CSI: Colour, Symbol, Image Routine

A routine for distilling the essence of ideas non-verbally

As you are reading/listening/watching, make note of things that you find interesting, important, or insightful. When you finish, choose 3 of these items that most stand out for you.

- For one of these, choose a colour that you feel best represents or captures the essence of that idea.
- For another one, choose a symbol that you feel best represents or captures the essence of that idea.
- For the other one, choose an image that you feel best represents or captures the essence of that idea.

With a partner or group first share your colour and then share the item from your reading that it represents. Tell why you choose that colour as a representation of that idea. Repeat the sharing process until every member of the group has shared his or her Colour, Symbol, and Image.

Purpose: What kind of thinking does this routine encourage?
This routine asks students to identify and distill the essence of ideas from reading, watching or listening in non-verbal ways by using a colour, symbol, or image to represent the ideas.

Application: When and where can it be used?
This routine can be used to enhance comprehension of reading, watching or listening. It can also be used as a reflection on previous events or learnings. It is helpful if students have had some previous experience with highlighting texts for important ideas, connections, or events. The synthesis happens as students select a colour, symbol, and image to represent three important ideas. This routine also facilitates the discussion of a text or event as students share their colours, symbols, and images.

Launch? What are some tips for starting and using this routine?
After the class has read a text, you might ask the class to identify some of the interesting, important, or insightful ideas from the text and list these on the board. Write CSI: Colour, Symbol, Image on the board. Select one of the ideas the class has identified. Ask students what colour might they use to represent the essence of that idea? What colour captures something about that idea, maybe it is the mood or tone. Select another idea and ask the class what symbol they could use to represent that idea. *You might define a symbol as a simple line representation or uncomplicated drawing, such as two crossed lines to denote an intersection of ideas, or a circle to represent wholeness or completeness*. Then pick another idea from the list and ask students what image they might use to represent that idea. *You might define an image as a visual image or metaphor that is more complex and fully developed than just a symbol*.

Cultures of Thinking, 2007
Project Zero / Harvard

Assessing Metaphorical Thinking to Describe the *Big Idea*

Ask students the following questions: (explanations could be oral, in pictures or in writing depending on students' age.)

1. Why did you choose that color? How does the color tie to the big idea?
2. How does your symbol represent the big ideas of the material?
3. How does your image connect with the big idea of the material?

Assess the answers to the questions by determining if the metaphors used to create the CSI are obvious or are they more complex, including more details and evidence that are reflective of a deeper level of thinking? Could be assessed on a scale of 1 (low) to 3 (high) or with a rubric.

Remember that the emphasis during assessment should be on the kind of thinking students are doing not the quality of their speaking, drawing or writing skills.

Adapted from Making Thinking Visible, Ron Richhart, Mark Church and Karin Morrison, Jossey-Bass, 2011

I USED TO THINK…, BUT NOW I THINK…

A routine for reflecting on how and why our thinking has changed

Remind students of the topic you want them to consider. It could be the ideal itself—fairness, truth, understanding, or creativity—or it could be the unit you are studying. Have students write a response using each of the sentence stems:

- I used to think….
- But now, I think…

Purpose: What kind of thinking does this routine encourage?

This routine helps students to reflect on their thinking about a topic or issue and explore how and why that thinking has changed. It can be useful in consolidating new learning as students identify their new understandings, opinions, and beliefs. By examining and explaining how and why their thinking has changed, students are developing their reasoning abilities and recognizing cause and effect relationships.

Application: When and where can it be used?

This routine can be used whenever students' initial thoughts, opinions, or beliefs are likely to have changed as a result of instruction or experience. For instance, after reading new information, watching a film, listening to a speaker, experiencing something new, having a class discussion, at the end of a unit of study, and so on.

Launch: What are some tips for starting and using this routine?

