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The Infiltration Education of Environmental Protection Consciousness on the Analysis Chemistry Teaching

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Abstract
Infiltrate environmental protection awareness into the teaching of analytical chemistry, and combine environmental education and analytical chemistry teaching organically. In order to improve the students' consciousness of environmental protection, strengthen students' self-consciousness and sense of responsibility of environmental protection.
Keywords: Environmental protection; Analysis chemistry; Education reform

1. Consistency throughout the word " allegory "

The development of education students today not only meets the needs of contemporary people, but also does not jeopardize the needs of future generations [1]. For a long time, human beings have been blindly taking from nature, so that the environment is getting worse and worse. For example, in the teaching of analytical chemistry experiment, students cannot leave the word "water" all the time. "protecting water resources" is incorporated into students' consciousness. As a teacher, I have the responsibility and obligation to strengthen the awareness of water resources protection. Every time analytical chemistry experiment to cultivate students' good habits and pay attention to save every drop of water.

The instructor should not only strengthen the education for students to protect water resource, but also develop a propagandist for protection of water resources. Told the students in the teaching, according to the astronauts, our beautiful earth from space is a beautiful blue water polo, the fresh water on the earth is very valuable, however, 97% of the earth's total volume of water is temporarily unable to direct use of sea, fresh water is less than total volume 3%, and all its two-thirds of glaciers, also hard to use, human actual use is only 0. 003%, and most of the pollution. China is facing a shortage of water and is listed as the poorest country. China's total water resources amount to 28 trillion m3, ranking 88th, has been included in the list of 13 poor countries in the world. Therefore, it is urgent to protect water resources, use water scientifically and save water. However, the serious fact of "water shortage" has not penetrated into everyone's consciousness. Education students should have a strong desire to protect water resources. They should be both guardians of water conservation and propaganda soldiers to protect water resources.

2. Natural harmony, highlighting a "infiltration" word

All of the elements in the earth 's crust are almost always found in humans, and even "all" elements of the periodic table are present in organisms[2]. In the analysis teaching, some environmental awareness can be infiltrated into it, so as to arouse students' interest in in-depth exploration of environmental protection issues. Its quality score include calcium in biological cells is 1.5 %, and that children lack calcium and can be very soft bone disease. Children are short of iron and susceptible to anemia. Lack of zinc can easily affect children's intelligence. It has been found that, in term of "illness", no matter animal or plant and human. It is mainly the "relationship" disease caused by the imbalance rather than the simple factor disease. Kerhill disease, elder osteopathy, goiter, the fluorosis, the lack of the Se, I, F, is the main, and it has a system imbalance with other elements. Chemical elements are the link between the human body and the environment. Under normal circumstances, environmental substances maintain a dynamic balance with the human body, and human beings can learn, live and work normally. On the contrary, the increase and decrease of certain substances in the environment will lead to the imbalance of certain elements in the human body, which means the imbalance of human beings, leading to poisoning and even death. Of course, there is a process from quantitative change to qualitative change between human body and harmful substances. In addition, the "London smog incident", "donors incident" and "4-day asthma incident" can be infiltrated into the teaching, so that students clearly know the serious consequences of SO_2 on human health, damage the leaves of plants, inhibit the growth of plants, corrode engineering buildings, and cause acid rain, etc. Teachers can also link some toxic gases to the green world. Under humid climatic conditions, the moss was dead, the cedar was dark brown, the cotton leaves were white, and the "tobacco disease" was found on all kinds of plants -- all of which showed signs of SO_2 pollution. Calamus plants, such as light brown or red streak obviously, is the writing on the wall of HF poisoning; Lack of clove and sash, and that appearance of "white spot disease", which shows that ozone is contaminate in the air; It

is mostly Cl_2 that leaflet of begonia and sunflower abruptly open.

