

Name: _____

Date: _____

Problem Solving Model

Is about ...

Problem Solving Model (Problem-Based Learning Lessons) is about using problems as the focus for developing problem-solving skills, content, and self-regulation.

Main idea

Theory

Problem Solving Models lesson goal is to solve a specific problem, the responsibility for solving it rests with the students, and teachers guide the problem-solving process. The Problem Solving Model is usually done in groups, which are small enough so that students are involved in the process. Teachers are meant to guide students efforts with questioning and other instructional support as the student attempts to solve the problem.

Main idea

Planning

Identify Topic: When identifying the topics, the topic being taught should be more complex and abstract than teaching a concept. Such as relationships between geography and economy in a geographical region in social studies, or even a procedure, like adding fractions

Specify Learning Objectives: Developing problem solving abilities and becoming self-directed learners are important objectives, but persevering when students struggle and don't understand answers is important. They will never acquire these abilities if they don't have experiences that promote their development.

Identify Problems: Personalizing problems that are clear and concrete are most effective with young or inexperienced students. Students must also have enough prior knowledge to effectively design a strategy for solving it.

Access Materials: The materials you provide will influence the size of your groups, pairs/groups of three are most effective. Smaller groups require more equipment so teachers must accommodate this limitation. You will need to monitor the groups closely to ensure that all members are doing their part and are being involved.

Main idea

Implementing

Review and Present Problem: Informally assess the students prior knowledge by reviewing the knowledge needed to solve the problem and presenting the students with specific, and concrete problems to solve which will provide a focus for the lesson. You will not only need to give them well-defined problems, but ill-defined problems as well because they will also encounter these in the real world as well as the classroom.

Devise a Strategy: To ensure to the fullest extent possible that students are using a fruitful approach to solving the problem, after groups have devised a strategy for solving the problem you can have them immediately begin attempting to solve the problem by implementing the strategies or reconvene the class and have the groups report their strategies and get feedback from the teacher and their classmates.

Implementing the Strategy: Although this phase should flow easily into students implementing their strategy sometimes teachers need to provide scaffolding with is instructional support that helps students complete tasks they can't on their own.

Discuss and Evaluate Results: Students should assess the validity of their solutions. The teacher then guides a discussion of the students' efforts and the results they find. Teachers should also provide students with feedback about their effort

Main idea

Assessing/Modifying/ Motivating

Assessing: Alternate assessments are especially valuable in evaluating Problem-Based Learning, because they provide teachers with ways of assessing process outcomes. Performance assessments, systematic observations, checklists, and rating scales provide both teachers and students with informative feedback about learning progress.

Modifying: It can be used with young children by presenting problems specifically and concretely and providing students with the guidance needed to successfully solve the problems.

Motivating: Beginning activities with a problem promotes curiosity and challenge, authentic tasks link abstract content to the real world, and autonomy and involvement exist as the activities are conducted.

So what? What is important to understand about this?

It is important to understand the Problem Solving Model because it uses problems as the focus for developing problem-solving skills, content, and self-regulation.