The Cultures of Thinking Project is a global initiative under the direction of Dr. Ron Ritchhart, a Principal Investigator and Senior Research Associate at Project Zero, Harvard Graduate School of Education.

**GOALS.** The CoT initiative considers education to be a social and cultural endeavor whose goal is the development of both the individual and the group as effective learners and thinkers able to engage with and adapt to a changing world. Within this context the most important assessment question we can ask ourselves as educators is: Who are our students becoming as thinkers and learners as a result of their time with us?

**HISTORY.** Since 2000, the Cultures of Thinking Project has worked with hundreds of public, independent, and international schools and museums across North America, Australia, and Europe to help transform schools, classrooms, and museums into places where thinking is valued, visible and actively promoted as part of the regular day-to-day experience of all group members.

**APPRAOCH.** The CoT initiative works to achieve its goals by working systemically in schools. This includes the formation of ongoing professional learning communities whose attention is focused on exploring and understanding group culture is shaped by the Eight Cultural Forces: Modeling, Opportunities, Routines, Expectations, Language, Interactions, Time, and Environment. By paying attention to how these eight forces send messages about what learning is, what kind of thinking is valued, and what it means to be smart; educators can reshape schools and classrooms into powerful learning environments in which students can achieve at the highest levels. The Documentation of learning and the integration of Thinking Routines—simple structures to scaffold, support, and direct students’ thinking—are also core practices.

**INFORMATION.** Over the life of the Culture of Thinking Project we have generated a large number of books, articles, and web resources that document the work of the project, report on our ongoing research, describe the changes occurring in schools and classrooms, and identify the impact on student learning. Visit www.RonRitchhart.com, www.pz.harvard.edu/vt and www.storiesoflearning.com to download resources and to learn more about the work of the project and how it is transforming schools and classrooms around the world.
Skills are not sufficient; we must also have the disposition to use them. Possessing thinking skills and abilities alone is insufficient for good thinking. One must also have the disposition to use those abilities. This means schools must develop students’ inclination to think and awareness of occasions for thinking as well as their thinking skills and abilities. Having a disposition toward thinking enhances the likelihood that one can effectively use one’s abilities in new situations.

The development of thinking and understanding is fundamentally a social endeavor, taking place in a cultural context and occurring within the constant interplay between the group and the individual. Social situations that provide experience in communicating one’s own thinking as well as opportunities to understand others’ thinking enhance individual thinking.

The culture of the classroom teaches. It not only sets a tone for learning, but also determines what gets learned. The messages sent through the culture of the classroom communicate to students what it means to think and learn well. These messages are a curriculum in themselves, teaching students how to learn and ways of thinking.

As educators, we must strive to make students thinking visible. It is only by making thinking visible that we can begin to understand both what and how our students are learning. Under normal conditions, a student’s thinking is invisible to other students, the teacher, and even to him/herself, because people often think with little awareness of how they think. By using structures, routines, probing questions, and documentation we can make students’ thinking more visible toward fostering better thinking and learning.

Good thinking utilizes a variety of resources and is facilitated by the use of external tools to “download” or “distribute” one’s thinking. Papers, logs, computers, conversation, and various means of recording and keeping track of ideas and thoughts free the mind up to engage in new and deeper thinking and help ensure that our thinking doesn’t get lost.

For classrooms to be cultures of thinking for students, schools must be cultures of thinking for teachers. The development of a professional community in which deep and rich discussions of teaching, learning, and thinking are a fundamental part of teachers’ ongoing experience provides the foundation for nurturing students’ thinking and learning.
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.
Chalk Talk

Originally developed by Hilton Smith, Foxfire Fund; adapted for the NSRF by Marylyn Wentworth.

Chalk Talk is a silent way to do reflection, generate ideas, check on learning, develop projects or solve problems. It can be used productively with any group—students, faculty, workshop participants, committees. Because is it done completely in silence, it gives groups a change of pace and encourages thoughtful contemplation. It can be an unforgettable experience. Middle Level students absolutely love it—it’s the quietest they’ll ever be!

Format
Time: Varies according to need; can be from 5 minutes to an hour. Materials: Chalk board and chalk or paper roll on the wall and markers.

Process
1. The facilitator explains VERY BRIEFLY that chalk talk is a silent activity. No one may talk at all and anyone may add to the chalk talk as they please. You can comment on other people’s ideas simply by drawing a connecting line to the comment. It can also be very effective to say nothing at all except to put finger to lips in a gesture of silence and simply begin with #2.

2. The facilitator writes a relevant question in a circle on the board.
Sample questions:
• What did you learn today?
• So What? or Now What?
• What do you think about social responsibility and schooling?
• How can we involve the community in the school, and the school in community?
• How can we keep the noise level down in this room?
• What do you want to tell the scheduling committee?
• What do you know about Croatia?
• How are decimals used in the world?

3. The facilitator either hands a piece of chalk to everyone, or places many pieces of chalk at the board and hands several pieces to people at random.

4. People write as they feel moved. There are likely to be long silences—that is natural, so allow plenty of wait time before deciding it is over.

5. How the facilitator chooses to interact with the Chalk Talk influences its outcome. The facilitator can stand back and let it unfold or expand thinking by:
• circling other interesting ideas, thereby inviting comments to broaden
• writing questions about a participant comment
3-2-1 BRIDGE
A routine for activating prior knowledge and making connections

<table>
<thead>
<tr>
<th>Your initial responses to the topic</th>
<th>Your new responses to the topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Thoughts/Ideas</td>
<td>3 Thoughts/Ideas</td>
</tr>
<tr>
<td>2 Questions</td>
<td>2 Questions</td>
</tr>
<tr>
<td>1 Metaphor/Simile</td>
<td>1 Metaphor/Simile</td>
</tr>
</tbody>
</table>

Bridge:
Explain how your new responses connect to your initial responses?

**Purpose:** What kind of thinking does this routine encourage?
This routine asks students to uncover their initial thoughts, ideas, questions and understandings about a topic and then to connect these to new thinking about the topic after they have received some instruction.

**Application:** When and where can it be used?
This routine can be used when students are developing understanding of a concept over time. It may be a concept that they know a lot about in one context but instruction will focus their learning in a new direction, or it may be a concept about which students have only informal knowledge. Whenever new information is gained, bridges can be built between new ideas and prior understanding. The focus is on understanding and connecting one’s thinking, rather than pushing it toward a specific outcome.

