Montessori Education Center of the Rockies - ELEMENTARY EXAMINATION - 3

Name of Student ........................................ Date ............... 

Our written examinations give you the opportunity to demonstrate your understanding of the Montessori elementary program and your ability to communicate information clearly and appropriately in writing. The time allocation of 3 1/2 hours is intended to allow you to plan the answer, write and edit. You are permitted to leave the site to work and to refer to books and other resources.

Answers may be typed or handwritten legibly. Prepare your answer as if it is to be published and read by staff or parents at your school. Answers must be your own work and joint work is not permitted. Provide the specific source and reference for any quotes used. Write your answer on 8 1/2" by 11" sheets, with your name at the top of each page.

Before you hand in your paper, check the following:
- Proofread carefully for grammar and spelling.
- Write your name and the date at the top of this sheet, place a check mark next to the question you have chosen to answer, and staple this sheet as a cover to your answer papers. Do not add additional covers or sheet protectors.
- Make a copy of your paper.

QUESTION 3

In “From Childhood to Adolescence” Maria Montessori suggested “Water” as a theme for study in the Lower Elementary classroom. Make a complete list of the ideas she mentions in the section on “Water”.

Then write a lesson plan for an activity that you could set up to introduce one of these ideas to the children. Circle the topic on your list that is introduced with this lesson.

The lesson plan must include detailed information under the following headings:

Your Name:
Name of Activity:
Materials: (Describe every item needed by you to give the lesson)
Preparation: (Prerequisite skills or knowledge of the child or children)
Aims: (What is the educational purpose of the activity?)
Presentation: (Detailed description of what the teacher does and says during the lesson)
Control of Error: (How does the child know if s/he is successful?)
Points of Interest: (What attracts the child to do this activity?)
Exercise(s): (What the children do as follow-up work)

These lessons may reflect ideas from your coursework but may not be copies of lessons given by course instructors.

For MECR instructor use:

__ Outstanding 100 pts  √ Excellent: 90 pts __Very Good 80 pts __Satisfactory 70 pts

__ Return to student for revision

Comments:
List of Maria Montessori's suggestions on Water as a theme for study

In the Lower Elementary Classroom

- Transformation into its 3 forms-solid, liquid and gas and water vapor
- Cooling and heating
- Weight/volume
- Seas/maintenance of life in the oceans
- Composition of salt water
- Rivers
- Water as a solvent
- Dissolving limestone
- Salt depositing into the Atlantic Ocean by various rivers
- How life forces in the oceans such as shelled animals, use the calcium carbonate that builds up and maintain equilibrium
- Coral islands in the Pacific Ocean
- Compare/contrast the Atlantic vs. Pacific oceans
- Movement of water
- Movement of fish aiding the movement of water
- Water current dependent upon sun/moon phases, temperature
- Streams (geography)
- A geography lesson showing directional flow of the waters and how they affect the inhabitants of the world
- Cosmic function of water-to dissolve rock
- Water and how it pertains to subjects of geography, chemistry, physics and mineralogy
- Technical, scientific and day to day uses of water

Comprehensive list
Neena Massey
Lesson Plan
How the Movement of Water Changes the Environment Over Time

Materials: A timeline of life, pictures on the cretaceous period, large aquarium, sand, soil, plants, large amounts of water, earth clay sculptures of animals made by children, a waterproof motor that generates movement (may be found at an aquarium store).

Preparation: Timeline of life, visit to Dinosaur Ridge, prior lessons on geography, namely the United States. Prior lessons on natural disasters, and evaporation.

Aims: To investigate how water changes the environment over time

Presentation: Discuss the time line of life, namely the cretaceous period. Show pictures of the Western Interior Seaway that use to cover Colorado during that time, and the life forms that inhabited the area. Generate a conversation about how life has evolved and changed through time and how the environment has changed in Colorado since the cretaceous period. Students may say that water is no longer present in modern day Colorado. Explain that water is always moving. They may list changes if they wish. Students will already have familiarity with this because of the field trip to Dinosaur Ridge.

Next explain to the students that we will be doing a science experiment with water that will take place over time. Emphasize that we are going to make
some theories, hypotheses and finally some conclusions.

Together create a mostly dry environment with sand, plants, soil, riverbeds, and animals and leave it alone for a few days. Over the next few days add water in gradually, until the environment is completely immersed. You may choose to fill the environment with water. Then put the motor in the water to generate a current. Leave this going for many days, weeks or months depending on how long it takes to evaporate the water. Ask students to come up with some ideas (hypotheses) on what will happen to the environment over time.

When the water has evaporated, notice the changes and ask the students what they observe. They may keep track of this in their science journals.

Control of Error: None needed since this is more like an experiment

Point of Interest: Everything, namely the pouring of the water and perhaps the anticipation of what will happen next.

Extensions: 1st year students may draw a picture of how the environment may look after the water has evaporated. 2nd and 3rd year students will write a formal scientific experiment paper including theory, hypothesis, notes, and finally a conclusion.

This lesson will be a lengthy one but can be a great conversation piece for the class.

I hope you try it!