Explain to students that the purpose of this activity is to help them reflect on their thinking about the topic and to identify how their ideas have changed over time. For instance:

When we began this study of _____, you all had some initial ideas about it and what it was all about. In just a few sentences, I want to write what it is that you used to think about _____. Take a minute to think back and then write down your response to " I used to think…"

Now, I want you to think about how your ideas about _____ have changed as a result of what we've been studying/doing/discussing. Again in just a few sentences write down what you now think about _____. Start your sentences with, "But now, I think…"

Have students share and explain their shifts in thinking. Initially it is good to do this as a whole group so that you can probe students' thinking and push them to explain. Once students become accustomed to explaining their thinking, students can share with one another in small groups or pairs.

Assessing *Changes in Thinking Over Time*

After students have responded to the sentence stems in the Launch section the teacher looks at their responses to answer the following questions:

Do students mention particular concepts that have changed for them?
Do students describe new skills they've acquired?
Do students mention shifts in their thinking about key ideas the teacher might expect them to have reconsidered?
Do students mention other kinds of ideas that strike them as significant in ways unexpected by the teacher?

Responses may be unique for each student but the teacher should also look for patterns or trends present in the group's responses to identify key areas of the class's learning. Students' misconceptions can also be revealed in the discussions. This information can then be used to determine future instruction on the concepts or to group students to disspell misconceptions.

Adapted from Making Thinking Visible, Ron Richhart, Mark Church and Karin Morrison, Jossey-Bass, 2011

Red Light, Yellow Light for Truth

A routine focusing students on signs of puzzles of truth

1. Identify a source or range of experiences to investigate, e.g. the editorial page, a political speech, a pop science source, rumors on the playground.

2. Students look there for "red lights" and "yellow lights," specific moments with signs of a possible puzzle of truth, like sweeping generalizations, blatant self-interest.

3. Round up students' observations. Make a list of specific points marked R for red or Y for yellow with the sign (see sample chart). Also, ask students to identify "red zones" and "yellow zones," whole areas that tend to be full of red or yellow lights. Write them on the board in circles.

4. Ask: What have we learned about particular signs that there could be a problem of truth? What have we learned about zones to watch out for?

Red light, Yellow light only identifies potential issues of truth. You may want to go on to some other truth routines to dig into a couple of the issues.

Purpose: What kind of thinking does this routine encourage?

In the general clutter of everyday life, moments that need deeper thinking tend to be invisible. Students have to learn to see them. This routine focuses students on signs of puz-zles of truth, and also on typical red zones and yellow zones where such puzzles are common. To build up this sensitivity, use the routine often in deliberately different ways.

Application: When and Where can it be used?

Wherever there might be interesting puzzles of truth: a text that might have questionable claims, the daily paper, TV news, political speeches, a mystery story, a math proof that might have weaknesses, playground activities and conversations, home life, pop science, potentially riskybehaviors, self-critique of something one has written, etc. For settings outside of school, students can keep logs over a day to a week. Typical red zones are the editorial pages of newspapers, political speeches, playground arguments, because so many red lights occur within them.

The source should be large enough to take some time, like a chapter or keeping track of rumors for a few days. That way, students have to keep alert in a sustained way, which practices their skills of noticing puzzles of truth.

Launch: What are some tips for starting and using this routine?

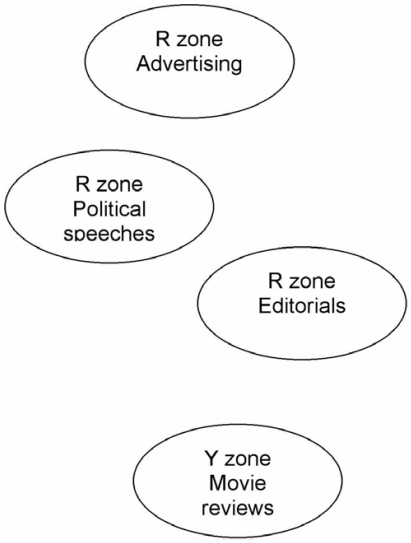
Explain that "red lights" are specific moments with signs of a possible puzzle of truth, signs like sweeping statements, one-sided arguments, obvious self-interest, etc. See the sample chart for others. Yellow lights are milder versions of the same thing. Naturally students may disagree on what's red vs. yellow vs. green in particular cases. Have students explain the signs and their judgments briefly, but mainly the routine is for detecting potential puzzles of truth. The real way to investigate a couple of the more important red or yellow lights is to dig further into the issue with another truth routine.

