

## Argumentation, ecology and novels

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Ecology is one of the main topics in biological education. Despite its importance, students have been shown to perform poorly in ecology. In this communication we analyse the arguments used by a group of participants in a book club when they had to guess what animal describes a young-adult novel. The aim of the activity is that participants activate their knowledge about animals and the relationship with their environment. Our framework is based in the idea that science education should promote scientific literacy in a fundamental sense, this means that students should learn to make sense of a large variety of texts. In particular we use novels because narratives can be used to communicate science in a more comprehensible, relevant and accessible way. But being scientifically literate also means to be able to “explain phenomena scientifically, evaluate and design scientific enquiry and interpret data and evidence scientifically”. In this framework, argumentation should also be integrated into science education. The key objective of this communication is analysing what kinds of arguments are used by the participants in a book club, aged 12-16, when guessing and arguing what animal is the protagonist of a young-adult novel. In order to answer the research questions we analysed the activity set out in a young-adult book club in Spain. During the session, participants read aloud the parts of the novel where the animal was the narrator. Concurrently, participants were asked to interpret the information while suggesting and arguing which animal could be. The session was recorded and transcribed entirely. For the analysis we selected different fragments: 1) fragments where participants suggest an animal and argue the suggestion 2) fragments where participants argue about the suggestion of a peer. The selected fragments were categorized in an inductive way. As findings it can be seen that participants used eight different kinds of arguments. Most of them, except from category 2, were biological arguments. The arguments most used were “external features” and “diet”. As conclusions it can be seen that young-adult novels can be used as didactic tools in science education. In addition, this kind of activities can help students to explain phenomena scientifically and to argue using evidences. These opportunities are related with: 1) the choice of the novel as the challenge proposed for the participants to base the arguments in biological concepts 2) the oral component that allows peer-regulation that improves the participants’ argumentation.