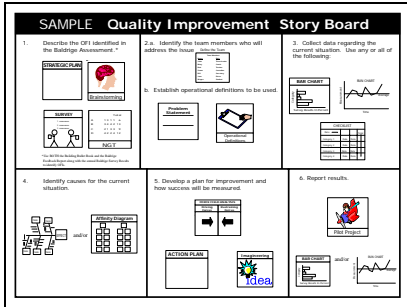




Slide 1



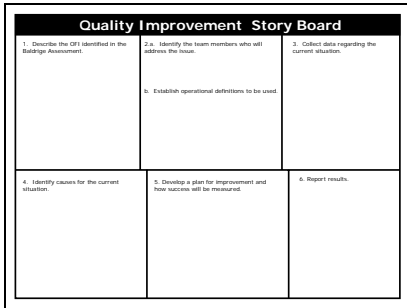
Slide 3

How To Use This Program

This program contains 37 quality tools, a Story Board and 36 additional tools designed to be used in conjunction with a Story Board. Each is represented by an icon on the next slide. Each icon is explained on a separate slide. Select the desired icon. Copy the icon to the clip board. Paste the icon to the Story Board. An explanation for each icon is located in alphabetical order after the Story Board.

1. Action Plan	14. Five Whys?	26. Pie Chart
2. Affinity Diagram	15. Flow Chart	27. Pilot Project
3. Bar Chart	16. Flow Tree	28. Plan-Do-Study-Act
4. Bone Diagram	17. Force Field Analysis	29. Problem Statement
5. Brainstorming	18. Gantt Chart	30. Project Bulletin Board
6. Cause and Effect Diagram	19. Histogram	31. Purpose & Vision
7. Capacity Matrix	20. Imaginering	32. Radar Chart
8. Check List	21. Interrelationship	33. Run Chart
9. Column Chart	22. Nominal Group Technique	34. Story Board
10. Consensusgram	23. Operational Definitions	35. Stratification
11. Control Chart	24. Pareto Chart	36. Survey
12. Correlation Chart	25. Parking Lot	37. Systems Progress

Slide 5



Slide 7

The **Strategic Plan** refers to all aspects of organization level planning and the deployment of action plans. This includes primarily the development and deployment of an organizational mission, key measures of mission fulfillment, and strategies that take into account key student and stakeholder requirements. Strategic Planning has a results-oriented focus and seeks to align all daily work within the organization with the over-all organizational direction.

STRATEGIC PLAN

Slide 9

Suggestion By The Authors

Plan-Do-Study-Act was designed to serve as a resource in the continuous improvement of learning environments.

Plan-Do-Study-Act is most effective if read in its entirety before the user opens the "tool kit" and begins Story Boarding a quality improvement.

RULE #1: Icons are only be placed on a Story Board if they are representative of real artifacts of the quality improvement process.

Brenda and Jim

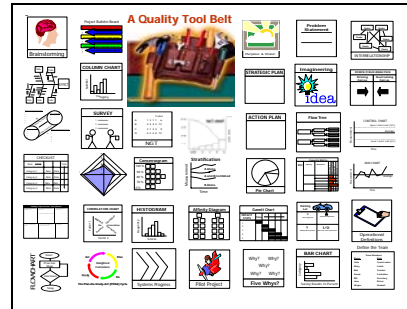
Slide 2

Purpose

Plan-Do-Study-Act is designed to serve as a resource in the continual improvement of learning environments. "Learning environment" is the new speak descriptor for the old speak term "classroom or school."

Plan-Do-Study-Act is not a guide to TQM or QIP. The Deming approach to Total Quality Management has been described elsewhere by the authors. Rather it is an introduction to the quality tools designed to be used in conjunction with TQM.

Slide 4



Slide 6

Action Plan refers to a series of connected steps that are designed to accomplish a goal or objective. Action plans include details of shorter- and longer-term performance projections, responsible personnel, resource commitments and time horizons for accomplishment. Action plan development represents the critical stage in planning when strategic objectives and goals are made specific so that effective organization-wide understanding and deployment are possible.

ACTION PLAN

Slide 8

The **Affinity Diagram** is the result of an interactive data collection method which allows groups of people to identify and process large quantities of ideas in a very short time. It is a non-judgmental way to collect and process ideas. A question is posed. Team members individually Brainstorm silently writing ideas on 3"x3" sticky notes.

