

Sensory Development

Lesson Abstract

Summary: In this lesson, students interpret sensory impressions and relate these impressions to the human emotions they evoke. Activities are designed to awaken students' senses to the aesthetic beauty near streams and their watersheds.

GLE: SC7.1.B.6, 7.1.C.6

Subject Areas: Science, Fine Arts

Show-Me Goals – 1.3, 2.4

Standards: Strands – SC 3, 4; FA 3

Skills: Observing, defining emotional characteristics related to beauty, communicating and refining sensory impressions, using imagination and senses to define personal relationship with the natural world

Duration: 1 to 2 class periods (50 minutes)

Setting: Stream and classroom

Key Vocabulary: Spontaneity, aesthetics, stewardship

Rationale:

- The development of a person's senses and the ability to communicate perceptions gained through the senses is important to scientific observation and aesthetic appreciation.
- As students better appreciate the beauty of a stream and watershed, they may take more ownership in caring for the land.

Student relevance:

- Students benefit from developing sensory observation skills, analyzing their observations, communicating impressions made by the observations, and relating these impressions to the human emotions.

Learning Objectives:

Upon completion, students will be able to . . .

- View photographs of streams and apply aesthetic considerations when making judgments related to human emotions.
- Use perceptual exercises as tools for sensory development.
- Discuss the cause and effect relationship between sensory experiences and the enjoyment of scenic beauty.

Students Need to Know:

- The senses help our perception of natural beauty.
- How we feel about the natural world affects our willingness to take care of it.
- Appearances can also affect attitudes.

Teachers Need to Know:

- Students benefit from pre-activity perceptual exercises which prepare them to perceive scenic beauty.
- Students are motivated to learn about the stream if they develop a relationship with the environment based on aesthetics.
- As students develop their senses, their powers of observation are likely to be enhanced, which may redefine or strengthen their value system.

Resources:

National Geographic, Missouri Conservationist and other magazines

Cornell, Joseph. *Sharing Nature with Children*. Ananada Publications, 1979.

Hammerman, Donald R., William M. Hammerman, and Elizabeth L. Hammerman. *Teaching in the Outdoors*. Danville, IL: Interstate Publishers, Inc., 1994.

Herman, Marina Lachecki, Joseph F. Passineau, Ann L. Schimpf, and Paul Treuer. *Teaching Kids to Love the Earth: Sharing a Sense of Wonder . . . 186 Outdoor Activities for Parents and Other Teachers*. Duluth, MN: Pfeifer-Hamilton Publishers, 1995

Leopold, Aldo. *A Sand County Almanac*. New York: Oxford University Press, 1949.

Van Matre, Steve. *Acclimatizing: A Personal and Reflective Approach to a Natural Relationship*. Martinsville, IN: American Camping Association, 1974.

Materials Needed for Lesson:

Ice water

Cups

Assortment of photographs of aesthetically pleasing streams from nature/outdoor magazines or nature calendars

Assortment of photographs of aesthetically displeasing streams from magazines or newspapers

Photographs of calm and flowing waters, waterfalls; fast-moving water, large rocks, narrowing streams, slowing water (widening stream), slow-moving (meandering) water, cliff, high stream banks, calm pool with afternoon shade, and overhanging trees.

Procedure:

Part One: Brainstorm the Pictures Frame

- Ask students to privately make a list of things that they consider beautiful.
- Have students compare their list with a neighbor.
- Ask students to raise their hand if water, such as a stream or river, was included on their list.
- Have students name 10 words which describe the most beautiful part of a stream.
- Ask students to write down what they feel when they see a beautiful stream.
- Have students describe what conditions, both natural and human, need to exist for a beautiful stream to exist.
- Show two pictures, one of an aesthetically pleasing and one of an aesthetically displeasing stream; have students make a list of emotions that each stream evokes in them.
- Repeat this activity in small groups using an assortment of collected photographs.
- Tell students that they will be visiting a stream and making personal and group observations based on their senses.

Part Two: Calming, Awakening, Contemplation

Conduct this activity at an aesthetically pleasing stream.

Calming activity

- Sitting by the stream, encourage students to close their eyes, breath deeply, relax and calm themselves, just as a stream becomes calmer as it moves from rapids to slow-moving pools.
- Instruct students to let go of thoughts and concentrate on their breathing, just relax and calm their minds and bodies.
- Allow several minutes for students to relax and appear calm.

Awakening activity

- After the calming activity, encourage students to focus their attention on one sense at a time by trying to awaken each sense individually and perceiving as many different sensations with each sense.
- Start by directing them to the sense of hearing (with eyes still closed); then move to the sense of smell (eyes closed); then move to the sense of touch. Encourage them to first direct their attention to touching the wind, the sun, the coolness of the ground, the texture of the grass, etc.
- Then move to activity touching, encouraging them to pick up something around them and examine it without looking at it.

