The Interactive Lecture
How to Engage Students, Build Memory, and Deepen Comprehension

Presented by Tr. Harvey F. Silver, EdD
Let’s Get Started
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Let’s look at an instructional practice, the lecture, and how it differs from strategic lecture, which we call The Interactive Lecture.
Think of some lectures you have either delivered or attended. Think about both the good and the bad.

What are the assets of using the lecture as a teaching strategy? What are the liabilities? Discuss with your ideas with a neighbor.
“If keeping someone’s interest in a lecture were a business, it would have an 80 percent failure rate.”
—J.Medina

Why are so many lectures ineffective? What can we do to improve the quality of our lectures so that they are engaging, memorable, and lead to deeper understanding of the content?
Goals of the Interactive Lecture

**Goal #1** 
Increase Student Engagement

**Goal #2** 
Build Students’ Information Management Skills

**Goal #3** 
Develop Students’ Note-Taking Skills

**Goal #4** 
Deepen Comprehension

**Goal #5** 
Build Students’ Background Knowledge

**Goal #6** 
Develop Students’ Habits of Mind

Which of the six goals of the Interactive Lecture strategy is most important to you, and why?
Can You Recall...

- A memory from earlier today?
- Where you put your keys last night?
- What “Please Excuse My Dear Aunt Sally” stands for?
- A dream from childhood?
- A memory from last year?
- The last time you laughed until you cried?
- The exact layout of your room from freshman year at college?
- The phases of the water cycle?
- Your earliest memory?
Addressing the Challenges of Presenting Information

How do you . . .

• capture and hold students’ attention?
• organize the information in your lecture for optimal learning?
• encourage students to actively process the most important content?
• provide students with opportunities to review and apply their new learning?
The Principles of Memory-Based Lecturing
**Principle 1:**

The stronger the connection, the stronger the memory.

We need an engaging hook to capture and hold students' attention and to “anchor” or connect new knowledge to prior knowledge.
Principle 2:

The clearer the organization, the stronger the memory.

How is the mind like a messy closet?
A little planning goes a long way.
What are the parts of the U.S. Constitution?

**PREAMBLE**
We the people of the United States….
Function of government defined:
- establish justice
- insure domestic tranquility
- provide for the common defense
- promote the general welfare
- secure the blessings of liberty for ourselves and our prosperity

**ARTICLES**
Article I: Legislative Power
Article II: Executive Powers
Article III: Judicial Power
Article IV: States’ Powers & Limits
Article V: Amendment Process

**AMENDMENTS**
I-X Bill of Rights
XIII Abolition of slavery
XV Citizens right to vote cannot be denied because of race
XIX Women’s right to vote
Principle 3:
The deeper the processing, the stronger the memory.
What is this?
Would you believe it’s the two-foot long tongue of a giant anteater?
The Giant Anteater weighs over 100 pounds. It feeds mainly on insects and termites, which it catches by flicking its long, sticky tongue into ant mounds.

or

So how does the Giant Anteater actually eat ants? Well, when you weigh over 100 pounds you need to eat over 20,000 ants and termites every day just to survive. It’s good to have a tongue that’s two-feet long and as sticky as flypaper. Ah, at last! You come to your favorite place on earth – a beautiful ant mound teeming with little crawling snacks. Flick! Flick! Flick-flick-flick! Not only is your tongue long and sticky, but it’s as fast as lightning. Flick-flick-flick! You can flick your tongue into an ant mound 160 times in a single minute! That’s as fast as a drum roll. Imagine being able to do a drum roll with your tongue! And best of all for you, with each flick of your tongue, you draw hundreds of delicious treats into your mouth. Yum! Now, where’s the next ant mound?
Principle 4:
Memories are like muscles: they develop with exercise.
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Memories are like muscles: they develop with exercise.

Students take a more active approach to creating strong memories when they think about what they have learned rather than when they simply recorded it.
<table>
<thead>
<tr>
<th>Principles to Phases:</th>
<th>Connect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The stronger the connection the stronger the memory.</td>
<td>Create a hook. Kindle the hook by having students write a response and talk about it. Create a bridge to link prior learning to new learning.</td>
</tr>
<tr>
<td>2. The clearer the organization, the stronger the memory.</td>
<td>Organize. Design a visual organizer that provides students with a structure of the lecture and present the information in chunks.</td>
</tr>
<tr>
<td>3. The deeper the processing, the stronger the memory.</td>
<td>Deep Process. Use multi-sensory tools and strategies. Pose questions or short tasks for students to do that will ask them to process information through different senses after each chunk of information.</td>
</tr>
<tr>
<td>4. Memories are like muscles, they develop with exercise.</td>
<td>Exercise &amp; Elaborate. Apply learning through synthesis tasks that encourage students to process their new learning.</td>
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Planning a Lesson
Planning a Lesson

