

## Problem Based Learning: Teacher Guide

### Preliminary Information: Problem Based Learning (PBL)

Problem based learning is an instructional approach that places the responsibility for the learning process more directly on the student. Learners are responsible for finding answers for themselves in ways that are typically creative and informative. The teacher is primarily a facilitator, giving the students the problem to solve through disclosures of information and guiding them through the learning process, but not giving them the answers.

The problem statements or disclosures of information give the students some information on the subject, but not enough to answer the big questions, so they will have to go elsewhere to find them. Problem-based learning units could take only one class period, or they could take weeks. The length of time that a problem-based learning unit takes will depend on your students and the problem being analyzed. There isn't always just one right answer in problem-based learning. Some problems could be more open-ended, and the students could come up with many different answers, all of which could be viable solutions (For example, how would you deal with providing safe water to a rural community?). Other problems may be more focused, and the students will be able to find one correct answer (For example, what has been causing the extreme water hardness in a local water supply?).

The teacher's role is one of supporting the PBL process. Shorter PBL work is likely to require less teacher effort in terms of tasks such as searching out experts and experiences outside of the classroom that learners can call upon.

A crucial initial step in problem based learning is the creation of a set of agreed upon "working rules" established by the students among themselves as to what their responsibilities are in their working group and how they will interact.

### Facilitator Do's and Don'ts

#### Do:

- Use prompting questions that are open ended
- Make brief notes for yourself before intervening

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- Count to 10 or 20 before intervening
- Give students time to self-correct before you do it for them
- Be in the problem with the students rather than be an observer that knows the answers
- Be patient and let the students make mistakes
- Help students discover how to correct mistakes and make sure that they do not make the same ones in the future
- Get excited with the students and enjoy learning with them

### Don't:

- Take the problem away from the students by being too directive
- Let learners get too Internet focused
- Send messages that they are thinking the "wrong" way or doing the "wrong" thing
- Give them too much information because you are afraid they won't find the solution
- Intervene the moment you sense they are off track
- Rush them, especially in the beginning
- Be afraid to say, "That sounds like a learning issue to me" instead of telling them the "answer"
- Worry

**Blank PBL Process Chart**

Fact List	Need to Know	Learning Issues

Possible Solutions	New Learning Issues

Defendable Solution(s)

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### **Resources and References:**

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