Problem Solving - Getting Stared

Right Frame of Mind

- **_Effective_** and **_Ineffective_** problem solvers
- Important factors: attitude
                      aggressiveness
                      accuracy
                      heuristic
- Approaching a situation using the characteristics of an effective problem solver will help define the **_real_** problem and lead towards generating good solutions
- _If you think you can --- you will_
 _If you think you can't --- you won't_

Problem Solving - Getting Started

Characteristic:	Effective:	Ineffective:
Attitude:	Believe the problem can be solved	Give up easily
	Redescribe the problem.	
	Ask themselves questions.	
	Create a mental picture.	
	Draw sketches, write equations.	
	Don't jump to conclusions.	Jump to conclusions

Problem Solving - Getting Stared

Characteristic:	Effective:	Ineffective:
Accuracy:	Check and recheck.	Do not check.
Solution Procedures:	Break the problem into subproblems.	Don't break the problem apart
	Start at a point they first understand.	Don't know where to start.
	Use a few key fundamental concepts as building blocks.	Fail to identify key concepts.
	Use heuristics.	Guess.
	Persevere when stuck.	Quit.
	Use quantitative formulas, descriptions.	Do not do so.
	Keep track of progress.	Use no special format.

The 7 Habits of Highly Effective People
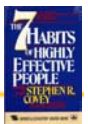
- **Habit 1 - Be Proactive**
  - Take the initiative and make things happen. If you make a mistake, acknowledge it and learn from it.

- **Habit 2 - Begin with the End in Mind**
  - Determine the right things to accomplish and then how to best accomplish them.

- **Habit 3 - Put First Things First**
  - Continually review and prioritize your goals. Focus on the important tasks, the ones that will have impact if carefully thought out and planned.

The 7 Habits of Highly Effective People
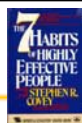
- **Habit 4 - Think Win/Win**
  - Win/Win is the frame of mind that seeks mutual benefits for all people involved in solutions and agreements

- **Habit 5 - Seek First to Understand, Then to Be Understood**
  - Learn as much as you can about the situation. "Listen, listen, listen." Present things logically, not emotionally. Be credible, empathetic, and logical

- **Habit 6 - Synergize**
  - Make the whole greater than the sum of its parts. Value the differences in the people you work with

The 7 Habits of Highly Effective People

- **Habit 7 -Renewal**
  - Renew the four dimensions of your nature:

Physical:	Exercise, nutrition, stress management.
Mental:	Reading, thinking, visualizing, planning, writing.
Spiritual:	Value clarification and commitment, meditation.
Social/Emotional:	Service, empathy, self-esteem, synergy.

_**Learn, Commit, Do;
Learn, Commit, Do;
Learn, ...**_

Taking Risks

- Risks or actions with little chance of succeeding that require significant effort, resources, and/or time

- Effective problem solvers have developed the proper attitude towards *risk taking*

- *... the greater the risk, the bigger the reward*

- Fear of failure is the greatest inhibitor to *risk taking*

- Knowledge gain from failure should be used constructively

Taking Risks

- "The Jolly Green Giant" first appeared as the symbol for Minnesota Valley Canning Company in 1925. However, when the company president proposed putting a green giant onto the label for canned peas, executives argued that it was ridiculous to have a giant with green skin.

- "The initial question: *"Whoever heard of green skin?"*
- The question now: *"Who has not heard of the green giant?"*

- He has appeared more than 450 million times on cans and been heard to say "Ho Ho Ho" more than 16,000 times in over 300 television commercials.

Taking Risks

- He has appeared more than 450 million times on cans and been heard to say "Ho Ho Ho" more than 16,000 times in over 300 television commercials.

1926   1960   1970

Welcome To The Valley
Blue Earth
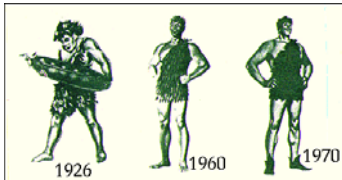
Paradigm Shifts

- A *paradigm* is a model or pattern based on a set of rules that define boundaries and specifies how to be successful at and within these boundaries

- **Paradigm Shifts** - a new model or new rules replace the old model

- **Paradigm Paralysis** - frozen to an idea that has been successful in the past

- **Paradigm Pioneers** - escape paradigm paralysis by breaking the existing model (rules) - no guarantee of success - risk takers

Example of Paradigm Shifts

- In 1968 the Swiss, held approximately 80% of the world market in watch sales. Today, they hold less than 10%

- **Cause:** The emergence of the quartz digital watch

- The Swiss invented the quartz digital watch

- After all, "the digital watch didn't have a main spring, it didn't tick; who would buy such a watch?"

Example of Paradigm Shifts

- Consequently, the inventors did not protect their invention with a patent

- As a result of this paradigm paralysis, the employment in the Swiss watch industry dropped from about 65,000 to about 15,000 in a period of a little over three years

Fostering Creative Environment

- "Don 't give people goals; give them directions (i.e., roughly aim them). "

- "Encourage contrary thinking."

- "The safer you make the situation, the higher you can raise the challenge."

- "Getting ordinary people to reach beyond themselves and do extraordinary things can be the result of establishing a nurturing creative environment."

Top 10 List of Group Problems

1. Floundering

2. Overbearing Experts

3. Dominating Participants

4. Reluctant Participants

5. Unquestioned Acceptance of Opinion

6. Rush to Accomplishment

7. Discounting or Ignoring Group Member's Statement

8. Wanderlust: Digression and Tangents

9. Feuding Team Members

10. Feuding Team Members

How To Run Effective Meetings

- At your first meeting, introduce yourselves, and give a little background. Set the group norms and expectations (e.g., showing up on time for meetings, responsibilities).

- Appoint a leader who will inspire the group to high levels of performance and be an effective listener.

- Prepare and distribute an agenda prior to meetings and stick to it.

- State why the group has come together.

How To Run Effective Meetings

- Bring all your materials to all the meetings.

- Keep the discussion focused.

- Have someone in charge of keeping the meeting on track.

- Have someone take minutes to remind participants of decisions made, actions to be taken.

Group Problem

Group Problem:

You are in a group working to solve a problem. Describe how you would handle each of the following situations:

- Someone starts dominating the group discussion

- Two of the group members are good friend and seem to form a clique

- Someone in the group is not carrying their load

- Someone in the group continually makes mistakes in their part of the project

Problem Solving

End of Chapter 2