**Step 1**: Identify the lesson’s standards and purpose.

**Step 2**: Design the visual organizer and fill it in to create your lecture notes.

**Step 3**: Decide which techniques you will use to help students actively process key points.

**Step 4**: Develop review questions in all four styles.

**Step 5**: Design the hook and the bridge.

**Step 6**: Develop a synthesis task.
# Middle School Science Lesson

## Hot and Cold: What’s the Difference?

<table>
<thead>
<tr>
<th>Definition</th>
<th>Your Words</th>
<th>How It Works</th>
<th>Icon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential energy: the energy an object has before it starts to move.</td>
<td>Still objects have potential energy inside them.</td>
<td>Think of the coiled spring inside the jack-in-the-box. Energy is stored up, waiting to “go off.”</td>
<td>![Energy Inside Icon]</td>
</tr>
<tr>
<td>Kinetic energy: the extra energy an object or a molecule possesses due to its motion.</td>
<td>When things are moving, they have kinetic energy.</td>
<td>When the jack-in-the-box pops out, the spring releases, becoming kinetic energy.</td>
<td>![Spring Release Icon]</td>
</tr>
</tbody>
</table>

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*Silver Strong & Associates, Thoughtful Education Press*

*ASCD, LEARN. TEACH. LEAD.*
When my warm hand was put into the cold water, the thermal energy from my hand was transferred to the water, so that hand lost thermal energy.

When my other hand was put into hot water, the hot water transferred thermal energy to my hand, so that hand gained thermal energy.
### High School US History

**Sectionalism: Why Didn’t the Era of Good Feelings Last?**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Northeast</th>
<th>South</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Geography</strong></td>
<td>Narrow coast</td>
<td>Wide coast</td>
<td>Plains</td>
</tr>
<tr>
<td></td>
<td>Natural harbors</td>
<td>Few harbors</td>
<td>Lots of open, fertile land</td>
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<tr>
<td></td>
<td>Little arid land between mountains and coast</td>
<td>Wide, navigable rivers</td>
<td></td>
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<tr>
<td><strong>Immigration</strong></td>
<td>Primary immigration from Northern Europe</td>
<td>Primary immigration from Africa (slaves)</td>
<td>Primary immigration from Central Europe</td>
</tr>
<tr>
<td></td>
<td>Many Irish people came to work in factory jobs</td>
<td></td>
<td>Many Germanic people became farmers</td>
</tr>
<tr>
<td><strong>Economic Base</strong></td>
<td>Commercial and industrial</td>
<td>Slave economy</td>
<td>Agrarian emphasis on grains</td>
</tr>
<tr>
<td><strong>Political Issues</strong></td>
<td>Favored national bank</td>
<td>Opposed national bank</td>
<td>Opposed national bank</td>
</tr>
<tr>
<td></td>
<td>Favored high tariffs</td>
<td>Opposed tariffs</td>
<td>Mixed on tariffs</td>
</tr>
<tr>
<td></td>
<td>Favored increased immigration</td>
<td>Opposed new immigration</td>
<td>Favored increased immigration</td>
</tr>
<tr>
<td></td>
<td>Mixed on expansion</td>
<td>Favored expansion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Favored road and canal development</td>
<td>Opposed road and canal development</td>
<td>Favored road and canal development</td>
</tr>
</tbody>
</table>
## Visual Organizers

### Matrix Organizer

<table>
<thead>
<tr>
<th>Transcendentalism</th>
<th>Realism</th>
<th>Naturalism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Themes</td>
<td></td>
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<tr>
<td>Stylistic Innovations</td>
<td></td>
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<td>Major Writers</td>
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<tr>
<td>Key Texts</td>
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</table>

### Topic Organizer

- **Instruments in the Orchestra**
  - Woodwinds
    - Details
  - Strings
    - Details
  - Percussion
    - Details
  - Brass
    - Details
Visual Organizers

Cycle Organizer

Acronym Organizer

How to Solve Linear Equations

S
O
L
V
E
R

Comparative Organizer

Fractions

Decimals

Similarities

Diagram Organizer
Visual Organizers

**Cause-Effect Organizer**
- Development of the Atomic Bomb
  - Political Developments
  - Military Developments
  - Scientific Developments

**Sequence Organizer**
- Building Themes in Literature
  1. Explain theme:
  2. Collect evidence:
  3. State connection as a sentence:
  4. Look for connection among units:
  5. Look for thematic units in poem:

**Flowchart Organizer**
- How a Bill Becomes Law
  - No → Yes → Yes → Yes → Yes
  - No → No (Veto) → Yes → No

*Source: The Interactive Lecture: How to Engage Students, Build Memory, and Deepen Comprehension (A Strategic Teacher PLC Guide)*
Classroom Tips

**Introducing the Interactive Lecture to Your Students**
- Make sure that each of your students has a visual organizer.

**Phase One: Connect our students has a visual organizer**
- Stimulate student thinking with an engaging hook.
- Kindle students’ initial ideas into better-reasoned responses.
- Bridge students’ prior knowledge to the content of the lecture.

**Phase Two: Organize**
- Select or design an organizer that best fits your content
- During the lecture, present information slowly and clearly, giving students the opportunity to listen and make notes.
Phase Three: Dual-Code
• Use different techniques (e.g., visual aids, vocal emphasis, elaboration, story, humor, demonstration, or processing activities) to add emphasis on key points.

Phase Four: Exercise and Elaborate
• Pause every few minutes to pose a review question. (Remember to use different styles of questions.)
• Develop a synthesis task that will help students apply what they’ve learned from the lecture. (Remember to give students ample time to complete the activity.)
What's the Difference Between a Research-Based Practice and a Strategy for Improving the Research-Based Practice?