

The most enjoyable way to learn the periodic table

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Constructivist learning allows students to be actively involved in the learning process and thus the learning to be permanent. It makes the lesson more interesting and enjoyable compared to classical learning where students are passive and get bored quickly. When students engage in activities during the learning process, they enjoy it more. And there is no doubt that games help this a lot.

In this project, a game has been designed to make it more entertaining to learn the periodical table for the students. In this game, a huge periodical table (with empty columns) is drawn with acrylic paint in the school yard. Acrylic paint is preferred because it is resilient to outdoor conditions, quick drying and relatively durable. Besides its functionality in the game, the presence of the huge periodical table in the yard boosts students' motivation for scientific activities.

Students are taught about the periodical table in their Chemistry lesson a week before the game is to be played. They are informed about the game and asked to bring some sportswear to wear during the game. On the game day, the class is divided into teams of five people. Each team wears a different color vest and is called by the color of the vest they are wearing. The starting point is drawn as far as possible from the periodical table.

Furthermore, some question cards that cover the subject are used in the game. As an example from the game: one student from each team is asked to find the correct place by the atomic number of a certain element as described in the cards given to them. There is a time limit so the stopwatch is started as each student starts reading the information on the card. The student runs to the correct place of the certain element according to the clues on their given card. Then they stop and raise their hands. The teacher stops the stopwatch for that student. The teams gain points according to their speed and correct guesses. The game continues as other students are given different question cards and asked to follow same directions. In the end, the winning team is awarded.

The game contains both short term goals, like allowing students to acquire the aimed learning outcome in a permanent way while having fun, and long term goals, like increasing the motivation toward the lesson and school and gaining team awareness.