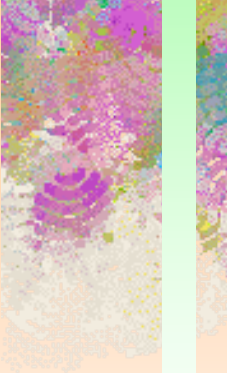


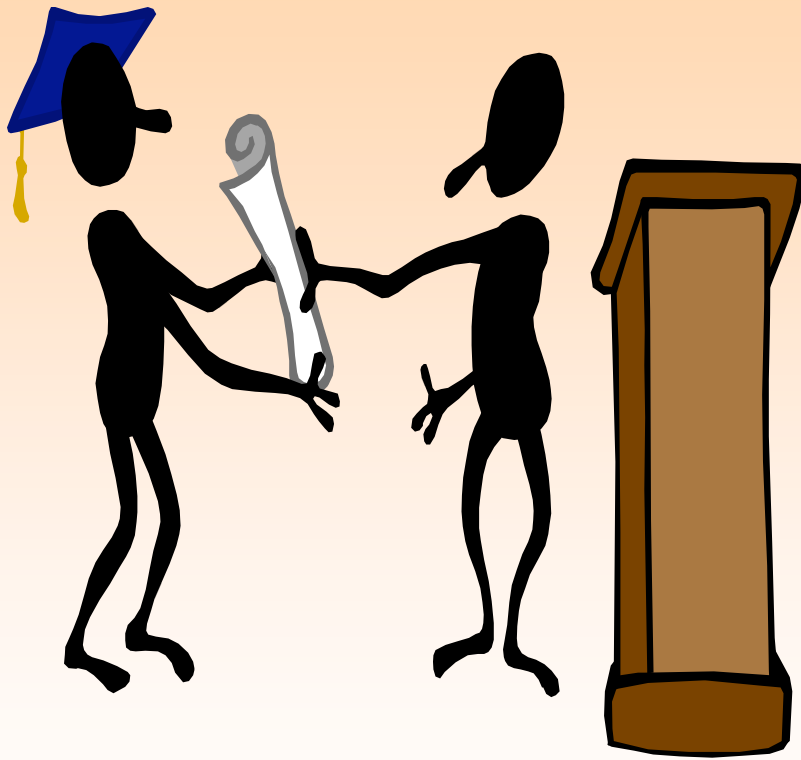


What would a Systems Thinker do?



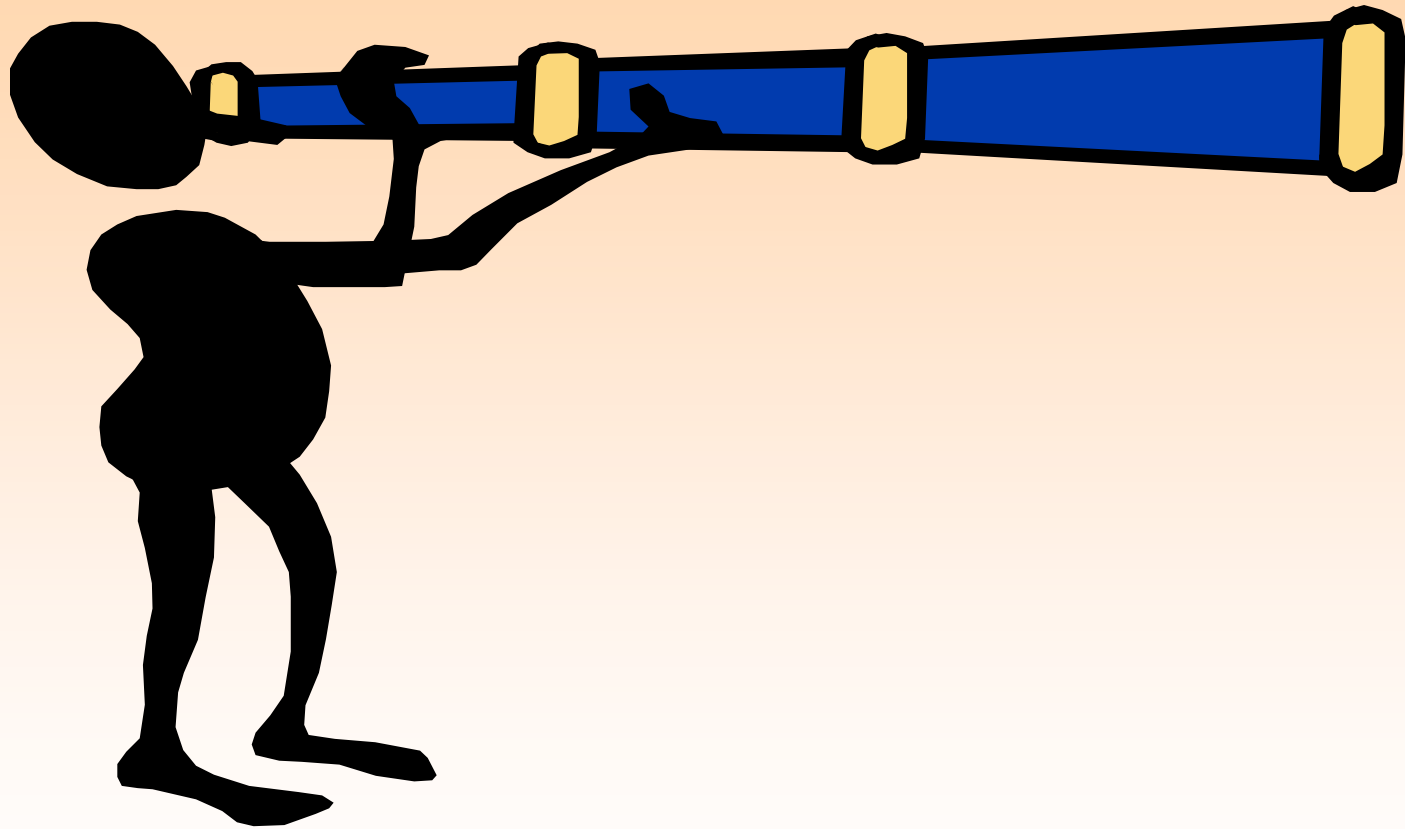
Mary Scheetz
Program Coordinator
Waters Foundation
K-12 Educational Partnership

