

CORE VISIBLE THINKING ROUTINES

from www.visiblethinkingpz.org

<p style="text-align: center;">What Makes You Say That</p> <ol style="list-style-type: none"> 1. What's going on? 2. What do you see that makes you say that? 	<p style="text-align: center;"><i>Interpretation with Justification Routine</i></p> <p>This routine helps you describe what you see or know and asks you to build explanations. It promotes evidential reasoning (evidence-based reasoning) and because it invites you to share your interpretations, it encourages you to understand alternatives and multiple perspectives.</p>
<p style="text-align: center;">Think Puzzle Explore</p> <ol style="list-style-type: none"> 1. What do you think you know about this topic? 2. What questions or puzzles do you have? 3. How can you explore this topic? 	<p style="text-align: center;"><i>A routine that sets the stage for deeper inquiry</i></p> <p>To help you connect to prior knowledge, to stimulate curiosity and to lay the groundwork for independent inquiry.</p>
<p style="text-align: center;">Think Pair Share</p> <ol style="list-style-type: none"> 1. Pose a question to others. 2. Ask to take a few minutes of thinking time. 3. Pair by turning to a nearby learner. 4. Pairs then share thoughts. 	<p style="text-align: center;"><i>A routine for active reasoning and explanation</i></p> <p>This routine encourages you to think about something, such as a problem, question or topic, and then articulate your thoughts. The routine promotes understanding through active reasoning and explanation. Because you are listening to and sharing ideas, Think Pair Share encourages you to understand multiple perspectives.</p>
<p style="text-align: center;">Circle of Viewpoints</p> <p>Brainstorm a list of different perspectives and then use this script skeleton to explore each one:</p> <ol style="list-style-type: none"> 1. I am thinking of ... the topic... From the point of view of ... the viewpoint you've chosen 2. I think ... describe the topic from your viewpoint. Be an actor - take on the character of your viewpoint 3. A question I have from this viewpoint is ... ask a question from this viewpoint <p>Wrap up: What new ideas do you have about the topic that you didn't have before? What new questions do you have?</p>	<p style="text-align: center;"><i>A routine for exploring diverse perspectives</i></p> <p>This routine helps you consider different and diverse perspectives involved in and around a topic. Understanding that people may think and feel differently about things is a key aspect of the Fairness Ideal.</p>
<p style="text-align: center;">I used to think... Now I think...</p> <p>Remind yourself of the topic you want to consider. It could be the ideal itself--fairness, truth, understanding, or creativity--or it could be the unit you are studying. Write a response using each of the sentence stems:</p> <ul style="list-style-type: none"> • I used to think... • But now, I think... 	<p style="text-align: center;"><i>A routine for reflecting on how and why our thinking has changed</i></p> <p>This routine helps you to reflect on your thinking about a topic or issue and explore how and why that thinking has changed. It can be useful in consolidating new learning as you identify your new understandings, opinions, and beliefs. By examining and explaining how and why your thinking has changed, you are developing your reasoning abilities and recognising cause and effect relationships.</p>
<p style="text-align: center;">See Think Wonder</p> <ol style="list-style-type: none"> 1. What do you see? 2. What do you think about that? 3. What does it make you wonder? 	<p style="text-align: center;"><i>A routine for exploring works of art and other interesting things</i></p> <p>This routine encourages you to make careful observations and thoughtful interpretations. It helps stimulate curiosity and sets the stage for inquiry.</p>
<p style="text-align: center;">Compass Points</p> <p>E = Excited What excites you about this idea or proposition? What's the upside?</p> <p>W = Worrisome What do you find worrisome about this idea or proposition? What's the downside?</p> <p>N = Need to Know What else do you need to know or find out about this idea or proposition? What additional information would help you to evaluate things?</p> <p>S = Stance or Suggestion for Moving Forward What is your current stance or opinion on the idea or proposition? How might you move forward in your evaluation of this idea or proposition?</p>	<p style="text-align: center;"><i>A routine for examining propositions</i></p> <p>To help you flesh out an idea or proposition and eventually evaluate it.</p>

UNDERSTANDING VISIBLE THINKING ROUTINES

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Connect Extend Challenge

CONNECT: How are the ideas and information presented CONNECTED to what you already knew?
EXTEND: What new ideas did you get that EXTENDED or pushed your thinking in new directions?
CHALLENGE: What is still CHALLENGING or confusing for you to get your mind around? What questions, wonderings or puzzles do you now have?

