

# THE POWER OF VISUAL THINKING

By Lesley K Sword, Director, Gifted and Creative Services Australia © 2005

## Introduction

So often we find it easier to avoid challenges and risk-taking. This can be especially so when we have been told since we were small, that we have some form of disability or lack an ability that others have. The irony is that so many visual-spatial thinkers fall into this trap, seeing themselves as 'less than' the majority of auditory-sequential thinkers when, in fact, they have a most powerful way of thinking that suits our current world environment.

In this article we will look at what makes visual-spatial thinking so powerful and explore ways that we may use it in the world. The article will cover:

- what is thinking;
- the three ways of thinking;
- how visual and auditory thinking works;
- some characteristics of visual-spatial thinking;
- strategies for using strength in visual-spatial thinking;
- some careers that suit visual-spatial thinkers.

This article celebrates our special gift of visual-spatial thinking and encourages us to continuously explore ways of applying it to life.

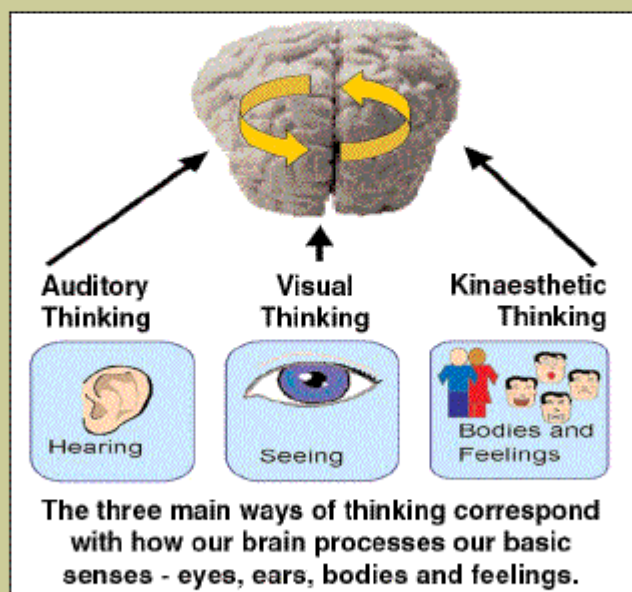
## What is Thinking?

Thinking is taking in information from the outside world and from within ourselves and processing it with our brain.

## The Three Ways of Thinking

There are three main ways of thinking that correspond to the senses:

- **Hearing** – auditory thinking
- **Seeing** – visual thinking
- **Feeling** – kinaesthetic thinking



**Auditory thinking** uses sounds, conversations, melody etc.

**Visual thinking** uses pictures, colours, abstract plans, diagrams etc.

**Kinaesthetic thinking** uses information of a feeling nature -balance, weight, temperature, emotional state, 'gut' feeling, intuition etc.

The words people use when speaking can indicate which thinking style they are using.

**Auditory thinkers** use words such as: hear, sound, rings, talk, listen, tune, ask, clicked.

**Visual thinkers** use words such as: see, look, clear, bright, picture, image, perspective.

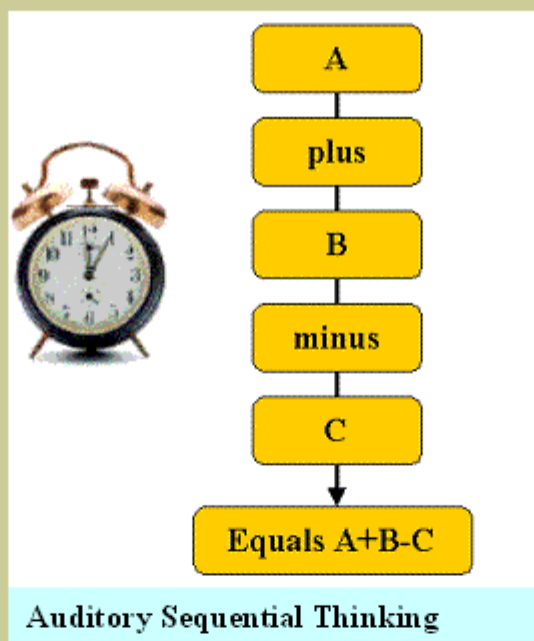
**Kinaesthetic thinkers** use words such as: feel, touch, handle, grasp, rough, heavy, weigh

### How Visual and Auditory Thinking Works

**Auditory thinking** is sequential thinking i.e. step-by-step

**Auditory-sequential thinkers** learn most efficiently, when material is presented to them in a logical, ordered progression.