Habits of Systems Thinking



- Based on the “Ways of a Systems Thinker, Systems Thinking Playbook, Linda Booth Sweeney and Dennis Meadows
- Developed by Waters Foundation K-12 Educational Partnership - Portland, Oregon

Seeks to understand the “big picture”

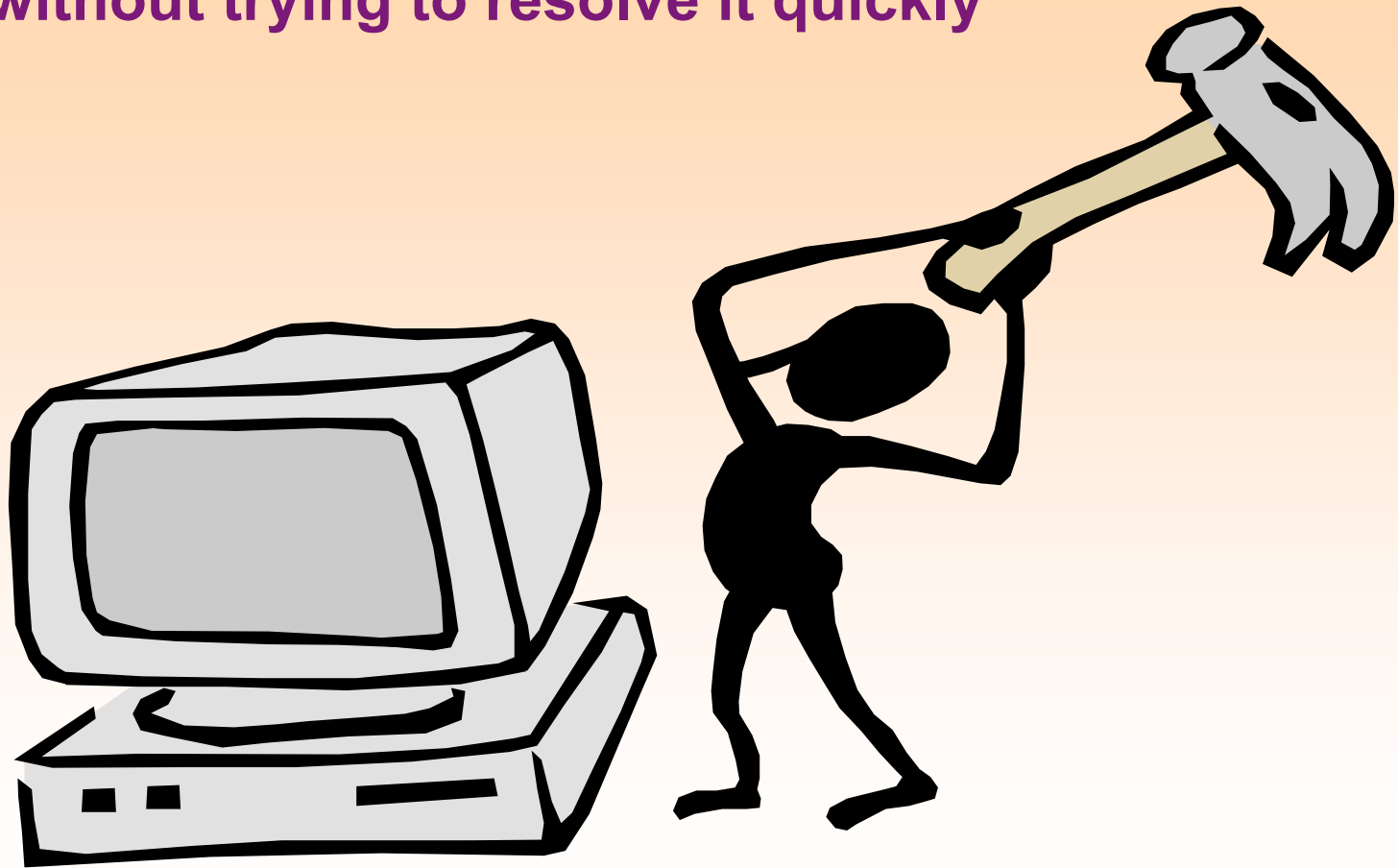




Seeks to understand the big picture

