

Routines to strengthen learning

An in-depth look at Content Enhancement

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This issue of *Strategram* takes an in-depth look at *Content Enhancement Routines*, what

they are, and how they fit together.

We also dispel a few myths about implementation of the routines.

Pages 3 through 6 of this issue are designed as a complete, pull-out reference describing *Content Enhancement Routines* and graphically depicting relationships among the routines. This article addresses where the routines fit best into continuing instruction.

Content Enhancement Routines fall into three general sets.

- **Setting the stage:** The Course Organizer, Unit Organizer, Lesson Organizer, Quality Assignment, and Survey Routines set the stage for learning, launching a process that requires the acquisition of in-depth conceptual and factual knowledge.
- **Learning conceptual knowledge:** The Concept Mastery, Concept Anchoring, and Concept Comparison Routines focus on the acquisition of conceptual knowledge.
- **Mastering factual knowledge:** The Clarifying and Recall Enhancement Routines focus on the acquisition of factual knowledge.

The figure on page 4 illustrates the instructional relationships we intended as we created and field-tested the routines. The figure depicts the routines as falling into course-level, unit-level, or lesson-level categories. However, many

relationships exist, and the routines may be inserted into instruction in other ways.

The **Course Organizer Routine** helps you introduce the subject of study at the beginning of a course. The Course Organizer is used to introduce the routines that will be emphasized during the course. As you plan the units, the critical concepts, and the standards that will be emphasized during the course, you also should consider which routines to include in the course.

After you use the Course Organizer Routine to give an overview of the course, you can use the **Unit Organizer Routine** to present units in more detail. "The Bigger Picture" section of the Unit Organizer addresses the course questions, themes, and concepts introduced in the Course Organizer Routine. The unit questions, the "is about" statement that captures the main ideas, and the unit concepts taught and emphasized using the Unit Organizer Routine should support the questions and concepts introduced in the Course Organizer Routine. You can use the Expanded Unit Map, which is constructed as part of the Unit Organizer, to help summarize what students have learned as the unit progresses.

The **Lesson Organizer Routine**, which helps you organize lessons within a unit, can be used in conjunction with the Unit Organizer to support

We expect relationships among the Content

(continued on page 2)

Implementing Content Enhancement Routines

(Continued from page 1)

unit ideas, or it can be used independently to convey course content. As you present each part of the Unit Map, for example, you can use the Lesson Organizer to focus attention on each part of the unit. After one or more lessons, you can use the Expanded Unit Map in the Unit Organizer to summarize the information included on the Lesson Organizer(s). Alternatively, the Lesson Organizer can be used *instead of* the Expanded Unit Map or the Unit Organizer. When you substitute the Lesson Organizer in this way, you need to spend more time introducing the Unit Map included in the Lesson Organizer.

Another routine you can use successfully at the beginning of a course is the **Quality Assignment Routine**, which can be used to explain to students how routine assignments are to be completed. Later in the course, you can use the Quality Assignment Routine again to discuss the features of big assignments. You are most likely to implement this routine with the Course Organizer Routine and with the Unit Organizer Routine, but you may use it with the Lesson Organizer Routine for big assignments.

The Survey Routine, which you and your students use to preview a reading assignment, such as a chapter in a textbook, usually is implemented with the Unit Organizer Routine. If you use the Survey Routine for a reading assignment within a unit, the routine will be implemented in conjunction with the Expanded Unit Map of the Unit Organizer Routine or with

the Lesson Organizer Routine. The figure on page 4 shows the use of the Survey Routine at both the unit and the lesson levels.

The Concept Anchoring Routine, which is used to introduce a new and usually

Organizer routines.

Similarly, you can use the **Concept Mastery Routine** to pull together information about concepts at the course, unit, or lesson levels. The routine can be used to introduce a concept, but it often is used to help

The Unit Organizer

NAME: Sharra Ti
DATE: 4/1

④ BIGGER PICTURE: The Animal Kingdom

② LAST UNIT /Experience: Invertebrates

① CURRENT UNIT: Vertebrates

③ NEXT UNIT /Experience: Eology

② UNITSCHEDULE

4/1	Introduce vertebrates
4/4	Fish/Amphibian of choice report due
4/5	Fish/Amphibian quiz
4/10	Reptile quiz
4/12	Trip to natural history museum
4/15	Trip report due
4/16	Bird/Mammal quiz
4/17	Lab report due
4/18	Review
4/19	Test

③ UNITMAP

is about

the most advanced and intelligent animals on the earth pp. 427-482

such as the

fishes

amphibians

reptiles

birds

mammals

② UNIT SELF-TESTS QUESTIONS

What are the basic differences among the major groups of vertebrates?
In what ways is life on land more difficult than life in water?
What is meant by cold blooded and warm blooded?
Which of the major groups of vertebrates is the most successful group? Why?

