



## ***Identifying with Earth***

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University Park Creative Arts Elementary

This curriculum unit is recommended for:  
3<sup>rd</sup>-5<sup>th</sup> grade Earth Science infused with Arts

**Keywords:** Earth science, Earth materials, soil, rocks, weathering, erosion, soil painting, cave paintings, identity, emotional development,

**Teaching Standards:** See [Appendix 1](#) for teaching standards addressed in this unit.

**Synopsis:** In this unit, students will explore with one of the Earth's materials, soil. They will begin looking at the earth as a whole and then examine its parts in more detail. This idea will be applied to the analysis of personal identity as an avenue for students to connect with science content.

*I plan to teach this unit during the coming year to 85, fourth grade students in my STEAM lab.*

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## **Introduction and Rationale**

Science should be a verb in every classroom. Luckily, the content lends itself to hands-on opportunities and discrepant events that to engage minds.<sup>1</sup> However, there are topics that tend to be a bit dry when it comes to grabbing and holding anyone's attention. One such topic for me is Earth's History. Students are excited to touch soil, add water and watch the effects but when it comes to making lasting connections with the content, they remember the fun time the classroom got really dirty and it was ok.

As decisions are constantly being made about how we treat our planet, it is imperative that our students connect with their one home of Earth earlier in their lives than later. While developmentally elementary-aged students are focused on the "world of ME", we need to provide opportunities for them to understand how caring for the Earth benefits this "world of ME" and encourage empathetic thinking for other living things. Through this unit students will explore their identities and how it impacts the identity of the Earth. Exploring these simultaneously will provide students deeper connections to the Earth and empower them to make positive changes in their lives and thereby altering their relationship with Earth.

I have always been a proponent of infusing the arts across the curriculum. They allow for self-expression of material, content displayed in a creative way builds a deeper connection. The creation of art uses multiple parts of the brain and when students are asked to create something based on science content they are building a connection to their physical world and their interactions with others.

This particular topic, Earth Science, I felt needed even more than art for young children to relate. This is where identity fits in and creating a piece to not only represent themselves but the identity of the Earth. The art will allow students to express their ideas, personal and content related, without the traditional fear felt during a test, perhaps a better indicator of mastery.

## **Demographics**

### **University Park Creative Arts School Improvement Plan 2016-2017**

University Park Creative Arts has 313 female and 195 male students. Males comprise 38.4% of our population, whereas, females make up 61.6% of our population. Our largest ethnic group is African American which is 80.5% of our population and the smallest ethnic group is our American Indian population which is 0.6% of our population. We have growing Hispanic and white populations with 13.4% Hispanic students and 2.8% white students. In addition, 2.8% of our population is either Asian or multiracial students. An additional subgroup is exceptional children. We have 27 students which is 5.3% of our population. We

have 3 academically gifted students and 27 limited English proficiency students. As for other subgroups, we also have 19 McKinney-Vento student and 12 students with a 504 plan.<sup>2</sup>

University Park is a Title I creative arts magnet that currently has drama, dance, orchestra and band in addition to music, visual arts, technology, media, physical education and STEAM lab as special area classes. Our 4<sup>th</sup> and 5<sup>th</sup> graders choose a major and minor to focus on during their specials time from the art classes. This helps them to focus their energy in the area that they are most passionate about for their annual performance, a junior musical. Our students are used to being asked to express themselves in various modalities but as all children are still figuring out who they are as a person.

## Goals

The goals of this unit are for students to have a better understanding of their own identity, the pieces that go into forming your identity and to use that understanding as a way to relate to Earth's History. Specifically, to truly understand something/themselves/someone else they need to take time to look at the details. Beginning with the big picture is a start but realizing that we are all made of the same thing and use those same things to make ourselves unique. The lessons begin with basic adjectives to describe themselves but then having them analyze other aspects of identity formation. In terms of the history of the Earth, students should develop an understanding of earth materials and their changes over time and how these materials and processes contribute to the Earth's identity.

## Content Research

We are charged as educators to fit a wealth of content into a small amount of time. As bright, energetic and imaginative professionals we strive to write innovating lessons while developing these unique individuals. In order to do so, the social emotional development of students is woven into our everyday lessons. When an off content incident occurs we address it, as best we can and continue to build relationships with each student. To facilitate this personal development should be done with intention, interwoven in our content lessons from our first introduction and throughout the school year.<sup>3</sup>

Instead of adding additional lessons it seems easier to infuse social emotional learning with the content. As students learn about themselves and their identity, they can connect with content. Developing these lessons with fidelity will take time and effort to plan appropriately and as trust and comfort levels are built, the learning will be easier for the students, in turn making the teaching easier. Ideally, students would walk into class with nothing but the subject on their mind. While this is not reality we can make our classes conducive to "dealing" with outside

forces and learning content. “the quality of the classroom experience, on both the academic and emotional levels, can improve when the teacher shows conscious awareness of the role of emotion.” (Park, 2016)

