

Spatial Strengths

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THE PICTURE THINKER TOOL KIT

Here is a kit of special strengths that picture thinkers wield

VIVID IMAGINATION - Picture thinkers have great—often wild—imagination. They form strong, vibrant pictures in their minds that are often on the move. They make their own mind-movies as they read and listen. These mental movies can include voice-overs, close-ups, split screens, or panoramic shots. Anything they have ever seen on a screen they can imagine and use, including a zoom-in to enlarge something, an overlay of two or more images, transformation of one thing into another, rotation to see the other side of something, cartoon animation, or a graphic they can enter like a video game. They can organize information visually—lay it out on an inner computer screen—and then file it away mentally to pull out later (handy for tests). Some picture thinkers may not know they have this mental computer capacity—so hampered are they by trying to listen and take written notes at the same time (and then outline!). Picture thinkers' imaginations can run away with them, leaping from one fantasy to another, but when under control there is almost nothing they cannot bring into play in the arena of their mind's eye.

VISUALIZATION – Visualization takes imagination a step further. Picture thinkers are wonderful visualizers, although some need to be taught this skill to jumpstart it. This is the most versatile tool in the picture thinker tool kit. It can be applied in every subject area in school and in life. Tapping into what you have visualized provides immediate rich experience that can be examined when you want. It is the basis of a kind of mental organization and storage of knowledge, ideas, and their interconnections that is like a computer and imitates its worldwide web potential.

There are two parts to visualization. There is the “cognitive scratch pad” that is like your computer screen where you input what you “see.” Then there is long-term storage of all the visuals that is like your computer memory. Visualization is so important that we devote an entire section on the wonders of visualization elsewhere on our site (in process). There we plan to include sample activities that build visualization skills and we'll show how to use visualization in a wide variety of situations. Here we just want to emphasize how important it is as a visual-spatial tool. Visualizing will work for all kinds of thinkers but it is home territory for picture thinkers.

One point. Good visual memory is needed for successful visualization. There are some picture thinkers, usually impatient ones, who never look at anything long enough to make

an image. They just play with speed-of-light inner perceptions. These picture thinkers may need help to look “just a few nano-seconds longer” to form a real memory.

3-D VIEWING - Although they may be called picture thinkers, visual-spatial learners see in 3D. Their world is far more complex than the flat textbook pages or paperwork. Spatialists often “see” ideas in a 3-dimensions like computer animation with depth. They look through both real space and imagined space to see the whole of something and to check out relationships and connections. This creates a huge amount of “inner territory” to explore. These spatial thinkers can quickly scan all that their senses have taken in (seeing, hearing, smelling, tasting, feeling, sensing) and mentally connect the dots that spell out what is going on out there. They can even make pictures to represent ideas that are being talked about and what they are all about as a whole. We all do this to some extent. It is called “perception.” But picture thinkers do it in spades. They take in 180 degrees of the space around them and an infinite number of degrees of depth of the space that surrounds them. This makes their input enormously richer and at the same time more challenging to analyze. There is just so much to survey! Having to scrutinize a small set of details can feel like being pulled back from their large normal range of awareness to pay unnatural attention to just one tiny part. That tiny part had better be worth their full attention, or they unconsciously discard it and resume the scan that is so much a part of how they live.

At times, some picture thinkers not only see but **grope** their way through concepts. They have kinesthetic input like those cyberspace reality games that evoke muscle response to what players “experience.” These spatialists grope through space as if they could touch ideas and possibilities to find what is there. Einstein, who could visualize thought experiments in Space (with a capital S), spoke of using a kind of imagistic, kinesthetic shorthand in his thinking process (he was groping for words, typical of spatialists when trying to explain themselves). It seems that he was trying to express the experience of thinking by seeing in imagination and feeling muscular response to ideas. It is particularly interesting that he recognized this as like “shorthand”—very minute, partial symbols, and tiny, nuanced muscle responses that could mark sensed relationships and also hold them in memory for future use. Spatialists’ “shorthand is different!

Certainly not all picture thinkers are Einsteins, but this explorative mode of operation is true for many of them, especially the deep thinkers and long processors. (They are covering a lot of mental territory and this takes time.) Thinking in 3-D mode means that all sorts of connections can be made in any dimension. Quantum physics and string theory would make us aware of more than 3 dimensions. 3-D thinkers may lead the way to extraordinary feats of inner space exploration, making its complexity more approachable to us all, but that is another story.

GETTING THE BIG PICTURE - Perhaps this goes back to hunter-gatherer days. Upon encountering something new—a new subject, a new experience, some unknown object—picture thinkers want to know right away what that thing is. They want to get to the heart of it, what it IS. They need to grok its essence. Usually the sense of that comes in a flash—the AHA! experience. Once they get this, spatial thinkers can sit back and fit in the details—all the bits and pieces that flesh out whatever it is. This need to get the big picture first is why they ask so many questions. They are trying to hook this new thing into something that already makes sense to them. Their world is a world of interconnections. This questioning stage can be a frustrating time for them. They can feel stupid, impatient, upset, and tense as they circle around something new, trying out various viewpoints. They don't want a ready-made explanation handed them. They want to understand it in their own way.

Picture thinkers also have their own order, which is organized around **significance**, an emotional response. Rather than outline, as step-by-step learners do, where the main ideas stand out like distinct trees on the plain, spatial thinkers respond to **feelings** about importance. If something strikes them as worthwhile, it becomes part of their web of core essentials, a mental map of things worth paying attention to. Instead of outlines—so comfortable to the stepwise—a picture thinker's scheme of reality is more like a 3D star map. The various stars and constellations stand out in different degrees of brightness, all shining against the dark space surrounding them and all interconnected in some way. Those connections are based on feelings and sensed importance.