③ RELATIONSHIPS

explanation

compare/contrast

Example of the Unit Organizer

abstract concept, can be used at the course, unit, or lesson levels. At the course level, you can use the Concept Anchoring Routine at the beginning of a course to introduce a few critical concepts that will run throughout a course. Teachers often use the Concept Anchoring Routine, however, to introduce concepts that are critical to comprehending information in a unit or lesson. Teachers usually make the decision to use this routine during unit planning, but may implement it as part of a lesson. Thus, the routine may be associated with the Unit Organizer or the Lesson

students organize information about which they have some knowledge. It may be used at the beginning of a course to provide necessary boundaries for effective learning or at the beginning of a unit to help students consolidate information about important concepts, or it may be implemented as a lesson or part of a lesson. You do not have to use both the Concept Anchoring and the Concept Mastery routines in the same unit or lesson.

After your students are familiar with concepts,

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The **Course Organizer Routine** helps teachers introduce courses.

The routine helps teachers adopt the necessary vision and mind-set for including and maintaining the use of strategies and routines in their courses over the year. It also helps teachers plan for and create the type of learning community they want to build in their classrooms.

- To implement the Course Organizer Routine, teachers
- create a set of course questions
 - create a visual map of the units to be included in the course
 - identify the rituals that relate to learning strategies and teaching routines that will be used and emphasized throughout the course
 - identify the principles of “community” that will be honored and reinforced
 - identify the standards by which students will be evaluated
 - identify the types of communication systems that will be put in place to facilitate sharing information between teachers and students

The **Unit Organizer Routine** focuses on how teachers can “frame” and then teach a unit of information with students. A unit is any “chunk” of content that a teacher selects to organize into lessons and that ends with a test or closure activity. Typically, a subject-area course is divided into several

Our Content Enhancement Routines are designed to help teachers organize and present information in a manner that benefits a wide range of students.

such units. By framing a unit, the teacher helps students see and understand the “big picture” of the unit. Specifically, the Unit Organizer Routine helps teachers introduce and build a unit so that everyone can

- understand how the unit can be part of bigger course ideas or a sequence of units
- see a method for organizing knowledge
- define the relationships associated with knowledge
- clarify what has been done in relation to what must be done
- monitor progress and accomplishments in learning
- recognize what has been learned through self-questioning

The Unit Organizer Routine can be used to help students become oriented to where they have been, where they are, and where they are going in learning.

The **Survey Routine** helps teachers lead students through a pre-reading survey of different reading assignments (such as chapters, books, or stories). It provides an overview of a reading assignment. The purpose of the routine is to make students aware of the main ideas associated with the reading passage and to help students focus on the most important information in the passage as they read it later. Through the use of this routine, the students and teacher