- The forest AND the trees
- Children's book example: *ZOOM*
- Other examples

**Holds the tension of paradox and controversy
without trying to resolve it quickly**

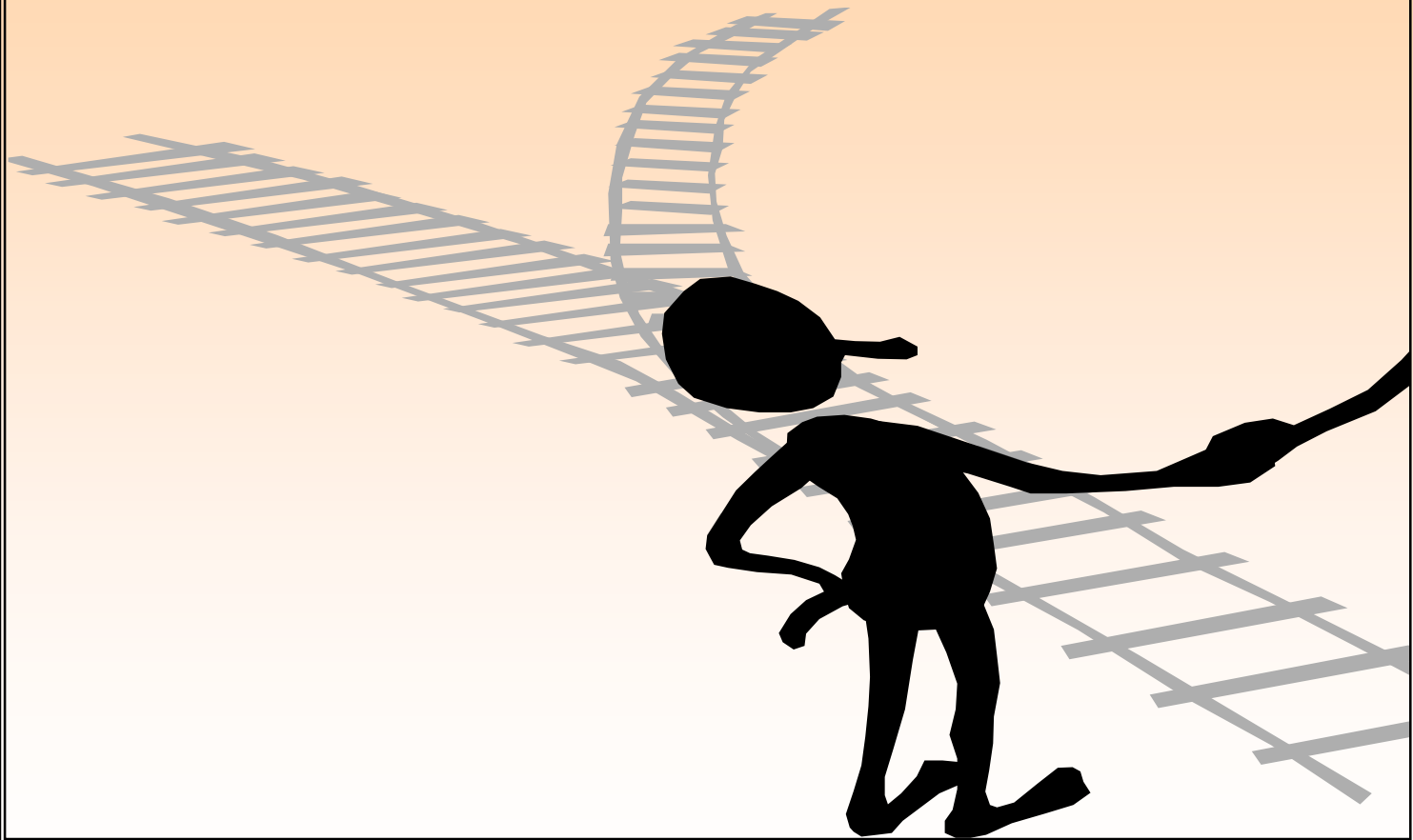




Managing impulsivity

- Don't just do something, stand there
- Children's book example: *Mrs. Frisby and the Rats of Nimh*
- Other examples

