**S.T.O.P. Systems Thinking Opens Possibilities**

for Systems Understanding and Sustainable Change

**Sample Story**

The Coffee Crunch. Having overslept, Joe grabs a cup of coffee for breakfast as he speeds out the door for work. By 10 am, his energy slumps causing him to drink another cup of coffee. At lunchtime, as coworkers leave for their daily walk, Joe rushes to the vending machine for a candy bar and soda. During his mid-afternoon meeting, Joe feels sleepy. He goes to the break room and thinking about the work he'll need to do that night, orders a large coffee. This makes him more tired for the evening but makes it hard to go to sleep and causes him to be even more tired the next morning. Poor Joe seems to be trapped in a cycle and doesn't know how to break it.

**Iceberg Model**

Joe's Example:

I woke up exhausted and need COFFEE!

Events
What happened?

Patterns
Recurring patterns of behavior

Structures
How the parts of the system are organized

Mental Models
Assumptions or worldviews

**Current State**

Inflows:
- coffee (short term)
- sleep
- exercise
- good nutrition

Outflows:
- work
- junk food
- sedentary lifestyle

To stay competitive, I need to work a lot of hours.
Coffee is how I survive.

**Behavior Over Time Graph**

**Connection Circle**

**Stock/Flow Diagram**

**Causal Loop Diagram**

Seeks to understand the big picture

Observes how elements within systems change over time, generating patterns and trends

Recognizes that a system's structure generates its behavior

Identifies the circular nature of complex cause and effect relationships

Makes meaningful connections within and between systems

Changes perspectives to increase understanding

Surfaces and tests assumptions

Habits of a Systems Thinker

Considers an issue fully and resists the urge to come to a quick conclusion

Considers how mental models affect current reality and the future

Uses understanding of system structure to identify possible leverage actions

Considers short-term, long-term and unintended consequences of actions

Pays attention to accumulations and their rates of change

Recognizes the impact of time delays when exploring cause and effect relationships

Checks results and changes actions if needed: "successive approximation"