Art is often used in therapeutic settings because people have an easier time expressing their thoughts and emotions through creative avenues versus verbal communication. Let’s use this to our advantage in terms of communication and application. There is less fear in getting science content wrong while creating a collage compared to a multiple choice test. Also, they are synthesizing the information from class to fit their understanding and then explain the content through the art.<sup>4</sup>

Art also encourages language development. Most students can share what they are literally seeing in a piece – the shapes, the colors etc... and others can express more of how the piece makes them feel because of these observations, everyone can participate. After students have received some instruction and more vocabulary is introduced and they feel more comfortable sharing when looking at a picture versus reading a test question.

These test questions are the application of knowledge shown by the students, which involves critical thinking skills to be applied. These skills are enhanced by analyzing pieces of work, synthesizing information across content, comparing artists, modalities etc... and can then be brought back into the science classroom to further master content standards and apply knowledge to standard test questions.<sup>5</sup>

This unit uses social emotional connection and art to enhance the learning of the science content. By taking the time within the lessons for students to think about the parts of their identity they can make a greater connection to the Earth. The Earth is made of basic materials all over just as humans are all made of the same materials but in order to fully understand a person or a part of the earth we must take time to analyze how these parts came to be and are still changing.

This unit references artwork found in Paleolithic-era caves discovered in France. There are two caves in particular, The Chauvet Cave and The Lascaux Cave. Both caves have paintings created with mineral pigments, paint created from components of soil. While at first glance the paintings may appear the same, the identities of the artists are shown through their subjects, technique and layout. The paintings have been studied and each detail recorded in an effort to learn more about the identity of the people of that time. The researchers did not stop when they learned that cave art existed they took time to look for details, which is necessary when learning about identity.<sup>6</sup>

The Lascaux Cave art was created approximately 20,000 years ago and discovered in the 1940s. Throughout the paintings there are animals, human figures and signs. Some art was also found by cutting into the stone, man-made weathering of Earth materials. There are paintings of bulls

in motion and various other animals but no reindeer. This is seen as unusual because the reindeer were their main source of food.<sup>7</sup>



Red Cow and First Chinese Horse, 2003<sup>8</sup>



Great Black Bull, 2003<sup>9</sup>

The Chauvet Cave art was created approximately 30,000-33,000 years ago and were discovered in 1994. The animals of focus were predatory animals, lions, bears, owls, panthers, etc... this is rare in cave art. Human figures only appear once throughout the cave. The artist(s) also showed more detail in their artistic ability which made the animals appear more realistic.<sup>10</sup>



Panel of the Lions, 2003<sup>11</sup>



The Panther Panel, 2003<sup>12</sup>

Besides the use of soil/minerals to make paint, there is another important scientific connection with the caves, their weathering. Due to exposure to climate and man the caves have recently been closed to prevent any further damage to the historic art.<sup>13</sup>

## **Instructional Implementation**

### Teaching Strategies

#### *Five E Method*

My classroom is generally guided inquiry with most lessons being hands-on. There are questions that lead the students thinking and they generate ideas on how to answer to those questions. I use the 5E lesson plan model - the first part is designed to ENGAGE the students in

the topic. The second part allows the students to EXPLORE the content generally through a hands on experience with guidance. The third part is EXPLAIN, during this section vocabulary is introduced and key concepts are revealed to the students. The hope is that they students have already become aware of these concepts through the explore portion and the teacher provides the more concise version with appropriate vocabulary. EXTEND is the fourth part when students are given another opportunity to explore the information with the new understanding from what the teacher has explained. The fifth E is the EVALUATE portion. During this evaluation the students can take part in a separate assessment or the teacher can use a rubric for their notebooking or participation.

### *Clever*

Another core practice in my classroom is using CIEvR (Claim, Evidence, Reasoning). Using this regularly helps students to think through information logically. A **claim** is what they believe or think before they complete the next activity, also known as a hypothesis. The **evidence** is the collection of proof using their five senses. This is when/how they perform their experiment and collect data, as well as analyzing for patterns. The **reasoning** comes after all the evidence is collected. The students evaluate their data and connect their evidence to their claim, explaining whether or not they were correct before the experience. To begin each activity, share the question and have the students form their claim, this can be collected as a class on an anchor chart or individually in their notebooks.<sup>14</sup>

The goal of this entire unit is to have students understand the properties of matter that make up the Earth and the processes it takes to change the surface of the Earth. This science goal can be connected to them on an emotional level by relating the pieces and the processes to their own identity. Each hands-on lesson with Earth materials will be introduced or followed by making personal connections to their own lives.

