What ifs?

#### How do we learn: Beginner to Expert

#### **Evaluate**

Can you evaluate, judge, make informed opinion?



Can you break info. into parts and examine?

#### **Apply**

Can you apply what you know to "real life" situations?

#### Comprehend

Can you put information into your own words, explain to others accurately

**Knowledge: (memorize)** 

Can you recognize and recall information?



Deep learning (scuba diving)



Shallow learning (snorkeling)

#### Test questions beginner to expert

Evalute the effect of No Child Left Behind policies on special education in Utah.

Considering the predator/prey process, determine how to re-populate the sage grouse in the Uintah Basin.

Using your knowledge of the electoral college, explain the events of the 2008 presidential election.

Describe the different climates and the characteristics of each.

List the steps of meiosis.

# Beginner Learner: Knowledge Recall or recognize facts and terms

- Name
- List
- Define
- Choose
- Label

## In what digestive organ is the pH of digestive juices most acidic?

# advanced beginner learner: Comprehension

Demonstrate you understand facts, terms, concepts.

You don't rely on professor's words alone.

- Describe
- Explain
- Discuss
- Outline

A man with normal vision and thinning hair marries a woman with normal vision and full hair. They have a son with color blindness and he goes bald at 18? The son should blame his misfortunes on:

- a. Mother for vision and both parent for hair.
- b. Mother for vision and father for hair.
- c. Father for vision and mother for hair.
- d. Father for giving the genes for vision and hair.
- e. Mother for giving the genes for vision and hair.

**BIOL 1010** 

# Intermediate learner: Application

Put knowledge to use: show you can use what you know in different situations than the ones professor told you.

- Give example
- Illustrate
- Solve
- Demonstrate
- Show

Using principles of operant conditioning, describe how you would train your dog to bring you her leash.

# Advanced learner: Analysis

Take complex information and describe its various parts. Show <u>deep</u> understanding.

- Analyze
- Compare/contrast
- Pro/con
- Diagram
- Relate
- Examine

List four methods a parent might use to soothe a crying baby after he/she has tried to feed the baby or change it's diaper. Give a short explanation of the advantages and disadvantages of each method.

# **Expert learner: Evaluate**

Make INFORMED judgments, develop INFORMED opinions; evaluate worth or relevance

- Evaluate
- Judge
- Defend
- Assess effects
- Weigh (pro/con)
- Select

Do you believe that language development is innate or learned? Provide at least three statements to support your belief/theory.

ComD

### More examples of test questions at different thinking levels

#### ECON 1500

- Give the definition of supply and demand.
- Using the following information, graph the supply and demand curves.

#### BIOL 1010

- Define homozygous and heterozygous.
- A white flowered, wrinkled-pea plant is\_\_\_\_?

#### SOC 1010

- What is "aligning action"?
- When would an aligning action be detrimental?

### Applying Bloom's to *Goldilocks and the Three Bears*:

- Knowledge LiSt the items used by Goldilocks while she was in the Bears' house.
- Comprehend Explain why Goldilocks liked Baby Bear's porridge the best.
- Apply If Goldilocks came to your house, Which chair would you pick for her to use?
- Analyze Compare your ethics with Goldilocks. How are they the same? How are they different?
- Evaluate Was Goldilocks ethical or unethical in how she used the property of others? Defend your position.