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Promoting STEM learning: Interdisciplinary Activities @Primary Education

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In most European countries, science curricula follow an approach of teaching science disciplines separately. Because of this, it is very rare students to make any connections between concepts they learn in different science disciplines.

In fact, students get bombarded with concepts, principles, terms, equations from their early school age. Thus, at the end of their school life, students are left with a pile of concepts and ideas that are unconnected. Only scattered pieces of knowledge remain since most of the gained school knowledge is forgotten after a couple of years.

However, everything that is taught in Natural Sciences is meant to give students a sense of our world. Physics, Astronomy, Biology, Geography, Geology, Chemistry, Environmental Sciences are all connected. They describe the same thing: Our World.

The idea of interdisciplinary learning allows students to realize that certain fundamental concepts don't belong to a single science discipline; on the contrary these concepts can be applied in many disciplines. When this happens, all this "chaos" will start to make sense to our students.

In May of 2018, students of our school had the opportunity to participate interdisciplinary activities about the fundamental concept "Energy". Student-centered teaching approaches were promoted by using well-structured educational activities. Our students studied "Energy" via Science, Geography, Technology, Chemistry, Biology, Astronomy, Literacy and Arts. At the end, they drew interdisciplinary maps about "Energy". All teachers involved commented that collaboration between teachers of the same school led to a more modern effective teaching, better tailored to the needs of our students. On the other hand, students said that they found these activities extremely interesting.

The range of these interdisciplinary activities are explored in this poster.