**Launch:** What are some tips for starting and using this routine?
This routine can be introduced by having students do an initially 3, 2, 1 individually on paper. For instance, if the topic is “democracy,” then students would write down 3 thoughts, 2 questions, and 1 metaphor. Students might then read an article, watch a video, or engage in an activity having to do with democracy. Provocative experiences that push students thinking in new directions are best. After the experience, students complete another 3,2,1. Students then share their initially and new thinking, explaining to their partners how and why their thinking shifted. Make it clear to students that their initial thinking is not right or wrong, it is just a starting point. New experiences take our thinking in new directions.
Walking the Talk
by Carolyn Taylor, 2005

Demystifying Culture

WHAT IS CULTURE?

Culture is what is created from the messages that are received about how people are expected to behave. Cultures develop in any community of people who spend time together and who are bound together through shared goals, beliefs, routines, needs or values. Cultures exist in nations, corporations, sporting clubs, schools, families, religious communities, professions and social groups.

Humans are tribal animals; we are hard-wired to fit in with our tribe. We read the signals about what it takes to fit in, and we adapt our behaviour accordingly. This is a survival strategy. If we cannot do this, we either leave the tribe, or the tribe ejects us. As we adapt to fit in with our new tribe, we in turn reinforce these tribal norms, or accepted behaviours, and thus reinforce the culture.

The process is supported by peer pressure. Existing tribe members work together to ensure that the new member does not rock the boat, and thus expose weaknesses in individual members.

Behavioural norms evolve over long periods of time, and are influenced by many factors including the values or beliefs which brought the community together in the first place; the nature of the activity carried out by the group; past and present leaders and heroes; historical events, successes and traumas; physical and geographical conditions; the demands and behaviour of external parties – customers, owners, enemies; and many others.
I have observed cultures which lift people to operate at the highest level of their intellectual and emotional potential, where the group really does exceed the sum of its parts and individuals seem to become ‘better people’; contributing more, whilst simultaneously supporting the success of their colleagues. Such groups deliver extraordinary results from ordinary people. I have seen others which turn fairly normal and well-meaning individuals into selfish, political, backstabbing monsters.

Behavioural norms become subconscious, they remain long after their original purpose disappears, and eventually may not be particularly useful in relation to the goals the community is seeking to achieve. This is often the case in organisations. Because established behaviour influences the behaviour of new members, cultures perpetuate themselves. They require extraordinarily strong and focussed leadership and/or a co-ordinated effort from a group of influential members, to change quickly.

While behavioural norms may be subconscious amongst existing members, new members notice them most acutely, but, if they are to survive, quickly adapt to the prevailing culture. Where members may be aware of the cultural tendencies, they rarely understand enough about their source, nor have sufficient confidence, power and determination to cause change. Hiding one’s own behaviour on a course which is at odds with that of one’s community requires great resilience and self-belief. In the scheme of things, in a work setting, and assuming the required behaviour does not go beyond a certain personal point of integrity, most people adapt to the norm. If you are used to a culture in which everyone speaks their mind in meetings, and you arrive in a new organisation where the norm is not to do so, over time you are likely to speak up less frequently. You get tired of being the only one to object. You find colleagues use you and your outspokenness to further their own ends. Your voice becomes less credible, and you build a reputation for negativity. At this point, most people adapt, or leave.

Cultures are maintained through the messages that are sent and received about what behaviour is expected. These come from many sources, and most of these are non-verbal. An early myth to dispel is that an organisation’s culture has very much all to do with the values statement, which appears in the Annual Report. Unless the organisation has worked very actively on living its values over a period of time, the statement will be one of intent. A very fine intent, and a good thing to have, but it almost certainly does not describe the culture as it is.

To get a sense of how messages are picked up, imagine a child born, let’s say in Italy. By the time this child is five years old, he is unmistakably Italian in his gestures, his expectations, his expressions, how he treats others, how he treats food, what he thinks about his home, his possessions. How did that occur? Somehow, along the way, this child picked up signals about how to be, and these signals were different from those picked up by, for example, an English child. This process is beautifully described in a book called An Italian Education by Tim Parks, (Parks, 1995), written by an Englishman about watching his son, born in Italy to his Italian wife, evolving into an Italian.

So culture is about messages sent. These messages demonstrate what is valued, what is important, what people do around here to fit in, to be accepted, and to be rewarded.

They come from three broad areas:

- **Behaviours** - The behaviour of others, especially those who appear to be important
- **Symbols** - observable events, artefacts and decisions to which people attribute meaning
- **Systems** - mechanisms for managing people and tasks

Two things to remember from this:

- **Culture is about messages** - culture management is about message management. If you can find, and change, enough of the sources of these messages, you will change the culture
- **Culture is about what is really valued** - demonstrated through what people do, rather than what they say

What people do, rather than what they say...
THE 8 FORCES THAT SHAPE GROUP CULTURE

EXPECTATIONS: Recognizing How Our Beliefs Shape Our Behavior

A set of strong beliefs surrounding future outcomes and anticipated results. As a culture shaper, expectations operate as “belief sets” or ‘action theories’ that influence our own efforts in relation to the achievement of desired goals and outcomes with respect to our teaching. In this way, expectations not only set our course, but also act as an internal compass that keeps us moving toward our goal. It is important to note that this deparfs from the way teachers more typically think of “expectations”, that is, as an explicit expression of standards used to direct and inform the behavior of others.

LANGUAGE: Appreciating Its Subtle Yet Profound Power

The system of communication used by a community to negotiate shared meaning and build group coherence and understanding around ideas, behaviors, and actions. As a culture shaper, language helps us to direct attention and action. However, the words and structures that make up language not only convey an explicit surface meaning, but also impart a set of deeper associations and connections that implicitly shape thought and influence behavior. This is the hidden power of language: Its ability to subtly convey messages that shape our thinking, sense of self, and group affinity.

TIME: Learning to Be Its Master Rather than Its Victim

The “containers,” consisting of measurable periods, that we allocate, assign or use to accomplish tasks of our choosing. As a culture shaper, all of these conceptions of time are in play. Our allocations of periods of time reflect our values. Our sequencing of events, construction of moments, and reflections on actions allows us to scaffold and draw a connecting thread through learning occasions to create a unity. Finally, our ability to generate, sustain, and capitalize on periods of total engagement allows us to create the energy needed for learning and thinking.

MODELING: Seeing Ourselves through Our Students’ Eyes

To display, demonstrate, or draw attention to as an example for others to follow or imitate. As a culture shaper, modeling operates on both an explicit and an implicit level. Explicitly, we may demonstrate techniques, processes and strategies in a way that makes our own thinking visible for students to learn from and appropriate. Implicitly, our actions are constantly on display for our students. They see our passions, our interests, our caring, and our authenticity as thinkers, learners, community members, and leaders. Adult models surround students and make real a world that they may choose to enter or reject.

