

Happy Worms Equals Happy Humans and Sad Worms Equals Sad Humans

Professor Donna F. St. John

KCAD

Grades: K - 1

Time: 2 days - 45 minute sessions

Outcome Statement:

In this lesson the students will create two original drawings that display the artist's scientific observation (using magnifying glasses) of a real worm and their creative visualization skills to create images of both a sad worm and a happy worm. They will learn that their art and the art of other artists can make the world a better and cleaner place. This lesson is important for this age level because it synthesizes both the scientific observation and the creative visual skills in art.

Objectives:

The Learner Will:

- Create two drawings using both observation and creative visualization (one drawing will be of a "happy worm" that has clean dirt or soil and one "sad worm" that only has poisoned dirt).
- Learn the importance of taking care of the earth and the responsibility we have of considering what we put in the ground and how we protect the dirt for us and for our worms thus cultivating the concept of interdependence.
- Learn how they and other artists better the world by creating artwork involving environmental issues and at the same time, giving students hope and the knowledge to know that they can make a difference.
- Discover how they can protect the worms' environment (dirt and soil) and make the world cleaner for all of us as they participate in the "Fundred" Dollar Project.
- Begin to understand the danger of lead and how it can get into our homes and soil.

Visual Art Standards:

ART.VA.V.K.1 Identify and discuss art in the student's environment.

ART.VA.V.K.2 Identify and speak about artists as people who generate new ideas and create art.

ART.VA.I.1.2 Demonstrate the responsible use of project materials with environmental awareness.

ART.VA.I.1.3 Recognize and illustrate the elements of art to communicate personal experiences.

Integrated Standards:

LA Grade 1 – Integration of knowledge and ideas: Use illustrations and details in a story to describe its characters, settings, or events

KCAD for Operation PayDirt

L.OL.01.13 Identify the needs of animals.

S.IP.01.11 Make purposeful observation of the natural world using the appropriate senses

Universal Design for Learning:

Multiple Intelligences:

Visual: Students will be given a visualization opportunity to examine a real worm and they will also have the opportunity to close their eyes creating a visionary environment

Naturalist – Observation of a live worm and dirt

Linguistic: Read the children's book *The Diary Of a Worm* by Doreen Cronin and *Growing Vegetable Soup* by Louis Ehlert

Existential: The opportunity to help keep the earth clean

Interpersonal: They can help keep the earth clean

Mind Styles:

Abstract Random: Students will be greeted at the door with instructor carefully holding a live worm

Concrete Sequential: Diagrams throughout the room that identify the different parts of a worm

Anticipatory Set:

Teacher will greet the students at the door with a worm. Students will enter the room with a small pile of dirt on each of their tables. The teacher will pick up a handful of dirt and ask them to think about what dirt is and why clean dirt is important for healthy worms and for people. Students will brainstorm what things grow in dirt?

Material & Supplies:

- Markers
- Pencils
- Colored Pencils or Markers
- Fundred Dollar template
- Several Handfuls of dirt for the tables
- Several earth worms and magnifying glasses
- Visual Examples of the anatomy of a worm throughout the room

Resources:

- Children's Books: *The Diary of a Worm* by Doreen Cronin- Short Video of the story <http://vimeo.com/17563063> and *Growing Vegetable Soup* by Lois Elhart
- <https://www.youtube.com/watch?v=B1K5kTzO4zE> (short video on nature for
- <https://www.youtube.com/watch?v=1LBX9K3BoYw&list=PLAF8198D882A94BE3&index=11> (Gloria Globe Is Sick) (short video on the earth and littering)
- <http://www.sesamestreet.org/parents/topicsandactivities/toolkits/leadaway> (Sesame Street Video)
- urbantext.illinois.edu – great website for the anatomy and life of a worm
- <http://vimeo.com/8656302>, "Now You See It Part 2"

Concepts and Vocabulary:

Environment – Relating to the natural world and the impact of human activity on its condition

Scientific Observation - Looking closely at the world around us

Artistic Observation - Looking at the shapes and lines in the world around us

Simple anatomy of a worm - Head, back end or anus, setae, segment, 5 hearts

Environmental benefits of healthy worms - Fertilizer and air for our plants

Pollution - Unhealthy things (lead paint) that get into our ground, water and air

Litter - Trash that isn't put in the trash can

Interdependence – When two or more people or things depend on each other

Day One Procedures:

Greet students at the door with a live worm. There will be a small bucket of dirt with one worm in the bucket at the tables. Pick up a handful of dirt and ask the students the question “What kinds of living creatures use dirt to live?” Dirt is home to many living organisms or animals. Have you ever dug up a worm? Where do we usually find worms? Are worms important for the earth and for humans? What do worms do for us? Soil or dirt is a mixture of broken rocks and minerals, living organisms, and decaying organic matter. Dirt or Soil also includes air and water. Do worms need clean water and dirt to live? Do people need clean air and water to live? What would happen if all of the air and water in our dirt had poison in it? Because we are bigger than worms, does that make us more important? Does that mean we should be protectors of worms? What can we do to protect the worms and their homes? What do worms need to be happy and healthy? What do worms do to help keep us happy and healthy?

