Lottery Tasks Description

TYPE: Group (pair)  WEIGHT = 15%  FORMAT: paper & presentation
BEGIN: Jan. 21  DUE DATE: Feb. 4  MODULE: • Nature of Science  LENGTH: 3 - 5 pages

Rationale:
The lottery task is designed to provide an experience of what scientists experience during their day-to-day work. As a result, this task is particularly relevant to the state and national science standards’ emphases on teaching children about the nature of science. In addition, the open-ended nature of this assignment provides opportunities for student creativity.

Description:
Students will work in teams of two. Each team will draw a task card and will have two weeks to solve the problem described. No answers to the problems can be accessed from external sources. On the due date, each group will present their findings to the class. Further details on the task rules and procedures will be distributed on the start date. Some of the experiences that relate to the nature of what scientists experience, include:

• a variety of emotional reactions, such as, frustration, anger, joy, etc.
• perseverance.
• contending with measurement and data collection problems and challenges.
• finding ways to analyze the data
• contending with time constraints
• contending with team members
• contending with open-ended problems

Requirements:
• You have two weeks to solve the problem, generate a paper, and develop a presentation for the class.
• You must solve the problem and not access external sources for solutions.
• Each team completes a paper and a presentation.
• The team keeps a hand-written, sequential log of the entire process. The log should contain the following elements:
  • what takes place each meeting time, as well as in between team meetings (procedures, data collected, discussions, etc.)
  • all reactions to the process as time proceeds
  • descriptions of how problems were solved (or not)
• The log portion affects the overall grade for the project.

Paper:
• The paper is a group assignment.
• The paper MUST address the following:
  • A brief description (1 paragraph) of the task and process.
  • How your experiences relate to the nature of science (what scientists do and experience, and the general nature of the scientific enterprise).
  ➔ Be sure to read Chapter 3 for more information about the nature of science, which MUST be referenced in your paper for this assignment.
• Implications for teaching and learning science.
• The inclusion of references to the readings in the textbook and elsewhere.