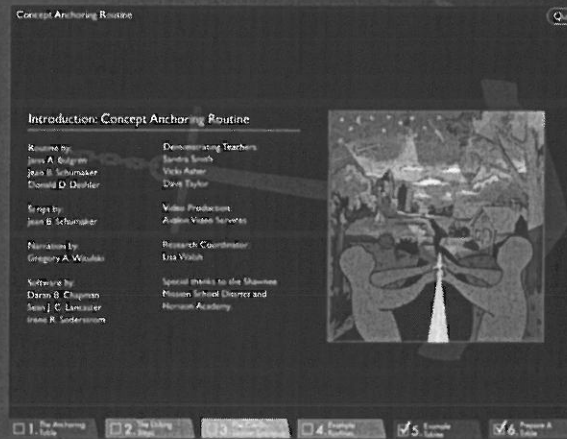


Concept Anchoring Routine Professional Development Program



Purpose of the Concept Anchoring Routine Professional Development Program

- To demonstrate how to effectively use the Concept Anchoring Routine with a diverse group of students

Anchoring Known Information to New Information

Concept Anchoring Routine Quit

Introduction: Concept Anchoring Routine

New Information

Known Information

1. The Anchoring Table
 2. The Linking Step
 3. The Linking Step
 4. Examples
 5. Examples
 6. Prepare a Table

The Anchoring Table

User: _____ Name: _____ Date: _____

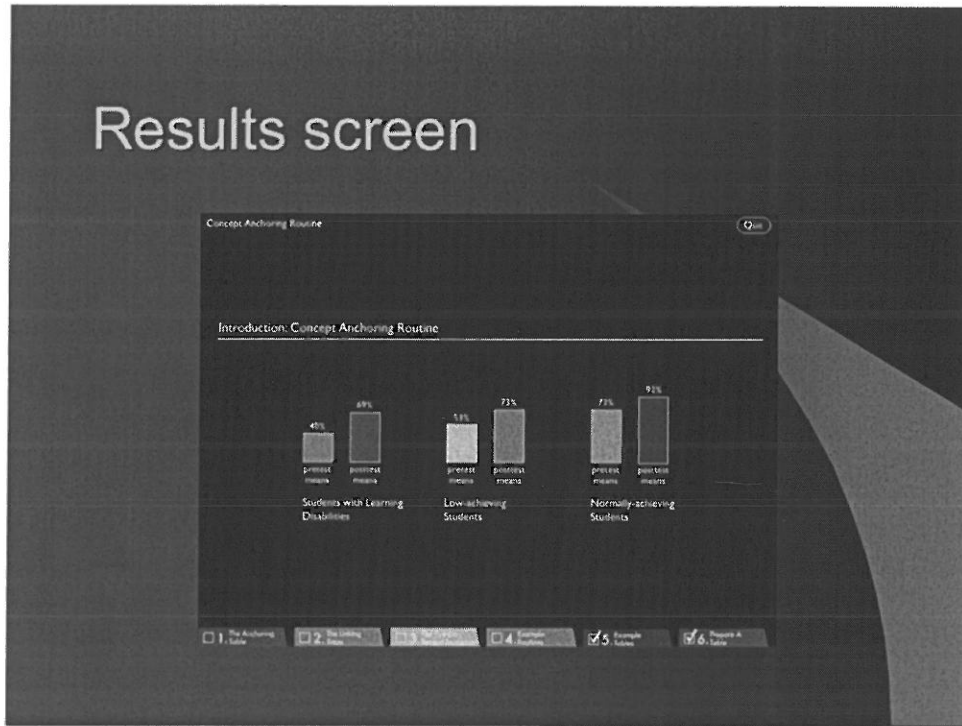
2 Known Concept	Anchoring Table	1 New Concept
4 Characteristics of Known Concept _____ _____ _____	3 Characteristics Shared _____ _____ _____	5 Characteristics of New Concept _____ _____ _____

7 Understanding of the New Concept

Anchor: _____

Linking Step: 1. Associate the New Concept 2. Name Known Concept 3. Collect Known Information 4. Highlight Characteristics of Known Concept 5. Observe Characteristics of New Concept 6. Draw Connections Shared 7. Map Understanding of New Concept

Results screen



Lesson 1: The Anchoring Table

Concept Anchoring Routine

Return to Intro Turn Narration Off Quit

1. The Anchoring Table (selected) 2. The Learning Table 3. The Characteristics of New Concept 4. Examples of Paragraphs 5. Examples of Paragraphs 6. Examples of Paragraphs

Lessons Intro Section 1 Section 2 Section 3 Section 4 Section 5 Section 6 Section 7 Final

The New Concept

Start Last Page Next Page

- The New Concept represents a category or class into which ideas, events, or instances can be grouped.
- It is written in the small rectangle at the top right side of the table.
- In the sample table to the right, the New Concept is "Paragraph." Everyday, we use new examples of paragraphs. Although they are all different, they have the same basic characteristics that make them all paragraphs.