OPPORTUNITIES: Crafting the Vehicles for Learning

A set of conditions or circumstances that make it possible to do or achieve something. As a culture shaper, the opportunities present will serve either to constrain or enhance the activity of both individuals and the group as a whole. Although it is possible for opportunities to lie hidden, remain untapped, or to languish; in strong cultures rich opportunities for growth, advancement, and creativity are prominent. In a culture of thinking, these types of opportunities dominate the landscape, guiding and shaping the activity of the group and engaging all individuals.

ROUTINES: Supporting and Scaffolding Learning and Thinking

A sequence of actions designed to achieve a specific outcome in an efficient and productive manner. As a culture shaper, routines represent a set of shared practices that constitute a group’s way of doing things. They are the classroom infrastructure, guiding much of the activity that happens there. Routines—whether they are for management, participation, discourse, instruction, learning, or thinking—help to minimize confusion, reduce uncertainty, and direct activity along known paths. Ultimately, routines become patterns of behavior for both individuals and the group. Of particular importance in learning groups, is the presence of thinking and learning routines that help to scaffold and draw a connecting thread through learning occasions to create a unity. Finally, our ability to generate, sustain, and capitalize on periods of total engagement allows us to create the energy needed for learning and thinking.

INTERACTIONS: Forging Relationships that Empower Learners

The dynamic phenomenon that emerges when two or more objects have an effect upon one another. As a culture shaper, interactions form the basis for relationships among teachers and students, students and students, and teachers and teachers. Interactions knit together the social fabric that binds individuals together in community. The interactions among group members help to define the emotional climate, tone, or ethos of a place. In a culture of thinking, teacher’s interactions with students show a respect for and an interest in students’ thinking while nurturing their development as valued, competent individuals able to contribute effectively to the group.

ENVIRONMENT: Using Space to Support Learning and Thinking

The physical space occupied by a group or individual, including its design, aesthetic, setup, displays, artifacts, and furnishings. As a culture shaper, the physical environment is the “body language” of an organization, conveying its values and key messages even in the absence of its inhabitants. The physical environment of a school or classroom will dictate how individuals interact, their behaviors, and performance. The physical space can inhibit or inspire the work of the group and the individual. Although most educators inherit a physical environment fashioned for an old paradigm of learning, there is still much that can be done in the design of that space to facilitate and promote a culture of thinking.
What is thinking?

When you tell someone you are thinking, what kinds of things might be going on in your head? For instance, you might be making a mental picture of things, or you might be comparing one thing with another. What other things might be going on in your head when you are thinking? Make a map or list of your ideas.
What additional ideas about thinking might you add to your map? To help you come up with more ideas about what thinking is and what is involved in thinking:

1. Think of a time when it was difficult or hard for you to think. What kinds of things did you do then? Add your new ideas on your map.

2. Think about times when you knew you were doing some good thinking. What were you doing then? Add your new ideas on your map.

3. Think of someone you consider to be a good thinker. What kinds of things does this person do that makes him or her a good thinker? Add your new ideas on your map.
What is thinking? When you tell someone you are thinking, what kinds of things might be going on in your head? For instance, you might be making a mental picture of things, or you might be comparing one thing with another. What other things might be going on in your head when you are thinking? Make a map or list of your ideas.
What is thinking? When you tell someone you are thinking, what kinds of things might be going on in your head? For instance, you might be making a mental picture of things, or you might be comparing one thing with another. What other things might be going on in your head when you are thinking? Make a map of your ideas.

Some other things to consider and to put on your map might be: When does thinking get hard or difficult? When it does, what kinds of things do you do? How do you know when you have been thinking well?

What is thinking? When you tell someone you are thinking, what kinds of things might actually be going on in your head? For instance, you might be making a mental picture of things, or you might be comparing one thing with another. What other things might be going on in your head when you are thinking? Make a map of your ideas.
What is thinking?

When you tell someone you are thinking, what kinds of things might be going on in your head? For instance, you might be making a mental picture of things, or you might be comparing one thing with another. What other things might be going on in your head when you are thinking? Make a map of your ideas.
What is thinking? When you tell someone you are thinking, what kinds of things might actually be going on in your head? For instance, you might be making a mental picture of things, or you might be comparing one thing with another. What other things might be going on in your head when you are thinking? Make a map of your ideas.

**THINKING**

- Formulate
  - Formulate ideas
  - Formulate opinions
- Analysing
  - Considering all factors
  - Making comparisons
  - What is the question
  - Gather all facts
- Search
  - Look for essence
  - Understand fundamentally
  - What is needed from me?
  - What does the question really mean? (Hard)
- Predict
  - Plan
  - Thinking about possibilities
  - Structure
  - Imagine

Some other things to consider and to put on your map might be: When does thinking get hard or difficult? When it does, what kinds of things do you do? How do you know when you have been thinking well?

Thinking gets hard when you don’t know what to think about, as anxiety or lack of confidence clouds the mind. When clear ideas or responses emerge or I have understood what I am asking, or what is asked of me, then I know...
End of Day 1

Optional Follow-Up Readings

Chapter 7: Creating a Place Where Thinking is Valued, Visible, & Actively Promoted

Chapter 1: The Purpose and Promise of Schools

Note: This chapter is available as a free download from Wiley.com or ronritchhart.com
8 Cultural Forces that Define our Classrooms

**Opportunities**
Providing purposeful activities that require students to engage in thinking and the development of understanding as part of their ongoing experience of the classroom.

**Time**
Allocating time for thinking by providing time for exploring topics more in depth as well as time to formulate thoughtful responses.

**Expectations**
Setting an agenda for understanding and conveying clear expectations. Focusing on the value for thinking and learning as outcomes as opposed to mere completion of "work."

**Modeling**
Modelling of who we are as thinkers and learners so that the process of our thinking is discussed, shared, and made visible.

**Routines**
Scaffolding students' thinking in the moment as well as providing tools and patterns of thinking that can be used independently.

**Language**
Using language of thinking that provides students with the vocabulary for describing and reflecting on thinking.

**Interactions**
Showing a respect for and valuing of one another's contributions of ideas and thinking in a spirit of ongoing collaborative inquiry.

**Environment**
Making thinking visible by displaying the process of thinking and development of ideas. Arranging the space to facilitate thoughtful interactions.
What Difference Does It Make for Students to Be in Classrooms that are Cultures of Thinking?

• Significant enhancement in students “meta-strategic knowledge.” Meta-strategic knowledge as a component of metacognition and deals with one’s awareness of the strategies at one’s disposal. Being aware of one’s strategies allows one to direct one’s mental efforts, a key to effective thinking.