A routine for connecting new ideas to prior knowledge

The routine helps you make connections between new ideas and prior knowledge. It also encourages you to take stock of ongoing questions, puzzles and difficulties as you reflect on what you are learning.

Layers

A routine for structuring analysis of creative works

To identify powerful questions that can guide inquiry and deepen our understanding, we need questions that are both generative (that take us somewhere) and genuine (that we care about). This routine helps you look at the questions you have generated, maybe through another routine such as Think-Puzzle-Explore or See-Think-Wonder, and identify which are most worth investigating.

Each Layer Consists of 4 Possible Elements to Seek Out and Identify in the Work

Narrative: The story, the back or pre story, the other or hidden story, the message
Aesthetic: The appeal (what pulls you in?), the reward or take away, the skill/mastery of the artist on display, the new/different/unusual
Mechanical: Technique, Form/structure, Methods, Symbolism
Dynamic: Surprise, Tension, Emotion and Movement
Connections: To other works (in and out of the medium/genre), to history, to oneself, to the artist's other works or personal life.

Headlines

A routine for capturing essence

1. Sum up and capture the essence of an event, idea, concept or topic. **If you were to write a headline for this topic or issue right now that captured the most important aspect that should be remembered, what would that headline be?**
2. Probe how your ideas of what is most important and central to the topic being explored have changed over time: **How has your headline changed based on today's discussion? How does it differ from what you would have said yesterday?**

This routine helps you capture the core or heart of the matter being studied or discussed. It also can involve you in summing things up and coming to some tentative conclusions.

Question Starts

A routine for creating thought-provoking questions

Brainstorm a list of at least 12 questions about the topic, concept or object. Use these question-starts to help you think of interesting questions:

- Why...?
- How would it be different if...?
- What are the reasons...?
- Suppose that...?
- What if...?
- What if we knew...?
- What is the purpose of...?
- What would change if...?

Review the brainstormed list and star the questions that seem most interesting. Then, select one or more of the starred questions to discuss for a few moments

Reflect: What new ideas do you have about the topic, concept or object that you didn't have before?

This routine provides you with the opportunity to practice developing good questions that provoke thinking and inquiry into a topic. It also helps you brainstorm lots of different kinds of questions about a topic. The purpose of asking deep and interesting questions is to get at the complexity and depth of a topic. The purpose of brainstorming varied questions about a topic is to get at the breadth, and multi-dimensionality of a topic.

Question Sorts

A routine for identifying powerful questions to guide inquiry and deepen understanding

1. Individually or as a group brainstorm a large set of questions on the topic and write each question on post it notes or note cards.
2. Create a horizontal continuum using masking tape on the table or draw one on the white board. This horizontal axis will represent generativity, that is, how likely the question is to generate engagement, insight, creative action, deeper understanding, and new possibilities. As a group, discuss and place each question on the horizontal line
3. Create a vertical continuum (axis) bisecting the horizontal axis. This line represents how genuine, that is, how much we care about investigating it, the question is. As a group, discuss and place each question by moving the post note up or down on the vertical axis.

To identify powerful questions that can guide inquiry and deepen our understanding, we need questions that are both generative (that take us somewhere) and genuine (that we care about). This routine helps you look at the questions you have generated, maybe through another routine such as Think-Puzzle-Explore or See-Think-Wonder, and identify which are most worth investigating.

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Colour, Symbol, Image

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.

A routine for distilling the essence of ideas non-verbally

This routine asks you 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.

Generate, Sort

Select a topic, concept, or issue for which you want to map your understanding.

- **Generate** a list of ideas and initial thoughts that come to mind when you think about this particular topic/issue.
- **Sort** your ideas according to how central or tangential they are. Place central ideas near the centre and more tangential ideas toward the outside of the page.
- **Connect** your ideas by drawing connecting lines between ideas that have something in common. Explain and write in a short sentence how the ideas are connected.
- **Elaborate** on any of the ideas/thoughts you have written so far by adding new ideas that expand, extend, or add to your initial ideas.

Continue generating, connecting, and elaborating new ideas until you feel you have a good representation of your understanding.