Name	Number	Date
New Concept		
Paragraph		
Characteristics of New Concept		

1. The Anchoring Table 2. The Learning Table 3. The Characteristics of New Concept 4. Examples of Paragraphs 5. Examples of Paragraphs 6. Examples of Paragraphs

Lancaster Schumaker
Edge Technology
Wednesday 3:30-5pm
Mallroom D
Rock Garden

Lesson 2: The Linking Steps

Concept Anchoring Routine

2. The Linking Steps

Lesson 2: The Linking Steps

Step 3: Collect Known Information

In Step 3, the teacher asks questions about the Known Concept to draw out information known about it.

- The questions are carefully crafted to ensure important components of the Known Concept are specified so that they can be used later in the analogy.
- As students contribute information, the teacher and students list key points in Section 3 of the Anchoring Table or on the board if they need more space.
- Often, when Step 3 has been completed, the list in Section 2 of the Anchoring Table contains several items that are not going to be used in the analogy to teach a case; the teacher underlines the words in the list that will be used in the analogy.

Play the video clip to watch the teacher model how to begin the Linking Step and elicit a few student ideas.

1. The Anchoring Table | 2. The Linking Steps | 3. The Linking Steps | 4. Example 1 | 5. Example 2 | 6. Practice A Table

Lesson 3: The Cue-Do-Review Sequence

Concept Anchoring Routine

3. The Cue-Do-Review Sequence

Lesson 3: The Cue-Do-Review Sequence

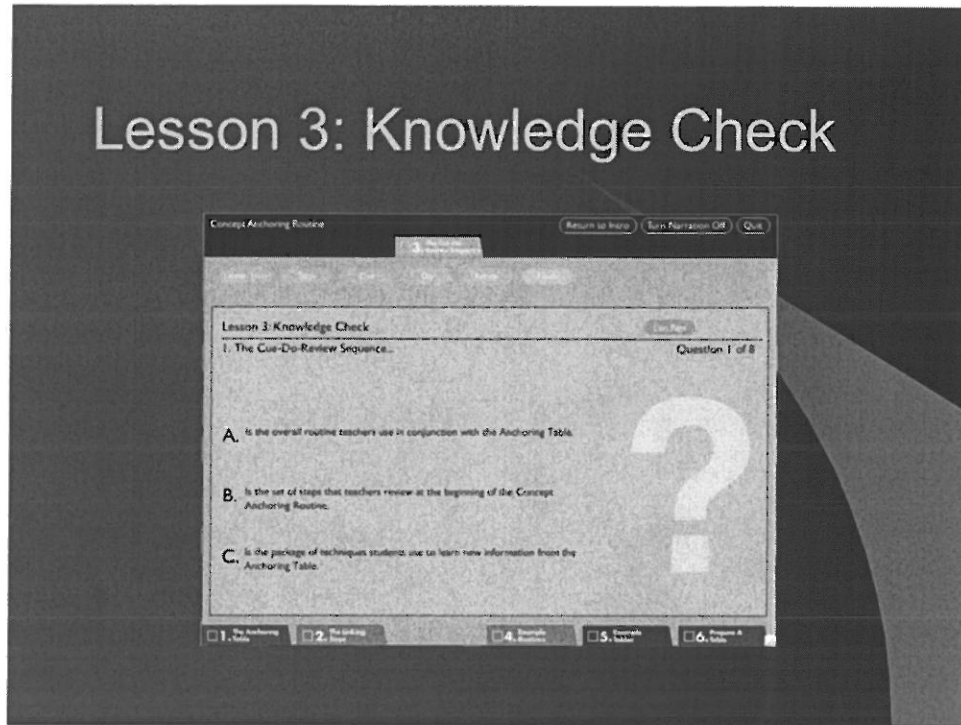
The Cue-Do-Review Sequence involves:

- Cueing the students that the routine will be used.
- Doing the Linking Steps, and
- Reviewing what's been learned.