Team members randomly place them in the middle of the table.

Ideas are grouped into like categories.

Finally, a header note is placed at the top of each column.

Affinity Diagram

□	□
□	□
□	□
□	□
□	□
□	□

Slide 10

A **Bone Diagram** is a systems reflection tool, which helps organizations clarify their current and desired state. It also identifies the forces driving and preventing progress toward the desired change. It combines the Systems Progress and Force Field Analysis Tools.

Slide 11

A **Bar Chart** displays collected data on parallel horizontal bars for comparative analysis. Lengths are proportional to collected data.

Slide 12

Brainstorming is a procedure that allows a group to express problem areas, ideas, solutions, or needs. It allows each participant to state their opinion in a non-threatening environment. Brainstorming helps a group create many ideas in as short a time as possible. Brainstorming can be used in two ways: **structured** or **unstructured**.

Slide 13

Capacity Matrix

A **Capacity Matrix** is a charting device used to break down an aim or result into major capacities, minor capacities, and learning levels.

A Capacity Matrix combines a Flow Tree Diagram and Bloom's taxonomy of learning levels.

By filling in the boxes on the Capacity Matrix bar graphs are created.

Aim or Result	Capacity	Breakdown	Knowledge	Understanding	Application	Analysis

Slide 14

CAUSE & EFFECT DIAGRAM [FISHBONE]

A Cause & Effect Diagram is used when you need to identify, explore, and display the possible causes of a specific problem or condition. "Fishboning" represents a sophisticated form of brainstorming.

Slide 15

A **Column Chart** is a vertical bar graph that displays collected data in parallel columns whose lengths are proportional to specific amounts in sets of data.

Slide 16

A **Consensogram** is a statistical survey that measures an entire group's perception of effort, commitment, understanding, etc. The question asked is decided by the leader, group, team, or organization. The Consensogram is used when you have a group of people and wish to see their view on an issue.

Consensogram	
100 %	<input type="checkbox"/> <input type="checkbox"/>
90 %	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
80 %	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
70 %	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
ETC.	<input type="checkbox"/> <input type="checkbox"/>

Slide 17

A Control Chart is simply a Run Chart with statistically determined upper and lower control limit lines drawn on either side of the process average. Being in control [meaning no data points fall outside the control limits] simply means the process is consistent.

Slide 18

A **Correlation Chart** measures the performance of one factor compared to another and helps determine what relationship, if any, exists. The correlation is based on the pattern of data points.

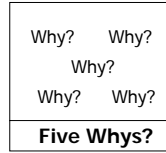
Slide 19

Define the Team

Team Members	
Name	Role
John	Team Leader
Mary	Coach
Bob	Teacher
Susan	Custodian
Bill	Secretary
Jane	Driver
Wayne	Student

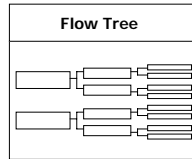
Slide 20

The Five Whys? are simply a process of asking Why? at least five times in a row to detect the root cause or meaning of a particular problem or situation.



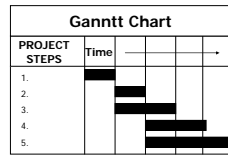
Slide 21

A **Flow Tree** helps to break down outcomes into major subcategories or capacities. It is an integral part of a Capacity Matrix [See].



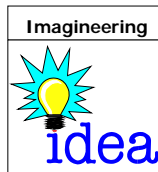
Slide 23

A **Gantt Chart** is used for planning schedules and managing projects. A Gantt Chart is useful when doing a project where one stage depends upon another. It also makes it obvious which steps can be done simultaneously.



Slide 25

Imagineering is a Brainstorming technique used to identify what an individual or group envisions as the perfect project, process, or system. Another term used for Imagineering is idealized design.

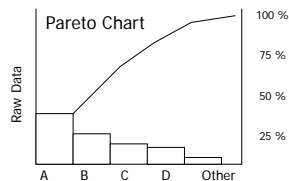


The facilitator or leader must clearly state the objective of the Imagineering session.

Example:
"What would be the perfect learning environment?"

Slide 27

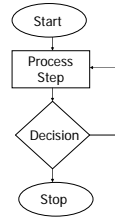
A Pareto Chart is a special form of vertical bar graph that helps you to determine which problems to solve in what order. Doing a Pareto Chart based on either a Check List or other forms of data collection helps direct attention and efforts to the truly important problems.*



*You will generally gain more by working on the tallest bar than tackling the smaller bars.