Students are asked to be scientists by using their magnifying glasses to carefully locate the worm at their table and use the magnifying glasses to make scientific observations of what they see in the dirt and the worm. The instructor will walk through the different parts of a worm. The teacher will ask the children “Are you being careful of your worms? Do you think your worms are happy? Would the worm be happy if there was litter and pollutants in the dirt? The teacher will ask the students to put their worms down. The teacher will introduce the Operation PayDirt outreach, discussing Mel Chin and the work that he is doing. The students will begin drawing a happy worm in clean dirt on their “Fundred Dollar Bill”, on the “My Home” side of the template. The lesson continues with the story *The Diary Of a Worm* by Doreen Cronin.

Day Two Procedures:

Students will review week one and discuss what they know about worms and dirt and

KCAD for Operation PayDirt

Operation PayDirt. The teacher will ask them to recall what worms need to be happy. What would happen if the dirt that the worms need to be healthy had poison in it? Sometimes poison gets into the ground and the worms eat it. Sometimes a poison called lead gets into the ground and makes the worms very sick and unhappy. Old paint can have lead in it; lead can poison our bodies and hurt the ground.

The teacher will review the anatomy of a worm.

What do you think a sad worm would look like? Students are asked to close their eyes and think about what their worm looked like and what kind of dirt their worm would like to live in. This visualization piece is very important to the students' ability to mentally create images. The instructor will slowly walk the students through the exercise by asking them to visualize their worms body, segments, eyes, etc. The students will open their eyes and draw a sad worm in poisoned soil. Students will use their imagination to create a sad worm on the other side of their "Fundred Dollar Bill".

After the students draw their sad worms, the teacher will finish reading the Growing Vegetable Soup by Lois Ehart. This story will reinforce the importance of taking care of our soil so that we can grow healthy foods.

The students will incorporate words or slogans that demonstrate the need of taking care of our environment and the dangers of lead. The Fundred Dollar Bills will be collected for the Operation PayDirt Organization and delivered to KCAD and from there they will be delivered to Washington to demonstrate a community voice representing the peoples desire to build a healthy environment for all.

Closure for each day will include the following questions:

What does the word Environment mean? - Relating to the natural world and the impact of human activity on its condition.

What do Scientists do when they study something? What do Artists do when they study something? - Looking very closely at an object to see the details of that object.

Simple anatomy of a worm - Head, back end or anus, setae, segment, 5 hearts

What are some of the environmental benefits of worms? Worms are decomposers and they fertilize the soil and irrigate the soil.

What is Pollution? - Poison (lead paint) that gets into the air, water, and ground

What is Litter? - Trash that humans leave on the ground.

What is lead poisoning? - How can we protect our environment from lead poisoning? Lead is a dangerous element that can be in our homes through old paint. Lead is a dangerous element that can be in our homes and our dirt. Lead can come form old lead paint; it can dust flake or and peel off of walls and windows. The instructor might show the students <http://vimeo.com/8656302>, "Now You See It Part 2"

Accommodations:

Students with physical disabilities will receive markers that have been adapted with a tennis modified tennis ball. The tennis ball will have a slit cut into it and the marker inserted. This eases hand stress.

Assessment:

Exemplary - Student was able to freely create two drawings using both observation and creative visualization (one drawing will be of a “happy worm” that has clean dirt or soil and one “sad worm” that only has poisoned dirt). Student has a strong understanding of the importance of taking care of the earth and that artists can create artwork to bring about change. Student is aware that lead is toxic and may be found in old paint.

Good - Student finished both drawings but was not able to use both observation and creative visualization to complete the drawings. Student has a moderate understanding of the importance of taking care of the earth and that artists can create artwork to bring about change. Student is moderately aware that lead is toxic and may be found in old paint.

Needs Improvement - Student did not comprehend the concepts and was not able to draw a happy and sad worm.