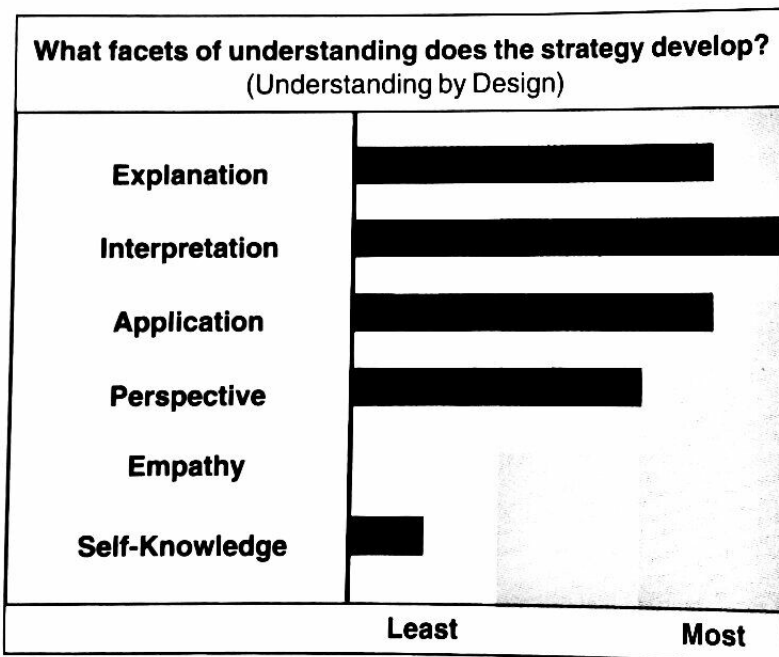
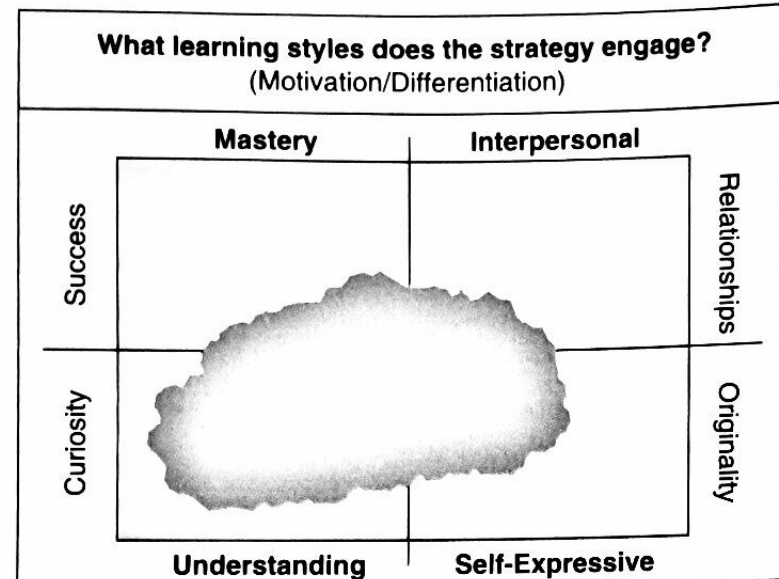
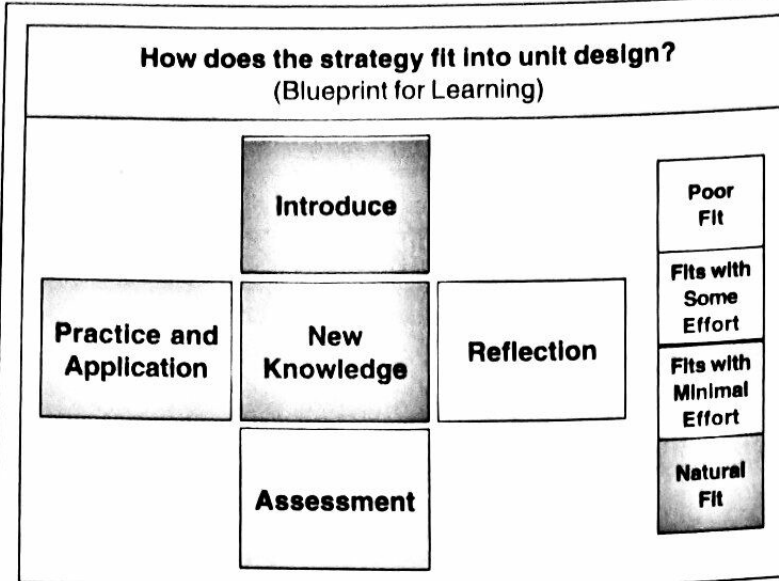


8. MYSTERY



What skills does the strategy build? (The Hidden Skills of Academic Literacy)

Read and Study

- Collect/organize ideas through note making
- Make sense of abstract academic vocabulary
- Read/interpret visuals*

Reason and Analyze

- Draw conclusions; make/test inferences, hypotheses, conjectures
- Conduct comparisons using criteria
- Analyze demands of a variety of questions