Humans are at the event of an event in which the fluorolyons, the chlorinated industrial products, nitrogen fertilizer, and sewage decomposition are produced by the N2O. Nuclear explosion tests have affected the thinning of the ozone layer - the ozone hole. The O3 absorbs ultraviolet light at less than 300 nanometers, and it protects life on earth. People's studies have shown that the amount of light in the atmosphere, every 1% of the amount of UV light that is in the atmosphere increases by two percent, and the incidence of skin cancer increases by four percent, and the number of people with cataracts and respiratory problems will increase, and it will lead to the extinction of a number of species of plant and plant species, disrupting the balance of the ecosystem. And the earth's climate warming, acid rain pollution, ozone hole, increasing world environmental problems, such as all can seep into the corresponding teaching. When teaching about the chemical elements in the earth's crust, education, which permeates the environmental theme of "only one earth", enables students to deeply understand that there is only one planet suitable for human survival and reproduction, namely earth. Human beings are always looking for a new environment suitable for human survival and development. For example, the famous biosphere ii experiment. It was in that 1980's that a curious structure was found in the desert of Arizona, USA, where a huge greenhouse was seen to be a huge greenhouse, known as the world's world-famous, almost completely sealed "biosphere NO. 2" project. It is about that survival of human right away from the earth. Eight scientists enter "biosphere no. 2" for two - year experiments, and they were engaged in scientific research on one side with a healthy and self - self - sustaining life. However, in one year, the experiment had failed for a variety of reasons. Human beings do not have the ability to simulate an earth-like ecological environment for human survival under the existing technical conditions. The biosphere 2 experiment has shown the world that, so far, the earth remains the only home for mankind. Students can understand the harm of environmental pollution from it, and more importantly, they can understand the meaning of "there is only one earth". In order to protect the cradle of human beings, they can consciously set up the awareness of environmental protection, from which they are deeply influenced by education.

3. To be practical, to emphasize a "use" word

Analytical chemistry is a highly practical discipline and knowledge of analytical chemistry is critical[3]. In the teaching of basic theory, it is necessary to penetrate the knowledge of analytical chemistry into the environment field, so that students can deeply learn to analyze the importance of chemical chemistry, arouse students' interest in analyzing chemical chemistry, and help them form an analytical chemistry concept, obtain analytical chemistry knowledge and experiment skills, develop the ability to observe and practice, and help to develop a realistic and serious scientific attitude, and good moral quality. The analysis of the chemical experiment to the environmental contaminant, which allows the student to be more direct and specific to the environment, and to increase environmental awareness. Such as in the experiment of coordination titration, can let the student for determination the content of Ca2+、Mg2+ in drinking water, whether its hardness is overweight. In the oxidative and reductive titration experiments, students were tried to determine the chemical oxygen demand (COD) in the wastewater by using K2Cr2O7 method, and try to determine dissolved oxygen (DO) in water using iodimetric method. In the weight analysis experiment, students can measure water content in the environmental soil. In the teaching of instrumental analysis of analytical chemistry, environmental analysis tests can be infiltrated into teaching by means of instruments. With the knowledge of environmental protection, the waste gas, waste liquid and waste residue in the analysis of chemical experiments will have the consciousness of effective treatment, and try not to diffuse them into the environment, or even turn them into useful drugs.

In short, teaching emphasizes the "partnership" between man and nature, and emphasizes that there is only one planet suitable for human survival and reproduction -- the earth. By analyzing chemical knowledge and environmental protection, students can not only solve the practical problems in the environmental testing by analyzing chemical knowledge of the system, but also enable students to obtain the necessary knowledge of environmental protection, consciously strengthen the consciousness of environmental protection, and make their own contribution to sustainable development in China.

References

[1] Li Zhu. (2000). Water crisis. Beijing: science press.119-123.

[2] Lin-Sheng Wang，Tai-Seng Zhang. (2001). Introduction to environmental chemistry. Shanghai: East China normal university press.28-30.

[3] Xiu-Qi Fang，Ze-Xia Meng. (2001). Environment education repository. Beijing: Huaxia press. 29-35.