



Problem Posing Pro-Forma use of photographs

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: Using the same amount of felt bobbles in placemat, how many bobbles would be needed to make 4 matching square coasters?
2. Expected duration of activity: 15 minutes
3. What EQF level is the activity (approximately)? CfE first level
4. What is the topic? Estimation, multiplication, division
5. What are the Learning Outcomes? Work out materials needed to make varying sized shapes through basic numeric functions
6. Prerequisite/prior knowledge assumed? Measurement, multiplication and division
7. In what ways does the problem, or the way the problem is delivered to the students:
 - encourage critical way of investigating and thinking? Explore relationship between addition, subtraction, multiplication and division
can extend to include different shapes and sizes and colour combinations
 - encourage analysis?
 - allow students to be creative? Could make the coasters and mats with paper or felt, could experiment with colour combinations-
 - allow independent learning? can work individually
 - allow for co-operative learning? working
 - allow students time to think? Picture is static so can be returned to at any time.
 - have a relevant or interesting context? Everyday learning

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- allow for multiple ways of solving or investigating the challenge?
Can extend to different shapes and colour combinations
8. Resources or materials required? Photograph, though materials to make similar mats and coasters would be useful
 9. What technology is required in the delivery of the problem? None
 10. What technology might potentially be required in the solving of the problem? none
 11. Suggestions for delivery