



Promoting Higher Order Thinking Skills in your Classroom

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Bloom's Six Levels

- Evaluation
- Synthesis
- Analysis
- Application
- Comprehension
- Remembering




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Remembering

Level 1 – Recall

Remembering previously learned material, recalling facts, terms, basic concepts from stated text

• Name	• Relate
• List	• Tell
• Recognize	• Recall
• Choose	• Match
• Label	• Define




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Comprehension

Level 2 – Understand

Demonstrating understanding of the stated meaning of facts and ideas

• Compare	• Explain
• Describe	• Rephrase
• Outline	• Show
• Organize	• Relate
• Classify	• Identify




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Application

Level 3 – Put to Use

Solving problems by applying acquired knowledge, facts, and techniques in a different situation

• Apply	• Dramatize
• Construct	• Restructure
• Model	• Simulate
• Use	• Translate
• Practice	• Experiment




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Analysis

Level 4 – Break down

Examining and breaking down information into parts

• Analyze	• Simplify
• Diagram	• Summarize
• Classify	• Relate to
• Contrast	• Categorize
• Sequence	• Differentiate




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Synthesis

Level 5 – Put together

Compiling information in a different way by combining elements in a new pattern

• Compose	• Elaborate
• Design	• Formulate
• Develop	• Originate
• Propose	• Solve
• Adapt	• Invent




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Evaluation

Level 6 – Judge

Presenting and defending opinions by making judgments about information based on criteria

• Judge	• Defend
• Rank	• Justify
• Rate	• Prioritize
• Evaluate	• Support
• Recommend	• Prove



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Applying Bloom's

Questions to ask about the fable, *The Tortoise and the Hare*.

- **Knowledge** – To where did the animals race?
- **Comprehension** – How did the tortoise manage to win the race?
- **Application** – Compare and contrast the attitude of each character.
- **Analysis** – What is the moral of the story?
- **Synthesis** – How would you rewrite the story from the hare's perspective?
- **Evaluation** – Compare the two characters... Which was a better individual? Defend your opinion.

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Bloom's taxonomy of thinking skills can help you:

- **1. Write course goals and objectives.**
- **2. Develop questions for class discussion.**
- **3. Choose teaching methods and learning activities.**
- **4. Choose methods to assess students.**



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Now try your hand at writing course objectives

Example

- **At the end of this unit, students will be able to:**
- **Goal:** understand the importance of academic honesty.
- **Objectives:**
- **Objective 1:** describe types of plagiarism
- **Objective 2:** compare a source and a student's summary to judge if it has been plagiarized.
- **Objective 3:** write appropriate in-text citations to give credit to the source.

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Applying Bloom to the questions you ask

The next slides give you opening phrases for the higher order thinking skills. Choose a story or book you are currently reading and try your hand at "sprouting" some high level questions....

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Application Openers

Put yourself in the place of one of the characters and tell what you would have done..... ?
 What would result if..... ?
 Compare and contrast..... ?
 What questions would you try to answer ... ?
 How would the character solve the similar situation of..... ?
 Put the main character in another story setting, how would he act?
 If you had to plan a vacation for the main character, where would they go?



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Analysis Openers

What motive does ____ have.....?
 What conclusions can you draw about.....?
 What is the relationship between.....?
 How is _____ related to?
 What ideas support the fact that.....?
 What evidence can you find.....?
 What inferences can you make about.....?
 What generalizations can be made about?
 What assumptions do you make about?
 What is the theme of.....?



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Synthesis Openers

What would happen if.....?
 What advice would you give.....?
 What changes would you make to.....?
 Can you give an explanation for.....?
 How could you change the plot.....?
 Suppose you could _____, what would you do.....?
 How would you rewrite the section from _____'s point of view.....?
 How would you rewrite the ending of the story?



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Evaluation Openers

Compare two characters in the selection....which was a better person...why?
 Which character would you most like to spend the day with?
 Do you agree with the actions of.....?
 How could you determine.....?
 Why was it better that.....?
 What choice would you have made about.....?
 How would you explain.....?
 What data was used to make the conclusion.....?
 Would it be better if.....?



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Apply Bloom to your teaching methods

Higher order thinking is more likely to occur in well-planned classes that incorporate active learning methods. What active learning methods work for you?



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It's tempting to just focus on facts and ideas in effort to cover a lot of material. But what are your students really learning? Are you aiming for knowledge or higher levels of thinking?



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It's hard !!

Do you realize how hard it is to teach without telling students the answers?

Getting students to think makes the teacher think too.

Putting Bloom to work when you assess students

Use performance measures like writing projects, projects, and presentations. Use essay questions that require students to apply, analyze and evaluate.



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**Now get out there and
"bloom" with higher order
thinking and questioning
skills!**

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- Bloom's taxonomy: Bloom, Englehart, Furst & Krathwohl (1956). Taxonomy of educational objectives: Cognitive domain. New York: McKay.



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