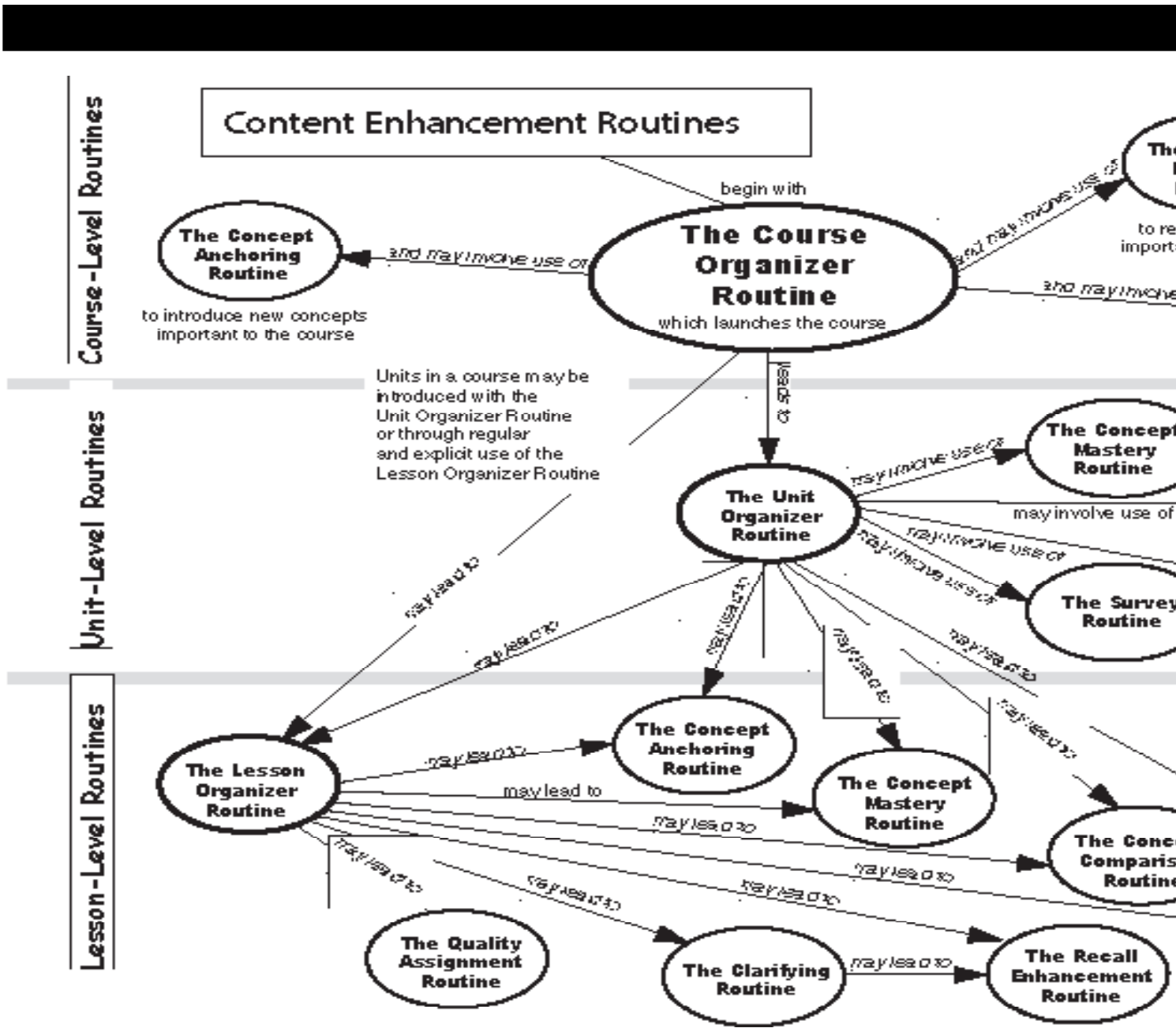
- discuss the title of the reading passage
- make a prediction about the contents of the passage
- identify relationships among the current reading passage and other passages within the unit of study

The Content Enhancement Series

- read and paraphrase the introduction of the passage
- determine the structure of the passage
- name the main parts of the passage
- identify key information within each part
- read and paraphrase the summary of the passage

The **Lesson Organizer Routine** focuses on how teachers “frame” lessons that make up a unit and then share these plans with students. The routine involves using a graphic device to introduce, anchor, and gain closure on a lesson that lasts one or more days. It is used for explaining what is important in a lesson and how the information or skills will be learned. Teachers use the Lesson Organizer Routine to introduce and build a lesson in which students

- understand the main idea of the lesson
- relate the lesson to their background knowledge
- understand how the lesson is structured and how the information is organized
- distinguish the most important parts of the lesson content from the less important
- understand the tasks and expectations associated with the lesson



Content Enhancement Myths

Here are three common myths we want to dispel about Content Enhancement Routines. You may know of others. If so, please let us know, and we'll address them in future issues of *Strategram*.

Myth: Content Enhancement Routines are not for use by support special education teachers.