• A change in students’ view of classrooms. Specifically, students view Cultures of Thinking classrooms as:
  - Being more focused on learning rather than work
  - Places where teachers regularly press them to think
  - Providing places where they develop a sense of efficacy and confidence in their abilities as learners
  - A community of learners

• Improved writing and reading performance. Learning to express one’s thinking, to give reasons, to build arguments, consider other viewpoints, and to rely on evidence allows students to express their ideas more effectively both orally and in writing. Learning to focus on meaning and understanding enhances reading comprehension.
  - 4th grade students at Way Elementary out performed a matched cohort of students using the same writing program by 16 percentage points on the Michigan Educational Assessment Program, placing them in the top performing schools in the state.
  - Washington International School saw a marked increase in their English IB Diploma scores over past years with 38% of students receiving a top score of 7 and 52% receiving a 6. This despite their classes having a significant percentage of students receiving learning support.
  - At Wesley College in Melbourne Australia, the percentage of students in Nathan Armstrong’s 12th grade English class who scoring in the top 10% on the Victoria Certificate of Education (VCE) has doubled since began using CoT ideas in his classes. He routinely gets three times as many students scoring at this top level as other teachers despite having a random assignment of students.
The Language of the Classroom

The Language of Community (vs. Distance)
Pronoun choice can communicate a sense of inclusiveness, collaboration, and community (we, us, our); or it can deliver a message of division, separateness, and control (I and you).

Language of Identity
Language can bring students into new words and invite them to step into new identities as scientists, writers, authors, mathematicians, thinkers and so on. These words communicate that it is learning to do and act authentically that matters, not just learning about the subject.

Language of Noticing & Naming
As the more knowledgeable adult, teachers have the power to name and notice the thinking that students are doing, providing them with more sophisticated language for their thinking: “That’s an interesting connection.” “You’ve really generated some new ideas.” “That’s a new theory.”

Language of Feedback & Praise
Teachers use language to direct feedback and praise either on behavior or on learning. Effective learning feedback aims to guide future learning and is specific, descriptive, informative, sincere, and action-oriented as opposed to global, judgmental, reflexive, and purely evaluative.

Language of Initiative
Through verbal interactions teachers can convey to students that they are active, decision-making agents in the learning process: “How are you planning on…” “What are you wondering about?” “What did you decide about that?” or they can step in and rescue students by making these decisions for them: “What you need to do next is…”

Language of Listening (vs. Directing)
Showing genuine interest through clarifying, verifying, challenging, extending, inviting. The language of listening often involves questioning, eye contact, and a body posture that is open and facing the speaker.

Language of Knowing (Conditional vs. the Absolute)
Language frames ideas and information as set, fixed, and absolute (“It is…” “What’s the answer?”), or as evolving, complex, and conditional (“What’s another perspective on that?” “It might be.” “One way is…”).
LISA: The children are studying human rights at the moment. And the reason that I wanted to use the routine of “I See and I Wonder” is that I wanted to give the children the opportunity to look at situations where children didn’t have their rights.

The beauty of this routine, is that it forces the children to slow down. And to really look at pictures, and focus on what it is that they really see. And then they can wonder about what that might mean. It stops them from drawing conclusions too quickly.

Yesterday we looked at the Convention of the Right of the Child (holding up photocopy of Rights), and today we’re going to carry on looking at that. The way I want to do it, is I want to give you some photographs to look at. And I want you to use a routine. I want you to use a routine we’ve used before, I See and I Wonder.

I’ve got a picture here, and it’s not one that actually anybody’s going to use, it’s just one that I’m going to show you now. So, if we were to say, ‘what do you see,’ what are the kinds of things that you might say about this. Alex?

ALEX: Children saluting.

LISA: Children. You can see that they’ve got their hands up and they’re saluting. Very good.

HUNG-JOON: I see a blackboard.

LISA: Okay. You see a blackboard. Is there any writing on the blackboard.

STUDENTS: Yeah.

LISA: Mila?

MILA: A flag.

JIN: And I see a girl, dressed like a maid.

LISA: Okay. But look what you notice. You say ‘dressed like a maid.’ But what is it about the girls’ dresses that you notice?

JIN: They’re old.
LISA: They’re old.

STUDENTS: Old-fashioned.

LISA: Old-fashioned. And what is it about them that makes you say they’re old-fashioned?

JIN: Because we don’t wear these kind of dresses now-a-days, we wear these kind of (motioning to herself) modern clothes. What do you think might be going on with those children?

STUDENTS: Singing.

STUDENTS: Uh, they’re saluting.

LISA: They seem to be saluting. So that’s another one of I see, isn’t it? I see them saluting. So, I see a group of children. I see them saluting.

STUDENTS: Maybe they’re in an assembly or something.

LISA: JIN?

JIN: I wonder if they’re singing their national anthem.

LISA: Okay, and why would you say…?

JIN: Because they’re looking at the flag, and they’re going like this

LISA: Alright. What we’re going to do, is we’re going do this part. And when we all think that we’ve finished with this part, we’re going to come together as a whole class again and we’re going to discuss what we found out...

RAHUL: The girl is worried.

GIRL: How can you tell if it’s a girl? I think it’s a boy.

RAHUL: We see a boy or a girl who looks worried.

GIRL: (as she writes) We see kids who look worried.

RAHUL: I wonder where they’re from.

GIRL: Maybe it’s the second World War?
RAHUL: Yeah, that’d a good point. (GIRL writes in the table under “What do you think is going on?”: “We wonder if they’re Jewish; we wonder if it’s in Israel; we wonder if it’s WW2”)

LISA: (reading the student’s table) You think it might be in the second World War. And what is it that’s making you say that?

RAHUL: This kind of German (pointing to picture).

LISA: Oh, this is written in German, is it?

RAHUL: Yeah, it says they’re not allowed, I think. And they have it against the Jewish.

LISA: What’s this sign here? (pointing)

GIRL: Star of David.

LISA: That’s the Star of David.

LISA: And what do you think is being said here, in this picture here?

LISA: Ok, so you’re saying over here “What’s going on?,” “I think the kids are being forced to work.” What makes you think they might be being forced rather than actually having agreed to do…?

ALEX: I mean he probably wanted to do it, but I don’t think that kid would really want to be making…I don’t think that’s the nicest job.

LISA: Yeah.

HUNG-JOON: Yeah.

ALEX: He’d probably have another job.

LISA: Now the next one’s really interesting, you’ve said “I wonder if they’re orphans.” What made you say that?

ALEX: It looks like they don’t have a home, and also him (points). It kind of looks like he lives there maybe. But, I don’t really know. But we just thought some of them looked a bit like they didn’t have a place to go, to live. I mean, like these ones (pointing)—these five—they looked like they had somewhere to go. But these three people, they looked a bit…

LISA: and what do you think you were basing that idea on? When you’re looking at them, what is it that you can see about them that maybe thinks they have a home to go to.
Alex & HUNG-JOON: They have clothes.