Slide 29

FLOWCHART

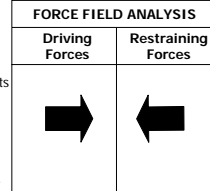


A Flowchart is a pictorial representation showing all of the steps of a process. Flowcharts are used to "document" a process. By creating and studying flowcharts teams can often uncover sources of trouble as well as solutions to problems. Many of us are visual learners. "Let's flowchart it" is a most important step in problem solving.

Slide 22

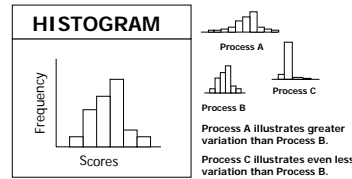
Force Field Analysis is a visual listing of possible forces driving or preventing change.

A Force Field Analysis is useful if a quality improvement team wants to find out what is driving, slowing, or not allowing change at all. Hint: removing a restraining force will make for more progress than creating driving forces.



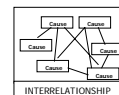
Slide 24

A **Histogram** is a specialized Column Graph used to illustrate the stability of a process. The greatest number of units are pictured at the mid point with roughly an equal number of units on either side of that point. See the example below.

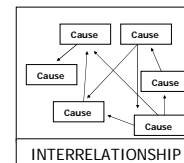


Slide 26

An **Interrelationship Diagram** is used to study the relationship between the causes and discover the "root cause" of a problem.

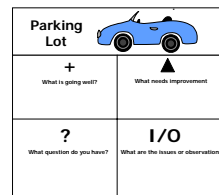


If a relationship can be established, lines are drawn between two causes. Analysis leads to drawing arrows between causes and effects.

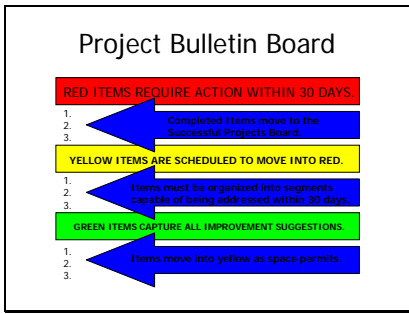


Slide 28

A **Parking Lot** is a place where group participants can anonymously communicate with facilitators or group leaders.



Slide 30

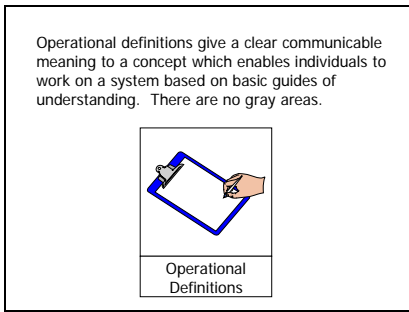


Slide 31

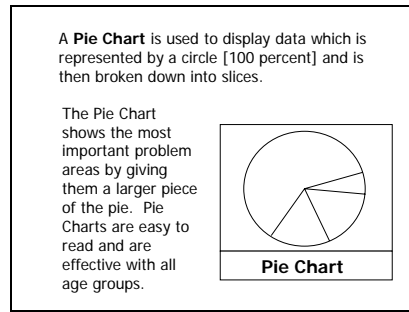
The **Nominal Group Technique [NGT]** provides a way to give everyone in the group an equal voice in problem selection.