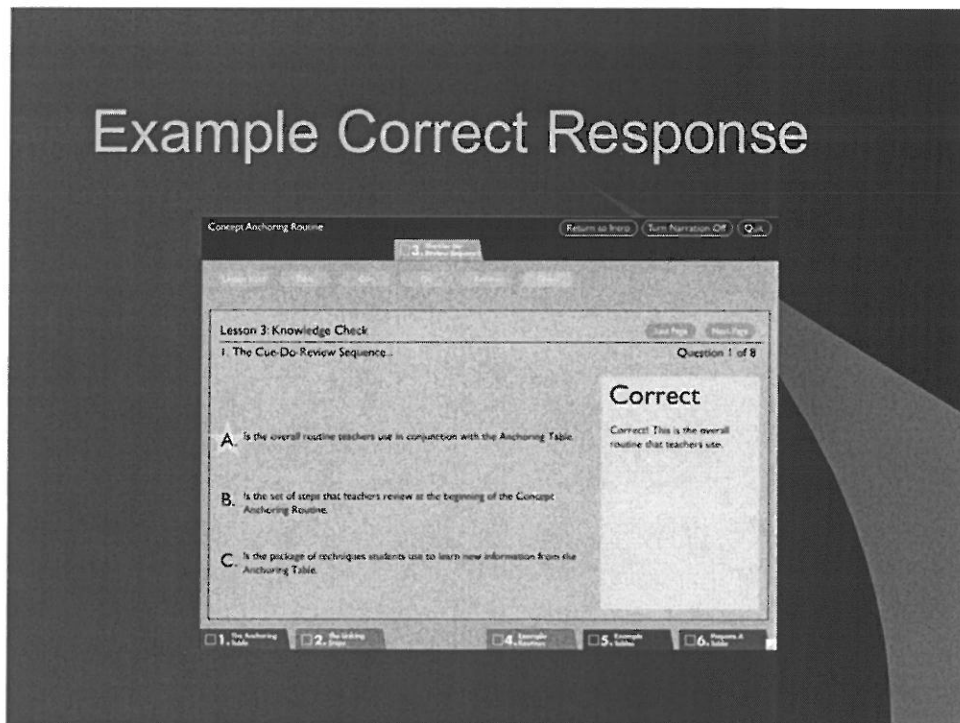
Cue-Do-Review. That's all there is to it!

1. The Anchoring Table | 2. The Linking Steps | 3. The Cue-Do-Review Sequence | 4. Example 1 | 5. Example 2 | 6. Practice A Table

Lesson 3: Knowledge Check



Example Correct Response



Example Incorrect Response

Concept Anchoring Routine

Lesson 3 Knowledge Check

1. The Cue-Do-Review Sequence. Question 1 of 8

A is the overall routine teachers use in conjunction with the Anchoring Table.

B is the set of steps that teachers review at the beginning of the Concept Anchoring Routine.

X is the package of techniques students use to learn new information from the Anchoring Table.

Try Again
Sorry. This is not what the Cue-Do-Review Sequence is. Please try again.

1. The Anchoring Table 2. The Learning Objectives 3. The Learning Objectives 4. Learning Objectives 5. Learning Objectives 6. Learning Objectives

Lesson 4: Example Routines

Concept Anchoring Routine

Lesson 4: Do - Step 4 Highlight the Characteristics of the Known Concept

In Step 4, the teacher and students move key characteristics from Section 3 to the lines underneath the Known Concept. In other words, they fill in Section 4 of the table. As they do this, the characteristics are written in an order that will facilitate the analogy that is being created.

1. The Anchoring Table 2. The Learning Objectives 3. The Learning Objectives 4. Learning Objectives 5. Learning Objectives 6. Learning Objectives

Lesson 5: Example Tables

Concept Anchoring Routine | Return to Intro | Turn Narration Off | Quit

Lesson Intro | Science | Math | Social Studies | Language Arts

Cells | **Anchoring Table** | **Cell**

Attribute	Cells	Cell
Structure	Composed of many smaller parts	Composed of one part
Function	Has a variety of jobs	Has a limited number of jobs
Movement	Can move from one place to another	Cannot move
Size	Can be very small or very large	Is always the same size
Shape	Can be many different shapes	Is always the same shape
Location	Can be found in many different places	Is always in the same place
Life	Can live for a long time or a short time	Does not live

Example Tables From Science

1. The Anchoring Table | 2. The Listing Table | 3. The Comparison Table | 4. The Summary Table | 5. Example Table | 6. Review Table

Lesson 5: Example Table

Concept Anchoring Routine | Return to Intro | Turn Narration Off | Quit

Lesson Intro | Science | Math | Social Studies | Language Arts

Human Body | **Anchoring Table** | **Red Blood Cells**

Attribute	Trucks	Red Blood Cells
Structure	Composed of many smaller parts	Composed of one part
Function	Pick up water	Pick up something
Movement	Carrying on roads	Carry in vessels
Size	Deliver to stores	Deliver oxygen to body
Location	Pick up empty	Pick up carbon dioxide
Life	Take to company	Take to lungs