**Understands and considers how
mental models affect current reality
and the future**





The power of mental models

- Believing is seeing
- Children's book example: *Two Bad Ants*
- Other examples

Changes perspectives to increase understanding

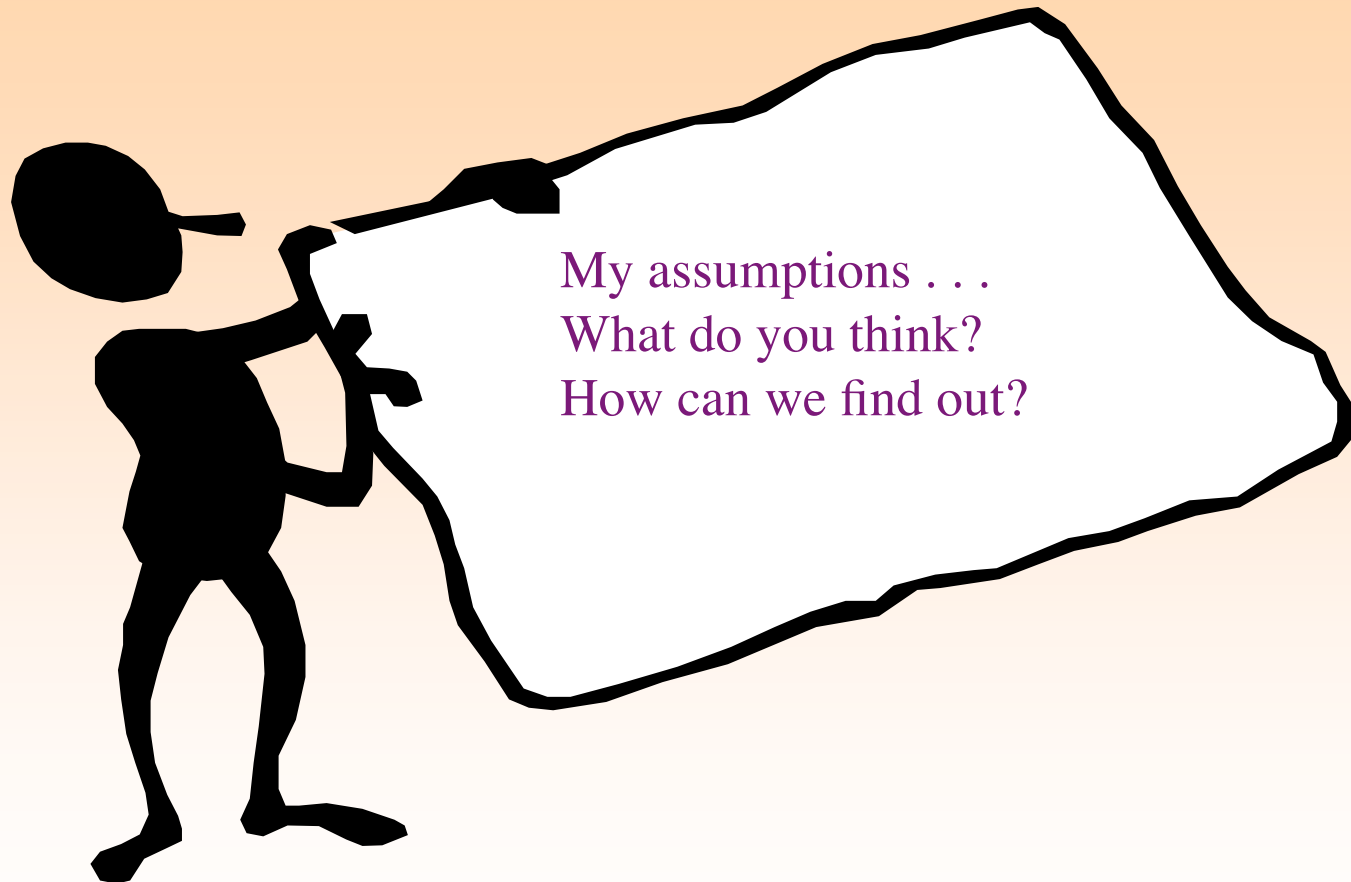




Changing perspectives

- . . . another set of lenses
- Children's book example: *The Other Side*
- Other examples