One way of connecting can be showing a piece of art before each lesson. There are many artists that use raw earth materials to express their voice.<sup>15</sup> Finding art that focuses on the science vocabulary enhances their experience with that word. Humus can be a challenging word for students to remember, by viewing art from fallen leaves or encouraging them to create their own piece will further establish meaning.<sup>16</sup>

### **Classroom Lesson /Activities**

Science Activity One - What is soil? Adapted from *Soils, rocks, and landforms: teacher toolkit*. Nashua, NH: Delta Education, 2012.

The first hands on activity involves students taking the time to observe soil and describe the ingredients for soil, regardless of where it originates.

### *Inquiry Question*

What is soil? How is soil part of the Earth's identity? Students write their claim to each question in their notebook. Before students record ideas about the Earth's identity they can describe their own identity. This was very interesting to discover that my students were not familiar with the term "identity".

### *Engage*

Activate students prior knowledge on earth materials, in particular soil(s). This can be done with a nature walk outside, watching a silent video clip of the Earth etc... anyway that you can have your students think about the materials that make up the Earth. Question - Where do you find soil? Where should we look for soil? What materials do you see in soil? What are those materials doing in the soil? Are there places where there is nothing growing in the soil? How the soils here the same/different from the soil over there? Do you think there is soil somewhere that we cannot see? Under something? What is the soil made of? Is it the same everywhere? Why is soil important?

### *Explore*

Let students know that our inquiry questions during these lessons are What is soil? and How is soil part of Earth's identity?

During this explore the students will take time to observe four different soils that you have created. Each soil should be labelled in the container, on the cup, and on the plate so that the soils are not confused, they will look relatively similar.

In their notebooks they can divide their paper into four parts, one section for each soil. Here they will list their observations. Review the five senses and remind them they will NOT taste the soil, and smelling must be done by wafting. Students will tend to make comparisons, "the soil looks like cookies" encourage fact based writing, the color, shape and size of the materials that make them think of cookies.

Provide enough time for adequate lists of observations but not too long to encourage playing. The goal is to have the students realize that each of the soils have the same materials but in varying quantities. This goal will be revealed during the explain portion of the lesson but important to keep in mind while facilitating the Explore part of the lesson.

The students observations are the evidence for this activity.

### *Explain*

Once the students have all had an opportunity to observe the soils their knowledge needs to be shared and realized. Have the students create a "t chart" to list how the soils are ALL the same and ALL different. If only two soils share a characteristic then it is not included in their chart.

To address the second inquiry question regarding the Earth's identity they will make another "t chart", this time comparing themselves with everyone else in their class. Again, if they share a characteristic with two other people then it should not be included in the chart.

Once their comparison charts are completed guide them to realize that all of the soils are made of the same materials. As a class create a list of things that were found in all the soils and then use that list to introduce the proper vocabulary found in Appendix 2. Show the students how their list fits in with the new words, I use smart software to move the words but you can use sentence strips to put their word twig under the new word of humus as an anchor chart in your room. Students will probably say sand, this word can be moved under the heading of rocks to show that sand is a size of rock found in soil.

Have students sit with a soil as you list the vocabulary, as you call out a word have the students find and point to that particular material. Make sure to have the students observe how many people raise their hand for each material, it should be more than less, this will prove to them that every soil contains the same materials. This is the goal of the lesson, all soils are made of humus and different sizes of rocks.

### *Extend*

Geologists use water, another earth material, to help separate the different materials in soil. Each student will pour their soil into a vial, leaving  $\frac{1}{3}$  empty. Add the water to watch the materials settle and compare the layers. Students should observe bubbles, which proves there is air in soil. They should also observe that the humus floats to the top. It is wise to try this out first before the students explore.

Leave the vials to settle overnight for students to make their final observations. The next day the vials should show the same number of layers, but different thicknesses. This will be the final detail to add to their definition of soil, while soils are all made of the same materials, each has a unique combination of rocks and humus.

### *Evaluate*

I have focused the evaluations on the science content and not on the identity content because I am using the emotional piece to help students to learn the science content. I will use their notebooks as the evaluation piece, there is a rubric in Appendix 4. Make sure they are apply new knowledge and not relying on their previous ideas about soil.

The reasoning portion of the activity is students thinking back to their claim and stated whether or not they were correct based on the new evidence presented.

Science Activity 2 How is soil made?