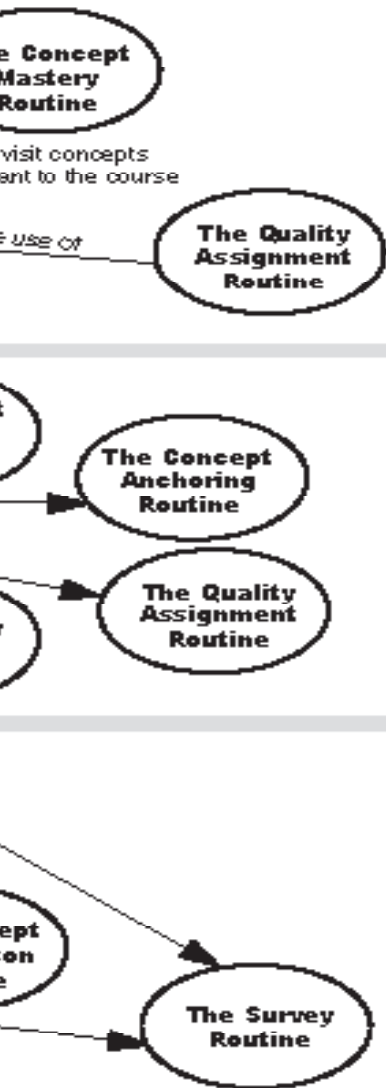
Reality: Special education teachers need to use Content Enhancement Routines just as much as general education teachers do to present content to students..

Myth: Content Enhancement Routines enable general education teachers to be independent of other teachers in promoting inclusive practice.

Reality: Content Enhancement Routines are best implemented and maintained when they are used as a tool for promoting communication between teachers. The success stories of effective Content Enhancement Routine implementation almost always have been the result of collaborative efforts between teachers.

Myth: If too many teachers use the routines in a school, students will become bored with them.

The Content Enhancement Series



The figure at the left depicts one of many ways to think about relationships among Content Enhancement Routines. The figure shows the routines fitting within zones: course level, unit level, and lesson level. Thinking about Content Enhancement Routines in these terms can help you understand how each fits in the instructional process and how use of the routines can support attainment of course objectives and fulfillment of state standards.

Three routines, one for each level, provide structural support for your courses. The Course Organizer Routine lays the overall foundation upon which all other routines will build. The Unit Organizer and Lesson Organizer Routines add more structural depth to instruction.

None of these routines needs to stand alone. Other routines add strength to the structure provided by these routines.

For example, the figure shows Concept Anchoring and Concept Mastery Routines fitting nicely into all three levels of instruction. At the course level, you may want to use the Concept Anchoring Routine in conjunction with the Course Organizer Routine to introduce concepts important to the course, or you may want to use the Concept Mastery Routine to review important concepts.

At the unit level, the figure reflects ways to integrate routines. You may use the

Concept Mastery Routine at the beginning of the unit to help students consolidate information about important concepts before moving on to lesson-level planning and instruction. Alternatively, you may use the Concept Anchoring Routine to connect new concepts to previously learned concepts. The Survey Routine and the Quality Assignment Routine also may be used to support the teacher's instructional goals at this level.

At the lesson level, various Content Enhancement Routines can be combined to help teachers achieve their instructional goals. During a unit or course, you will find many opportunities to implement the Concept Mastery, Concept Anchoring, Clarifying, Concept Comparison, Recall Enhancement, Survey, and Quality Assignment Routines alone or in various combinations to support the structure presented using the Lesson Organizer Routine.

The relationships depicted in this graphic device are flexible. As you use the routines in your classroom, you will no doubt find many other effective ways to fit Content Enhancement Routines into your instruction. We hope you will share your experiences with us at the Center for Research on Learning so we can pass them on to others.

Reality: Teachers often modify standard teaching procedures to make them more interesting. The more frequently students see and experience sound, explicit instruction, the more confident they become in what they know and what is expected of them. In general, students tell teachers that they prefer the use of the devices and the routines. Teachers should use these routines as a springboard for instruction that maximizes learning and is interesting for students.

The Quality Assignment Routine

helps teachers present and ensure learner completion of high quality assignments during group instruction. General education teachers can use this routine to

- plan assignments that all students can complete at a high level of quality
- present assignments to students
- evaluate assignment products and give feedback to students

Using this routine, teachers also teach their students how to record assignments and use a strategy called “REACT” to ensure that they have all the information they need and that they can set goals and make a plan for completing the assignment.

Many Content Enhancement Routines use graphic devices, to help organize or present information.

The Concept Anchoring Routine

focuses on helping students connect new concepts to previously learned concepts to increase student understanding and retention of new information. The routine involves using a graphic device, the Anchoring Table, to present a new, difficult concept using a familiar concept selected by the teacher. Teachers present and summarize similar characteristics possessed by the two concepts. Then the teacher and students can explore

- salient characteristics of the familiar concept
- similar characteristics possessed by the new concept

higher-order commonalities between the two concepts. This routine actively engages the students in creating a summary statement that shows understanding about why the analogy is meaningful.