	Total
A	1 3 1 1 6
B	3 4 4 2 13
C	2 1 3 3 9
D	4 2 2 4 12
NGT	

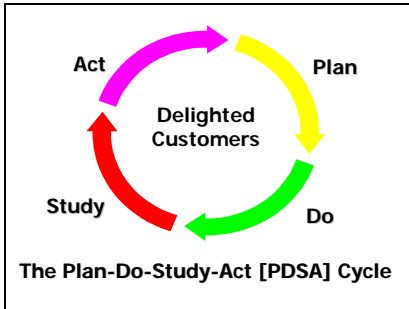
Slide 32



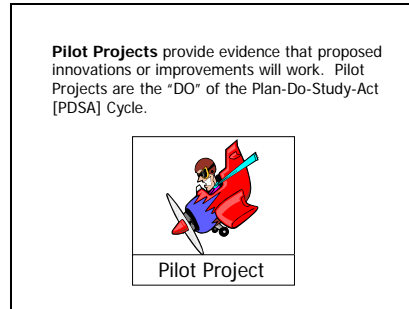
Slide 33



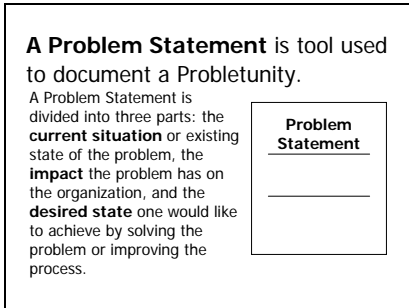
Slide 34



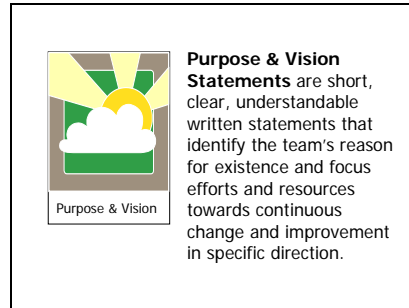
Slide 35



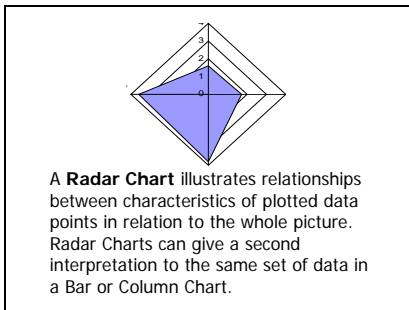
Slide 36



Slide 37



Slide 38



Slide 39

A **Story Board** is the graphic representation and documentation of a Plan-Do-Study-Act Cycle.

Quality Improvement Story Board		Plan-Do-Study-Act	
1. Document the initial condition	2. What is the problem/issue? (What is the current situation?)	3. Analyze the current situation	4. Develop the action
5. Develop and implement a Plan-Do-Study-Act cycle	6. Study the results	7. Document the improvement results	8. Establish future plans

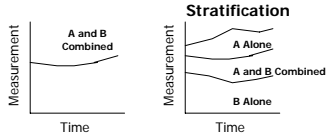
Copyright 1998 © Brooks/Beeson & Associates

Slide 40

Stratification helps analyze cases in which data may actually mask the real facts.

This is often the case when the recorded data is from many sources but is treated as one number.

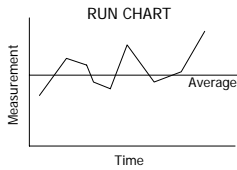
Stratification breaks down single numbers into meaningful categories to focus corrective action.



Slide 41

A Run Chart is used to monitor a process to see whether or not the long-range average is changing.

Run Charts are the simplest quality tool to construct and use.



Slide 43

Suggested Reading

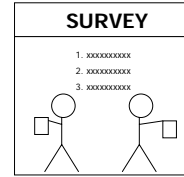
Note: The following is not an alphabetical listing, but a list in suggested order for reading. The *MEMORY JOGGER, TEAM Handbook* and *The Deming Management Method* are available through the Grand Blanc Change Team Office.

- GOAL/QPC. *The MEMORY JOGGER for Education.*
- McClanahan, Elaine, and Carolyn Wick. *Future Force: Kids That Want To, Can, and Do!*
- Joiner Associates Inc. *TEAM Handbook for Education.*
- Langford, David P. *Tool Time: Choosing and Implementing Quality Improvement Tools.*
- Langford, David P. and Barbara A. Cleary, *Orchestrating Learning With Quality.*
- Walton, Mary. *The Deming Management Method.*

Slide 45

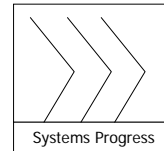
Surveys are used when a project is planned, to prove the need and demand of the customer, or to test a group for determining quality.

Compile the results using a Checklist and display them using a Bar Chart, Column Chart, or Pareto Chart.



Slide 42

Systems Progress is a visual technique used to answer the questions: "Where did we start? Where are we now? Where are we going?"



Slide 44



One Minute Paper

Overall, how much did you get out of **Plan-Do-Study-Act?**

Little or Nothing A Fair Amount A Great Deal
 1 2 3 4 5 6 7 8 9 10

What was the most important thing you learned?

What was the muddiest point? [What was most unclear?]

What single change by the authors would most have improved the program?

Slide 46