LISA: You’ve talked about the background that you see, the rubbish everywhere, a child asking for something, a lady on her own with her baby, wearing dirty clothes. And over here (pointing to “I wonder” column) you’ve said: “I wonder if they are poor.” “I wonder if there’s been a war.” “I wonder if that’s why the walls have got broken.” “I wonder if he’s a beggar because he has a small bucket.” “I wonder if that’s her job, but she doesn’t get much money.” This is the little girl cleaning the rubbish?

ANDRE: Yeah. We didn’t have enough space…

LISA: Ok, you’ve done a really good job of looking at those pictures. I can see you’ve really tried to find an explanation for what’s going on. And I really like the way that you used what you already know, things that you’ve already seen

LISA: What we’re going to do, is you’re going to come with your table and your photograph, …Come and sit up at the board. And we’re going to see what conclusions we can draw about the pictures,

LISA: Hung-joon and Alex, can you tell us, quite simply, what was the big idea that you got from looking at these pictures? What were the things that you were noticing and thinking might be going on.

ALEX: Quite a lot of slavery

LISA: I’m going to pull you back a little bit, Alex, and ask you, what was it that were you seeing in all of the pictures, then. What were you seeing before you got to the idea of slavery. What was it you were actually seeing?

HUNG-JOON: We saw all of the children working, and we wondered if they were forced to work.

LISA: Okay. And why were some of the reasons that you thought that maybe they were being forced to work rather than just doing it quite happily.

ALEX: Because some of the jobs that the people had, like the one on the top in the middle, there are two children and they have bags on their backs, and we thought they were maybe carrying garbage. And they were being forced to do that.

HUNG-JOON: Their faces are all very serious.

STUDENTS: The one on the bottom, carrying the bricks.
LISA: Drewf? (calling on student will hand raised)

DREWF: I’m sure that they don’t want to work, and they would much rather go to school. So, I wonder if they’re being driven by the extreme poverty.

T & students: yes.

DREWF: And maybe their parents are making them work.

T & students: yes.

LISA: Now look, everybody, you’ve all done a really good job on each of your different pictures, and we’ll share the others. And the idea of this is that then we’ll be able to look at the connections between these different photographs and what’s going on in different children’s lives. And be able to draw a big conclusion about the rights of the child.

LISA: I’ve used this routine several times during the year already. But what I was delighted to see was it was becoming easier for them to do it. They were not getting distracted and forming conclusions too quickly, they were really looking carefully and focusing

And I think that the routine—although it’s getting at thinking—it’s also a social skill, it’s developing that social interaction—that ability to listen to each other and to think about what somebody else is saying.

And so, the thinking that happens in the classroom becomes more exciting because they’re starting to build explanations and pictures, and they help each other to understand the situation better.
DEFINING THINKING ROUTINES

• **Tools** used over and over again in the classroom, that support specific thinking moves such as,
  
  • Making connections
  • Describing what’s there
  • Building explanations
  • Considering different viewpoints and perspectives
  • Capturing the heart and forming conclusions
  • Reasoning with evidence

• **Structures**, through which students collectively as well as individually initiate, explore, discuss, document, and manage their thinking. These structures are:
  
  • Explicit: They have names to identify them
  • Instrumental: They are goal directed and purposeful
  • A few steps: Easy to learn, and easy to remember
  • Individual as well as group practices
  • Useful across a variety of contexts
  • Help to reveal students’ thinking and make more visible

• **Patterns of behavior** adopted to help one use the mind to form thoughts, reason, or reflect. We see these patterns emerging as the routines:
  
  • Are used over and over.
  • Become engrained in us both teachers and students.
  • Flexibility emerges.

From Ritchhart et al, 2006
The UNDERSTANDING Map

- **Consider Different Viewpoints**
  What's another angle on this?

- **Reason With Evidence**
  Why do you think so?

- **Wondering**
  What are you curious about here?

- **Describe What's There**
  What do you see and notice?

- **Build Explanations**
  What's really going on here?

- **Uncovering Complexity**
  What lies beneath the surface of this?

- **Make Connections**
  How does this fit what you already know?

- **Capture the Heart & Form Conclusions**
  What's at the core or centre of this?

Sourced from: The Cultures of Thinking project at Project Zero, Harvard Graduate School of Education.
Understanding Map – ‘Peeling the Fruit’

**Core**
Capture the Heart & Form Conclusions
What’s at the core or center of this?

**Substance**
Build Explanations
What’s really going on here?

**Substance**
Make Connections
How does this fit?

**Substance**
Consider Different Viewpoints
What’s another angle on this?

**Skin**
Describe
What’s There
What do you see and notice?

**Throughout:**
Reason with Evidence
What makes you say that?

**Getting Under the Skin Mysteries**
What puzzles and questions come up?
Understanding Map
‘Peeling the Fruit’ – A Map for Tracking and Guiding Understanding

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.

Purpose: Why use this map?
We often want to develop learners’ 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.

Application: When and where can I use this map?
Whenever there’s a topic that calls for a broad and rich understanding and learners have enough time to look at it in different ways – anything from a single long lesson to several lessons or a unit. You can use it with students collectively, to help them maintain a bird’s eye view of progress through a topic and to make with them good choices about what to do next. You can use it yourself, to plan topics and to track progress. You can also give copies to students for their individual self-management in pursuing a general class topic or individual projects.

Launch: What are some tips for starting and using this thinking map?
Explain that the map is for tracking and guiding the exploration of the topic. Explain the metaphor briefly. Invite learners to help chart progress by using the map.

You can create a giant version of the map to put on the wall of a classroom (see diagram below), or just put labels up for the categories if it’s easier to organize on the wall, or personalize the process in some other way. If you’re tracking two or three topics at the same time or multiple groups you might: have two or three wall maps, color code paths on a single map, give learners page-size copies to track their own progress, or invent something else. Whatever works! The main idea is to make visible the developing understanding to mark progress and choose next steps.

