

Affective Mental Imagery

What are affective mental images?

“Affective images” are not pictures or illustrations—they are images in the mind that you can call up simply by talking. They are “affective” in the sense that they have some emotional quality attached to them. Not swooning passions, but just something that engages students’ emotions even if just in a casual way. We tend to be alert to the concepts and content that we teach, and tend to neglect the powerful images that are a part of every topic in the curriculum. This is regrettable because images can be very powerful communicators of meaning, and to neglect them is to ignore one of the great tools in the teacher’s professional toolkit. Indeed, generation of mental images from words can be of immense emotional importance, influencing us throughout our lives. (Think of any event or issue of real importance in your life, and you will find yourself bringing images to mind.) In societies saturated by visual images, as is ours, it is perhaps increasingly important to allow students space to learn to generate their own mental images. We can easily forget the potency of our unique images generated from words. Often the image can carry more imaginative and memorable force than can the concept, and the use of images should play a large role in teaching.

Think about the topic you are teaching—pull back, as it were, from the way you have organized the content and the methods you are using, and look for something about the topic that touches you, or about which you feel some emotional tug. You might find this rather exotic advice—it’s a very rare teacher education program or professional day activity that invites you to feel something about the topics you teach. Yet everything in the curriculum is a product of someone’s hopes, fears, and passions, and part of the trick of engaging children with the knowledge past people have left behind them is to connect with the hopes, fears, and passions that are involved with each topic.

How can we employ mental images in teaching?

Topic: Penguins

Subject Area: Science

Cognitive Tool: Mental Imagery

Generating vivid mental images in students’ minds with words would enhance a study of penguins. One might begin a unit of study for example by describing in detail the bond between the Emperor penguin and its young, the hardship endured by the male penguin to protect his offspring, the collective unity of the penguins in a rookery, huddling together to survive, as a group, the frigid temperatures. One might also juxtapose this image with a description of the Fairy penguin, found only on the remote islands off the Tasmanian coast.

Topic: DNA
Subject Area: Science
Cognitive Tool: Mental Imagery

Out of billions of possible combinations of the 4 base pairings only a very few (in the game you will play – a maximum of 3) mistakes or mutations can happen before the DNA that is building a person, or a mouse, or a bacterium fails and that person, mouse, or bacterium dies, has a disease, or has a malfunction. The “re-zipping” of DNA, after it separates must be pretty much perfect – each and every time!

Topic: Color
Subject Area: Science
Cognitive Tool: Mental Imagery

Imagine the sun, 93,000,000 miles from earth, shining upon the Earth. It takes about 8 minutes for the light from the sun to reach Earth. Imagine a ray of light from the sun to be a magic wand. As the light from this magic wand touches a colorless object, presto, that object magically has dazzling color. The magic of what appears to be white light actually creates color; magically there exists, within each ray of white light (boring), a rainbow of colors (exciting). Not only does this magic ray of light wand create color in objects, it also magically creates the color of us. We are a part of the beauty and magic of color. As an experiment, try to paint a classmate’s skin color. A discovery is soon made that there really is no black or white skin – trying to re-create skin color demonstrates that many of the same colors are needed to make various shades of skin – again, creating a common understanding about color (of us).

Topic: LocoMotor and Non-Locomotor Movement
Subject Area: Physical Education
Cognitive Tool: Mental Imagery

Teaching about movement can include the evoking in students’ minds of mental images of various kinds of animals. We might begin with some infamous predators. So, for example, a teacher could invite students to come with him to the plains of Africa at dusk. It is the end of a day, the soft light is spreading across the tall grasses as the sun begins to set. The female lions roam with a few others, starting to feel the hunger in their bellies. They are on high alert for prey. Their prey consists mainly of large mammals, such as antelopes, gazelles, warthogs, wildebeests, buffalo and zebras, but smaller animals like hares and birds are also taken occasionally. Like lions, they are hunched down, silent and still. As they identify prey the lions pounce forward, with as much might as they can muster, toward their target. The jaws are open, the teeth ready to devour their prey.

Why do mental images engage our imaginations?

One further implication of the development of language was the discovery that words can be used to evoke images in the minds of their hearers, and that these images can have as powerful emotional effects as reality might, and in some cases even more. These mental images are

unlike anything else we are familiar with. Mental images are, after all, even at their closest to quasi-pictures, quite unlike what we see with our eyes. They are also enormously varied in kind, from those quasi-pictorial mental images which we think of as like real images even to the point of “scanning” with closed eyes in search of details (Shepard, 1978), to “images” of smells or sounds which evoke nothing like a picture in the mind, to the most generic capacity of being able to think of things as possibly being so (White, 1990).

Images, like stories, performed in traditional oral cultures the crucial social role of aiding memorization. So we find myths replete with vivid and often bizarre images, that give them what we might categorize as a powerful literary impact. The original purpose of that “literary impact” was an urgent need to preserve knowledge in cultures without writing. They achieved this end by stimulating a range of psychological effects, which continue today in quite different circumstances, long outliving the social purpose they were developed for. Similarly, language development in children leads to the capacity to evoke mental images of what is not present and to feel about them as though they were real and present. Recall, as most of us can quite vividly, images from some of the earliest stories you remember. Some no doubt are influenced by pictures in books but it is common to find that the most vivid and evocative images are those we generated ourselves from oral stories.

In pre-service programs for teachers, considerable time is spent on equipping students with techniques for organizing content, and helping them to clarify concepts. Very little time is spent discussing the power of images in communicating and teaching, and there are few techniques for systematically using images in teaching. Guided Imagery is one such. This usually involves the teacher, or a cassette-taped voice, taking the students verbally to some different time and place and describing the sights, sounds, smells, and other sensations. Guided Imagery can be a powerfully effective technique in many circumstances. What we mean by the use of images here, however, is on a much smaller scale. It does not require relatively elaborate preparations or set-piece performances. Rather it requires the teacher to be more consistently conscious of the array of vivid images that are a part of every topic and to draw on them consistently in vivifying knowledge and concepts.

If teaching about the earthworm, for example, the teacher can augment the facts about its senses and structure by evoking for students images of what it would be like to slither and push through the soil, hesitantly exploring in one direction then another, looking for easier passages, contracting and expanding our sequence of muscles, segment by segment, sensing moisture, scents, grubs or whatever. That is, as we learn about the anatomy of earthworms we can also feel something of their existence by means of images that evoke analogs of their senses. If teaching about flowers, images of emerging from the cold ground, away from the dark and heavy earth, pushing towards light, bursting with a kind of ecstasy in the warmer air, turning with passion towards the sun, the rush of sap, the horror of returning cold, the shriveling back to underground. Constantly evoking affective images will help both to make the content memorable and, relatedly, meaningful in terms with which children are familiar.

Early understanding, then, is significantly more imagistic than is common for forms of understanding built on literacy. As such, because of the affective charge associated with images, it is in some ways more vivid and more closely tied in with emotions. When teaching young children, then, we would obviously be prudent to bear in mind this powerful imagistic and affective capacity for grasping the world.