



Problem Posing Pro-Forma: use of videos

Assumption

A numerical or maths problem has multiple solutions or none, it is framed as an open-ended question. There is no clear path to the answer – students cannot easily use a formula. Within the problem students are often given too much information or not enough

1. Activity Name: The Blond Hair Problem
2. Expected duration of activity: 45 minutes
3. What EQF level is the activity (approximately)? All
4. What is the topic? Problem solving
5. What are the Learning Outcomes? Encourage logical thinking and persisting with a difficult problem
6. Prerequisite/prior knowledge assumed? Knowledge of Product, Sum, Factorising
7. In what ways does the problem, or the way the problem is delivered to the students:
 - encourage critical way of investigating and thinking?
At the outset, this is presented as a difficult problem. However, as students work through it and investigate using the clues/ information provided, it will become more solvable.
 - encourage analysis? Students will come up with various suggestions for the ages of the children as there are many factors of 36. However, how can they be sure that their suggestions are correct over other options?
 - allow students to be creative? N/A
 - allow independent learning? Could be worked on individually
 - allow for co-operative learning? Would be useful to work in groups to share ideas
 - allow students time to think? After initially presenting the problem, students should be given plenty of time to think. The Video can be played a few times in case students miss any information
 - have a relevant or interesting context? The problem should grab students' attention, especially the way it is presented in the video.

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- allow for multiple ways of solving or investigating the challenge?
N/A

8. Resources or materials required? N/A

9. What technology is required in the delivery of the problem? Access to video required

10. What technology might potentially be required in the solving of the problem? none

11. Suggestions for delivery – in a group setting, watch video and then explore problem solving in small groups.