### *Inquiry Question*



How is soil made? Students can record their claim in their notebooks. Remind students that we now know what materials are used to make soils and to keep that in mind when making their claim. Depending upon your students, have them discuss ideas for their claims before or after they write in their notebooks. As the claims are written keep track of how many students suggest natural methods versus methods caused by humans.

### *Engage*

Make a connection to identity by discussing the big picture and subsequent details, using a graphic of concentric circles to show the “digging” deeper into the details maybe helpful for students, the largest circle is Earth, then Earth materials/matter, soil/water/air, finally two smaller circles to describe soil, rocks and humus. An example can be found in Appendix 4.

Show images of the different sizes of rocks, mountain, boulder, pebble, gravel, sand, clay and silt. Have the students ask a partner questions that these images encourage. Ask students the question “Where does silt come from?” This will give an idea of which students understand that silt is the smallest size of rock. Continue with the questioning by replacing silt with clay and so forth until you have reached boulder. This hopefully will reinforce that each size rock came from a larger size.

Final question of the engage portion, “How could you break these into smaller pieces?” Students may offer that rocks fall and break when they hit each other. “How could we model rocks falling and breaking when they hit each other?” Lead students to the explore activity and explain how this is a model.

### *Explore*

The students will collect and record evidence in their notebook.

Each pair of students will observe sugar cubes and the changes that occur as a model for rocks. Distribute materials, four sugar cubes, plastic container with lid, paper plate, goggles, and hand lenses. Allow students to shake the container for two minutes total and discuss their observations. They will pour “the rock” out onto the paper plate for closer observation with their hand lenses. Their observations should be kept in their notebook, pictures and words. Provide each group with a “whole rock” to compare their results to and draw the changes.

Students should switch tables to observe the other rock and record their observations. Encourage conversation at the tables, the size, color, shape of the pieces etc...

### *Explain*

Today the rock was broken into pieces by hitting another rock because we shook them in a container. In nature this happens to all rocks when they fall, are moved in landslides or by water or wind. When rocks are broken into smaller pieces that is called weathering.

Since the rock only changed in size this is physical weathering, it did not change the materials.

### *Extend*

Rocks are also broken by water as it freezes. Water seeps into the cracks, freezes, expands and breaks the rock into smaller pieces. This can be demonstrated by freezing water in a glass bottle.

Explain that to model this type of weathering the bottle will model the rock, the water will be rain or water from a stream that has seeped into the rock, the freezer will model freezing weather conditions in nature. To be safe wrap the bottle in a few layers of newspaper and place it in a plastic bag before putting it into the freezer. Allow the bottle to freeze overnight.

The following day allow students to observe and draw the evidence in their notebooks, encourage labeling of what the materials were modeling and then a sentence or two to explain the process.

### *Evaluate*

Allow students to revisit their claim and evaluate their evidence collected in this activity. Their reasoning should be written in their notebook, using new knowledge and vocabulary. Provide sentence starters, if needed. I now know \_\_\_\_\_. I know this because I saw \_\_\_\_\_.

### Art/Identity Activity

See Appendix 5

### Art/Science Activity

### *Engage*

Read *Monkey see monkey draw* (Beard, 2010).

Show the instrumental video clip about the Chauvet cave paintings. Allow students to observe with their own thoughts. Watch it a second time after giving students guiding questions and giving some background. This is artwork found in France from artists that lived 17,000 - 2 million years ago. How did they create those pictures? What did they use? What objects did they choose to draw/paint? What can you learn about these people from what they drew? What did you learn about their identity?

### *Explore*

Students will talk to a partner about what images they could draw to show their identity. They can think about what they would want someone to know about them if they couldn't write out an explanation. What colors would they use to show their identity? Have them write down their ideas to use later in the creative process.

Engage the class in a discussion based on how they think the paleolithic people created their drawings? What materials were available to them at the time? If they need help ask them to make a connection to what they have been exploring in the science notebooks. Today we are going to use the same materials to make our own paint. You will use paint made with soil to create colorful paper to use in an identity piece. Think about the message you want to send to people about yourself when painting your paper. Do you want to use dark soil or light soil? Soil made with red pieces or brown pieces? Do you want to paint specific pictures or shapes?

If there is time the students can mix their own paints, if not have the paint made or demonstrate how to make it and allow them time to create their paper.<sup>17</sup>

### *Explain*

People who lived before paper and pencil could not write down their stories to share their identities, they shared their lives through artwork and other ways. They made choices to share certain parts of their lives that were important to them, that is how we learn about their identity.

You will choose the important parts of your identity to share in a similar way, you will use the same medium - soil paint - to share things that are important to you and your identity.

We are all using the same materials to make our paint but our art pieces will look very different because of each of our unique identities. Just like Earth is made of all the same materials but with different amounts.