Example Tables From Science

1. The Anchoring Table | 2. The Listing Table | 3. The Comparison Table | 4. The Summary Table | 5. Example Table | 6. Review Table

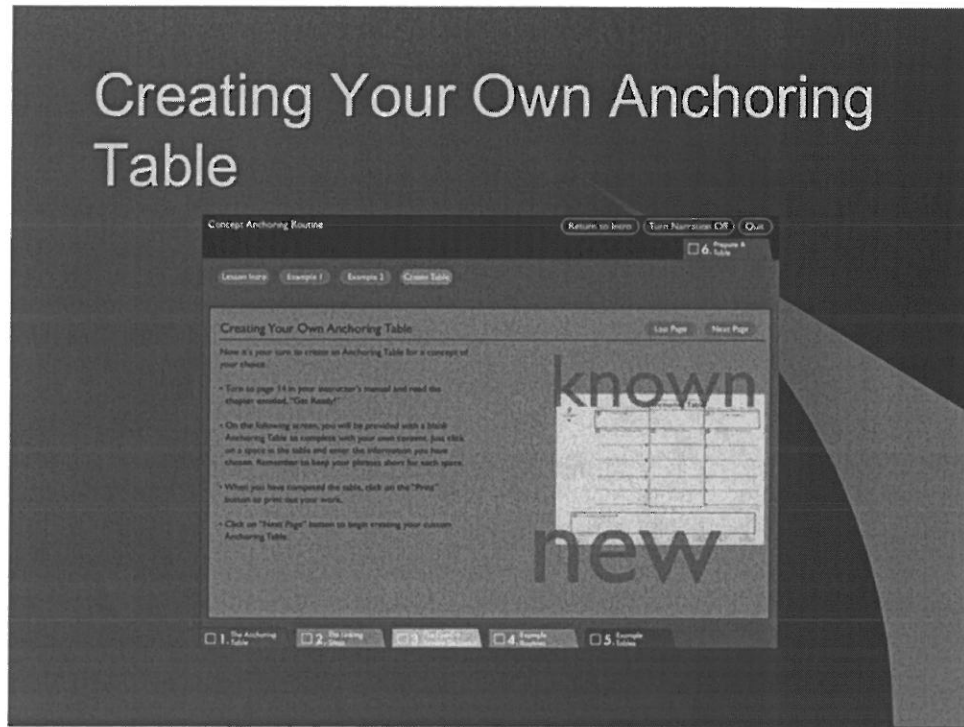
Lesson 6: Prepare a Table

The screenshot shows the 'Lesson 6: Prepare a Table' page. At the top, there are navigation buttons: 'Return to Intro', 'Turn Narration Off', and 'Quit'. Below these are tabs for 'Lesson Intro', 'Example 1', 'Example 2', and 'Create Table'. The main content area has a title 'Lesson 6: Prepare a Table' and a 'Next Page' button. The text reads: 'As you have seen, the Concept Anchoring Routine can be used to teach a wide variety of concepts to students in all grade levels. This lesson will guide you through the process of developing your own Anchoring Tables for you to use to teach new concepts. In the first two sections, you will create Anchoring Tables for pre-selected concepts. In the last section, you can create your very own custom tables and print them out for use in your own classroom.' To the right of the text is a collage of three images showing students in a classroom setting. At the bottom, there is a progress bar with five steps: '1. The Anchoring Table', '2. The Linking Table', '3. The Concept Table', '4. Example 1', and '5. Example 2'. Step 1 is currently selected.

