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## **A game for teaching plate tectonics**

Gabriella Salerno

Istituto Tecnico Statale Carlo Cattaneo, San Miniato, Italy (prof.gabriella.salerno@gmail.com)

The game is a cognitive model for the study of complex phenomena in the teaching science. Students, helped by the teacher, are involved in a stimulating activity, able to drive their energies into a more complete and exhaustive learning and to keep their interest high. Everything is in a structured context, without neglecting the scientific rigor.

The educational outcomes are a greater ability to apply knowledge acquired in the process of problem solving.

I present a game for teaching Earth Science. It 's a game that can be used during the discussion of plate tectonics, referring to the movement of plates and the phenomena connected to it. The game is made using cards that simulate the collision between two plates and the events associated to convergent boundaries.

Students have two cards that represent the lithosphere: "Oceanic Lithosphere" and "Continental Lithosphere". They simulate the collision between lithospheres and they collect "Events Cards": "Earthquake", "Volcano", "Mountain", "Island Arc", "Oceanic Trench". The winner is who collect all events cards.

The game turns out to be an opportunity of learning peer to peer, where the content transmission occurs horizontally with the teacher who acts as facilitator. The sharing of common rules within the class group has also positive effects on group cohesion that has a positive effect in areas outside the school; this implies teaching and educational value on large scale.