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| **Web Quest** | **Ill Structured Problem? Complex? Messy? No single correct answer?** | **Problem mirrors real life? Provides context, challenge, and motivation?** | **Students as decision makers with roles and responsibilities?** | **Teacher as a cognitive guide/coach?** | **PBL?** |
| **Rain Forest** | No ill structured problem, problem is just how are you going to acclimate to living in the rainforest. | It introduces that there is a real life problem in the rainforests but that problem is not addressed or being solved in this activity. The activity provides a great deal of context and the motivation is to inform others on how to adjust to living in the rainforest. | Students are the sole decision makers they are assigned roles such as: Biology expert, population expert, geography expert, and botany expert. | The teacher is not acting as guide in this activity. The students are presenting the information to the class. The teacher is not actively engaging in the activity with the students. The only guidance given is in the rubric being used to grade the students | I would not consider this activity a PBL, the only criteria that it meets is that the students are the decision makers and have specific roles. |
| **Radically Reduced Radiolarians** | This is a messy problem because congress is trying to decide whether or not to fund research on a dying organism. There could be multiple answers depending on what the students present as evidence. | This problem is set in the future and could possibly be a realistic problem, but it is not current. It is a challenge because you as the investigator have to provide evidence to help scientists get funding to research this organism. The incentive for this research is that the government will fund further exploration on how to keep this organism around. | Students are the sole decision makers. They are assigned the following roles: rad expert, paleontology expert, ecology expert and art/history expert. | The teacher does serve as a guide in this activity by stating what sites the students should look at as a whole and giving structure for how groups should meet and organize information, but also leaves the creation of the power point up to the students | I would consider this a PBL. Most of the criteria are meet and there could be a real life problem like this to be solved, the students are in control and the teacher acts as a cognitive guide while still letting the students make the decisions. |
| **Solve It With Logic** | This problem is not ill structured or messy. There are clues that lead you to one solution and that would be who committed the murder. There could be multiple killers but that would still lead to one correct answer. | This is a real life problem and presents the students with the challenge to find out who did. There is lots of context presented with this activity you have crime scene photos and witness statements to go through. The motivation in this activity is to catch the killer. | The students are the ones making the decisions based on the evidence given. They are required to come up with a case study to present the evidence to the class on who killed the couple. They are not assigned specific roles for this activity. | The teacher is not really an active guide in this activity. They are responsible for laying out the process but only seemed to be involved when it is time for the students to present. | I would not consider this a PBL while some of the criteria are met, this was not a large world problem that could have multiple solutions to fix it. It also did not give students specific roles and there was not teacher involvement |
| **Don’t Drink the Water** | This is a messy problem due to the fact that an outbreak of a microorganism could cause an epidemic without coming up with a solution on how to get rid of it. Students could come up with multiple ways of getting rid of this microorganism depending on what they identify it as. Depending on if it is gram positive or gram negative will yield different results on how to take care of it | This could easily be a real life problem. Outbreaks of E. coli have happened plenty of times in open sources and teams are required to come up with a solution. The US has been worried about certain bacteria such as bird flu causing and epidemic. This is a challenging concept because the students will have to rule out certain types of microorganisms. The motivation for this activity is to find a solution to save your friends and neighbors. | Students are the decision makers for this problem. This activity doesn’t assign specific roles to the students but they as a group have to come up with an experiment to test their hypothesis | The teacher is used as a guide in that the students need to obtain approval from the teacher before they are allowed to start their experiment. There are also guidelines set up to guide students on the process they should carry out to come up with a solution to the problem. | I would classify this as a PBL each of the requirements are met except for assigning specific roles to the students. This activity contains the most real life problem and has the students actively explore a way to fix the problem. |