



The Research Game

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Many undergraduate degree programmes in Geosciences require that students undertake an individual research project. 'The Research Game' is a competitive board game designed to teach students the fundamentals of an hypothesis-testing approach to research within the framework of a critical rationalist philosophy. The game simulates the real world of research in which unexpected problems may arise and, conversely, serendipity plays a part. Loosely based on a combination of 'Monopoly' and 'Snakes and Ladders', the game aims to teach the value of careful planning and rigorous logic. It comprises three parts. Play begins in a section of the board that represents the initial stages of a research project, including specifying the research question and identifying hypotheses to test. The second section of the board represents the middle stages of research, in which three alternative hypotheses are tested. In the final part of the game each player strives to complete their Model, and thus win the game, by thoroughly testing all three of their hypotheses. Testing is only considered complete when results falsify each hypothesis or, if falsification is not possible, all available tests have been carried out. An advantage of playing the game as a physical board game is that it makes a sociable in-class activity and allows students to discuss issues as they are presented by the game, as well as to obtain a wider experience by seeing problems and opportunities encountered by their competitors. It would be possible to develop an electronic version and single-player versions, and to develop equivalent games for other approaches to research design.