They will often attack problem solving with a series of ordered steps.



Auditory Sequential Thinking

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**Auditory thinkers** have a good sense of time.

They often will understand in part before understanding the whole.

They prefer to start off with the simplest concept or part of a problem, and work through to the more difficult parts until the whole solution is found.

Many teachers and instructors are sequential thinkers.

**Auditory thinkers** think most efficiently when material is presented to the audibly.

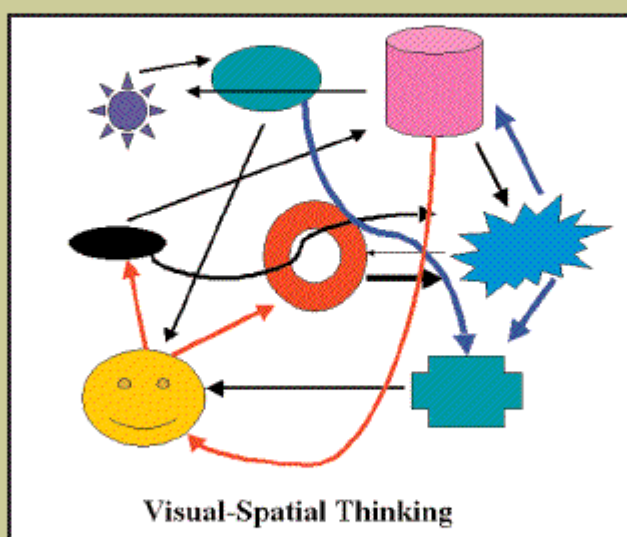
To retain information they often repeat it out loud to themselves.

They would rather have someone explain in detail how to accomplish a task, rather than view a physical, visual demonstration

**Visual thinkers** think most efficiently, when material is presented to them using diagrams, flowcharts, time lines, films and demonstrations.

Visual thinkers tend to be spatial and have an eye for size, space and relationships.

To retain information they often draw it as a diagram.



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They would rather view a physical, visual demonstration than have someone explain in detail how to accomplish a task.

**Visual Thinking** is Holistic.

Holistic thinkers work through material most thoroughly and efficiently in 'fits and starts.'

They may often feel overwhelmed with confusion for awhile, but understanding will often suddenly click.

When the material does suddenly click in understanding, the holistic thinker will usually not only see the big picture, but with a more clear and creative perspective than other thinkers.

Often, holistic thinkers will take more time to understand information than other thinkers. However, their final understanding is more extensive.

Here are some basic distinctions between **visual spatial thinkers** and **auditory sequential thinkers**.

VISUAL-SPATIAL	AUDITORY-SEQUENTIAL
Thinks primarily in pictures	Thinks primarily in words
Relates well to space	Relates well to time
Is a whole-part learner	Is a step-by-step learner
Learns concepts all at once	Learns by trial and error
Hard concepts are easy; easy is hard	Progresses from easy to hard
Sees the big picture; may miss details	Progresses from easy to hard
Reads maps well	Follows oral directions well
Learns sight words easily	Learns phonics easily
Does well at math	Does well at arithmetic
Prefers keyboarding to writing	Has neat handwriting
Has 'unique' methods of organization	Is neatly organized
Arrives at correct solutions intuitively	Can show working-out easily
Excellent long-term memory	Excellent short-term memory
Finds unusual solutions to problems	Finds one right answer

Source : Dr. Linda Silverman



## Two Types Of Visual-Spatial Thinkers and Learners

There are two types of **visual-spatial thinkers**: those who have a preference for visual thinking and those who **must** think visually, usually because of an auditory-sequential weakness.

