
Microplastics: A local action to aware environmental global problems

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Abstract

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Marine plastic litter is a global problem that affects coastal areas as a result of their low density, which make them easy to spread. Once plastics reach the ocean, they break into smaller particles mainly by photo-oxidation, thermal oxidation and mechanical degradation, among others.

In the last years, concern about microplastic contamination (1 μm - 5 mm) has clearly increased at many levels, specially the scientific, which has reported new hotspots of plastic debris (1,2,3).

In primary and secondary education, environmental awareness is included as part of the current the curricula (Ley Orgánica 2/2006, de 3 de mayo, de Educación and Ley 6/2014 de 25 de julio, Canaria de Educación no Universitaria). However, in the curricular specifications, local environmental problems, which are of special concern to identify students awareness, are not frequently included in the textbooks.

The general aim of this contribution is to provide specific activities to raise environmental awareness on problems related with the presence of microplastics in the marine environment to non-university students. In particular, we provide a template for counting and separating microplastics as well as to describe the steps to make sensory boxes that allow students to understand the difficulties that marine animals have in discerning between plastics and food. The microplastic template and sensory boxes were tested on 86 students of 14 years old (middle school) and 23 students aged 16 (high school) of Santa Cruz de Tenerife, showing a successful and easy application of a local action to aware environmental global problems.

Keywords: Microplastics, Education, Canary Islands, Environmental awareness