List of some signs to start with. Students can add to this.

Red Lights/Yellow lights for problems of truth

Sweeping generalization
One-sided arguments
Bold claim, no argument
Blatant self-interest
Extreme conviction
No obvious expertise
Angry claims
Feelings: seems implausible, uncertain, tentative
Plainly an opinion

Students investigating a newspaper might find examples (abbreviated) like these



R The only honorable way out is to win on the battlefield (political, extreme statement, no argument)
Y The majority of people agree… (evidence?)
R I'm sick and tired of the way…. (editorial, angry claim)
Y The senator expressed his judgment that… (tentative)
R You can save more now than ever before… (ad, blatant self-interest)
Y Thousands of people flock to these kinds of self-medication (re the medications, lack of expertise)
Y Both teenagers and young adults will like this film (opinion)

Assessing Using *Rules* to be a Critical Consumer of Information

Observe student responses to see:

1. How readily do students identify places of potential puzzles in information? (e.g. sweeping generalizations, blatant self-interests, oversimplified conclusions, unexpressed bias, hidden motives)
2. Do students give logical reasons for identifying the red lights or yellow lights?
3. Can students group the reasons and create rules about where the questionable information might be found? (e.g. What words might indicate cause for skepticism? Are certain locations in the presentation more likely to contain red or yellow lights?)
4. Do students use this routine to reflect on and modify their own arguments, ideas, theories, and generalizations when writing or discussing?

A checklist using yes or no or with a Likert scale (1 being not often and 3 being almost all of the time) could be used to assess the observations and monitor student performance over time.

Adapted from Making Thinking Visible, Ron Richhart, Mark Church and Karin Morrison, Jossey-Bass, 2011

STEP INSIDE: PERCEIVE, KNOW ABOUT, CARE ABOUT

A routine for getting inside viewpoints

Three core questions guide students in this routine:

1. What can the person or thing *perceive*?
2. What might the person or thing *know about or believe*?
3. What might the person or thing *care about*?

Purpose: What kind of thinking does this routine encourage?

This routine helps students to explore different perspectives and viewpoints as they try to imagine things, events, problems, or issues differently. In some cases this can lead to a more creative understanding of what is being studied. For instance, imagining oneself as the numerator in a fraction. In other settings, exploring different viewpoints can open up possibilities for further creative exploration. For example, following this activity a student might write a poem from the perspective of a soldier's sword left on the battlefield.

Application: When and where can it be used?

This routine asks students to step inside the role of a character or object—from a picture they are looking at, a story they have read, an element in a work of art, an historical event being discussed, and so on—and to imagine themselves inside that point of view. Students are asked to then speak or write from that chosen point of view. This routine works well when you want students to open up their thinking and look at things differently. It can be used as an initial kind of problem solving brainstorm that open ups a topic, issue, or item. It can also be used to help make abstract concepts, pictures, or events come more to life for students.

Launch: What are some tips for starting and using the routine?

In getting started with the routine the teacher might invite students to look at an image and ask them to generate a list of the various perspectives or points of view embodied in that picture. Students then choose a particular point of view to embody or talk from, saying what they perceive, know about, and care about. Sometimes students might state their perspective before talking. Other times, they may not and then the class could guess which perspective they are speaking from.

In their speaking and writing, students may well go beyond these starter questions. Encourage them to take on the character of the thing they have chosen and talk about what they are experiencing. Students can improvise a brief spoken or written monologue, taking on this point of view, or students can work in pairs with each student asking questions that help their partner stay in character and draw out his or her point of view.