The first type of **visual-spatial thinkers** can use both auditory-sequential and visual-spatial thinking. They prefer visual-spatial thinking as it is a powerful way to think and they will tackle problems using this mode of thinking first. However, they can 'switch their brains' to auditory-sequential thinking when necessary.

The second type of **visual-spatial thinker** must think visually and cannot switch to auditory-sequential thinking. These people often had illnesses that blocked conductive hearing during early childhood. Examples of such illnesses are:

- ear infections
- allergies
- asthma
- eczema
- tonsillitis
- sinusitis.

Poor auditory sequential information processing is common in children who have experienced early childhood illnesses that have adversely affected conductive hearing during the developmental period.

While their hearing is not permanently affected by these illnesses, the development of auditory information processing is impaired and these visual spatial learners commence school with a learning difficulty:

a language based auditory-sequential information processing weakness that makes school learning, following instructions, concentrating and paying attention very difficult.

### Visual-Spatial Thinking is Powerful and Fast

**Visual-spatial thinking** is complex, rich, textured, detailed and imaginative.

With visual thinking the information is processed instantly, just by looking at a picture.

Auditory thinking is much slower as each word must be processed separately and the information cannot be understood until the whole sentence is heard.

Try this out at home:

Look at a picture and capture the image in your mind.

Now describe it to yourself out loud.

Which takes longer?

### Visual-Spatial Thinking Is Both Problem Finding And Problem Solving

If I was explaining an issue to a visual thinker, they would immediately tell me the inherent problems they could see. A few minutes later, they would tell me how to solve these problems or several better ways to do it.

This is what is meant by problem finding and problem solving

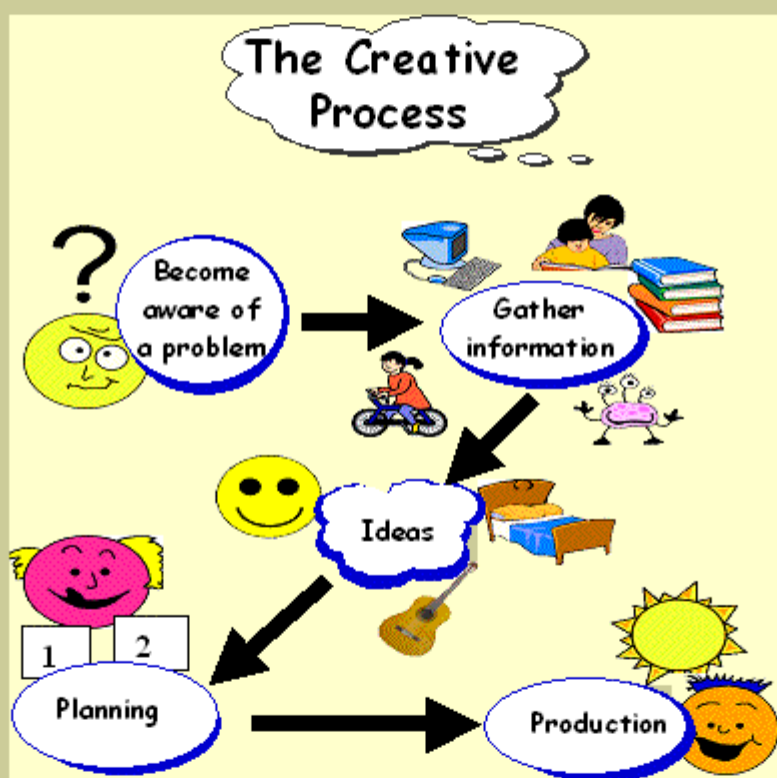
## Visual Thinking is Creative

**Visual-spatial thinkers** see the big picture with a more clear and creative perspective than other thinkers. Visual-spatial thinking is associated with inventiveness, intuition and divergent thinking. These characteristics are essential for creative thinking.