### *Extend*

Students will create cave paintings using the soil paint, their fingers or other natural materials, and butcher paper on the wall. Before they begin, remind them that each detail speaks about their identity, where they choose to paint, how large or how small they paint their images, what images/shapes they use etc... Allow them time to consider what they want their artwork to “say” about them and their identity.

### *2nd Extend - Art Product*

Using the same soil paint to cover a piece of paper the students<sup>18</sup> will rip the paper to simulate weathering of rocks and use the pieces to create a collage of color/shapes etc... inside a focused image.

Students will choose an image as their outline for their collage. This image will be connected to their identity in some way. They do not need to explain the why behind the image as long as they recognize that the shape they choose for their collage is an expression to their audience of their identity. The shape will not be their whole identity, the students will use the pieces of painted paper to show more details within the shape.

### *Evaluate*

This final art product will serve as their assessment of the science content. Students will describe their product using science vocabulary and what they learned about the Earth's identity. They will explain the process that they went through to create the art product and relate that to the processes on earth and how it changes the surface.

Depending upon the student's level of writing it may make more sense to have the students complete a graphic organizer.

### **Assessments**

Students are given the open ended assignment to respond to "What is your identity?" After sufficient time is given, allow students to respond to "What is the Earth's identity?" Students will list factors that make up their identity and then those of the Earth. When I had my students do this they had many more words to describe the identity of the Earth than themselves.

Each activity/lesson is written in the 5E format, the final E is Evaluate, there you will find the ongoing assessments.

## **Appendix 1: Implementing Teaching Standards**

### Science as Inquiry

As students progress through the grade levels, their strategies for finding solutions to questions improve as they gain experience conducting simple investigations and working in small groups. They are capable of asking questions and make predictions that can be tested. Students must be encouraged to make more careful observations and measure things with increasing accuracy. They must have experiences that allow them to recognize patterns in data and use data to create reasonable explanations of results of an experiment or investigation. They should be encouraged to employ more sophisticated language, drawings, models, charts and graphs to communicate results and explanations. Students must always use appropriate safety procedures, including listening skills, when conducting simple investigations.

4.E.2 Understand the use of fossils and changes in the surface of the earth as evidence of the history of the Earth and its changing life forms.

4.E.2.3 Give examples of how the surface of the earth changes due to slow processes such as erosion and weathering, and rapid processes such as landslides, volcanic eruptions, and earthquakes.

4.E.2.3 Students know that the surface of the earth changes over time. Students know that there are many factors that contribute to these changes. Students know that such changes may be slow or rapid, subtle or drastic. Erosion and weathering are processes that change the Earth. Wind, water (including ice), and chemicals break down rock and can carry soil from one place to another. Under the right conditions, gravity can cause large sections of soil and rock to move suddenly down an incline.

## **Appendix 2: Vocabulary**

The vocabulary is in order of when they are introduced to the students through the lessons.

Claim - a statement of belief

Evidence - the act of using senses to gather data / collecting proof through observations

Reasoning - connecting evidence with the earlier claim and developing a concluding thought

Earth Materials - the ingredients used to make earth, they include soil, water and air

Soil - one of the three earth materials

Rocks - one of the two ingredients found in soil

Pebbles - the largest size of rocks found in soil

Gravel - the 2nd largest size of rocks found in soil

Sand- the 2nd smallest size of rocks found in soil

Silt/clay - the smallest size of rocks found in soil, the size of dust

Boulder - the largest size of rock on Earth, the size of a car

Model - a representation of an object or action either larger or smaller to observe

Physical change - to alter the physical properties of an object

Weathering - the process of breaking apart a natural object

### Appendix 3: Lesson Materials

Pebbles  
Gravel  
Sand, coarse  
Clay  
Humus - potting soil

#### Science Activity 1

Using the materials to the right create 4 different soil samples from various ecosystems around the world.

1- mostly clay, equal parts sand and gravel and small amount of humus (mouth of a river)

2- Mostly gravel and pebbles, equal parts

Small amount of clay and sand, equal parts (mountain)

3- mostly gravel and sand, more gravel than sand with a small amount of humus and clay, equal parts (desert)

4- mostly humus, a smaller amount of gravel make up a 3/4th of this soil, small amount of sand, and even smaller amount of clay and pebbles (forest)