A routine for organising one's understanding of a topic through concept mapping

This routine activates prior knowledge and helps to generate ideas about a topic. It also facilitates making connections among ideas. Concept maps help to uncover your mental models of a topic in a non-linear way.

Peel the Fruit

1. Put some version of the map up in a convenient location or give learners copies. See example below and notes about different ways of using the map.
2. Briefly state that the group will be tracking progress and planning with the map from time to time. Note how the map uses the metaphor of 'peeling the fruit', getting familiar with the surface of something, seeking puzzles and mysteries to investigate, and pursuing these in various ways to arrive at core understandings.
3. Refer to the map to choose next steps and mark progress from time to time during the exploration of a topic (no need to do everything every time). Use it as a way of thinking about what routines to use or simply what kind of conversation or other activity to have.
4. When the map is used collectively by a class, you may want to invite students to put up Post-its on the map over time to mark insights associated with any of the map elements.

A Map for Tracking and Guiding Understanding

We often want to develop our understanding of a complex topic over days or weeks. This map can help. It's not a routine but a way of planning and tracking over time the exploration of a topic. It can help in choosing good routines too.

3-2-1 Bridge

Your **initial responses**

to the topic:

- 3 Thoughts/Ideas
- 2 Questions
- 1 Analogy

Your **new responses**

to the topics

- 3 Thoughts/Ideas
- 2 Questions
- 1 Analogy

Bridge:

Explain how your new responses connect to your initial responses?

A routine for activating prior knowledge and making connections

This routine asks you to uncover your initial thoughts, ideas, questions and understandings about a topic and then to connect these to new thinking about the topic after you have received some instruction.

Explanation Game

1. Identify something interesting about an object or idea: **"I notice that..."**
2. Then follow that observation with the question: **"Why is it that way?"** or **"Why did it happen that way?"**

A routine for exploring causal understanding

This is a routine for understanding why something is the way it is. This routine can get at either causal explanation or explanation in terms of purposes or both.

TRUTH VISIBLE THINKING ROUTINES

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Claim Support Questions

1. Make a **claim** - - - - **Claim:** An explanation or interpretation of some aspect of the topic.
2. Identify **support** - - - - **Support:** Things you see, feel, and know that support your claim.
3. Ask a **question** - - - - **Question:** What's left hanging? What isn't explained? related to your claim What new reasons does your claim raise?

A routine for clarifying truth claims

The routine helps you develop thoughtful interpretations by encouraging you to reason with evidence. You learn to identify truth claims and explore strategies for uncovering truth.

True For Who?

Discuss.

- What kind of situation was the claim made in?
- Who made it?
- What were people's interests and goals?
- What was at stake?

Brainstorm. Make a list of all the different points of view you could look at this claim from.

Dramatise. Choose a viewpoint to embody and imagine the stance a person from this viewpoint would be likely to take. Would he or she think the claim is true? False? Uncertain? Why? Go around in a circle and dramatically speak from the viewpoint. Say:

- My viewpoint is...
- I think this claim is true/false/uncertain because...
- What would convince me to change my mind is ...

Stand back. Step outside of the circle of viewpoints and take everything into account: What is your conclusion or stance? What new ideas or questions do you have?

A routine for exploring truth claims from different perspectives

This routine helps you cast a wide net for facts and arguments by imagining how an issue looks from different points of view. The routine also helps you see how different viewpoints and situations might influence the stances people are likely to take.

Tug For Truth

1. Identify a question of **truth** -- a controversial claim that something is true or false -- where you know there is some evidence on both sides that you can bring forward.
2. Ask if everyone if they have an **opinion** about it (it's okay not to have one).
3. Draw a tug of war diagram on the board (or tape a piece of rope on the wall and use sticky notes to make it more dramatic). You can add two kinds of things:
 - One is **evidence** -- tugs in the Yes, True direction or the No, False direction.
 - The other thing to add is a **question** about the tug of war itself, a question that asks for more information or about "what if" we tried this or we tried that, what would the results be?
4. Finish by asking what **new ideas** everyone has about the question of truth.
 - Can we decide now?
 - Do some people lean one way and some the other?
 - Is the best answer in a "grey area" -- most of the time true but not always, or half the time?
 - How could we settle it if we had to?

A routine for exploring tensions of truth

It encourages you to reason carefully about the "pull" of various factors that are relevant to a question of truth. It also helps you appreciate the deeper complexity of matters of truth that can appear black and white on the surface.

