SYMPP - (18578) - CARBON STORIES: LEARNING SCIENCE AS KNOWING AND BEING IN-THE-WORLD

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Short Abstract

This paper focuses on an experience of teaching the carbon cycle with prospective secondary school science teachers via a STEAM approach. Drawing on the work of Colucci-Gray et al. (2019; 2021), the experimental unit was designed to involve students in building aesthetic-affective –aesthetic relations through processes of narration and poetic interpretation. In this study, the 'A' in STEAM was not intended as an addition to science content, to make it more appealing or creative, but as a process of re-configuring knowing in science as a process of being-in-relation. 30 students in Italy and Scotland took part in the activity with the task to trace the processes of material and energy transformations that connect organic and inorganic processes in the living world. The session was designed to integrate the linear logic of the scientific experiment with the imaginative logic of the artist to open out and bring forth multiple and different futures. Data were collected through observations, students' drawings, reflections and a set of collective poems. These were analysed through diffractive analysis (Barad, 2007; Braidotti, 2019). Results indicate that students enjoyed the activity and appreciated to be invited into the affective and emotional space of the story. Tracing the destinies of carbon moved their attention from formulas to processes involving physical, biological and historical transformations. Of particular note was the concept of energy transformations through time: rather than standing apart and presenting a dispassionate view, the poems' rhythms and pace enacted responsibility as an integral part of the world (Barad, 2007).

References

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