Cups

Paper plates

Hand lenses

Vials

Water

#### Science Activity 2

Plastic jar with lid for each pair of students

Sugar cubes

Paper plates

Hand lenses

Goggles

Glass bottle with top

Newspaper

Freezer

Water

## Art Activities

Egg cartons

Soil samples - clay, humus, sand

Glue

Craft sticks

Sponges

Water

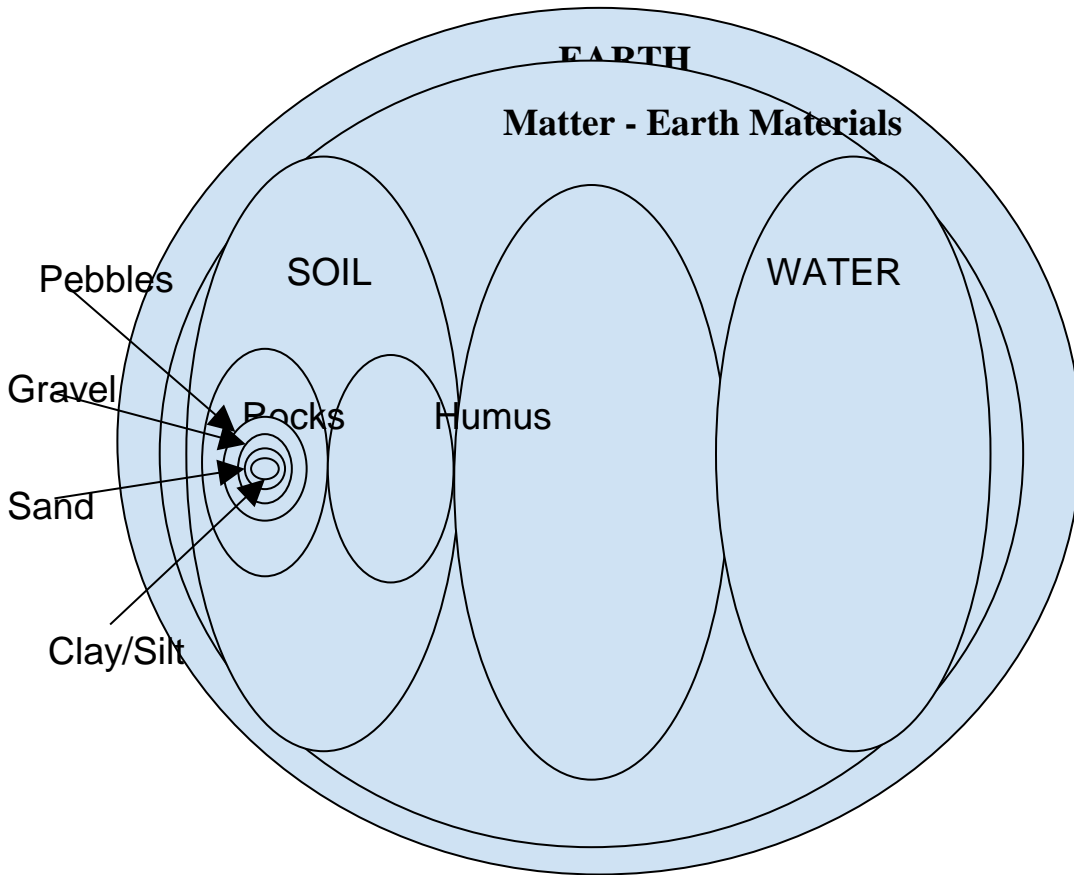
Construction Paper

Butcher paper



**Appendix 4: Notebook Rubric and Graphic Organizer**

Things to look for	



## Appendix 5: Art/Identity Lesson

Students will take the time to think about their own identity and compare getting to know a person vs getting to know the Earth through broad observations and then specific observations.

Display an image of Earth from space and ask the students to share what they see.

Display an image of Phil Hansen and ask the students to share what they see.

Does the image give you enough information about their identity? We are looking at the whole Earth why can't we tell enough about it's identity? We can see the whole Phil Hansen, why can't we tell enough about his identity? As scientists and human beings we need to take time to learn about the parts that make up these whole objects. We need to get to know both to have a better sense of who/what they are and their purpose. We have already begun to look deeper into the Earth's identity and discovered that Earth is made of earth materials. The materials we have spent the most time on learning about are rocks and humus. If we look at Phil closer will we be able to learn more about his identity?

Create a class T chart, one side Earth's identity and the other side Phil Hansen's identity. Start by recording what they observe by looking at the whole picture. Then they can add the different parts to add details. They can use what they already know about soil to fill in the Earth side and you will use the Ted talk, Embrace the Shake, for students to collect more information about Phil. Students can record information to add to the class T chart as they watch and listen.

Students will make claims about his identity and provide evidence from the video. Watching the video in segments will help students to focus on particular characteristics and evidence.

Example: Phil is an artist - went to art school, , positive thinker -found things to do that his shake was helpful for, focused - he only practiced one art form, pointillism, in pain - his hand shook and has nerve damage, determined - found other ways to make art regardless of his injury.