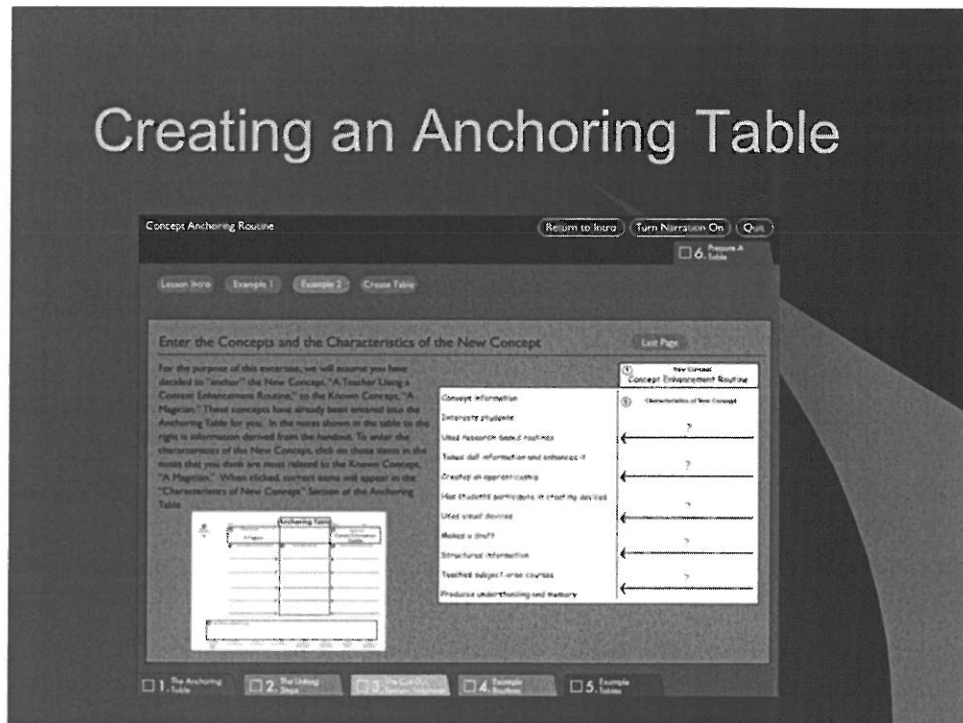
Prepare an Anchoring Table on White Blood Cells

The screenshot shows the 'Prepare an Anchoring Table on White Blood Cells' page. At the top, there are navigation buttons: 'Return to Intro', 'Turn Narration Off', and 'Quit'. Below these are tabs for 'Lesson Intro', 'Example 1', 'Example 2', and 'Create Table'. The main content area has a title 'Prepare an Anchoring Table on "White Blood Cells"' and 'Last Page' and 'Next Page' buttons. The text reads: 'In this section you will be guided through a series of steps in order to build an Anchoring Table which links the New Concept, "White Blood Cells" to the Known Concept, "An Army". Click the "Next Page" button to begin.' To the right of the text is a large graphic with the words 'army' and 'cells' in a stylized font, overlaid on a grid representing an anchoring table. At the bottom, there is a progress bar with five steps: '1. The Anchoring Table', '2. The Linking Table', '3. The Concept Table', '4. Example 1', and '5. Example 2'. Step 3 is currently selected.

