

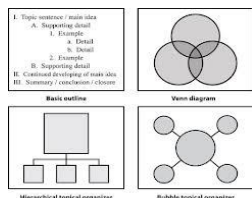
Nonlinguistic Representations

ULTIMATE GOAL: Produce nonlinguistic representations of knowledge in minds of students so they are better able to: *Process* information, *Organize* information, and *Retrieve* information

- Imagery is expressed as **mental pictures** or **physical sensations**
- Provide students with useful tools that MERGE knowledge with mechanisms for understanding and remembering knowledge
- Helps them construct meaning of relevant content and skills leading to better capacity for recall

Nonlinguistic Representation Strategies

Creating Graphic Organizers



- Combines linguistic and nonlinguistic forms
- Use both words and symbols to represent and organize knowledge

Explicitly TEACH students HOW to use these tools

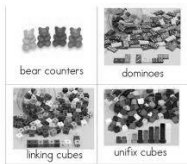
Introduce the graphic organizer with familiar content.

Students can focus on learning to use the organizer without having to worry about the new content.

Opportunities to use:

Developing Summaries, Taking notes, Identifying Similarities and Differences, Generating and Testing Hypotheses, Organizing Information

Physical Models/ Manipulatives



Concrete Representations of academic content or concepts

Students must be engaged in **BOTH** the process of making/using models or manipulatives **AND** with the targeted knowledge and understanding.

Provide “explore” time prior to using a new manipulative or model.

Generate Mental Pictures



Facilitate students’ construction of mental pictures by providing details that enable students to incorporate sounds, smells, tastes, and visual details.

This is the most direct way to generate a nonlinguistic representation.

Explicitly TEACH students how to create mental images

Model the process several times and use texts or experiences that are familiar.

Create Pictures, Illustrations, and Pictographs



Provide opportunities for students to represent their learning in a **PERSONALIZED** manner.

Pictographs use symbols or symbolic pictures to represent information.

Creating pictures that are personally meaningful can be especially helpful when students are learning new vocabulary words and terms.

Technology also provides a way to add animation to pictures, which enhances the effect of using pictures to represent knowledge.

Engage in Kinesthetic Activities



When students move around as part of learning activities, they create more neural networks in their brains and the learning stays with them longer.

Some Kinesthetic activities include:

- Role playing, Acting out vocabulary words/concepts, Using body to illustrate concepts, Tapping out rhythm, hand gestures to cue memory, demonstrate motion of objects

Tips for Teaching Using Nonlinguistic Representations

1. Model the use of the strategies through demonstrations and think-alouds.
2. Provide opportunities to practice with familiar information before using strategy with new information.
3. Provide students with a variety of opportunities to use strategies as they learn new content.
4. Model how students can use more than one strategy as they learn a new concept or term.
5. Provide students with information about and opportunities to use graphic organizers to organize their learning.