Study Guide

This study guide is a companion to the book *Differentiation and the Brain: How Neuroscience Supports the Learner-Friendly Classroom, Second Edition*, by David A. Sousa and Carol Ann Tomlinson. *Differentiation and the Brain* presents neuroscience-based guidance for deciding which curricular, instructional, and assessment choices will have the greatest effect in classrooms.

This guide is arranged by chapter, enabling readers to either work their way through the entire book or focus on the specific topics addressed in a particular chapter. It can be used by individuals, small groups, or an entire team to identify key points, raise questions for consideration, assess conditions in a particular school or district, and suggest steps that might be taken to promote a healthy school culture.

We thank you for your interest in this book, and we hope this guide is a useful tool in your efforts to create a healthy culture in your school or district.
Chapter 1

The Nonnegotiables of Effective Differentiation

1. What does differentiated instruction ask educators to acknowledge, which they have known for centuries?

2. In what ways is an instructional model of differentiation learner centered? What roles does a teacher need to play in this model to meet students’ learning needs?

3. Briefly describe the five-part argument that forms the bedrock of differentiation and effective teaching.

4. What five key components guide effective differentiation, and what four classroom elements can teachers modify to meet students’ needs and promote effective differentiation?

5. How do research-based principles about how the brain learns substantially support the components of differentiation?
Chapter 2

Mindset, Learning Environment, and Differentiation

1. Consider the Case in Point on page 20. How does this case exemplify why it is crucial for teachers to examine their mindsets about teaching, learning, and their students?

2. Why is attending to students’ social-emotional needs a crucial part of classroom practice? Describe a way in which you help address these needs as you impart curriculum objectives to students.

3. How can teachers prevent students from feeling afraid to engage with challenging learning tasks?

4. In your own words, define what it means to have a fixed mindset and what it means to have a growth mindset. In what ways do you and your students exhibit fixed- and growth-mindset outlooks?

5. According to John Hattie, in what ways can teachers create invitational learning environments? Which of these policies do you think you need to strengthen in your classroom, and how will you go about strengthening it?
Chapter 3

Curriculum and Differentiation

1. In your own words, define what the word *curriculum* makes you think of. What should a solid curriculum include, and what five important attributes should it have?

2. How do the brain’s processes for making *sense* and for making *meaning* differ? Why do both sense and meaning play important roles in the brain’s storage of information?

3. What has happened when you have come to class without explicitly stating learning goals or when you have only loosely coupled a lesson plan with content goals? How have these, or similar occurrences related to curriculum, influenced student outcomes?

4. Consider how Sara B. Kajder, Steven Levy, and Stephanie Villegas helped their students engage with their studies and find their studies relevant to their lives. How could you apply a tactic similar to one of these approaches in your classroom so that your students feel intrinsically motivated to learn?

5. Briefly describe four key features of an authentic curriculum that help hold the brain’s focus and interest.
1. As a young educator, what baggage did you bring to the classroom related to assessment, testing, and grading? How did you grow out of or abandon this baggage and adopt more effective assessment practices?

2. Briefly describe assessment of learning, assessment for learning, and assessment as learning; the purposes they serve; and their differing intents.

3. What important points do practitioners of differentiation recognize about the role assessment plays in addressing academic diversity?

4. What should teachers do to report cards to make sure students understand and respect their report card grades? Which of these actions do you consider the most important to implement in your report cards, and why is this the case?

5. In this chapter’s Better Scenario (page 87), what has changed since the Case in Point (page 68) that has made Darius a more confident student and has made his schoolwork feel worth the effort?
Chapter 5

Differentiating in Response to Student Readiness

1. How are readiness and ability different? What student qualities can affect students’ readiness to learn particular content?

2. What is the zone of proximal development (ZPD), and why does implementing a recursive ZPD model in the classroom pose a challenge?

3. Consider the list of guidelines for differentiating in response to student readiness (pages 101–105). Which of these guidelines do you already follow, and which should you put in place as soon as possible to ensure you address student readiness?

4. In your own words, describe the three key curriculum elements that teachers should differentiate based on student readiness needs: content, process, and product.

5. Consider how Mrs. Farr preassessed her students’ readiness in the Better Scenario (page 113). How could you use preassessment in your classroom—and then follow up with progress monitoring—in a way that uncovers students’ readiness and responds to that readiness with differentiation?
Chapter 6
Differentiating in Response to Student Interest

1. Why shouldn’t teachers consider student interests tangential to learning? How do you currently address or incorporate student interests in the classroom?

2. Define interest. Describe a case in which you have differentiated or you could differentiate based on student interests to enhance learner efficacy and academic outcomes.

3. Briefly describe the seven themes that can help teachers plan classroom instruction that addresses student needs and learning differences.

4. In what three ways do student interests intersect with assessment?

5. Considering the examples of preassessments in figures 6.3 (page 132) and 6.4 (page 133), what kind of preassessment of student interests do you think would best fit your classroom, and why is this the case?
Chapter 7

Differentiating in Response to Student Learning Profile

1. What four aspects of how individuals learn does the term learning profile cover?

2. List the five categories of learning styles around which Rita and Kenneth Dunn’s learning-style model is organized. Name five learning preferences that you have—one for each of these categories.

3. According to Robert J. Sternberg’s triarchic theory of intelligence, through which three modes or intelligences can individuals interact with ideas? Describe what each of these three intelligences stresses.

4. What definition of culture has strong implications for teaching and learning? What principles do culturally proficient teachers understand and demonstrate in their teaching?

5. Consider the example gender-shaped learning differences listed on pages 157–158. Which of these gender-shaped learning differences have you seen come up among your students?
Chapter 8

Managing a Differentiated Classroom

1. How has anxiety about maintaining control influenced how you manage your students or your classroom? What is *frontal control*, and how has it manifested in your classroom?

2. How do classroom leaders’ and classroom managers’ approaches in the classroom differ? What eight basic principles should teachers adhere to in order to become leaders of their students?

3. As the school year starts, what do you do to form positive links with your students? Based on this chapter’s guidance, in what ways will you alter your approach in order to become a better leader of students from the first days of the year?

4. Ask your students what your class would need to be like to fit everyone’s learning needs. How do their responses compare to the listed student conclusions on pages 190–191?

5. What issues do baseline classroom expectations and parameters address? What baseline expectations that fit into these issue categories do you have in place, and why do they benefit differentiation?