It usually makes sense to start with the ‘skin’ and go to ‘getting under the skin’ with mysteries and then on from there to ‘substance’ and toward the ‘core’. You need not use all of the ‘substance’ approaches – whatever fits – and there’s no fixed order. You can go back to something and add at any time of course!
# Thinking Routines Matrix

from the upcoming book *Making Thinking Visible* by Ritchhart, Morrison & Church (Spring 2011)

<table>
<thead>
<tr>
<th>Routine</th>
<th>Key Thinking Moves</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Routines for INTRODUCING &amp; EXPLORING IDEAS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>See-Think-Wonder</td>
<td>Description, Interpretation &amp; Wondering</td>
<td>Good with ambiguous or complex visual stimuli</td>
</tr>
<tr>
<td>Zoom In</td>
<td>Description, Inference, &amp; Interpretation</td>
<td>Variation of STW involving using only portions of an image</td>
</tr>
<tr>
<td>Think-Puzzle-Explore</td>
<td>Activating prior knowledge, wondering, planning</td>
<td>Good at the beginning of a unit to direct personal or group inquiry and uncover current understandings as well as misconceptions</td>
</tr>
<tr>
<td>Chalk Talk</td>
<td>Uncovers prior knowledge and ideas, questioning</td>
<td>Open-ended discussion on paper. Ensures all voices are heard, gives thinking time.</td>
</tr>
<tr>
<td>321 Bridge</td>
<td>Activates prior knowledge, questioning, distilling, &amp; connection making through metaphors</td>
<td>Works well when students have prior knowledge but instruction will move it in a new direction. Can be done over extended time like the course of a unit.</td>
</tr>
<tr>
<td>Compass Points</td>
<td>Decision making and planning, uncovers personal reactions</td>
<td>Solicits the group’s ideas and reactions to a proposal, plan or possible decision.</td>
</tr>
<tr>
<td>Explanation Game</td>
<td>Observing details and building explanations</td>
<td>Variations of STW that focuses on identifying parts and explaining them in order to build up an understanding of the whole from its parts and their purposes</td>
</tr>
<tr>
<td><strong>Routines for SYNTHESIZING &amp; ORGANIZING IDEAS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headlines</td>
<td>Summarizing, Capturing the heart</td>
<td>Quick summaries of the big ideas or what stands out</td>
</tr>
<tr>
<td>CSI: Color, Symbol, Image</td>
<td>Capturing the heart through metaphors</td>
<td>Non-verbal routine that forces visual connections</td>
</tr>
<tr>
<td>Generate-Sort-Connect-Elaborate: Concept Maps</td>
<td>Uncovering and organizing prior knowledge to identify connections</td>
<td>Highlights the thinking steps of making an effective concept map that both organizes and reveals one’s thinking</td>
</tr>
<tr>
<td>Connect-Extend-Challenge</td>
<td>Connection making, identify new ideas, raising questions</td>
<td>Key synthesis moves for dealing with new information in whatever form it might be presented: books, lecture, movie, etc.</td>
</tr>
<tr>
<td>The 4 C’s</td>
<td>Connection making, identifying key concept, raising questions, and considering implications</td>
<td>A text-based routine that helps identifies key points of complex text for discussion. Demands a rich text or book.</td>
</tr>
<tr>
<td>Micro Lab</td>
<td>A protocol for focused discussion</td>
<td>Can be combined with other routines and used to prompt reflection and discussion</td>
</tr>
<tr>
<td>I used to think</td>
<td>Reflection and metacognition</td>
<td>Used to help learners reflect on how their thinking has shifted and changed over time.</td>
</tr>
<tr>
<td><strong>Routines for DIGGING DEEPER INTO IDEAS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What makes you say that?</td>
<td>Reasoning with evidence</td>
<td>A question that teachers can weave into discussion to push students to give evidence for their assertions.</td>
</tr>
<tr>
<td>Circle Viewpoints</td>
<td>Perspective taking</td>
<td>Identification of perspectives around an issue or problem.</td>
</tr>
<tr>
<td>Step Inside</td>
<td>Perspective taking</td>
<td>Stepping into a position and talking or writing from that perspective to gain a deeper understanding of it.</td>
</tr>
<tr>
<td>Red Light, Yellow Light</td>
<td>Monitoring, identification of bias, raising questions</td>
<td>Used to identify possible errors in reasoning, over reaching by authors, or areas that need to be questioned.</td>
</tr>
<tr>
<td>Claim Support Question</td>
<td>Identifying generalizations and theories, reasoning with evidence, counter arguments</td>
<td>Can be used with text or as a basic structure for mathematical and scientific thinking.</td>
</tr>
<tr>
<td>Tug of War</td>
<td>Perspective taking, reasoning, identifying complexities</td>
<td>Identifying and building both sides of an argument or tension/dilemma</td>
</tr>
<tr>
<td>Word-Phrase-Sentence</td>
<td>Summarizing and distilling</td>
<td>Text-based protocol aimed at eliciting what a reader found important or worthwhile. Used with discussion to look at themes and implications.</td>
</tr>
</tbody>
</table>
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 of 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 from the text 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.
Leaving Identity Issues to Other Folks

As heard on NPR's All Things Considered, July 11, 2005.

Standing in the rain waiting to go up the steps to the balcony of the Grand Theater I gripped Mama's hand and watched the little blond kids enter the lobby downstairs. It was the '50s, I was "colored" and this is what I believed: My place was in the balcony of the downtown theater, the back of the bus and the back steps of the White Dove Barbecue Emporium. When I asked Mama why this was so, she smiled and said, "Baby, people do what they do. What you got to do is be the best that you can be."

We got our first television in the '60s and it brought into my living room the German shepherds, snapping at a young girl's heels. It showed children just like me going to school passing through throngs of screaming, angry folks, chanting words I wasn't allowed to say. I could no longer be "colored." We were Negroes now, marching in the streets for our freedom -- at least, that's what the preacher said. I believed that, even though I was scared, I had to be brave and stand up for my rights.

In the '70s: beat-up jeans, hair like a nappy halo and my clenched fist raised, I stood on the downtown street shouting. Angry young black men in sleek black leather jackets and berets had sent out a call from the distant shores of Oakland, Calif. No more non-violence or standing on the front lines quietly while we were being beaten. Simple courtesies like "please" and "thank you" were over. It was official: Huey, H. Rap, and Eldridge said so. I believed in being black and angry.

By the '80s, fertility gods lined the walls and crammed the display cases of all my friends' houses. People who'd never been closer to Africa than a Tarzan movie were speaking broken Swahili. The '80s made us hyphenated: African-American. Swaddled in elaborately woven costumes of flowing design, bright colors and rich gold I was a pseudo-African, who'd never seen Africa. "It's your heritage," is what everybody said. Now, I believed in the elusive promise of the Motherland.

In the '90s, I was a woman whose skin happened to be brown, chasing the American dream. Everybody said that the dream culminated in stuff. I believed in spending days shopping. Debt? I didn't care about no stinkin' debt. It was the '90s. My 401(k) was in the mid-six figures and I believed in American Express. Then came the crash, and American Express didn't believe in me nearly as much as I believed in it.

