***HOW TO BUILD A BETTER LESSON by Dr. Jane E. Pollock***

Chpt. 3, *Improving Student Learning One Teacher at a Time (ASCD, 2007), Chpts. 3,4,and 5* *Improving Student Learning One Principal at a Time (ASCD, 2009)*

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| **Components of the Lesson** | **Chapters from *Classroom Instruction that Works*** | **What we are trying to get the brain to do – the neuroscience of the brain** | **The Nine Effective Strategies the Teacher should use during this component of the lesson (from *Classroom Instruction that Works*)** | **Learning Strategies We need to teach our students**  *Each of these thinking skills requires a process for students to learn to organize and reorganize information in order to* ***retain it longer*** *and use the information to* ***construct new ideas.*** |
| **G:** Goal  Teacher shares the goal of the lesson | Chapters 8 and 4 | We are trying to get the brain to focus on the goal; reduce impulsivity and stick to a task | Setting Objectives and Providing Feedback  Reinforcing Effort and Providing Recognition | ***Identify Similarities and Differences***  **Compare:** describe how things are the same and different  **Create an Analogy:** substitute something familiar for something difficult  **Classify:** group similar items into categories    ***Use Analysis Techniques***  **Analyze Perspectives:** consider different points of view  **Create an Argument or Persuade:** to make a claim or convince others to change their viewpoints  **Analyze for Logical Fallacy:**  articulate errors in thinking  **Analyze as a System:**  consider change to make an improvement  ***Generate and Test Hypotheses***  **Make a Decision:** select from seemingly equal choices  **Solve a Problem:** negotiate obstacles to find a good solution  **Investigate:** resolve issues about which there are contradictions(projective, historical, or definitional)  **Invent:** develop original products or processes to meet specific needs |
| **A:** Access Prior Knowledge  Teacher accesses students’ prior knowledge | Chapters 10, 6, 2, and 7 | We are trying to get the brain to associate; make analogies and compare | Questions, cues and advance organizers  Nonlinguistic representations  Identifying similarities and differences  Cooperative Learning |
| **N:** New Information  Teacher shares new information; new information is practiced | Declarative and Procedural Knowledge  Chapters 3, 5, and 11 | We are trying to get the brain to gather and organize information | Summarizing and note taking  Homework and Practice |
| **A:** Application of New Information  Apply what was learned | Application of Declarative and Procedural  Knowledge  Chapters 2, 9, and 10 | We are trying to get the brain to categorize; analyze perspectives, construct arguments; extract themes, deduce, analyze for logical errors, systems analysis, investigate; make decision, solve problems, create a test and invent; follows complex directions | ***Identify Similarities and Differences***  ***Cues, Questions and Advanced Organizers***  ***Generate and Test Hypotheses***  Homework and practice |
| **G:** Goal is revisited  Teacher reminds the student about what to “click and save” and provides feedback to the student | Chapters 8 and 4 | We are trying to get the brain to “put a tab on the folder”, make a connection to the goal and retain the information learned | Setting Objectives and Providing Feedback  Reinforcing Effort and Providing Recognition  Homework and practice |

Steps in the Critical Thinking Skills

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| ***Identify Similarities and Differences*** | **Compare:** describe how things are the same and different  1. Select items to compare  2. Select characteristics on which you want to base your comparison of the items  3. Explain how the items are similar and different with respect to the characteristics  4. Summarize your findings and draw useful conclusions | **Create an Analogy:** substitute something familiar for something difficult  1. Identify a situation or basic information  2. State the basic information in general terms  3. Identify new difficult information in terms of the familiar situation (general terms)  4. Use the similarities and differences as a platform for new understandings  5. Summarize new explanation (s) about the difficult information | **Classify:** group similar items into categories  1. Identify items to classify  2. Select an item and identify other items like it to combine into a group based on attributes  3. Choose a rule that describes membership in the category  4. Repeat with another item until all items are classified  5. If necessary, combine or split groups into smaller categories and state the rule for membership  6. Reclassify to consider different patterns and summarize findings |  |  |
| ***Use Analysis Techniques*** | **Analyze Perspectives:** consider different points of view  1. Identify an issue  2. State a perspective, the logic, and evidence that support it  3. State a different perspective with the logic and evidence that support it  4. Repeat  5. Summarize the similarities and differences among viewpoints | **Create an Argument or Persuade:** to make a claim or convince others to change their viewpoints  1. Make a claim  2. State evidence about the claim  3. Elaborate on the evidence by providing detail, both opinion and factual information  (4. To persuade, use techniques to sway the audience to accept the claim) | **Analyze for Logical Fallacy:**  articulate errors in thinking  1. Describe how information being presented is intended to change your behavior or beliefs.  2. Identify claims or tactics that are unusual  3. Ask for clarification or more accurate information  4. Summarize the errors and resolution | **Analyze as a System:**  consider change to make an improvement  1. Explain a situation as a system – the parts and the functions of each part  2. Describe how the parts affect each other  3. Identify one part, change it, and explain how it affects the rest of the system  4. If possible, make the change, and show the results to draw conclusions |  |
| ***Generate and Test Hypotheses*** | **Make a Decision:** select from seemingly equal choices  1. Identify a situation that requires a choice  2. Identify different choices or alternatives  3. Hypothesize the best criteria important to the situation  4. Assign each criterion a value score  5. Score the extent to which each alternative possesses each criterion  6. Multiply the criterion scores by the alternative scores  7. Identify the alternative with the highest score  8. Summarize the result or justify why not to elect that choice | **Solve a Problem:** negotiate obstacles to find a good solution  1. Identify a goal  2. Describe a barrier that prevents you from achieving the goal, causing the problem  3. Hypothesize or generate solutions for overcoming the barrier  4. If possible, test a likely solution (s)  5. If necessary, test another hypothesis, and summarize how to resolve the situation | **Investigate:** resolve issues about which there are contradictions(projective, historical, or definitional)  1. Describe a hypothetical, past event or concept to be explained  2. Explain what is already known or agreed upon  3. Explain the confusion or contradiction  4. Hypothesize a plausible explanation about the confusion or contradiction  5. Summarize findings | **Invent:** develop original products or processes to meet specific needs  1. Describe a situation that needs improvement  2. State the purpose or goal from different perspectives  3. Hypothesize specific needs and restrictions for the invention  4. Develop a model, sketch, or outline  5. Seek feedback on the idea or product  6. Improve the idea or product by editing or revising  7. Publish or produce the idea or invention | **Experiment or Survey:** test explanations for things we observe  1. Describe an event or situation  2. Explain what you observed  3. Based on your explanations, make a prediction or hypothesis  4. Create an experiment or survey to test your prediction  5. Explain the results of your experiment or survey  6. Summarize, and if necessary, revise the explanation |