What is systems thinking?

Systems thinking offers us a powerful new perspective, a specialized language, a series of Habits and a set of tools.
Your system...any system is perfectly designed to produce the results you are obtaining.

(Adapted from Carr, 2008)
The Big Picture

Seeks to understand the “big picture”

- Events
  - What happened?
  - What has been happening?
  - What are the trends?
  - What changes have occurred?
  - What has influenced the patterns? (e.g., policies, laws, physical structures)
- Patterns of Behavior
  - What are the relationships among the parts?
- Structure of the System
  - What assumptions, beliefs, and values do people hold about the system?
- Mental Models
  - Ladder of inference
  - Connection circles
  - Causal loops
- Deeper Learning
- What is Seen
- What is Unseen

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Adapted from Innovation Associates, Inc.
Reading, Reflection & Making Connections
pp 32-33
Considers Mental Models

Mental models are deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action.

Have I ever?
1. Each person takes a *Have I ever...* question from the envelope. (You can always pick again if you don’t like your question.)

2. When it is your turn, read your question with a “poker face” to your small group.

3. Members of your group make a quick judgement about you:

   - Answer is YES!
   - Answer is NO!

4. Reader provides the correct answer and asks, *What are you each paying attention to that leads you to your response about me?*
Remember Four Corners?

What role do your mental models play as you think about your preferences?
**Practice the Habit**

**Think of a time when you shared your mental model about something you care about.**
What did you learn about yourself when you shared it?

How can you invite others to share their mental models?

How do you respond when mental models differ?

**Think about the last meeting you attended or facilitated.** It could be a work-related meeting or a community-based gathering. What was your impression of the meeting?

How did people hear and interpret what was being said?

How did the facilitator provide participants opportunities to voice their interpretations?

How might you interpret silence?
“You never really know a man until you understand things from his point of view, until you climb into his skin and walk around in it.”

Harper Lee, *To Kill a Mockingbird*
I notice certain information & experiences.

Information & experiences around me
I notice certain information & experiences.

I add my own meaning. (cultural & personal)
I develop beliefs based on the meaning I add.

I add my own meaning. (cultural & personal)

I notice certain information & experiences.

Information & experiences around me

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I notice certain information & experiences.

I add my own meaning. (cultural & personal)

I develop beliefs based on the meaning I add.

I do something based on my beliefs.
I notice certain information & experiences.

I add my own meaning. (cultural & personal)

I develop beliefs based on the meaning I add.

I do something based on my beliefs.

My beliefs affect what I choose to notice in the future.
Ladder of Inference

Practice Scenario #1:
Sitting in an important meeting with a distracted colleague
I notice certain information & experiences around me.

I add my own meaning. (cultural & personal)

I develop beliefs based on the meaning I add.

I do something because of my beliefs.

Things I noticed about my colleague:

- Nonstop use of Smart Phone
- Constant clicking noise
- No eye contact with speaker
- Colleague leaves and returns to the room throughout the meeting 3 different times
I notice certain information & experiences.

I add my own meaning. (cultural & personal)

I develop beliefs based on the meaning I add.

I do something because of my beliefs.

Information & experiences around me

This behavior was so annoying and distracting. It was hard for me to pay attention. What would be so important?
I notice certain information & experiences.

I add my own meaning. (cultural & personal)

I develop beliefs based on the meaning I add.

I do something because of my beliefs.

My Mental Model:
My colleague doesn’t care about what we are talking about!
Our director (meeting facilitator) must feel disrespected!
I notice certain information & experiences.

I add my own meaning. (cultural & personal)

I develop beliefs based on the meaning I add.

I do something because of my beliefs.

Try to suspend judgment before taking action.

Could there be another side to this story?

Information & experiences around me
I notice certain information & experiences.

I add my own meaning. (cultural & personal)

I develop beliefs based on the meaning I add.

I do something because of my beliefs.

Information & experiences around me

How can I discover new information about this situation?
I notice certain information & experiences around me.

I add my own meaning. (cultural & personal)

I develop beliefs based on the meaning I add.

I do something because of my beliefs.

This situation gave us an opportunity to talk about ways people interpret the use of technology during meetings. We shared our various mental models to help increase our understanding of people’s actions.
I notice certain information & experiences.

I add my own meaning. (cultural & personal)

I develop beliefs based on the meaning I add.

I do something based on my beliefs.