This routine is adapted from Debra Wise, *Art Works for Schools: A Curriculum for Teaching Thinking In and Through the Arts* (2002) DeCordova Museum and Sculpture Park, the President and Fellows of Harvard College and the Underground Railway Theater.

Assessing Responding from *Multiple Perspectives*

Review student monologues to determine:

1. Are students' stating the given information or are they able to infer and hypothesize what might be happening?
2. Are students' responses requiring inference still based on evidence and reason?
3. Are students able to move beyond their own positions, feelings, and questions to see how other people may think or feel about the situation?
4. Can students build a reasonable case for the position they support?

Assess each question using a yes or no checklist and include comment sections about strengths and areas of improvement needed in students' use of the routine.

Adapted from Making Thinking Visible, Ron Richhart, Mark Church and Karin Morrison, Jossey-Bass, 2011

TUG OF WAR

A routine for exploring the complexity of fairness dilemmas

1. Present a fairness dilemma.
2. Identify the factors that "pull" at each side of the dilemma. These are the two sides of the tug of war.
3. Ask students to think of "tugs", or reasons why they support a certain side of the dilemma. Ask them to try to think of reasons on the other side of the dilemma as well.
4. Generate "what if?" questions to explore the topic further.

Purpose: What kind of thinking does this routine encourage?

This is routine builds on children's familiarity with the game of tug of war to help them understand the complex forces that "tug" at either side of a fairness dilemma. It encourages students to reason carefully about the "pull" of various factors that are relevant to a dilemma of fairness. It also helps them appreciate the deeper complexity of fairness situations that can appear black and white on the surface.

Application: When and where can it be used?

This routine can be used in any situation where the fairness dilemma seems to have two obvious and contrasting ways of being resolved. Dilemmas can come from school subjects or everyday life: testing of medicine on animals, adding people to a game once it has started, censoring a book in a library, and so on.

Launch: What are some tips for starting and using this routine?

The routine works well as a whole class activity. Present the dilemma to the class. Draw or place a rope with the two ends representing the opposing sides of the dilemma and ask students to think about what side of the dilemma they would be on and why. Students can write their justifications on post-it notes. Encourage students to think of other reasons or "tugs" for both sides of the dilemma, and then have students add their post-it notes to the rope. Stand back and ask students to generate "What if's:" questions, issues, factors or concerns that might need to be explored further to resolve the issue. Write and post these above the rope. Finish the lesson by asking students to reflect on the activity. What new ideas they have about the dilemma? Do they still feel the same way about it? Have they made up minds or changed their minds? The display of the tugs and What if's? on the rope helps to make students' thinking visible. Most importantly, their ideas are displayed in a way that shows their interconnectedness. The collaborative thinking process of the group as a whole is represented through the "action" of the tug of war. This is a key point about making thinking visible: It shows the dynamic interaction of people's thoughts in a context of a shared inquiry. Documenting thinking and making it visible in the classroom can facilitate this interaction in order to make the inquiry richer.

A similar routine can also be used with ethical dilemmas with multiple viewpoints, once students have experienced the Tug-of-War. The Tug-for-Truth routine emphasizes the complexity of many dilemmas.

Assessing Using *Details* and *Unanswered Questions* to Explore of Fairness Dilemmas

During the Activity:
As students place their factors on the diagram ask them to provide justification for their choices. Have students also provide justification for where they have put their factors on the diagram. Locations closer to the center of the diagram have less impact on the dilemma while those closer to the endpoints indicate more impact on the specific choice in the dilemma.

Assess responses using a 1-3 checklist scale based on the factors presented and the logic of the explanations.

After the Activity:
Have students write two opinion articles to explain each side of the dilemma to a new audience. Have students each select one answered question that would like to have answered and explain how this new information could contribute to solving the dilemma.

Assess the accuracy and relevance of details presented and the reasonableness of the new information to aid in solving the dilemma.

Adapted from Making Thinking Visible, Ron Richhart, Mark Church and Karin Morrison, Jossey-Bass, 2011