The other important thing to focus on is how he changed and his identity changed. He had a goal in mind, to be a pointillism artist but because he did not take care of himself, SLOWLY OVER TIME he injured his body. (This connects to how the Earth changes by weathering and erosion) He had to change the type of art he did to feed his need to wanting to share art. Once he finished art school he started at a new job and bought new supplies, which he thought would quickly change his art. This did not help, he could not create art for awhile. He changed his thinking to the opposite, instead of having all the materials he focused on 1 thing at a time.

Allow time for students to reflect on their own identity, thinking about their limitation and things they really want to do but can't right now.

## Possible Break

The other important feature of this video is the link between his artwork being destroyed and how earth materials are changed. At 4:23 Phil begins to discuss his project “Goodbye Art”. Here the students could connect the changes in the art forms due to Phil’s actions and make the connection to how the earth changes. Connecting the “breaking” that was done to the art to weathering that happens in nature with air and water.

How did this art project change Phil Hansen? He learned to let go, let go of outcomes, let go of failures, and let go of imperfections. He is in a state of constant creation and not worried about what kind of art he will create. Nature happens without emotions, and the Earth is constantly creating new materials made out of the same things, water, rocks and humus.

Could we have know all of this about his identity just by looking at him?

We need to take time to look closer and at all the different parts that make each person, piece of art and the earth.

When students are creating their art pieces remind them of Phil Hansen and how they can Embrace the Shake.

## Notes

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14. "Claims, Evidence, Reasoning." Teaching Channel. 2014. Accessed November 18, 2017.  
<https://www.teachingchannel.org/videos/support-claims-with-evidence-getty>.
15. "Yusuke Asai | yamatane." Rice Gallery. Accessed October 28, 2017.  
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16. "These artists create mind-bending artwork solely from autumn leaves." Inhabitat Green Design Innovation Architecture Green Building. September 27, 2016. Accessed October 28, 2017. <https://inhabitat.com/top-6-incredible-artworks-made-from-autumn-leaves/>.
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<https://www.agclassroom.org/utah/matrix/lessonplan.cfm?lpid=390>.
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## **Teacher Resource Annotated Bibliography**

### Identity

Batra, Sunil. 2013. "The Psychosocial Development of Children: Implications for Education and Society--Erik Erikson in Context." Contemporary Education Dialogue 10, no. 2: 249-278. ERIC, EBSCOhost (accessed September 16, 2017).

This article looks at the relationship between human development and awareness of self. This connection is linked to how personal identity is formed.

FitzPatrick, Sarah, Mairéad Twohig, and Mark Morgan. 2014. "Priorities for Primary Education? From Subjects to Life-Skills and Children's Social and Emotional Development." *Irish Educational Studies* 33, no. 3: 269-286. ERIC, EBSCOhost (accessed September 16, 2017). This article evaluates the current focus of curriculum and focuses on integration of life skills, including social and emotional development which will ultimately impact their futures.

Hansen, Phil. "Embrace the shake." Phil Hansen: Embrace the shake | TED Talk. February 2013. Accessed November 18, 2017. [https://www.ted.com/talks/phil\\_hansen\\_embrace\\_the\\_shake](https://www.ted.com/talks/phil_hansen_embrace_the_shake).

This is the video that you will use to have to students analyze Phil Hansen's identity and then develop a better understanding of their own. There are wonderful connections between his changes and the changing earth.

Klein, S. R., & Miraglia, K. M. (2017). Developing visually reflective practices: An integrated model for self-study. *Art Education*, 70(2), 25-30. Retrieved from <https://librarylink.uncc.edu/login?url=https://search.proquest.com/docview/1889708845?accountid=14605>

Visual literacy is an important piece of education that can reveal and inspire critical thinking. This article is written for teachers to analyze their current strategies to evoke deeper thinking.

Mynarikova, Lenka. 2012. "Art-Based Program for Social and Emotional Development of Children." Online Submission ERIC, EBSCOhost (accessed September 16, 2017). This study shows how the use of art based activities can be used to explore students' emotions and identity. They are able to find their voice through creative arts.

Haynes, Norris M., Michael Ben-Avie, and Jacque Ensign. "How social and emotional development add up: getting results in math and science education." New York: Teachers College Press, 2003.

This book provides insight to focusing on social and emotional development in the science and math classroom benefits children and their learning. There are anecdotes from different schools and research on how/why this cannot be neglected.

Park, Mi-Hwa. 2016. "Emotional Scaffolding as a Strategy to Support Children's Engagement in Instruction." *Universal Journal Of Educational Research* 4, no. 10: 2353-2358. ERIC, EBSCOhost (accessed September 16, 2017)

The research presented in this article explains the need for emotional development to be a focus in the education of younger students. This focus is found to support student engagement in content and overall success.