My beliefs affect what I choose to notice in the future.

Information & experiences around me

Adapted from *The Fifth Discipline Fieldbook*, Last modified 5/05
Managing your Ladder of Inference

- **Reflection**
  - Try to suspend judgment
  - Become more aware of your own thinking and broaden your observations
Managing your Ladder of Inference

• **Reflection**
  – Try to suspend judgment
  – Become more aware of your own thinking and broaden your observations

**Inquiry**

– Inquire into other’s thinking and reasoning
– Ask open-ended questions that seek clarification
Managing your Ladder of Inference

- **Reflection**
  - Try to suspend judgment
  - Become more aware of your own thinking and broaden your observations

- **Inquiry**
  - Inquire into other’s thinking and reasoning
  - Ask open-ended questions that seek clarification

- **Advocacy**
  - Make your thinking and reasoning visible to others by describing what influenced your thinking and your actions
Practice Scenarios

• With a partner select a scenario
• Consider the problem
• Select relevant Habits of Systems Thinker
• Use the Ladder of Inference
  – Reflection, Inquiry and/or Advocacy
• Consider Unintended Consequences of Possible Solutions
Practice the Habit

A systems thinker looks ahead and anticipates not only the immediate results of actions, but also the effects down the road. Think about a decision you are about to make that will lead to action. Read and respond to the following questions to help you consider both expected and unintended consequences.

What are possible unintended consequences of your decision? They might involve reactions, attitudes, results or new challenges.

Identify the benefits and trade-offs of your decision. How will you minimize the impact of the trade-offs? What structures can you put into place (e.g., communication, safeguards, modified practices) to address the potential impact of trade-offs?

Will your decision involve short-term hardship to achieve long-term success? If so, what is your plan to minimize the challenges you expect to face in the short run? If not, describe the road to long-term success.

WHAT'S NEXT?

Systems thinkers carefully consider the interrelationships among key elements that influence change over time. Their full attention to the consequences of actions and the patience required when responding thoughtfully is important in the next chapter. Resisting the urge to come to a quick conclusion is a high priority for systems thinkers.
Ladder of Inference

1. Information and experiences around me
2. I notice certain information and experiences.
3. I add my own meaning. (cultural & personal)
4. I develop beliefs based on the meaning I add.
5. I do something based on my beliefs.

My beliefs affect what I choose to notice in the future.

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Adapted from The Fifth Discipline Fieldbook, Senge et al. and originally created by Chris Argyris
**Ladder of Inference as Tool for Debrief or Reflection**

**Information & Experiences:**
Based on my previous experiences what was I expecting?
What did I notice? What did I pay attention to?
How did my mental models influence what I noticed, heard and saw?
Was I aware of my perceptions / mental models?

**Personal & Cultural Perspective:**
How did I interpret this experience – what are my assumptions?
What influenced my experience of this event?
Do others share my perceptions?
What questions do I have?

**Beliefs:**
What do I believe based on my interpretation of my experience?
What information led me to develop my beliefs?
Did my beliefs affect what I noticed?
Have I any of my perceptions or beliefs changed?
What actions will I take?

**NOTES:**
Applying the Ladder of Inference to School or District Data

What actions should we take based on our conclusions?

What conclusions do I make? What beliefs do I hold based on my interpretations?

What meaning do I place on the data I select? How do I interpret this data?

What data do I choose to pay attention to? What stands out for me?

Information, data & experiences available to me

My beliefs affect what I choose to notice in the future.
What is seen

Systems Thinking helps one understand what is hard to see

Systems Thinking helps you see the system as a whole
Iceberg
Seeing What’s Below the Surface

What are some of the current mental models you see in your system?
Provide quotes or phrases to capture the different points of view.
What are some of the current mental models you see in your system? Provide quotes or phrases to capture the different points of view.
What role do mental models play in your work setting?

What are some mental models you may be holding (about the system, about others) that may be barriers to achieving your desired outcomes?
Practice the Habit

Identify a situation where you might be able to gain some clarity by changing your perspective. Apply the following questions to the situation to help you in seeking additional perspectives.

1. How does my point of view influence my understanding of the situation?

2. How might a different point of view inform my understanding of the situation?

3. Who could I approach to help me gain new perspectives on the situation?

4. If I truly understood that other person’s perspective, what would I notice about my current situation?

5. How do different points of view influence my understanding of the system?