Surfaces and tests assumptions



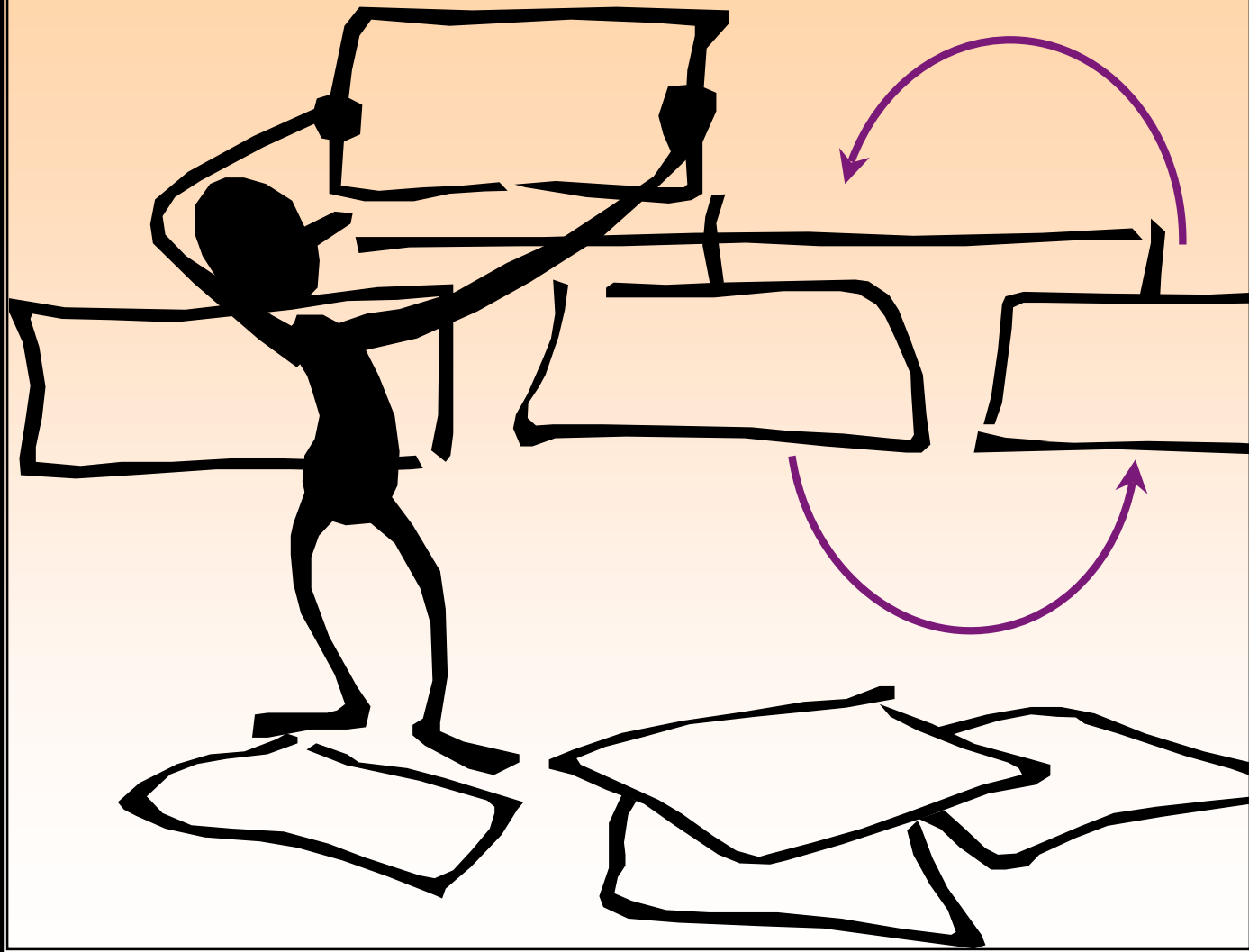
My assumptions . . .
What do you think?
How can we find out?



Surfacing and Testing Assumptions

- Making our thinking explicit
- Checking the evidence
- Children's book example: *Great Mistakes*
- Other examples

