DELEGATES WELCOME

CREATIVE THINKING

PROGRAM

Objectives

To share a few insights on creative thinking

To understand keys behind creative thinking

To discuss 3 techniques for being creative

Temperament Score interpretation Scores above 50-60% and below15- 20% areas of Attention

- AA Allergic to ambiguity
 - ♦ Fear of unknown
 - C Conformity
 - Fear of social disapproval
- RS Rigidity Stereo typing
 - Fear of both
- FF Fear of Failure

- SS Starved of Sensibilities
 - Fear of unknown shown as lack of abstract creativity
- RM Resource Myopia
 - Fear of lack of competence
- T Touchiness
 - Fear of relationships being damaged

THINKING

WHAT & HOW

A Smart Thinking Session







Make 8 Squares With least cuts







Connect the nine dots with 4 lines without lifting pen from paper









need to et answers



Brain theory

Right brain Creative, emotional, joy, sorrow

Left brain

Analytical, logical, detached, clinical

Right brain Left brain

Which do you use most?

Problem 1

- You are at the races to celebrate
- **3** races are over
- A relationship exists between the winners: A tip for the fourth race winner
 - ♦ War
 - Lobo
 - North Racer
- Fourth race horses are
 - Forester
 - Fire dancer
 - Hoar frost
 - ♦ Grenade
- Which horse will you bet on?



Rowe's Decision style inventory <u>The whole brain approach</u>

Solve the problem and take a decision

XEROX

Lateral Thinking

Path to Creativity



Sequence of information affects the output

How does the mind function?

It creates patterns
 <u>These patterns become codes</u>

Vertical Thinking: defining a problem in only one way

Lateral Thinking: defining a problem in multiple ways

Lateral thinking

- is about generating ideas
- thinking sideways
- generative
- does not have to be relevant

Vertical thinking

- is about proving something
- thinking step by step
- selective
- every step must be justified

Both complement each other.

Analogy

- Vertical thinking digs at the same hole
- goes deeper
- Lateral thinking digs holes at different places

Need both

- to penetrate
- to explore

Key 2

Mind functions better when it has to generate a targeted number of alternatives

Demonstration Problem 1



Generate 3 different ways of describing this figure.



Demonstration Problem 2

Children getting separated from parents and get lost in large crowds.

Generate 5 alternative solutions.



Challenge Assumptions

How important are Assumptions?

Assumptions and clichés are useful.
But do not be imprisoned by them.
Any assumption can be challenged.

A man gets off on the 10th floor and walks up to the 15th floor in the morning.

At night, he gets into the lift on the 15th floor and gets out on the ground floor.

What is he up to?



Fractionation

Fractionation

The more unified a pattern, the more difficult it is to restructure it; therefore...
 Fractionate it along unusual lines....



Divide this shape into four pieces which are exactly similar in size, shape and area.



















Fractionation: How ?

Break down the situation into fractions.
 Focus not on finding true components
 But on creating parts
 Does not matter if parts overlap
 Application: Put the fractions together in a new way

Generate a new way of looking at the situation

Techniques

What are the possible uses of a brick?

Technique 1: Working with Attributes

2 steps

Step 1: Attribute Analysis

The process of breaking down a problem, idea, or thing into attributes or component parts, and then...

thinking about the attributes rather than the thing itself.

Guide to Attribute Analysis

- Physical: color, weight, material, speed, odor, size, structure, taste
- Psychological: appearance, symbolism, emotive ("happy smell of detergent")
- Functional: intended uses, applications, how it does what it does
- People: who's involved
- Miscellaneous: cost, reputation, origin, class it belongs to, definition

Step 2: Attribute Improvement

- 1. List the attributes of the problem, object, or situation
- 2. Under each attribute, list all the alternatives you can think of.
- 3. Choose an alternative from each column at random and assemble the choices into a possibility for a new idea.
- 4. Repeat the choosing and assembly many times.

Example: Develop a better band aid

stick on flesh	colored	Plastic	rectangular	gauzed
magnetic	red or green	Cloth	round	medicated
tie on	flower pattern	Paper	triangular	cellulose
paint on	black	Metal	square	plasticized
Velcro	words (ouch)	Wood	trapezoid	plastic
clamp on	stripes	Rubber	animals	cotton

How to Improve?

Automate

- Make easier to use, understand
- Reduce fear to own, use
- Make safer, quieter, more accurate
- Make faster, less waiting
- Provide more durability, reliability
- Add & integrate features, functions Give larger capacity
- Make portable

Something to think about...

How will you improve....

♦ A book ?

♦ A coffee cup?

♦ A bus ?

Technique 2: Reversal

Reversal: How?

Turn the situation around, inside out, backwards, or, • upside down. ... there is no one formulaic way.

Reverse the situation: 'How can we waste water ?'

Reversal: Key points

Wherever a direction is indicated then the opposite direction is equally well defined.
Reversal is a provocative rearrangement of information
Its not whether the new way makes sense or not; once one escapes, it becomes easier to move in other directions

Technique 3: Analogies

What happened to a monkey?

- A monkey put the paw into a jar full of nuts and grabbed a handful of nuts....
- But the mouth of the jar was such that it would admit only an empty paw, not a clenched paw full of nuts....
- The monkey was unwilling to let go of the nuts....
- So, it was TRAPPED!

Lets try to form an analogy here

Problem: Vertical Thinking
 Compared with: How monkeys are supposedly caught by burying a narrow-mouthed jar of nuts in the ground.

Developing the relationship...

With vertical thinking, one grasps the obvious way of looking at a situation as it has proved useful in the past.
 Once it has grasped it one is reluctant to let

go

What the monkey could have done....

Let go of the nuts; then, dig the jar and empty it out

The major danger in vertical thinking is not of getting trapped by the obvious but failing to realize that one may be trapped by the obvious.

Key Points about Analogies

A convenient way of getting started!

- The important point is that one does not start moving only when one can see where one is going
- One moves for the sake of moving and then sees what happens
- Analogies are used as stimulants, not as proofs

Summary
Lateral thinking complements Vertical thinking
Lateral thinking provocative restructuring
Key processes:

- Overriding effect of sequence of information
- Challenging assumptions
- Fractionation
- Few techniques
 - ♦ Attribute analysis and improvement
 - Reversal
 - Analogies

Questions ?