It is hard for picture thinkers to experience significance if only parts are available to them without the essential whole. Remembering a detail and then attaching the next segment of words to that doesn't go well for them. They itch to size the whole situation up, sort out what feels important, to understand for themselves what something is about, and to make the right connections. Often they suddenly “see” the whole thing all at once, with everything in its place. Aha!

SCANNING – It is as if picture thinkers have radar out always scanning the environment, taking in every little thing. They are alert for changes, shifts in energy, or tones of voice in everything around them. They even notice if some little thing they saw yesterday is missing today. They scan for signals that something is going to happen as well as for the general feel of things. They absorb what's going on, intensely immersed in that experience. At school, if the lesson of the day can enter their experience, these emotional picture thinkers will take it in and remember it forever. Otherwise, scanning makes picture thinkers vulnerable to distractibility. Their attention may be captured by all sorts of things. They can be equally aware of a bug bite on their arm, the way the lights are humming, someone's simmering anger three rows away, or the relationship of a radius to its circumference.

FINDING PATTERNS – Scanning and the search for significance combine to produce talent for pattern recognition in picture thinkers. It is part of their awareness of connections. If a pattern (recurring connection) is there, they will see it. This means, for one thing, that they will learn math facts better when made aware of interconnecting number patterns than through rote memorization of math facts. Playing games that use number patterns works far better for these emotionally attuned learners than drilling, since their memories don't hold isolated, disconnected facts. Picture thinkers immediately recognize patterns that are pointed out to them, but really excel in finding their own, often seeing connections overlooked by others. Once pointed out, the connections make sense to others who wonder why they never noticed that.

ORIGINALITY – An important aspect in understanding picture thinkers is that they need to think in their own way. They are uncomfortable when following some one else's line of thought, partly because such linear thinking is not the way their minds operate. Sometimes they just can't follow along step by step. They can take in each step but without that Big Picture, the steps fade away. They don't remember details well unless those details vibrate with significance, are tagged with their own feelings, or are part of a sudden gestalt. Picture thinkers blaze their own thought trail. Most need processing time to do this. There seem to be no real steps in their thinking. Often they have a sudden insight that "things go together like this!" Either in a flash or more slowly a whole concept emerges, which may be brilliant or flawed. Picture thinkers need special help in proving (or discarding) their new ideas. Trying them out is a good strategy if you are teaching them. If their idea actually works in a variety of situations, then it has validity. If not, it's back to the spatial drawing board.

The tendency to originality can make teachers and bosses uncomfortable. Not only does it throw off their planning, but there is often an uncomfortable feeling that they are not doing their job. Shouldn't they be the ones to tell spatials what they should know? They aren't sure the spatials have "got it right." It is helpful to give spatials some processing time and to let them work in their own way, while insisting that they apply and test their ideas.

EMOTIONALITY - Spatial learners live emotionally. They do not shut their feelings away to examine and deal with them later. Instead, their feelings enliven, interpret, and underscore their experience all the time. *Their emotions affect the way they think.* Moods intertwine with learning, which means that thinking can fly when they feel upbeat and confident. On the other hand, if they are upset, confused, angry, or depressed, spatials may have difficulty learning much at all. It's as if their mind shuts down then, not able to function until their feelings are more positive. This may be why they try to liven things up with humor, games, tricks, and drama. Positive vibes just help them to learn better. It

follows that picture thinkers will have days when they learn poorly, just as they will have days of remarkable accomplishment. Those around need to learn that variability is the name of the game.

LOVE OF PLAY - Picture thinkers just want to enjoy life. They love humor, fun, excitement, and challenge. They are affronted by dullness and plodding drudgery and will often sabotage an atmosphere like this. They were usually happy, cheerful, fun-loving *bon vivants* as toddlers. Just as then, they have boundless curiosity, are natural explorers, and delight in discovery and excitement. Positive feelings are very important to them, partly because when they are down, they can be so very down. Spatial learners desire to liven things up, often by playing the clown or stirring up arguments, and this can be very annoying to anyone trying to make a serious point. However, they are really not behaving this way to be obstructive. Well, mostly. Some *are* angry because many environments don't work for them.) Spatial learners want life to be lively. Situations where play is seen as restorative, or even as a good way to solve problems, draw out the best in them. Those in charge do well to make the most of spatial learners' creativity, out-of-the-box thinking, and brilliant solutions that seem to come from nowhere.

In a classroom, hands-on or participatory lessons work well for them (and for step-by-step-ers also). Simulation games, board games created by students as part of a learning project, hands-on immersion learning situations, contests, construction and designing, art, music, poetry, skits, and dramatic enactment—all meet a deep need of picture thinkers to live in a rich, colorful, and stimulating environment. They remember their own experience best, so experiential lessons make their points memorably. Enlivening activities such as these also spice up things for step-by-step learners, who enjoy but won't demand this kind of teaching. It is just these lively, upbeat, dramatic personality qualities that draw others to picture thinkers like a magnet. Life is more zestful around them, and classrooms are more exciting.

Of course, there are many other minor strengths and talents exhibited by picture thinkers, but we think these are the most important. We would love to hear from you what other strengths you discover in spatial learners you know, including yourself.