Now, it's a brand new millennium and the bling-bling, video generation ain't about me. Everything changed when I turned 50. Along with the wrinkles, softened muscles and weak eyesight came the confidence that allows me to stick to a very small list of beliefs. I'll leave those identity issues to other folks. I believe that I'm free to be whoever I choose to be. I believe in being a good friend, lover and parent so that I can have good friends, lovers and children. I believe in being a woman -- the best that I can be, like my Mama said.

Phyllis Allen has sold yellow pages advertising for 15 years. She spends about half her working hours in her car covering her territory around Dallas and Fort Worth, Texas. When she retires, she hopes to get rid of her car and telephone books and pursue her first passion, writing.

www.thisibelieve.org
Generate, Sort, Connect, Elaborate: Concept Maps

A routine for organizing one’s understanding of a topic through concept mapping

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 center 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.

**Purpose:** What kind of thinking does this routine encourage?  
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 students’ mental models of a topic in a non-linear way.

**Application:** When and where can it be used?  
This routine can be useful as a pre-assessment before beginning of a unit of study if students already have a lot of background information about the topic. Conversely, it can also be useful as a post or ongoing assessment to see what students are remembering and how they are connecting ideas. Individual maps can be used as the basis for construction of a whole classroom map. Maps can also be done progressively, with students adding to their maps each week of the unit.

**Launch? What are some tips for starting and using this routine?**  
Depending on how much familiarity students have with concept maps, you may need to demonstrate making a concept map using this routine with the whole class. However, if students are relatively familiar with the idea of concept maps, you can launch right into the routine explaining that students will be making concept maps but in a structured way. Give time for students to complete each step of the routine before moving on to the next step. It isn’t necessary that students generate an exhaustive list of all their ideas initially, but make sure they have time to generate a rich and varied list before moving on. Tell students that at any point they can add new ideas to their list and incorporate them into their map. If you are adding to a map over time, you might want to have students use a different color pencil each time they make additions. Explaining and discussing maps with partners helps students to consolidate their thinking and gain other perspectives.
### CLAIM / SUPPORT / QUESTION

* A reasoning routine

1. **Make a claim** about the topic  
   → **Claim:** An explanation or interpretation of some aspect of the topic.

2. **Identify support** for your claim  
   → **Support:** Things you see, feel, and know that support your claim.

3. **Ask a question** related to your claim  
   → **Question:** What’s left hanging? What isn’t explained? What new reasons does your claim raise?

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**Purpose:** What kind of thinking does this routine encourage?  
The routine helps students develop thoughtful interpretations by encouraging them to reason with evidence. Students learn to identify truth claims and explore strategies for uncovering truth.

**Application:** When and where can I use it?  
Use *Claim Support Question* with topics in the curriculum that invite explanation or are open to interpretation.

**Launch:** What are some tips for starting and using this routine?  
The routine can work well for individuals, in small groups and for whole group discussions. Begin by modeling the routine: Identify a claim and explore support and questions in a whole group discussion. On the board make one column for SUPPORT and one column for QUESTIONS. Ask the class for evidence that either supports a claim, or questions the claim and write it in the appropriate column. Take turns using the routine so that each student makes a claim, identifies support and asks a question.

Following each person’s report, take a moment as a group to discuss the topic in relation to the claim before moving on to the next person. Be patient as students take a few moments to think. You may need to probe further by asking: What are some other questions you might want to ask about this statement? or Can you think of reasons why this may be true? Encourage friendly disagreement – once a student comes up with an alternative perspective about a claim, encourage other students to follow. The questions can challenge the plausibility of the claim, and often lead to a deeper understanding of the reasoning process. Let students know it is fine to disagree with one another’s reasons and encourage them to come up with creative suggestions for support and questioning.

After everyone has had a turn, reflect on the activity. What new thoughts do students have about the topic?
SPROUTS

The game of Sprouts starts with three dots on a piece of paper (though you can play four or five dot sprouts games as well later on). The rules are as follows:

- The players take turns moving.
- A move has two parts: drawing a line and making a new dot.
- The line must go from a dot to a dot so that it does not cross another line and so that once the line is drawn, no dot has more than three lines coming out of it. You might want to circle used-up dots.
- The new dot goes on the line the player just drew (this means it starts with two lines coming out of it).
- The winner is the last player to move.
- A line can go from a dot to itself as long as you don't break the "three lines" rule.
**CONNECT / EXTEND / CHALLENGE**  
*A routine for connecting new ideas to prior knowledge*

| **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? |

**Purpose: What kind of thinking does this routine encourage?**
The routine helps students make connections between new ideas and prior knowledge. It also encourages them to take stock of ongoing questions, puzzles and difficulties as they reflect on what they are learning.

**Application: When and where can it be used?**
The natural place to use the Connect-Extend-Challenge routine is after students have learned something new. It doesn’t matter how much they have learned – it can be a lesson’s worth, or a unit’s worth. The routine is broadly applicable: Use it after students have explored a work of art, or anything else in the curriculum. Try it as a reflection during a lesson, after a longer project, or when completing a unit of study. Try using it after another routine!

**Launch: What are some tips for starting and using this routine?**
This routine works well with the whole class, in small groups or individually. Keep a visible record of students’ ideas. If you are working in a group, ask students to share some of their thoughts and collect a list of ideas in each of the three categories. Or have students write their individual responses on post-it notes and add them to a class chart. Keep students’ visible thinking alive over time: Continually add new ideas to the lists and revisit the ideas and questions on the chart as students’ understanding around a topic develops.
10 Suggestions for Getting Started with Thinking Routines in Early Childhood Classrooms

1. Have great expectations. Young children surprise us with their connections, ideas, and the multiple languages they use to make their thinking visible.

2. Do the routines pretty much as they are initially without trying to change them. At the beginning it may feel uncomfortable but wait to see what you learn from using them as they are before adapting them.

3. Match the routines with provocative topics and projects that are significant to the children. The routines aren’t the content; they are vehicles for exploring the content.

4. Model the language for younger and less language able students. Build up the language over time and by modeling your own thinking. Be part of the routine with the assistant or someone else in the class to facilitate the modeling.

5. Use the language of thinking as often as you can. Name children’s actions: “you made a connection” or “I find your point of view very interesting,” and so on.

6. Document students’ thinking. It sends a clear message of how much we value students, their thoughts, and work; and it allows revisiting, reflecting on and re-enforcing the topics later.

7. Give yourself permission to be learner and try the routines in a variety of ways to get a feel for them and then try to incorporate them in their daily routines and language.

8. Understand this is a process that takes time. Be patient, consistent and take some risks. Just by trying you will be making a difference already.

9. Focus on the thinking you want to promote and why it is important. Use it as a tool not an activity. This will help you attend to students’ thinking as it emerges because you will know what you are looking for.

