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| **Section of Project** | **6th Grade Science: Plant + Soil Unit [Day 1]** |
| **Title** | *Layers in the Soil* |
| **Introduction** | The purpose of this project (Cotton: From Dirt to Shirt) is two fold:   1. To show show the cycle of connectedness from science to economics, through use of Math and Language Arts. 2. To utilize cotton as a catalyst for comparison and discussion in all aspects of this project.   We understand that schools cannot solely devote their time to one crop for their source of material and discussion. We do recognize the importance of comparing crops through specific science units. Cotton is a versatile crop with a dynamic endurance to both natural change and economic change.  The purpose of this project is not to develop “extension lessons”, but rather to help students engage deeper into understanding of content already outlined in the NC Public School Systems. You will note that all of these activities and lessons are meant to partner with lessons you may have already created for your classroom. The best way to read these lessons is thru the lens of the lessons you have already created. How can you take portions, or all of what we have to offer here, and establish it into your lessons already made?? |

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| **Curriculum Alignment** | * 6.E.2.1 Summarize the structure of the earth, including the layers, the mantle and core based on the relative position, composition and density |
| **Learning Outcomes** | Participants will express their understanding of soil layers through art  Participants will compose a diagram (foldable) as a working model of soil layers  Participants will compose definitions of each soil layer |
| **Time Required and Location** | One 50-minute class period |

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| **Materials Needed** | This section contains 2 lists: one with materials and resources needed by the facilitator and the second with materials and resources needed by participants. Include quantities for all materials, such as books, handouts, technology, paper and pencils, art supplies, and so on.  If you use handouts or specific materials for presentation, please make them available as separate files.  **FACILITATOR LIST**   * [Handout #1](https://s-media-cache-ak0.pinimg.com/236x/ff/c6/13/ffc61356fcf11ce2ed52cc45b266a205.jpg) sheet posted on the ActiveBoard or Screen * Premake the following labels for each student. These labels should be small enough to fit on their foldable.   + Crust   + Oceanic Crust   + Continental Crust   + Lithosphere   + Convection Currents   + Middle Mantle   + Lower Mantle   + Asthenosphere   + Outer Core   + Inner Core   **PARTICIPANT**   * Multi-color pack of construction paper (5+/student, different sizes per layer)   + NOTE: students can recycle scraps during this activity * Markers (1/student)   + Black or brown preferred * Labels (1 of each, per student) * Glue stick (1/student) * Scissors (1/student) |
| **Safety** | N/A |
| **Participant Prior Knowledge** | As previously discussed, these activities are meant to latch onto what you are already teaching in the classroom. This activity should coincide with your already required section and introduction of soil. |
| **Facilitator Preparations** | Be familiar with all terms (mentioned in “Materials Needed” section) and their definitions. |
| **Activities** | *In these lessons, these activities are built as add-ons and expansions of lessons you should already be teaching in your curriculum. We will be expressing the outline of the activity only. Please make certain that the activity you are performing matches the lesson of the unit you are teaching*.   1. Have image of the [Earth’s Layers](http://pearcedms.weebly.com/uploads/1/3/3/9/13395286/earth-foldable.jpg) up on the board. (If you have a different handout that you have used, feel free to use that, so long as it covers all of the terms mentioned above) 2. Have students use different construction paper to cut out a new section of the Earth’s layer (ex: Upper Mantle = yellow, Crust = Green, etc.) 3. Have students glue down *ONLY THE TOP PORTION OF EACH LAYER* (we want to make sure they can open each flap) 4. On top of each section, have the students take the appropriate label and glue them onto the layer 5. On the back of each layer, students will need to create a working definition of each label created.    1. *A “working definition” should include both the formal definition of the term, as well as a sentence or example that incorporates the term* |
| **Assessment** | * Create a Kahoot Quiz for class on subsequent days, after doing this lesson. The Kahoot Quiz will allow you to break down an assessment, per question, and determine what the majority of students know and do not know. * Have students create their own document, foldable, or design (i.e. - Prezi) at home (using any medium) that expresses all of the Earth’s Layers you have discussed in this section. |

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| **Critical Vocabulary** | * Crust * Oceanic Crust * Continental Crust * Lithosphere * Convection Currents * Middle Mantle * Lower Mantle * Asthenosphere * Outer Core * Inner Core |

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| **Supplemental Information** | Download the Earth Layer Handout: <http://www.readbag.com/mjksciteachingideas-pdf-earthfoldable> |
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