Create and Communicate

- Write clear, coherent explanations
- Write comfortably in major nonfiction genres**
- Read and write about two or more documents

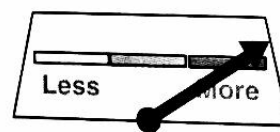
Reflect and Relate

- Construct plans to address questions and tasks
- Use criteria and guidelines to evaluate work
- Control/alter mood and impulsivity

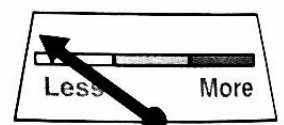
How does the strategy incorporate the research on instructional effectiveness? (Classroom Instruction That Works)

- Identifying similarities and differences
- Summarizing and note taking
- Reinforcing effort and providing recognition
- Homework and practice
- Nonlinguistic representation
- Cooperative learning
- Setting objectives and feedback
- Generating and testing hypotheses
- Cues, questions, and advance organizers

What types of knowledge does the strategy teach?



Declarative



Procedural

*Depending on content, Mystery lessons often incorporate visual clues, charts, and graphs.
**Mystery naturally builds students' capacities to use evidence in their writing.

process of generating and testing hypotheses is a surefire way to increase academic achievement levels across all grade levels and content areas (Hansell, 1986; Koedinger & Anderson, 1993; Koedinger & Tabachneck, 1994; Marzano, Pickering, & Pollock, 2001).

How to Use the Strategy

1. Begin by explaining the content of the lesson and the goals of the Mystery strategy.
2. Engage student interest by presenting a problem to be solved, a question to be answered, or a situation to be explained. Encourage students to tap into their background knowledge about the topic or problem and to generate tentative hypotheses or solutions.
3. Present students with a variety of brief clues. Ask students or student teams to read the clues carefully, organize them into relevant groups, and give each group a descriptive label. Clues may be placed in more than one group.
4. Instruct students to use their labeled groups to develop hypotheses. Allow students to merge groups and refine hypotheses.
5. Hold a discussion in which students present, defend, and further refine their hypotheses.
6. Assign a synthesis task that allows students to apply what they have learned.

Planning a Mystery Lesson

Planning a Mystery lesson involves these steps:

1. **Identify a question to be answered, riddle to be solved, situation to be explained, or secret to be discovered.** Most content areas are filled with mysteries. The Mystery strategy presents students with the mystery but never the answer. Students have to discover answers for themselves. Appropriate questions for the Mystery strategy often take the form of "Yes, but why?" or "Yes, but how?" For example, "We all know that green plants take in carbon dioxide and release oxygen, whereas humans do the opposite. But why?" Questions of this nature require more than factual answers—they demand investigation and thought. Here are a few teachable mysteries:

- How is energy from food made available to body cells?
- Why was the death rate in the Jamestown Colony so high?
- What happened to the dinosaurs?

Once you have formulated your mystery, ask yourself: What is the overall solution to the mystery? Identify and write out the generalizations you expect students to make in solving the mystery.

2. Gather or develop the clues. What sorts of clues will lead your students to the appropriate solution(s)? Make sure you develop enough clues to support each generalization you identified in Step 1. The clearer you are about the connections you want your students to make, the easier it will be for you to generate the necessary clues.

Of course, clues can take many forms. Statements, quotations, paragraphs, pictures, graphs, charts, maps, interviews, demonstrations, and even mini-experiments are all good clue candidates. For example, a 4th grade teacher we know had students conduct four separate experiments to solve the mystery of how humans hear sound. Students followed these instructions:

- Hang a clock from the ceiling and listen to it from all directions.
(Conclusion: Sound travels in all directions.)
- Whisper to each other, with and without two cups and a string.
(Conclusion: Sound travels through gases and solids—under certain conditions.)
- Listen to a CD of a mother whale locating her calf.
(Conclusions: Sound travels through liquids; Sound bounces off the calf.)
- Snap a ruler over a table at various lengths.
(Conclusion: The faster something vibrates, the higher the pitch.)

3. Decide how students will work to solve the mystery. How will your students work to solve the mystery? Will they work independently, in cooperative learning groups, or as an entire class? If you choose to have your students work in small groups, consider distributing the clues evenly among group members. This way, you help create a sense of interdependence among group members.

4. Determine how you will present the clues. Clues can be presented all at once. Students can cut them out themselves, or you can cut them up into strips, place them in an envelope, and hand them out to groups or individual students. Alternatively, you can present clues gradually. This gradual-distribution approach works especially well with students who are unfamiliar with the strategy or who have difficulty managing large amounts of information. If you present the clues gradually, you may want to create various stations around the classroom where the students go to collect the different clues.

5. Select a format for the presentation of students' conclusions. Students should explain and defend their solutions. This process of explanation and defense can be done as part of a synthesizing discussion or through any number of oral, visual, or written products. For example, the 4th grade teacher who had students conduct a set of experiments in order to solve the mystery of how humans hear sound asked students to create a short, illustrated pamphlet explaining and showing how sound travels from a source, through the air, and through liquids and solids, to a person's ears.