

# Brainstorming Techniques

It's best to start with an open problem statement, i.e. "how to remove contents from a can" rather than "how to improve a can opener"

## **Rules of brainstorming:**

- 1) Absolutely no evaluation
- 2) Wildest possible ideas
- 3) As many as possible
- 4) Build upon other ideas
- 5) Record all ideas, even repeats.

## **Variations:**

Silent - everybody writes ideas on paper, as many as possible. Read, without evaluation, and repeat

On demand - People are numbered, then called on with dice roll. Immediate response is required.

## **Suggested topics for a brainstorming exercise:**

What goes in a design journal (*Listed on Back*)

Improved method for securing a bicycle

How to get across campus faster

Uses for the Web

## **Comments on brainstorming:**

Brainstorming always works to generate ideas, but it may not lead to a group consensus on the best solution. Other idea generation/selection processes may be more effective.

The genesis of the technique is unknown. It may have been developed in the advertising industry, where creative, raw ideas are valued. Another possible history is that brainstorming was coined by a man named Osborne circa 1939. One of the first uses of this technique was a better temporary way to fasten an electrical lead for test purposes. Current technology was solder or a screw binding post. Problem statement was to find a better way to fasten two wires together. One brainstorm solution was to get a mouse to hold the wires in its teeth, which is where the "alligator" clip came from.

## **References:**

The Team Handbook by Peter R. Scholtes et al. Joiner Associates, Pub. ISBN 0-9622264-0-8, pp. 2-37 through 2-45, 1988.

The Care and Feeding of Ideas by James L. Adams, Addison-Wesley, pp 183-188, 1986.

## Journal Entry Ideas

Ideas  
Drawings  
Measurements  
Names  
Tools  
Materials  
Techniques  
Locations  
Dates  
Factors/Tolerances  
Times  
Questions  
Answers  
Notes  
Equations  
Wrong Answers  
Weather  
Possibilities  
Theories  
Doubts  
Own Name  
Demographics  
Position of Heavenly Bodies  
Environment  
Goals  
Problems  
Expectations  
Solutions  
Needs  
Clients  
Financial Records  
Shopping Lists  
Numbers  
Minutes  
Song Lyrics  
Children's Games  
Tests  
Resources  
Teaching/Learning Techniques  
Conclusion  
Periodic Table  
Tolerances  
Specifications  
Meaning of Life  
Goals  
Pictures  
Clients Background  
Weaknesses  
Research  
Bibliography  
Addresses  
Time-scales  
Budget  
References  
Solar Flares  
Birthdays  
Anecdotes  
Emotional Reactions  
Reminders  
Websites  
Directions  
Quotations  
Vectors  
Instructions  
Deadlines  
Milestones  
Personal Events  
Graphs  
Outlines  
Tables  
Jobs  
Contacts/People  
Evidence  
Evaluations  
Outcome  
Jokes  
Menus  
Notary  
Witnesses  
Agendas  
Meetings  
Conversations  
Quotes  
Material Sources  
Resources  
Processes  
Origins of Ideas  
Doodlings  
Calculations  
Inspirational Items  
Dead End Experiments  
Clients Vision  
Calibrations  
Accidents  
Stipulations  
Strengths

