

Thinking Devices:

**Engaging students through provocative prompts
that they can't resist talking about
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The Kansas Coaching Project

THINKING DEVICES AT A GLANCE

What Are Thinking Devices?

Thinking Devices are provocative objects that teachers can use to prompt discussion and higher order thinking in their classrooms.

Why Should Teachers Use Thinking Devices?

Thinking Devices serve several purposes. They capture student attention through the use of media and topics that are especially relevant to students. They enable students to see connections between new content to be covered and their own way of seeing the world. They positive cultural norms and a positive learning environment in the classroom.

What Are Some Examples of Thinking Devices?

- Video clips, movie clips, or short videos from online sites such as YouTube.
- Cases or short stories that portray situations that are interesting, complex, unresolved (such as problems in need of a solution)
- News paper or other media reports on current events
- Cartoons
- Songs (with a message)
- Quotations
- Poems
- Word problems

What Are the Characteristics of Effective Thinking Devices?

Thinking Devices should be provocative, complex, concise, humanizing, varied, and “not lame.”

How Are Thinking Devices Used in The Classroom?

We suggest teachers employ the “Cue, Do, Review” routine first described by Keith Lenz:

- Cue: Provide students with an advance organizer so that they know what they are about to do, why it is relevant, and how they should respond to the device
- Do: Walk through the device and use effective facilitation techniques to encourage student comments and dialogue and build connections
- Review: Summarize what has been discussed, what has been learned, and how the thinking device links to the next learning activity

QUALITY THINKING DEVICE CHECKLIST

The Thinking Device is...	√	Comments
Provocative: It is some compelling that after experiencing it students can't help but have something to say		
Complex: It does not suggest a simple right or wrong answer but can be viewed "correctly" from a number of perspectives		
Concise : It briefly communicates an important message.		
Humanizing: It fosters positive human emotions or inspires others to do good/realize their potential		
Varied: It different from the other forms of thinking devices used previously in the class		
Not lame: It deals with an issue that students genuinely find interesting		

ADDITIONAL COMMENTS:

CUE, DO, REVIEW CHECKLIST

Name: _____ Date: _____ Course: _____

TEACHING BEHAVIOR	√	COMMENTS
CUE		
Explain that you will be sharing a thinking device		
Explain how it will help students learn		
Specify the actions they need to do		
DO		
Share the thinking device		
Ask several high-level questions		
Listen actively to all students		
Reinforce all responses		
Accelerate conversation and learning by repeating and focusing complex student comments		
Help students make sense of the discussion suggesting connections between various comments		
REVIEW		
Summarize the main points that have been raised during the discussion		
Make connection to next learning activities		
Prompt students to do an extension activity (optional)		

FACILITATING DIALOGUE IN THE CLASSROOM

- Establish respectful norms for all classroom dialogue (respect each response, listen to others before talking, wait until speaker is finished before raising your hand to talk, don't blurt out responses and so forth). There are no "right" norms. Each class and teacher is unique, but it is important that classroom norms are consistent.
- Use high-level questions. Consider Bloom's taxonomy or Costa's Levels of Question as a guideline creating questions
- Consider using question recipes, questions that are open-ended and non-judgmental
- Listen empathetically to all student responses
- Encourage students by frequently offering authentic praise
- When students' comments are convoluted or confusing, listen intently to decipher the student's main idea, then paraphrase the main idea using simple language and then ask the student if you've heard him correctly
- Suggest connections between various ideas offered by students
- Keep the dialogue session short enough so that all students remain engaged

THINKING DEVICES

TASK	DONE ? IC	COMMENTS (what's worked/hasn't worked, etc.)
Enroll teacher to commit to experimenting with a thinking device		
Identify the lesson where it will be used		
Brainstorm possible thinking devices (try to identify some for each possible type)		
Review the checklist for a quality thinking device to ensure you have a quality device		
Review and discuss the Cue, Do, Review checklist		
Identify what class coach will model in and what class you observe		
Consider observing classes where the teacher doesn't use the device, gathering data, (t.o.t, disruptions) and then comparing that data with data from classes where the device was used.		

Model the use of the device		
Observe the teacher using the device		
Collaboratively explore checklist and other data if recorded		
Identify next steps for coach and teacher		