Happy Worms Equals Happy Humans and Sad Worms Equals Sad Humans

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KCAD

Grades 2 – 3 – (This lesson shows an extension of the K-1st grade lesson providing a more age appropriate version)

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 scientific observation and the creative visual skills used in art.
This lesson is also important because it celebrates and empowers each student to recognize their unique abilities to help others and help clean up the environment.

Outcome Statement:

Visual Art Standards:

ART.VA.II.2.1 Demonstrate how materials, techniques, and processes can be used creatively to communicate ideas.
ART.VA.II.2.2 Combine the use of elements of art and principles of design to communicate ideas.
ART.VA.II.2.5 Compare and contrast how artists convey ideas through the creation of artwork.
ART.VA.III.2.2 Recognize that art is created to fulfill personal and/or social needs.
ART.VA.III.2.3 Share personal experiences and preferences in response to works of art.

Integrated Standards:

H2.0.3 2 Use an example to describe the role of the individual in creating history.
H2.0.4 Describe changes in the local community over time (e.g., types of businesses, architecture and landscape, jobs, transportation, population).
2 – G5.0.1 Suggest ways people can responsibly interact with the environment in the local community.
2 – G5.0.2 Describe positive and negative consequences of changing the physical environment of the local community.

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 regarding environmental issues.
- 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.
- Learn what lead is and where it can be found in our environment.

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 Lorax by Dr. Suess
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 holding a handful of dirt
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 handful of dirt. The teacher will hold a handful of dirt and ask them to think about what dirt is and why clean dirt is important for healthy minds and bodies. 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 Lorax by Dr. Suess
- http://youtu.be/ImDMNnAz4fA – Students from Charlotte's Jay M. Robinson Middle School explain lead and the Fundred Project
- urbantext.illinois.edu – great website for the anatomy and life of a worm
- https://www.youtube.com/watch?v=Xor8lqjtc4M
- 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 (posterior), back end or anus (anterior), setae, segment, five 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

Lead - A toxic bluish-white metallic element that occurs in old paint

Day One Procedures:

Greet students at the door with a handful of dirt. There will be a small bucket of dirt on the tables with one worm in each bucket. Written on the board will be the questions "How many living organisms are there in a handful of dirt?" The answer is that there are hundreds or millions of living organisms in one handful of dirt. These living organisms are an integrated web of life. If our dirt is properly taken care of it can provide all of the nutrients needed for healthy plant growth and healthy plants can help us stay healthy.

What kinds of animals or insects live in the dirt? Have you ever dug up a worm? Do you think worms are important for the earth and for human survival? In what ways do worms help us? Soil or dirt is a mixture of broken rocks and minerals, living organisms, and decaying organic matter called humus. Humus is rich in nutrients. Dirt or Soil also includes air and water. 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? What can each of us do to help keep our soil clean?

The lesson continues with scientific and artistic visual research. Students are asked to be scientists by using their magnifying glasses to carefully locate the worm at their table and make scientific observations of what they see in the dirt and the worm. There will be anatomy images on the tables to help them identify the parts of a worm. The instructor

will walk through the different parts of a worm. The teacher will model careful treatment of the worms. The teacher will ask the students to put their worms down and will then be introduced to Operation PayDirt and the work of Mel Chin. The students will have the opportunity to begin drawing a happy worm in clean dirt on their "Fundred Dollar Bill", on the "My Home" side of the template. Students will be given studio time to complete their drawings.

After the students have cleaned up the room and closure questions are answered, the teacher will begin reading The Lorax by Dr. Suess.

Day Two Procedures:

Students will review Operation Paydirt and the work of Mel Chin. Students will review week one and discuss what they know about worms and dirt. The teacher will ask them to recall what worms need to be happy. The teacher will discuss the dangers of lead poisoning and how we can keep the environment and ourselves safe. 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. Old paint in our houses can make us sick.

The teacher will review the anatomy of a worm and importance of respecting all creatures on the planet. Continue the discussion by asking the question – "What do you think a sad worm would look like?"

Students will be instructed to draw from their imagination a sad worm on the other side of their "Fundred Dollar Bill". 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, wrinkles, eyes, etc. The students will open their eyes and draw a sad worm in lead poisoned soil.

After the students draw their sad worms, the teacher will finish the story The Lorax. This story will reinforce the importance of standing up and protecting our environment. The teacher will also discuss Mel Chin and his efforts to clean up lead poisoning. The short video from Robinson Middle school will be shown, (see resources).

They will draw or write words on their Fundred Dollar that demonstrate how they will help take care of worms, soil and the earth.

The Fundred Dollar Bills will be collected for the Operation PayDirt Organization and delivered to Washington as a political statement.

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 is Scientific and Artistic Observation? - 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 and irrigate the soil.

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

Where do we find lead? Old paint

Can artists make the world a safer place by creating artwork? Yes

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 carefully examine the worm and draw it freely both as a happy worm and as a sad worm. Student understood the importance of taking care of the dirt and us by taking care of the environment. Student understood that artists sometimes create art to make the world better and safer. Student had an understanding that he/she can be a friend to the earth by not littering and being kind to animals and insects.

Good - Student was not able to carefully examine the worm and draw it freely both as a happy worm and as a sad worm. Student had a moderate understanding of the importance of taking care of the dirt and us by taking care of the environment. Student did not understand that artists sometimes create art to make the world better and safer. Student did not have an understanding that he/she can be a friend to the earth by not littering and being kind to animals and insects.

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