Looks for interdependencies

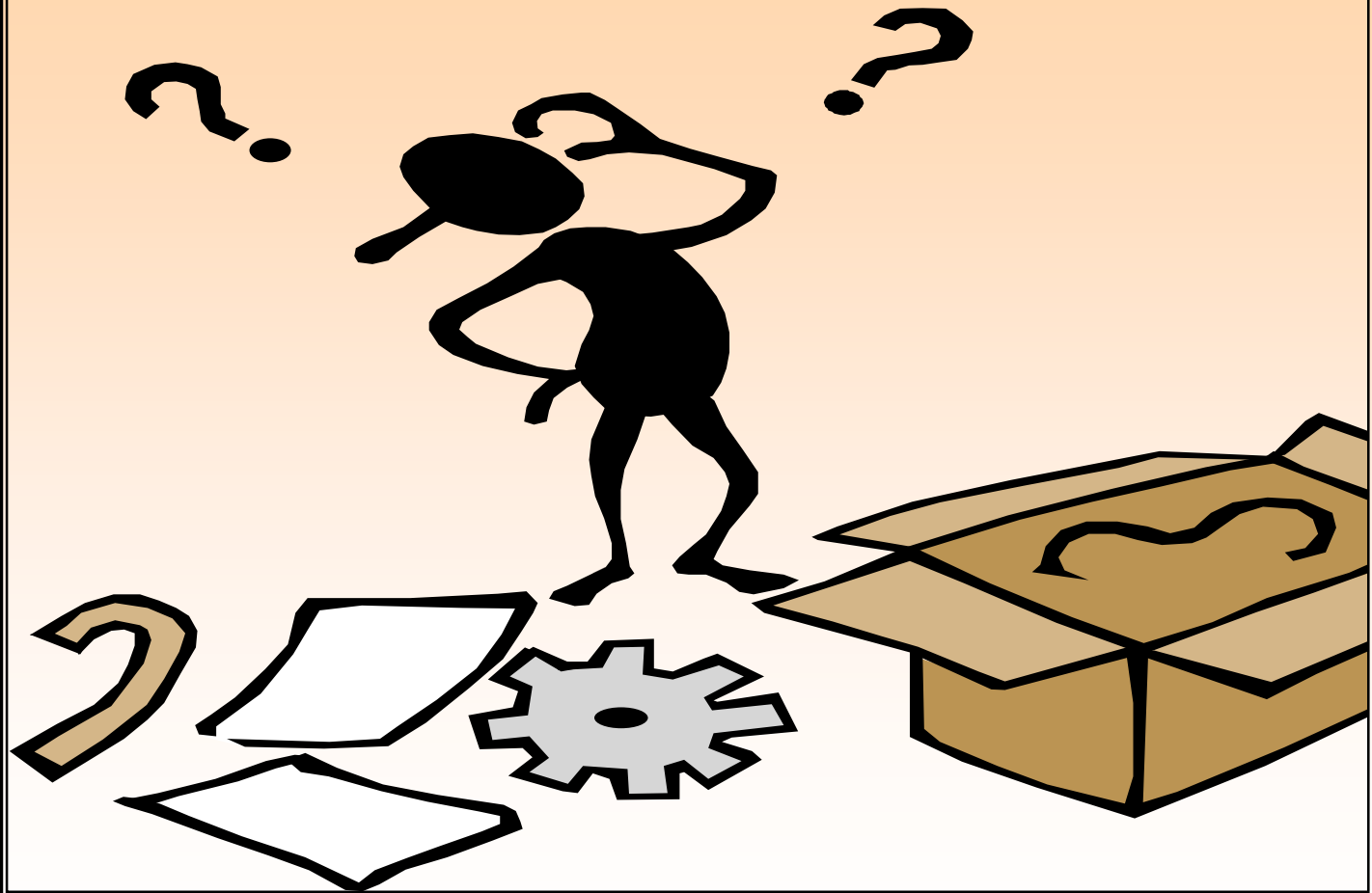




Looks for interdependencies

- Circular causality
- Children's book example: *Common Ground*
- Other examples

Identifies complex cause and effect relationships





Complex cause and effect

- Not linear, multiple causes, multiple effects, change over time
- Children's book example: *Billibonk & the Big Itch*
- Other examples

Considers both short and long term consequences of actions





Short and long term consequences

- Change over time, patterns and trends.
system dynamics
- Children's book example: *One Grain of Rice*
- Other examples