Thompson, Ian, and Alice Tawell. 2017. "Becoming Other: Social and Emotional Development through the Creative Arts for Young People with Behavioural Difficulties." *Emotional & Behavioural Difficulties* 22, no. 1: 18-34. ERIC, EBSCOhost (accessed September 16, 2017).

The research shows the need for creative arts to support students who struggle with behavioral expectations.

## Science

"Claims, Evidence, Reasoning." Teaching Channel. 2014. Accessed November 18, 2017.  
<https://www.teachingchannel.org/videos/support-claims-with-evidence-getty>.

This video provides a glance into a science classroom with students using CIEvR to answer a question about artwork while the teacher explains the process.

"Investigation 1." In *Soils, rocks, and landforms: teacher toolkit*. Nashua, NH: Delta Education, 2012.

FOSS materials are research based and provide hands on explorations that are developmentally appropriate. There are two more investigations included in this module that I did not use in this unit.

Weller, H. "What is a "Discrepant Event" in Teaching?" Maine In-situ Sound & Color Lab. 2008. Accessed November 18, 2017.

[http://misclab.umeoce.maine.edu/boss/classes/SMS\\_491\\_2008/week2/discrepant\\_event.pdf](http://misclab.umeoce.maine.edu/boss/classes/SMS_491_2008/week2/discrepant_event.pdf).

Often critical to engage minds, discrepant events can take many forms. This document answers the basic questions around using such an event in teaching.

## Art

Cavendish, Richard. "The Lascaux cave paintings discovered." *History Today*, September 9, 2015.

This article provides a possible moment for storytelling during the unit. There is a brief recount of how the Caves of Lascaux were discovered, by four boys and their dog.

Foundation, Bradshaw. "Introduction to the Cave Art Paintings of the Chauvet Cave." Bradshaw Foundation. 2011. Accessed October 23, 2017.

[http://www.bradshawfoundation.com/chaudet/chaudet\\_cave\\_paintings.php](http://www.bradshawfoundation.com/chaudet/chaudet_cave_paintings.php).

This website has an instrumental video clip that introduces the art in the caves. The background information helps to share with students when before they do their art piece.

"Paleolithic Period." *Encyclopedia Britannica*. October 20, 2017. Accessed October 23, 2017.  
<https://www.britannica.com/event/Paleolithic-Period#toc329001>.

This article helps to understand when the Chauvet Cave paintings were created. There is a section specifically on the art during that time period.

Soilsmatter2011. "How are artwork and pottery created with soil?" Soils Matter, Get the Scoop! December 22, 2016. Accessed October 21, 2017.

<https://soilsmatter.wordpress.com/2015/10/13/how-are-artwork-and-pottery-created-with-soil/>.  
Explanation and resources for integrating art with soil observation and analysis.

Spielmaker, Debra. "Agricultural Literacy Curriculum Matrix." Utah Agriculture in the Classroom. 2013. Accessed October 21, 2017.

<https://www.agclassroom.org/utah/matrix/lessonplan.cfm?lpid=390>.

This lesson plan has an alternate art activity that infuses soil and the color wheel. It also provides directions for making the soil paint and additional resources.

"These artists create mind-bending artwork solely from autumn leaves." Inhabitat Green Design Innovation Architecture Green Building. September 27, 2016. Accessed October 28, 2017.

<https://inhabitat.com/top-6-incredible-artworks-made-from-autumn-leaves/>.

Wonderful examples of art using fallen leaves. This can offer inspiration and connection to vocabulary.

"Yusuke Asai | yamatane." Rice Gallery. Accessed October 28, 2017.

<http://www.ricegallery.org/yusuke-asai/>.

This website shows many works from Yusuke Asai in the Rice Gallery using soil paint. There is also a short video.

### **Student Resource Annotated Bibliography**

Beard, Alex. *Monkey see monkey draw*. New York: Abrams Books for Young Readers, 2011.

This book follows playful monkeys while they investigate a deep cave. Once they overcome their fear they enter the cave and discover a unique art form.

Brett, Jan. *The first dog*. New York, NY: G.P. Putnam's Sons, an imprint of Penguin Group (USA), 2015.

This fictional story is set during Paleolithic times. Students can gather ideas about the young boy's identity and recognize depictions of cave art.

Yunk, Dan, Steve Swaffar, and Michele Johnson. *The Soil Neighborhood*. Manhattan, Kan.: Kansas Farm Bureau, 2008.

This book is a great addition to the soil lessons to help explain the parts of soil and why soil is important. This book could also be used to inspire students to write their own book about soil.