TRUTH VISIBLE THINKING ROUTINES

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Hot Spots

Key Prompts:

Identify a topic or situation. Is this idea clearly true, or false, or where between the two?

What makes it so **uncertain**? (or almost certainly true or false)

How **important** is it? What makes it important? (important or not so important)

A routine for noticing truth occasions

A key part of thinking is spotting situations that need more thought, and where it is worthwhile. This routine asks you to spot "thinking hotspots" about truth within a topic or situation that might be worth more attention. Also, asking "What makes this idea this way?" draws from you characteristics that make an idea more or less uncertain and more or less important. This greater awareness helps you to spot truth hotspots in the future.

Stop Look Listen

The routine follows a simple 3-step structure:

Stop: Be clear about the claim.
Define your question from your list of facts and uncertainties.

Look: Find your sources.
Where will you look? Consider obvious and non-obvious places.

Listen: Hear what the sources tell you with an open mind.
Is it possible for your source to be biased and how does it affect your information?

A routine for clarifying claims and sources

The routine helps you investigate truth claims and issues related to truth. It allows you to stand back and think about ways to obtain information when trying to find out about the truth of something. You are encouraged to think critically about sources. It helps you appreciate the deeper complexity of truth situations by addressing issues of bias and objectivity

Red Light, Yellow Light

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.

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

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

Round up everyone's observations. Make a list of specific points marked R for red or Y for yellow with the sign. Also, ask everyone 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.

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?

A routine focusing students on signs of puzzles of truth

In the general clutter of everyday life, moments that need deeper thinking tend to be invisible. You have to learn to see them. This routine focuses you on signs of puzzles 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.

CREATIVITY VISIBLE THINKING ROUTINES

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Creative Hunt

Key Prompts:

- What's the **main purpose** here?
- What are **the parts** and their purposes?
- Which are especially **smart or creative**? – star them!
- Who is the **audience** for this?

A routine for looking at parts, purposes and audiences

An important part of creativity is recognising how creative things around us are. This is often inspiring. Because we are so used to things, we do not appreciate their creativity. It is also often practical: we see better the limitations of things and how they might be improved. It's also a good way of understanding things better, by looking into what they are for, how they work, and who their audiences are. Thus, this creativity routine has an "understanding bonus."

Creative Questions

Pick an everyday object or topic and **brainstorm** a list of questions about it.

Look over the list and transform some of the questions into questions that challenge the **imagination**. Do this by transforming questions along the lines of:

- What would it be like if ...
- How would it be different if ...
- Suppose that ...
- What would change if ...
- How would it look differently if ...

Choose a question to **imaginatively explore**. Explore it by imaginatively playing out its possibilities. Do this by: Writing a story or essay, drawing a picture, creating a play or dialogue, inventing a scenario, conducting an imaginary interview, conducting a thought experiment

Reflect: What new ideas do you have about the topic, concept or object that you didn't have before?

A routine for generating and transforming questions

Formulating and exploring an interesting question is often as important than finding a solution. This routine encourages you to create interesting questions and then imaginatively mess around with them for a while in order to explore their creative possibilities. It provides you with the opportunity to practice developing good questions that provoke thinking and inquiry into a topic.

Does It Fit?

Fit your options to the **Ideal**

Identify what the Ideal solution would look like and then evaluate each option against it. Ask yourself:

How well does each option fit with the ideal solution?

Fit your options to the **Criteria**

Identify the criteria or attributes that feel are important for you to consider in this situation and then evaluate each option against those. Ask yourself:

How well does each option fit the criteria?

Fit your options to the **Situation**

Identify the realities and constraints of your situation, such as resources and time, and then evaluate each option against them. Ask yourself:

How well does each option fit the realities of the situation?

Fit your options to you **Personally**

Try out each option by running a "mental movie" in which you imagine yourself carrying out the option and try to get a sense of what it would feel like. Ask yourself:

Which option just feels like the best fit for me?

A routine for thinking creatively about options

To help you more effectively flesh out and evaluate options, alternatives, and choices in a decision-making situation.

CREATIVITY VISIBLE THINKING ROUTINES

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Options Diamond

Identify a couple of obvious options.

Usually there are trade-offs or tensions between them that make the decision hard: Choose one and you get X but lose Y; choose the other and you lose X but get Y.

