Chapter 1: Introduction

Transcript:

In this module you are going to learn why creating multi-sensory experiences helps improve the memory retention of students. You will also learn specific strategies to use in your own classroom.

This module is one part of a four-part series on how to teach so students remember important content and skills. Click on each icon for a brief description of the modules in this series.
Video

When teachers create multi-sensory experiences, students feel more connected to the content and are more likely to learn it.

Transcript:

Damian:

I had a P.E. teacher in about fifth grade that really pushed me to enjoy nature and physical activity. We would take field trips occasionally to some of the hiking trails around the school. And he would, you know, be giving nature lessons and stuff like that where he would go off about certain types of plants or rocks.

Kenny:

Even today whenever I think about math I think about how she always made it into a puzzle. It always turned into kind of a game for me, which was very important because I couldn’t just look at the things and then understand, like, and learn the concept later. I needed to understand why it worked, and so whenever she would make it into a real-world example and kind of like turn it into a game. Like, something I could win and defeat, like that really worked for me.

Planning for Learning
Transcript:

As teachers, we need to move from planning lessons to planning for learning (Jensen, 1995; Tileston, 2004). Being a content and strategy expert is important, but is of little worth if students can’t remember anything from your lessons.

Context

Multi-sensory experiences are learning activities that activate more than just one of your students’ five senses (Bailey & Pransky, 2014; Jensen, 1995; Laster, 2008; Marzano, Pickering, Pollock, 2001; Spraenger, 2002; Willis, 2007).

Think back to your own time in school. What learning activities do you remember? There is a good chance that your most vivid memories are multi-sensory.

How the Brain Works

How the brain works

As new information is taken in it gets sent to appropriate areas of the brain – visual stimuli to the visual cortex, auditory stimuli to the auditory cortex, etc.

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For a complete list of references, refer to the On-Demand Module Creating Multi-Sensory Experiences to Improve Memory Retention.
Transcript:

Let’s take a close look to see how multi-sensory experiences affect the brain and improve the memory retention of students.

Stimulating

**How the brain works**

Stimulating multiple senses at once creates more brain connections, allowing for faster recall.

(Willis, 2008)

Encoded

**How the brain works**

Multi-sensory experiences allow for information to be encoded into multiple areas of the brain.

(Bailey & Pransky, 2014; Jensen 1995; Laster, 2008; Marzano, Pickering, & Pollock, 2001; Sprenger 2002; Willis, 2007)
Chapter 2: Strategies

Visualization

There are many ways to incorporate multi-sensory activities into your lessons. Let’s look at two strategies you can begin to use in your classroom right away.

Our first strategy is visualization, which allows students to record information into multiple cortexes of the brain. Though its name suggests the visual aspect, cueing the other senses is an important part of the process. During visualization, the brain functions as if it were actually experiencing the sensations in real-time rather than just remembering information (Willis, 2006).

Click to see either an elementary or secondary example.

Elementary Science

"Today we are going to use the visualization strategy to understand the process of photosynthesis at a deeper level. I want you to write a journal entry explaining the process from the perspective of a plant. What do you feel and see when the sun rises? What is happening in your plant body? How is your energy changing with the production of glucose?"
Our second strategy involves creating hands-on experiences for your students. Teachers often rely heavily on visual and auditory stimulation. If you make learning more tactile for students and allow them to experience learning in the physical world, information is more likely to be stored in their long-term memories (Bailey & Pransky, 2014).

Click to see either an elementary or secondary example of teachers using hands-on experiences to enhance the learning process.
Social Studies

Hands-on Experiences

“Students, today we are going to build models of a Roman aqueduct using the methods and tools of the time. How are you going to create the arch and what do you need to do to get the keystone in place?”

Secondary ELA

Hands-on Experiences

“Students, today we are going to use the inspirational poetry of Langston Hughes to visualize his message in different art forms. In small groups pick a stanza from one of Hughes’ poems and create a more visual representation of it. This can be done as a mural, short film, statue, or something else of your choosing.”
Auditory Experiences

Transcript:

Our third strategy involves including auditory experiences into your lessons, such as music, speeches, and other sound bites.

Click to see either an elementary or secondary example of teachers using auditory experiences to enhance the learning process.

Elementary Art

“Students today we are going to use the sounds of nature to influence your painting. I want you to close your eyes and listen carefully to the recording. What emotions does it draw out? What colors come to your mind? Use what you hear to make a self-portrait.”
Secondary Physics

Auditory Experiences

“Students, NASA has recordings of stars dying that took over 100,000 years for the sounds to reach earth. We are going to listen to these recordings and make inferences about what happens when a star dies.”

Pause and Think

Transcript:

Before we wrap up, pause and think for a moment about how you can make an upcoming lesson a more multi-sensory experience. Can you add a visualization or a hands-on component?
Conclusion

Transcript:

Understanding content at a deeper level through multi-sensory experiences will help students store relevant information as long-term memories.

These experiences arouse the senses of your students and help them become more active participants in the learning process.