Creative thinking is the process of sensing difficulties, problems, gaps in information, missing elements, something askew; making guesses and formulating hypotheses about these deficiencies, evaluating and testing these guesses and hypotheses; possibly revising and re-testing them; and finally communicating the results, often incorporating images, shapes, models, colour, melody allegory and allusion.

## The Creative Process

The creative process incorporates problem awareness, information gathering, idea development, planning and production.



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## Strengths of Visual Thinking

**Visual-spatial thinkers** excel at:

- using images and pictures
- knowing where they are in space eg driving, parking, going places without directions
- getting the whole idea at once and then filling in the parts
- working with complex issues
- bringing together a range of disparate ideas
- abstract mathematical concepts
- visual spelling
- working with computers
- using intuition
- creative problem solving
- memory for places, events, people
- geometry, physics, graphics
- using metaphors – verbal images
- three dimensional thinking
- seeing patterns
- visualising rhythm, melody and harmonies

## Strategies For Using Your Strength In Visual-Spatial Thinking

- recognise and accept your strengths
- do things visually whenever possible
- develop and use the skills of visualising e.g. holding pictures still in your mind's eye, manipulating your images
- use graphic organisers when studying
- use mind maps to bring ideas together and highlight relationships
- set priorities by making more important items **bigger** in your mind map
- use timelines to help with planning and sequencing
- set small deadlines within the larger timeline
- get the big picture first and then move to the details
- watch others before attempting new tasks
- brainstorm an idea to generate pieces of information
- use categories to organise or bring together pieces of information
- ask for things to be repeated when you need to write them down – be upfront and say 'I remember things better when I write them down'.
- ask a person to write down what is required e.g. 'please send me an email confirming...'
- ask for time to consider when making important decisions
- in meetings use an electronic whiteboard
- doodle while listening – incorporate what you hear into the doodle
- keyboard when possible instead of writing
- use word-processing programs to help with editing, spelling and grammar
- read your reports/assignments out loud to see if the grammar and punctuation makes sense
- record lectures, tutorials, important meetings etc so that you can listen to them again (and again)
- establish habits/routines for practical things e.g. put your car keys, sunglasses and wallet/purse in the same place immediately you walk in your front door
- read the contents page of books and reports first to get an overview of the whole (the big picture)
- dictate reports/assignments into a recorder and have someone else type them for you
- use computerised voice dictation software and dictate the content when you have set out an outline of what you want to say



- use computer mind mapping programs such as Inspiration™
- use creative visualisation tapes for relaxation and to reduce anxiety
- learn to 'hear' your voice or the voice of a respected person speaking to you in your mind and helping you with a task or situation – practice this by speaking out loud when you are alone
- catch yourself doing something correctly and praise yourself for it.

## Careers for Visual Thinkers

Here are some careers that use strength in **visual-spatial thinking**:

• SCIENTIST	• ADVERTISING
• INVENTOR	• DESIGNER
• POET	• CHEF
• MUSICIAN	• ENTREPRENEUR
• ARTIST	• SELF-EMPLOYMENT
• SPORTS-PERSON	• COACH/TEACHER
• ARCHITECT	• MATHEMATICIAN
• COMPUTER SYSTEMS	• MARKETING

This article encourages us to focus on our strengths and not on our perceived deficiencies. When we do this, we are able to accept, explore and extend ourselves and to live life to its fullest with joy in being.

E. Paul Torrance, the "father" of creativity gave us this manifesto:

Don't be afraid to fall in love with something and pursue it with intensity.

- ✓ Know, understand. Take pride in. Practice. Develop.
- ✓ Exploit and enjoy your greatest strengths.
- ✓ Learn to free yourself from the expectations of others and to walk away from the games they impose on you.
- ✓ Free yourself to play your own game.
- ✓ Find a great teacher or mentor who will help you.
- ✓ Don't waste energy trying to be 'well rounded'.
- ✓ Do what you love and can do well.
- ✓ Learn the skills of interdependence.

To this, I would simply add:

**We are visual-spatial thinkers – let's celebrate!**