Creating Your Own Anchoring Table



Creating an Anchoring Table



Study 1

Inservice Teachers

- 12 Experimental
- 12 Control

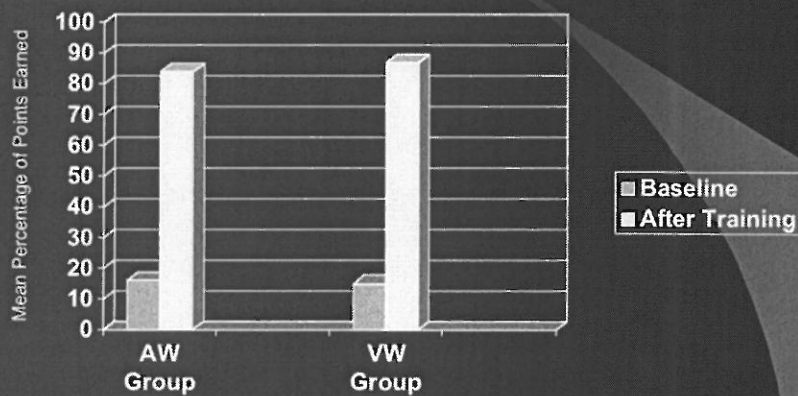
All Students

- 154 Experimental
- 142 Comparison

Students with LD

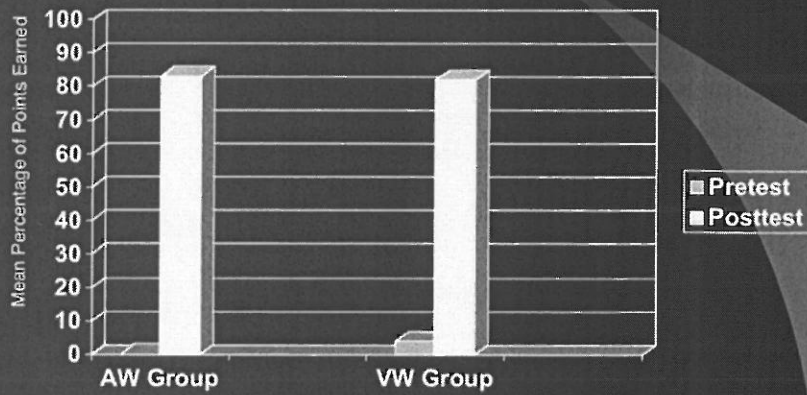
- 33 Experimental
- 42 Comparison

Study 1: Implementation Results



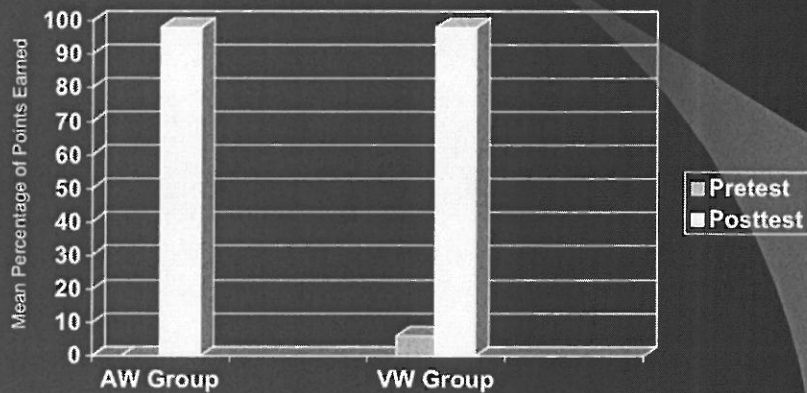
ANCOVA: No differences
R.M. ANOVA: Significant gains for both groups ($p < .001$)

Study 1: Knowledge Test Results



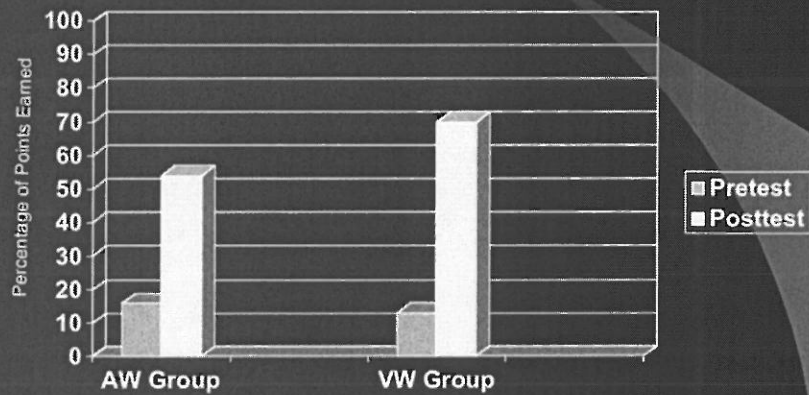
ANCOVA: No differences
R.M. ANOVA: Significant gains for both groups ($p < .001$)

Study 1: Anchoring Table Test



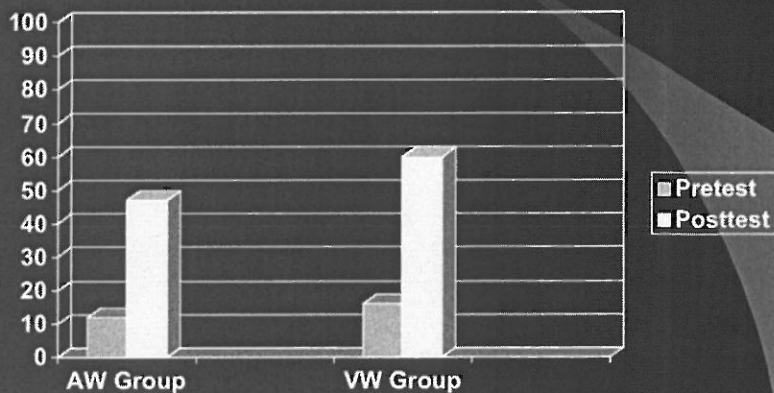
ANCOVA: No differences
R.M. ANOVA: Significant gains for both groups ($p < .001$)

Study 1: Concept Acquisition Test (All Students)



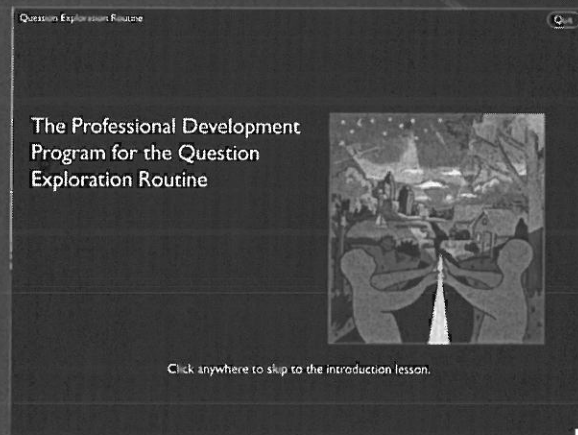
HLM Approach: Significant posttest differences ($p < .014$)
Significant gains for both groups ($p < .001$)