Make a diamond diagram.

Put at the left and right corners the one or two main trade-offs (the X's and Y's) pulling in opposite directions.

Now have students brainstorm one to three solutions for each corner of the diamond.

Left side: go with that trade-off.

Right side: go with that trade-off.

Bottom: compromise between them.

Top: clever solutions that combine the seeming opposites and get the best of both.

Ask: What have we learned about the situation from finding these options?

This is a way of understanding the situation better.

Exploring the tensions of decision making routine

This routine fosters creative thinking. It helps to explore decision making situations where a trade-off makes it hard to find a really good option. It focuses on resolving opposites. Sometimes, but not always, there are options that partly bring the opposites somewhat together. All this is also relevant to understanding. It helps in understanding situations even when you are not the real decision maker.

Options Explosion

List the obvious options.

There would not be a decision unless there were at least two or three obvious options.

Now brainstorm all sorts of different options to find the "hidden" options.

Often there are hidden options that are the real best choices. Be imaginative!

Piggyback on ideas already up, combine ideas to get new ones, look for ideas of a very different kind, imagine you are in different roles and suggest ideas from the perspective of those roles, etc.

Ask: What have we learned about the situation from finding these options?

This is a way of understanding the situation better. You may want to go on to a routine for comparing and choosing among options.

A routine for creative decision making

This routine fosters creative thinking. It helps explore "hidden" options in a decision making situation. Often people don't make good decisions because they miss the hidden options. It is also relevant to understanding. It helps in building an understanding of decision-making situations even when you are not the real decision maker.

Step Inside: Perceive, Know, Care About

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**?

A routine for getting inside viewpoints

This routine helps you 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 you might write a poem from the perspective of a soldier's sword left on the battlefield.

FAIRNESS VISIBLE THINKING ROUTINES

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Here Now There Then

1. **Identify** a controversial issue or fairness topic that has changed significantly over time and uncover student's basic knowledge about the topic.
Column A: List present stances, values and judgments about the topic.
2. **Ask** kids to imagine they could travel back to a time when the attitudes about the fairness of this topic were different.
Column B: List past stances, values and judgments about the topic.
3. **Compare** the past and present perspectives in Columns A and B.
Why do you think things have changed? Why did people in the past not think the way we do today?
4. **Close** the discussion.
How could we find out more about the way people thought back then?

A routine for considering presentist attitudes and judgments

The routine encourages you to consider past perspectives and develop a better understanding of how thinking changes over time and across cultures. It helps you acknowledge that we have strong stances regarding controversial issues, and that our stances are influenced by social and historical context. It also helps to uncover stereotypical perceptions as well as ethnocentric and presentist judgments.

Making It Fair: Now Then Later

1. **Frame the task.** Present and clarify an issue of fairness. The class will be thinking about things to do to make the situation more fair: now, in the future, or to change the situation so it would have been fair in the past.
2. **Brainstorm.** Ask students to brainstorm ideas for things they might do to "make it fair."
3. **Sort.** Sort the list into actions that relate to making the situation fair in the past, now, or for the future.
4. **Evaluate.** Ask students to pick one idea from the list that they think has the most merit and expand on it, either verbally or in writing.

A routine for finding actions

This routine is about identifying and evaluating specific actions that might make a situation fair. This routine involves you in generating and evaluating options. Initially the focus should be on an open generation of ideas without evaluation. Later, you evaluate your ideas and justify them. This routine helps you see that fairness and unfairness are not merely judgments that one makes but that these situations also invite direct actions by finding ways to repair, prevent, or preclude unfairness.

Reporter's Notebook

1. **Identify** a situation, a story or dilemma for discussion.
2. Ask students to identify the **Facts and Events** of the situation. As students name them, ask if these are clear facts, or if they need more information about them.
3. Ask students to then name the **Thoughts and Feelings** of the characters/participants involved in the story. As students name them, ask if these are clear facts, or if they need more information about them.
4. After a discussion, ask to **make their best judgment** of the situation, based on the information at hand.

A routine for separating fact and feeling

This routine is about distinguishing facts from thoughts and judgments. It helps organize ideas and feelings in order to consider a situation where fairness may be at stake. It promotes the fine discernment of information and perspective taking in order to clarify and make a tentative judgment.

Tug of War

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.

A routine for exploring the complexity of fairness dilemmas

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