The Concept Mastery Routine

focuses on helping students understand and master key concepts within curriculum content. The routine involves using a graphic device, the Concept Diagram, to

- identify a target concept
- place that concept within a larger framework
- explore students’ background knowledge of the concept
- specify salient characteristics
- analyze both examples and nonexamples of the concept
- construct a definition of the concept

This routine also actively engages students in testing a new, previously unencountered item to determine whether it is an example of nonexample of the target concept.

The Concept Comparison Routine

focuses helping students compare and contrast two or more concepts. This routine involves using a graphic device, the Comparison Table, to specify two or more concepts and to explore characteristics of each. Then, salient characteristics that are not common between or among the concepts also are explored. The routine also encourages higher order thinking because students are guided in identifying larger categories into which the similarities and differences can

be grouped. This routine actively engages students in creating a summary statement that demonstrates understanding about the similarities and differences between or among concepts.

The Clarifying Routine

focuses on helping students identify, explore, and organize information that supports the comprehension of factual information. A graphic organizer is used to help teachers

- identify a critical supporting detail
- explore key information about the detail
- relate what the student already knows to the detail
- clarify accurate and confusing uses and interpretations that might be associated with the detail
- summarize what students should remember about the detail and how it supports the understanding of bigger ideas and concepts in a lesson

The Recall Enhancement Routine

focuses on how teachers can help students create remembering systems during group instruction to help students organize and recall a set of information they have been taught. General education teachers can use this routine to

- organize a set of information they have taught students
- involve students in creating a device to help recall
- help link the recall device to background knowledge
- explore how the recall device can be used to help recall
- test recall to ensure that students are using the recall device effectively



Enhancing content to help students learn

(Continued from page 2)

you can use the **Concept Comparison Routine** to compare characteristics of two or more concepts. During unit planning, you may decide that students need to understand the comparative relationships between two important concepts in a unit. Note this in the Unit Relationships box on the Unit Organizer, and then you and your students can explore the relationships as part of the Expanded Unit Map. The comparison also could be part of decisions related to lesson planning and the use of the Lesson Organizer Routine because it focuses on manipulation of information within a unit. The Concept Comparison Routine can be used to compare more than just concepts. It can be used, for example, to compare two or more battles or two or more examples. When the routine is used in this way, it helps students learn information that supports understanding of unit concepts.

When you need to present or review factual information rather than conceptual information, the **Clarifying Routine** can help your students identify and understand factual information that supports concepts. This routine, which is implemented as part of fulfilling lesson plans, is most often associated with the Expanded Unit Map of the Unit Organizer or with the Lesson Organizer Routine.

Finally, once information has been presented to students, they must be able to understand it and store it in a way that can be recalled for later use



A high school history teacher set the stage for her U.S. history course in a dramatic fashion, sure to gain the attention of every student in the room.

Holding a rat up for the class to see, she said, "Look at this rat. This is the 'big idea.' Now, come with me."

Carrying the rat, she led her students out of the classroom and down the hall to the biology room. There, she placed the rat in a cage with a boa constrictor. As the students watched, the boa snatched up the rat and swallowed it. The students—some squealing—watched as the lump that had been a rat moved through the body of the snake.

After allowing ample time for the students to discuss and consider what they were seeing, the teacher regained control. "Come with me back to the classroom," she said. "Remember the rat. Remember the snake."

Back in her own room, the teacher connected the scene they had just witnessed with the learning she expected to take place during her course.

"The rat is the big idea. This year, you are going to be the snake, eating and digesting the big ideas. One of our rats this year, one of our big ideas, is states' rights."

The teacher further illustrated the concept of states' rights, strengthening the analogy as she presented the concept of states' rights using the Concept Mastery Routine. The image she created on that first day stayed with students throughout the year.

Keith Lenz uses this story as an illustration of how to incorporate Content Enhancement Routines into course planning in ways that may not be immediately apparent. When a concept, such as states' rights, permeates a course, teachers can use Concept Anchoring or Concept Mastery to set the stage for learning. This is the kind of consistent and persistent use for which the Content Enhancement Routines were developed.

in answering questions or performing tasks. Here, the **Recall Enhancement Routine** can help. The routine can be implemented at the lesson level and as a good follow-up to the Clarifying Routine.

We expect the relationships among the Content Enhancement Routines to evolve as we implement them in more classrooms. We look forward to hearing about your experiences.

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