Study 1: Concept Acquisition Test (Students with LD)



HLM Approach: No significant differences between groups
Significant gains for both groups ($p < .001$)

The Question Exploration Routine Professional Development Program



Purpose of the Question Exploration Routine CD

- To demonstrate how to effectively use the Question Exploration Routine with a diverse group of students

Unpacking the Critical Question

Question Exploration Routine

Introduction: Question Exploration Routine
Rationale Behind the Question Exploration Routine

complex question

smaller packages

1. The Question Routine 2. The Guide 3. The Question Exploration Routine 4. Journal Prompts 5. Journal Prompts 6. Journal Prompts

The Question Exploration Guide

Question Exploration Guide

Title/standard: _____
Student name: _____ Date: _____
Course/Question #: _____ Unit/Question #: _____ Lesson/Question #: _____

1. What is the **Central Question**?

2. What are the **Key Terms** and explanations?

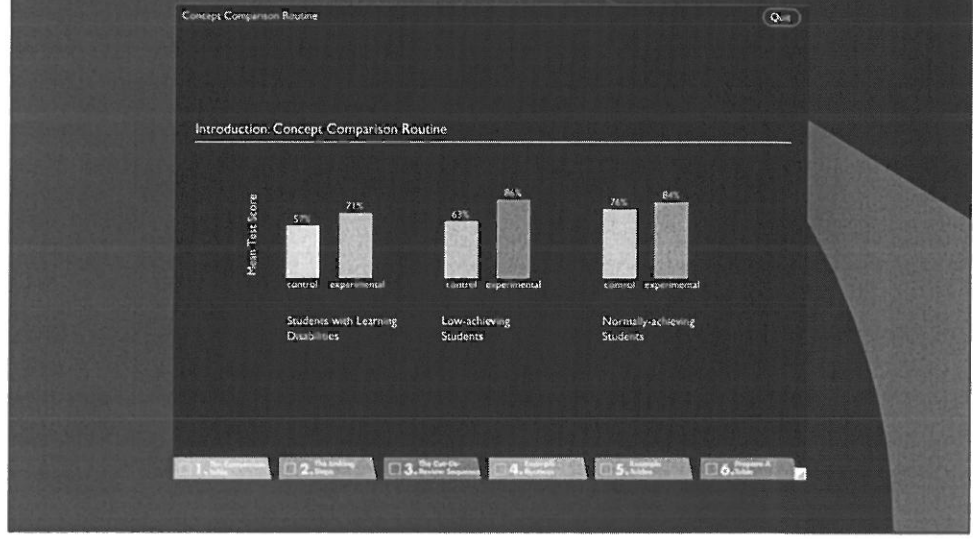
3. What are the **Supporting Questions** and answers?

4. What is the **Main Idea Answer**?

5. How can we use the **Main Idea**?

6. Is there an **Overall Idea**? Is there a **real-world use**?

Research Results



QER Linking Steps

Question Exploration Routine

2. The Linking Steps

Lesson 2: The Linking Steps

This lesson is about the Linking Steps of the Question Exploration Routine. The Linking Steps are the procedures teachers use to co-construct the Question Exploration Guide with students in class. That is, the teacher uses these steps to lead a discussion and create the Question Exploration Guide in partnership with the students.

To do this, the teacher displays a blank Question Exploration Guide on the board or overhead transparency. The students have blank guides at their desks. Everyone fills in a guide as the discussion proceeds.

1. The Question 2. The Linking Steps 3. The Question Exploration Routine 4. Results 5. Examples 6. Page 4

Making Your Own Guide

Outsized Exploration Routine Return to Intro Turn Narration On Quit

Lesson here Example 1 Example 2 Create Guide Finish

6. 6.1

Work out the Main Idea Answer

Now that you have selected a Critical Question you will need to create a Main Idea Answer for that question and insert it in Section 4 of the guide.

The Main Idea Answer is a statement that summarizes all the information related to the question. It needs to be factual enough that it can be generalized to other contexts within the course to inform you.

