

## **Introduction**

Welcome to the Reading Rainbow Cupcake video overview. My name is Kristi Santi, Professor of Special Populations at the University of Houston. I am a team member of the UH AIPaT Model Demonstration Project and want to take a moment to share out the other team members. The goal of this session is to describe the Reading Rainbow Cupcake.

### **Concept: Reading Rainbow Cupcake**

The agenda for the short video today includes a description of the Reading Rainbow Cupcake and how we developed it. We will spend most of our time reviewing the Reading Rainbow Cupcake and then move into some considerations of the real-world applications. We end with Improvement Science and the PDSA model to help you consider how to integrate (not add on) this concept into your daily routine. Please note the handout includes additional resources for your consideration.

### **Concept: Reading Rainbow Cupcake**

We have worked with several schools on the science of reading and the skill set all children need to become proficient readers. We are thankful for the previous work by researchers whose previous work helped guide the current team in developing this graphic. In multiple conversations with teachers, we found there was difficulty in understanding the connections between graphics such as Scarborough's Reading Rope and Chall's Stages of Reading Development. We also found that the Reading Rope, while well understood by researchers, led to the impression by educators that you could pull out various threads (skills) and use that one thread to teach that skill in isolation. Our team members developed a different way to view the skills and show how the skills needed to integrate and support other skills. In short, pulling out the pieces exclusively independent of other skills is not a good learning science strategy. This discussion with educators in the field led us to the design of our Reading Rainbow Cupcake.

### **Reading Rainbow Cupcake**

The teachers felt this was a more concrete example of the systems required to become a proficient reader. The upper left displays the Core Reading Systems, How Reading Works, Phonemic Awareness, Word Identification, Vocabulary, Comprehension, and Fluency. On the bottom left, you see the representation of the Mental Systems, including Attention, Perception, Memory, Language, Thinking, and Reasoning. Going across the top from left to right, you notice the Chall's Stages of Reading Development. When all systems are implemented using a Learning Science approach, proficient reading is more likely to occur. Thus,

reading skills are merged with other skills, and once learned, it becomes very difficult to pull out one strand.

As with Learning Science, the internalization of skills occurs when we have varied practice opportunities. According to Brown and colleagues (2014), for learning to occur, we must work within a zone of desirable difficulties using retrieval strategies that require us to exert effort and move away from the philosophy of *memorize-to-pass*. The more opportunities we present to students that involve distributed practice and the ability to make connections across multiple contexts, the more opportunities students have for durable learning.

### **Improvement Science**

We come back to the Improvement Science slide and show the six pillars as a reminder that change takes time. We must find a way to work together to ensure that the end goal of helping all students become skilled readers is achievable.

### **In Practice**

What do you need to do to work towards this end goal in your own setting? First, remember that not all skills can or should be taught in isolation. We discuss more global reading strategies in a later session, but as evidenced by the graphic, we do not want our basic literacy skills taught in isolation or with worksheets. Use authentic literature above the students' reading levels for your morning read-alouds. This will help build a model of fluency, motivation, and vocabulary. Look for decodable books that balance interest, decodability, and opportunities for thinking. In the learning science aspect of teaching, you are helping the students through the desirable difficulty of moving from *learning to read* to *reading to learn* without losing sight of active engagement to help sustain high interest in reading text.

### **Campus PDSA**

In the final step of the review and implementation of the Reading Rainbow Cupcake, we offer a suggestion on how to conduct a PDSA cycle that helps all the stakeholders think about the skills aligned with the text aligned with the standards and monitored by the assessments. This cycle does not end once basic literacy skills are mastered. Instead, it moves to incorporate all five pillars of high-quality readers – phonemic awareness, phonics, fluency, vocabulary, and comprehension.

### **Closing**

The Reading Rainbow Cupcake was developed as a team to help show reading skills integration. As the colors merge, the skills become effortless, and the students move along the reading development continuum.

## References

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