- Finally hand each student a cool stream pebble. Encourage them to hold it in their hand, feel the coolness, and let it remain in their hand until losing its coolness.
- Move to the sense of taste providing each with a drink of water (small sip).
- Then move to the sense of sight directing their visual attention to light and shadow reflections, textures, movements, aquatic life, animal behavior, and changes in vegetation as it nears the stream. Then direct them to visual clues of the season, time of day, weather conditions, etc.
- After the students have been challenged to focus their senses on some of the simplest forms of beauty, explain that you will be challenging them to use their imaginations to perceive beauty from different points of view.
- Direct the group to focus their perceptions on one animal or plant. Have them examine it in detail (without getting up); then using their imaginations project themselves into that animal or plant (imagine you are the animal or plant).
- Encourage them to try to perceive from the point of view of that animal or plant. What sensations would they feel? How are the physical properties of this plant or animal affected by interaction with its environment? Is there evidence of the environment altering growth patterns?

Contemplation activity

CAUTION: This activity involves varying degrees of obtrusiveness. It would not be suitable for unique protected natural areas. For Missouri Department of Conservation areas, check with park managers or read signs that define rules regarding disturbing the natural state. Even when these activities are done on private lands, it is imperative that the landowners are aware of the purpose and extent of obtrusiveness. Before doing these activities, it would be helpful for the students to discuss the consequences, including how there must be an effort to match obtrusiveness for educational purposes to areas which can reasonable absorb these activities.

- Direct students to become an active part of the ecosystem and contemplate the consequences of each of their activities. Then space them 100 feet apart along a stream path.
- Direct students to walk on the trail and, at times, off the trail.
- Direct students to walk slowly and quietly, then faster and scoot their feet.
- Direct students to look under rocks, peel back the bark of a dead tree, and roll over rotted logs.
- Direct students to break off small branch tips of cedar, pine, or other fragrant trees, crush them in their fingers and smell the fragrance.
- Direct students to skip or throw a rock in the water. (Give each student a rock to take on the walk.)
- Weather permitting, direct students to wade barefooted in the edge of the stream in the mud. (Have a towel at the wading station.)
- Direct students to walk off the trail and find evidence of animal presence such as scat, fur, feeding, nesting, burrows, and trails. (Find an area where these can be observed.)
- Direct students to strip off seeds of grasses or wildflowers, examine them, then drop them as they walk.

- Direct students to throw a stick into the stream and watch it until it is out of sight.
- Direct students to bring back any pieces of litter they find near the stream.

Part Three: Closure

- Have students share their experience with a partner.
- Pair partners for additional sharing until the whole class can share the experience.

Evaluation Strategies:

- Have students produce a photo journal with photographs or magazine pictures of pleasing natural scenes. Ask them to find or write poetry that communicates the mood of the photo or picture. Have them explain their choices.

Extension Activities:

- Encourage students to initiate discussions with friends, family, teachers, or others regarding the emotional aspects of natural beauty.
- Encourage students to discuss consequences of their activities and the importance of sensory development.

Suggested Scoring Guide:

Sensory Development

Teacher Name: _____

Student Name: _____

CATEGORY	4	3	2	1
Attitude	Never is publicly critical of the project or the work of others. Always has a positive attitude about the task(s).	Rarely is publicly critical of the project or the work of others. Often has a positive attitude about the task(s).	Occasionally is publicly critical of the project or the work of other members of the group. Usually has a positive attitude about the task(s).	Often is publicly critical of the project or the work of other members of the group. Often has a negative attitude about the task(s).
Working with Others	Almost always listens to, shares with, and supports the efforts of others. Tries to keep people working well together.	Usually listens to, shares with, and supports the efforts of others. Does not cause "waves" in the group.	Often listens to, shares with, and supports the efforts of others, but sometimes is not a good team member.	Rarely listens to, shares with, and supports the efforts of others. Often is not a good team player.
Contributions	Routinely provides useful ideas when participating in the group and in classroom discussion. A definite leader who contributes a lot of effort.	Usually provides useful ideas when participating in the group and in classroom discussion. A strong group member who tries hard!	Sometimes provides useful ideas when participating in the group and in classroom discussion. A satisfactory group member who does what is required.	Rarely provides useful ideas when participating in the group and in classroom discussion. May refuse to participate.
Focus on the task	Consistently stays focused on the task and what needs to be done. Very self-directed.	Focuses on the task and what needs to be done most of the time. Other group members can count on this person.	Focuses on the task and what needs to be done some of the time. Other group members must sometimes nag, prod, and remind to keep this person on-task.	Rarely focuses on the task and what needs to be done. Lets others do the work.

Rubric Made Using: **RubiStar** (<http://rubistar.4teachers.org>)