10. Include parents in the process, they are your allies and it is amazing how they become advocates for the use of thinking language at home.
COMPASS POINTS
A routine for examining propositions

1. E = Excited
   What excites you about this idea or proposition? What’s the upside?

2. W = Worrisome
   What do you find worrisome about this idea or proposition? What’s the downside?

3. 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?

4. 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?

Purpose: Why use this routine?
To help students flesh out an idea or proposition and eventually evaluate it.

Application: When and where can I use this routine?
This routine works well to explore various sides and facets of a proposition or idea prior to taking a stand or expressing an opinion on it. For instance, the school may be considering the idea of a dress code, a teacher might present the class with idea of altering the room arrangement, a character in a book might be confronted with making a choice, a politician might be putting forth a new way of structuring taxes, and so on.

Launch: What are some tips for starting and using this routine?
The routine needs to be modeled with the whole group initially with responses recorded for the entire class to see. This enables students to build on each other’s ideas. You might record responses using the directions of a compass to provide a visual anchor. That is, draw a compass in the center of the board and then record responses corresponding the appropriate direction: E, W, N, or S. It is generally easiest for students to begin with what is exciting or positive about the idea or proposition and then move to worrisome and need to know. Students might be asked to write down their individual stance or suggestion for moving forward after the initial group discussion.
You can also ask students to make an initial judgment or evaluation of the idea or proposition before doing the compass points and then ask them how their thinking has changed after discussion using the compass points routine.
10 Ideas to Start Building a Culture of Thinking at Your School

✓ **Have a conversation using the Chalk Talk routine.** There are lots of possible topics, but one option is to label 4 sheets of chart paper with: Engagement, Independence, Understanding, and Thinking. Have teachers engage in conversation about these topics silently in writing. They can define the terms, say why they think they are important, share what they have learned is effective practice, and most importantly raise questions and issues about how to move these ideas forward in students’ lives. After the silent period identify key ideas worth returning to and thinking more about. Some other good topics for Chalk Talk discussions are: What is good thinking and how do we promote it? How can we know our students are becoming 21st century learners and thinkers? What do we want the students we teach to be like as adults? If we couldn’t rely on tests, how could we know our students are learning?

✓ **Do a ghost walk at your school.** Ask teachers to generate a list of what they would expect to see at a school that had thinking as its centerpiece and called itself a culture of thinking. After you have generated the list, send teams off to look for signs of a culture of thinking within the school. Where does it show up? Where is it missing that you might have expected? Are there any mixed messages? What might we do collectively and independently to show parents and students that this school really values thinking?

✓ **Engage in an article or book study.** There are several options for books or articles related to cultures of thinking: *Making Thinking Visible, Intellectual Character, Smart Schools, Intellectual Character, Making Learning Whole*, and *The Global Achievement Gap* are some. Teacher written articles from the [www.StoriesOfLearning.com](http://www.StoriesOfLearning.com) website can be downloaded. Research articles can be downloaded from [www.RonRitchhart.com](http://www.RonRitchhart.com). You might want to use a different protocol to structure the discussion for each session. These can be found at [http://www.nsrfharmony.org/protocol](http://www.nsrfharmony.org/protocol).

✓ **Identify, “What thinking lives in my classroom?”** Ask each teacher to identify the kind of thinking he/she is trying to promote in his/her classroom (this can be taken from the understanding map or from the Deluge of Dispositions sheet). Ask each teacher to come to the next faculty meeting with some evidence (anecdote, story, student work, narrative) that demonstrates how that thinking lives in his/her classroom and has a prominent place there. Extend this by surveying students about what thinking they think lives in that classroom.

✓ **Discuss a video.** There is a DVD included with *Making Thinking Visible* and a DVD on thinking routines is also available. There are lots of videos to be found on the web as well and from various organizations such as Edutopia. In watching and discussing videos it is important to have a purpose/focus and a protocol/structure for the discussion so that the session doesn’t become about the teacher or the activity. You can focus viewing by looking for the types of thinking on display, the level of engagement and independence exhibited by students, the way the cultural forces are shaping the learning, the underlying messages about what learning is, the kinds of questions the teacher is asking, and so on. As one gets better at looking for learning and thinking, it raises your awareness of it and helps you notice it more in your own classroom.

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✓ Collect some data. Find out what kind of thinking is going on in your school currently. Survey students on the type of thinking they feel they are doing in their classes. Collect assignments from all classes on a given day and analyze them using the Understanding Map and the Slice protocol. Observe in classroom and pay attention to what students are actually doing. Where and when do you see them thinking? What kind of mental activity are they actually engaged in? After you have a snap shot of where the school is at, identify the areas you want to work on going forward.

✓ Try a Thinking Routine school wide. As a school, pick one thinking routine to try out. Collect samples of student work from the routine and look across grade levels and subject areas to see what it can tell you about the development of students’ thinking. Did older students produce more thoughtful work or did the younger students surprise you? What do you notice about the role the content/stimulus plays in producing deeper, richer thinking?

✓ Convene a group to use the Looking At Student Thinking (LAST) Protocol. A great way to get teachers more attuned to student thinking is to examine student work and actually look for evidence of thinking. Convene a group of interested teachers (6-8 is good) to engage in this process on a regular basis (note, it generally takes about 3 times through before people really get good at using a protocol). As a facilitator, remember that this isn’t a protocol to assess performance, nor is it about helping a teacher plan, the heart of the protocol is about looking for thinking and raising questions and implications for us all.

✓ Institute a “What if…Week:” Sometimes teachers are reluctant to take on new ideas for fear trying something new will harm students’ preparation for important tests. Other times there is just a reluctance to try something new because it will feel uncomfortable. You can send a message to teachers about the importance of experimentation in teaching and learning about the effects on students by designating a “What if… Week” in which everyone agrees to try something new, not just for day, but for a whole week that they feel has the potential to foster students’ engagement, independence, understanding, or thinking. This point is important. It isn’t just trying something new, it is having a hunch that this new thing might have a specific benefit and then actually testing it out. For example, letting students come up with their own homework assignments to nurture independence and engagement or trying to ask more facilitative questions to uncover students’ thinking. Everyone then tries their ideas out on the same assigned week: At the end of the week everyone reports back on what they learned. Some schools have extended this idea by instituting a “Risky June” at the end of the year.

✓ Celebrate thinking. Start each faculty meeting by sharing examples from classrooms of students engaged in good thinking. The kind of thinking behavior that makes a teacher stand up and take notice because of its depth, richness, or insightful nature. Identify the type of thinking. Hold a gallery walk of student work that displays the documentation of student thinking and learning. Invite students, parents, and teachers from other schools to view and comment on the work.