Montessori Earth Science

Full Video

Learning In Context

During the Elementary years, ages 6 to 12, the child has an intense need to understand their place in the universe. In order to help them satisfy this curiosity and provoke further questions for the children to investigate, we tell them the greatest story of all – the story of the origins of the universe and the formation of the stars, planets, the sun, and the Earth.

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This story sets the broadest possible context for learning for the children, setting the universe in time, and entices them into further exploration in all subject areas, including the arts as well as the sciences. Having provoked the Elementary children's imagination and wonder about the intricacies of this infinitely complex universe, the children are encouraged to investigate and discover the answers to these interesting and puzzling questions.

They are free to hypothesise, discuss and debate all the questions about Science raised by First Great Lesson. The child's interest is sparked, not only by the teachers' retelling of the Great Stories and the many fascinating follow-upon lessons, but also by the interests and the investigations of their peers and the explorations of the older children in this multi-age environment.

The inspiration to do more, to learn more, to satisfy one's own interests is at the core of Montessori.

Dual-Language Learning In The Classroom

As the children receive many follow up lessons in Earth Science, Chemistry, Physics and Astronomy, the Lower Elementary Chinese Teachers provide Chinese language extension in order to support and encourage the child's ability to communicate about such fascinating principles in fluent Mandarin

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The Upper Elementary student investigates how human beings are profoundly connected to the world around them, which leads to investigation of economic and cultural geography. Learning becomes deeper and more integrated, and concepts more complex. Chinese Teachers support these increasingly complex concepts by providing more detailed vocabulary and additional Chinese language lessons on Earth Sciences.

Elements Of The Montessori Elementary Learning Experience

Working in Small Groups

There are many more opportunities to learn and to explore the questions raised during the first Great Story in small groups. Science projects and Materials encourage and assist further exploration by the child to begin to answer all of these questions raised.

Geography in the Upper Elementary

In Upper Elementary, deeper exploration occurs. Children explore more in depth into and the concept of the influence role of geographic features and

the influences on the economies of various types of societies. and their resulting economies is investigated according to their own interests.

Chinese Inspired by their Teachers and their Peers

Interest is sparked, not only by the teachers' retelling of the Great Stories and the many fascinating follow-up lessons, but also by the interests and the investigations of their peers and the explorations of the older children in this multi-age environment. The inspiration to do more, to learn more, to satisfy their own interests is at the core of Montessori.

Exploring 3 States of Matter

After the this introduction to Chemistry in the first Great Story, children explore the three states of matter in more depth, discover what the universe is made of - atoms, investigate basic atomic theory, and then conduct experiments to understand more about compounds, solutions, and mixtures. Later, they learn about Mendeleev's Table of the Elements and get excited about building atomic models or about the history of the discovery of the Periodic Table. There is literally no end to the possible avenues of interest and or exploration.

Dual Language Instruction in Upper Elementary

More on Geography

What is the impact of the Earth's relationship to the Sun? How does it move through space? What causes gravity? How is gravity different on other planets? Why do we have seasons and climatic zones?

More on Geography

Sun and Earth

Read More:

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Planet Earth and its Composition

The teacher gives some Key Lessons on Earth's unique atmosphere, biosphere and hydrosphere to the children, resulting in follow-up work exploring various questions. . What is the role of the magnetic poles on the Earth? What is the difference between igneous rock and metamorphic rock? What kinds of conditions and time formed them? Lessons and questions are designed to provide the children with the background knowledge they need to pique their interest and engage in their own research and follow-up.

Geographic Nomenclature: Land and Water Forms

Children learn about land and water forms such as peninsulas, bays, archipelagos, etc. in the Casa dei Bambini, and then explore more deeply in the Elementary Years. Hands-on interaction and experimentation give

the children direct experience, which helps them understand how land and water interact. They can explore this knowledge more abstractly by searching for these features on the globe and in an atlas.

More on Science

There are many more opportunities to learn and explore the questions raised during the first Great Story in small groups. More science projects and materials encourage further exploration by the child. Some typical follow up work after the Story of Formation of the Universe includes reading, investigating through science experiments, and Going Out to find examples in nature or in museums.

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The Children in Action

There are many more opportunities to learn and explore the questions raised during the first Great Story in small groups. More science projects and materials encourage further exploration by the child. Some typical follow up work after the Story of Formation of the Universe includes reading, investigating through science experiments, and Going Out to find examples in nature or in museums.

In the Lower Elementary classroom, Physical Geography is a key area of exploration, as well as an initial exploration of Cultural and Economic Geography. In Upper Elementary deeper exploration occurs. Children explore more in depth into the influence of geographic features on the economies of various types of societies.

Chemistry in the Montessori Elementary Years

After the introduction to Chemistry in the first Great Story, children explore the three states of matter in more depth, discover what the universe is made of, investigate basic atomic theory, and conduct experiments to understand more about elements and compounds, solutions and mixtures. Later, they learn Mendeleev's Table of the Elements, many get excited about building atomic models or about the history of the discovery of the Periodic Table. There is literally no end to the possible avenues of interest and exploration.

The Solar System and Earth's Position in the Universe

As with all subject areas in the Montessori system, we start by orienting the child to the big picture. Having explored the universe, we focus on our galaxy, and our solar system and then our own planet. Children might build models of and answer questions about the solar system.

What's Next?

Read About the Second Great Lesson!