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How to Teach Thinking Skills: Seven Key Student Proficiencies for College and Career Readiness, Second Edition

By James A. Bellanca, Robin J. Fogarty, and Brian M. Pete

Study Guide

This study guide is a companion to the book *How to Teach Thinking Skills: Seven Key Student Proficiencies for College and Career Readiness, Second Edition* by James A. Bellanca, Robin J. Fogarty, and Brian M. Pete. *How to Teach Thinking Skills* offers tools and strategies to aid K–12 educators in designing rich and rigorous lessons that explicitly teach higher-order thinking skills to ensure all students are college and career ready.

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.

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Chapter 1

Analyze

1. What is analysis? List some examples of what analyzing could look and sound like in your classroom.
2. What is the order of operations for analysis?
3. What is a fishbone diagram? How can you use this instructional strategy in your own classroom to allow your students to break down a topic in an upcoming lesson?
4. How can you adapt the fishbone diagram strategy to integrate technology and customize it to the grade level you teach?

Chapter 2

Evaluate

1. What is evaluation and what might it look and sound like in your classroom?
2. What is the order of operations for evaluation?
3. What is a plus/minus chart? How can you use think-pair-share to help students collaborate on this strategy?
4. How can you adapt the plus/minus chart to use it in the grade level you teach?

Chapter 3

Problem Solve

1. Define problem solving and the two types of problems that students may encounter. Are you likely to use one type in your classroom more than the other, or a mixture of both?
2. What is the order of operations for problem solving?
3. How can you assess problem solving?
4. What are the two ways that you can ask students to engage in metacognitive reflection about problem solving?

Chapter 4

Generate

1. What is generating? How does it fit in to the process of producing a product or performing a presentation?
2. Can students explicitly learn to generate ideas? Have you seen evidence of this in your own practice?
3. What is the order of operations for generating ideas?
4. What is four-fold concept development and how can you use it in the grade level you teach?

Chapter 5

Associate

1. What is associating and what might it look and sound like in your classroom?
2. How does the skill of associating develop as children learn about the world around them?
3. What is the order of operations for associating?
4. What is ABC graffiti and how does it help students practice the skill of association?

Chapter 6

Hypothesize

1. What is hypothesizing and why is it such an important skill for students to develop?
2. What might hypothesizing look and sound like in your classroom?
3. What is the order of operations for hypothesizing?
4. What is Poll Everywhere and how can it support students' development of the skill of hypothesizing?

Chapter 7

Clarify

1. What is clarifying? What are the tasks that interweave to make clarification possible?
2. How does clarification serve as a foundation for more sophisticated skills?
3. What is the order of operations for clarification?
4. The book uses the example of clarifying the Preamble of the U.S. Constitution. How can you use the same four-square organizer to clarify an important text or problem from your classroom?

Chapter 8

Interpret

1. What is interpretation and how does it differ from clarification?
2. What might interpretation look and sound like in your classroom?
3. What is the order of operations for interpretation?
4. List some ways that you could use the one-minute write strategy to help students practice interpretation.

Chapter 9

Determine

1. What is determining and what are some things students need to determine in your classroom?
2. What does determining look and sound like in your classroom?
3. What is the order of operations for determining?
4. How can generating notes or topics about a target topic help students practice the skill of determining?

Chapter 10

Understand

1. What is understanding and how does this skill serve as a foundation for even deeper skills?
2. What might understanding look and sound like in your classroom?
3. What is the order of operations for understanding?
4. The text offers an example from ReadWriteThink (Cube Creator) as a way to help students practice the skill of understanding. How would you use this strategy, or is there another one from ReadWriteThink that would suit your students even more?

Chapter 11

Infer

1. What is inferring and how does it differ from implying? Have you or do you expect to cover this difference with your students?
2. What might inferring look and sound like in your classroom?
3. What is the order of operations for inferring?
4. The chapter uses the example of inferring meaning from a poem as an instructional strategy. What are some ways you could relate this example to subjects other than language arts? Could inferring meaning from a poem be a useful exercise even in a mathematics classroom?

Chapter 12

Compare and Contrast

1. What are comparing and contrasting, and why do some students struggle with this skill as they get older and need to discern more subtle similarities and differences?
2. What might comparing and contrasting look and sound like in your classroom?
3. What is the order of operations for comparing and contrasting?
4. Venn diagrams are a classic tool for practicing the skill of comparing and contrasting. What are some ways you could use it in your classroom?

Chapter 13

Explain

1. What is explaining and what does it look and sound like in your classroom?
2. What is the order of operations for explaining?
3. How could you use the portmanteau strategy to help students practice the skill of explaining?
4. How can you use Wikipedia as a tool to enhance the portmanteau strategy?

Chapter 14

Develop

1. What is developing and what are its four stages?
2. What might developing look and sound like in your classroom?
3. What is the order of operations for developing?
4. How can you use the problem scenario strategy to help students practice the skill of developing in your classroom?

Chapter 15

Decide

1. What is deciding and how does a collaborative environment complicate it?
2. What might deciding look and sound like in your classroom?
3. What is the order of operations for deciding?
4. How could you adapt the differentiated lesson strategy for use in your classroom?

Chapter 16

Reason

1. What is reasoning and what are its rules?
2. What might reasoning look and sound like in your classroom?
3. What is the order of operations for reasoning?
4. How could you adapt the comic strip activity to use in your classroom?

Chapter 17

Connect

1. What is connecting and what makes it an active part of the communication process?
2. What might connecting look and sound like in your classroom?
3. What is the order of operations for connecting?
4. This chapter's recommended strategy is the KWL chart. Have you ever used this tool in your class? If so, do you have any new ideas for how to use it to enhance student's understanding of the skill of connecting? If not, how do you think it will be helpful in learning this skill?

Chapter 18

Represent

1. What is representing and what are the two sets of skills that make up this thinking skill?
2. What might representing look and sound like in your classroom?
3. What is the order of operations for representing?
4. How could you use the optical illusion strategy in your class? Is there any way you can relate it to your content area?

Chapter 19

Synthesize

1. What is synthesizing and why is it so necessary for creating new ideas, products, and performances?
2. What might synthesizing look and sound like in your classroom?
3. What is the order of operations of synthesizing?
4. How can you use the synectics strategy to introduce students to the skill of synthesizing?

Chapter 20

Generalize

1. What is generalizing? How can it be useful and why must students be careful with it?
2. What might generalizing look and sound like in your classroom?
3. What is the order of operations for generalizing?
4. How could you adapt the themes, big idea, tagline strategy to use in your classroom?

Chapter 21

Apply

1. What is applying and why is it so important?
2. What might applying look and sound like in your classroom?
3. What is the order of operations for applying?
4. How can you use the talk-through, walk-through, drive-through strategy to gradual release responsibility to students so they can learn the skill of applying?