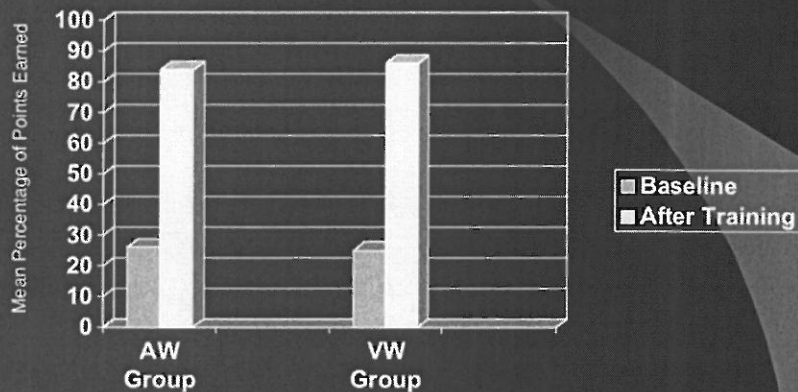
Given the information that you have read in the handout, click on the boxes in the columns on the right that represent the best Main Idea Answer to the Critical Question.

1. What is the Critical Question?

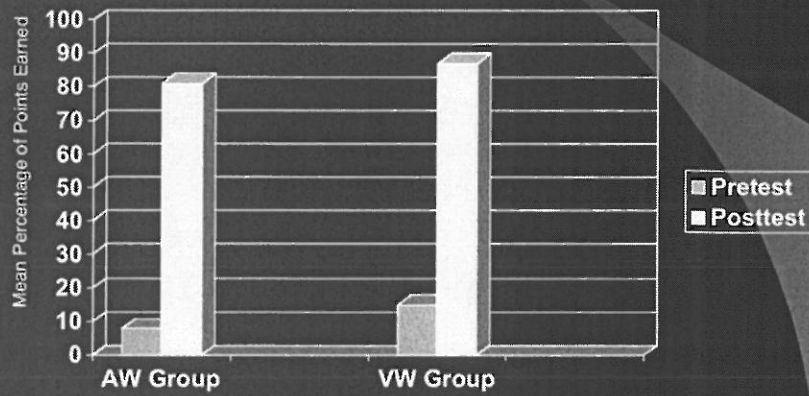
4. What is the Main Idea Answer?

1. The Overview of Exploration Guide 2. The Linking Step 3. The Critical Question 4. Evidence 5. Example

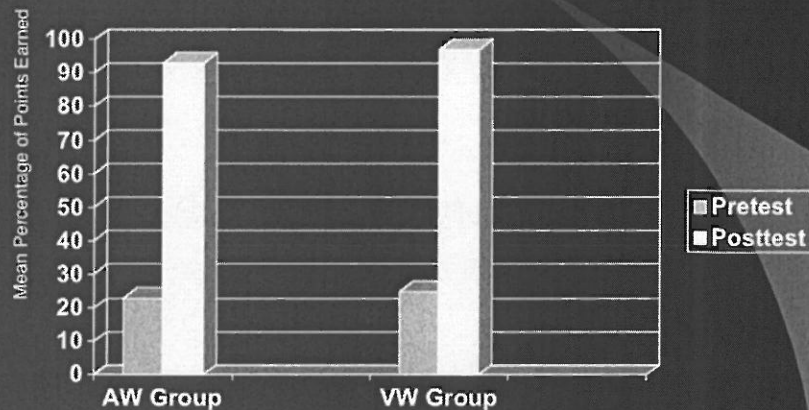
Study 1: Implementation Results



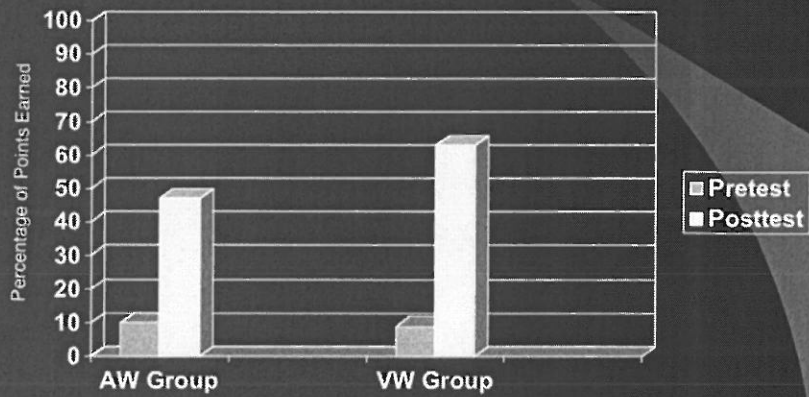
Study 1: Knowledge Test Results



Study 1: Question Exploration Table Test



Study 1: Content Acquisition Test (All Students)



Study 1: Content Acquisition Test (Students with LD)