Finds where unintended consequences emerge

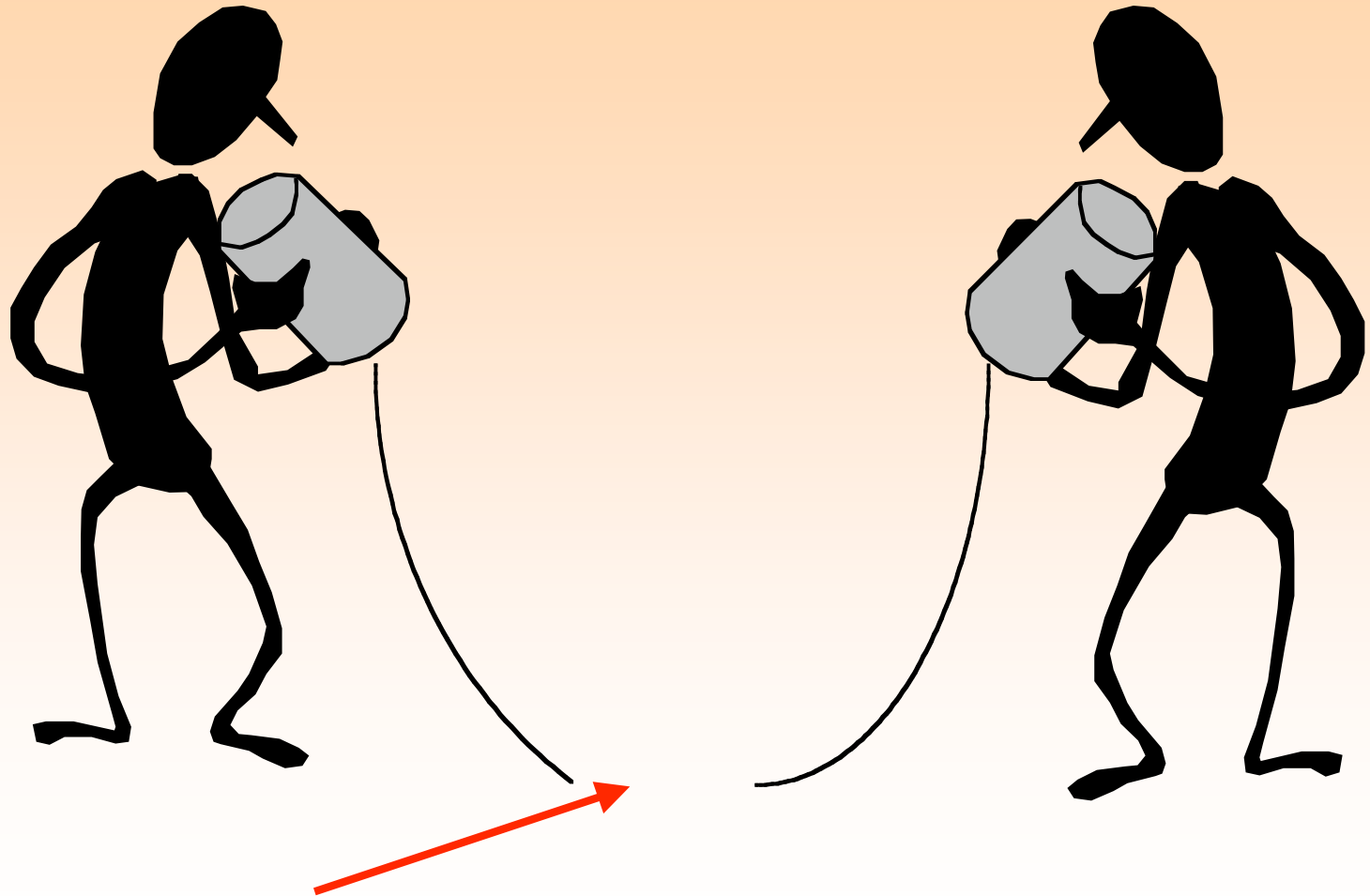




Unintended consequences

- Trade-offs
- Children's book example: *Rainbow Fish*
- Other examples

Focuses on structure, not on blame

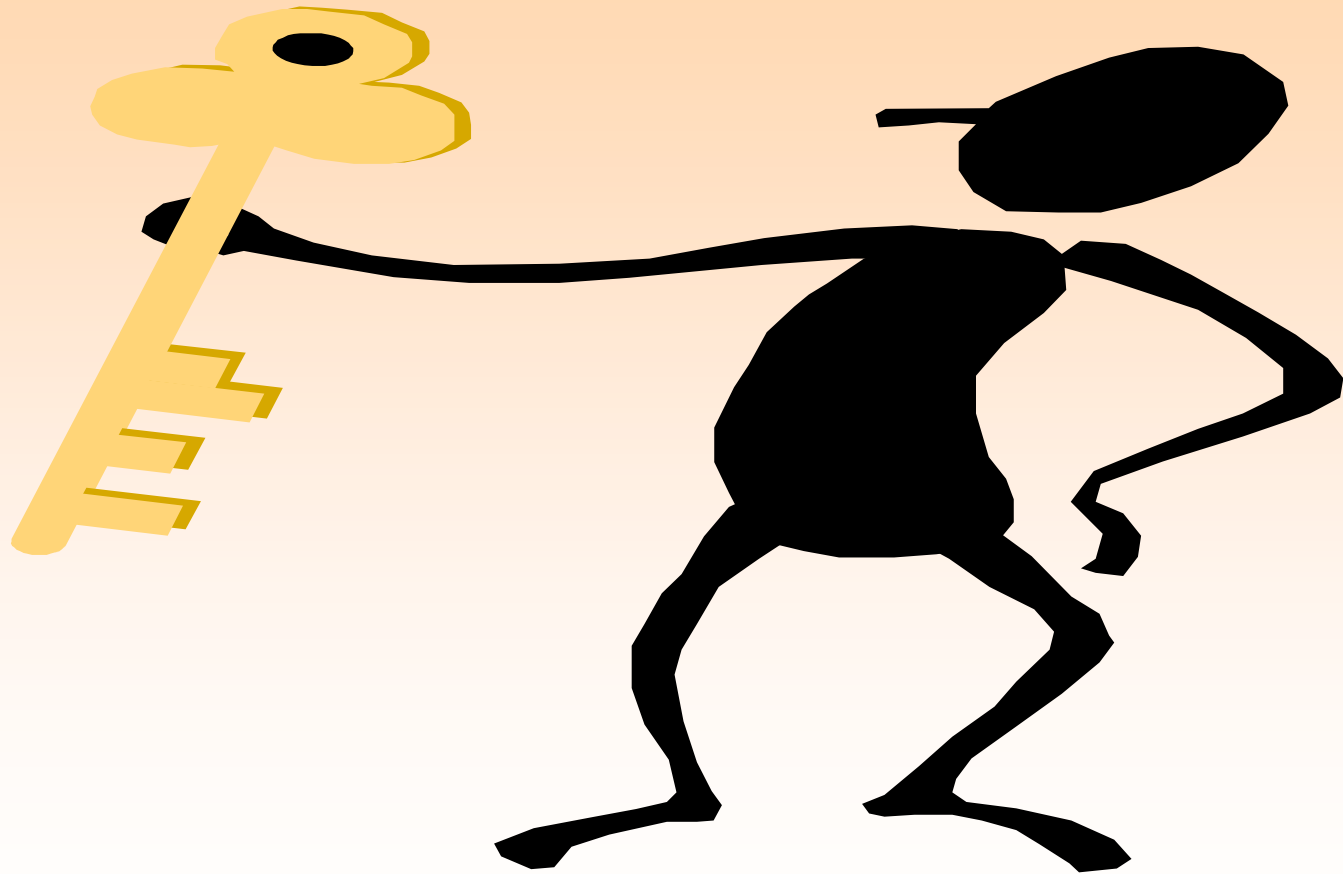




Structure, not blame

- Relationship between structure and results of system
- Children's book example: *Sneetches*
- Other examples

Uses understanding of system structures to identify possible leverage actions

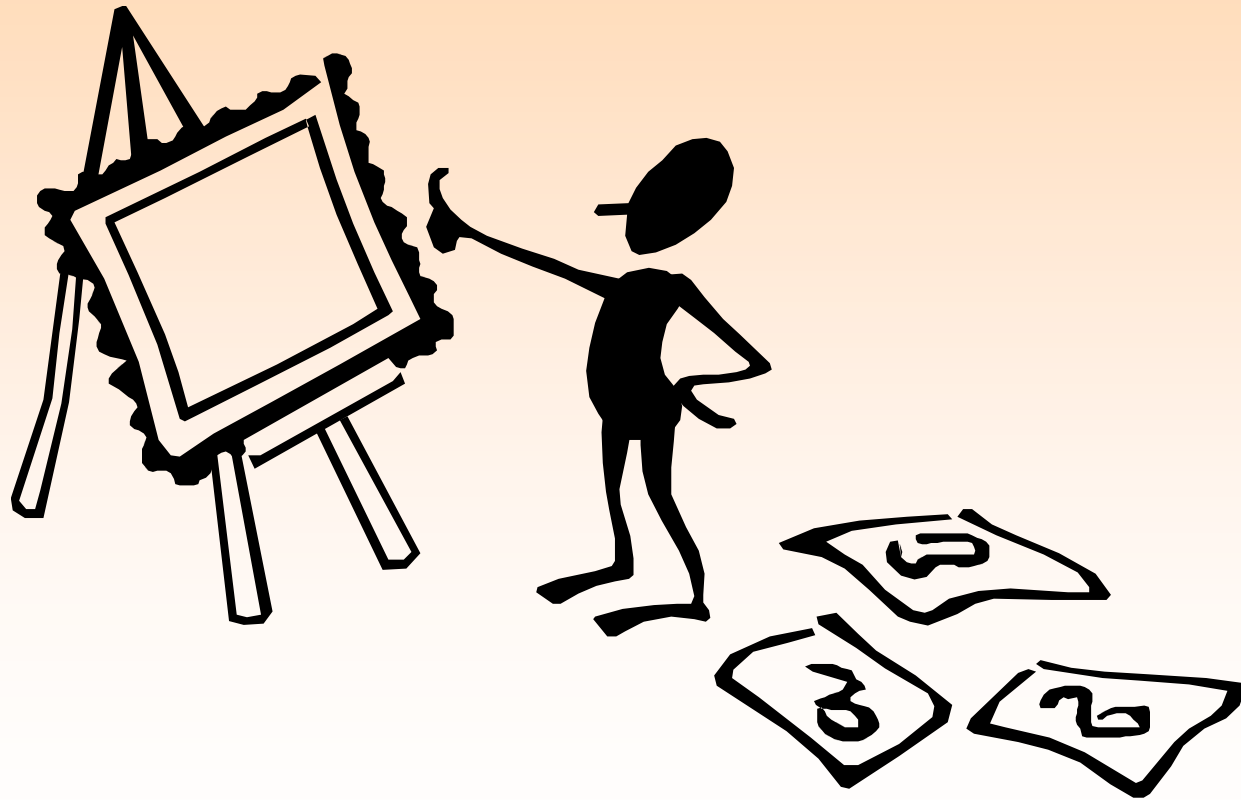




Leverage

- Using a lever to get the most results from the least action
- Children's book example: *The Butter Battle Book*
- Other examples

Monitors results and consistently re-aligns actions as needed “Successive Approximation”





Successive Approximation

- Monitoring and adjusting
- Children's book example: *The Hundred Hungry Ants*
- Other examples



Building the Habits

- Awareness and Understanding
- Practice
- Reinforcement
- Modeling



Connections

- Systems Thinking concepts and tools
- Best Practice
Instruction
School Improvement

HABIT IS A CABLE;WE WEAVE IT
EACH DAY AND AT LAST WE CANNOT
BREAK IT. Horace Mann

