Concepts addressed: Theoretical foundations about how learning occurs: How students construct knowledge, acquire skills, and develop habits of mind

Constructivism:
- Constructivist Ideas are opposed to letter grades, standardized tests, and most methods of evaluation.
- Constructivist teachers do believe in:
  - Field trips
  - Explorations of the world
  - Open-ended activities
  - Children being active in their learning
  - Doing problem-solving activities
- They explore areas such as:
  - Self-esteem
  - Cooperative learning
  - Caring skills

Constructivist Approaches (Student-Centered and Humanistic) to Instruction
- How much have you really learned?

A Quiz:
- 20 questions with answers

The essence of constructivist theory is the idea that learners
- Are passive and teachers are active
- Are placed in ability groups that work at different levels
- Individually discover and transform complex information.
- Participate in bottom-up instruction.

Which of the following "teacher roles" best captures the philosophy of the constructivist approach?
- Guide on the side
- Sage on the stage
- Knowledge imparter
- Drill instructor

According to constructivist thought, which originally drew on Vygotsky's and Piaget's theories, the four key concepts are:
- Zone of proximal development
- Cognitive apprenticeship
- Scaffolding or mediated learning
- Rote learning, independent learning, social learning and computer-based learning

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Constructivist approaches to teaching typically make extensive use of cooperative learning. Why is this?
   e. It is easy for teachers to assign drill and practice activities
   f. There is less need to challenge students' misconceptions
   g. Students understand concepts better if they can talk with each other
   h. It allows teachers time to work on non-instructional duties

A student knows how to break complex problems into simpler steps, how and when to skim, and how and when to read for deep understanding. What key concept of constructivist theories of learning defines this student?
   a. Impulsive thinker
   b. Dependent learner
   c. Reflective thinker
   d. Self-regulated learner

In assisted (or mediated) learning, who is the cultural agent who guides instruction?
   a. Students
   b. Outside resource personnel (e.g., librarian)
   c. The teacher
   d. Computers

The Student Teams-Achievement Divisions (STAD) involves ...
   a. Competitive learning
   b. Cooperative learning
   c. Individualized learning
   d. Computer-assisted instruction.

Based on research findings, what are two main conditions that cooperative learning strategies should include to be most effective in promoting learning?
   a. Groups should have 8-10 students in them
   b. Group rewards and individual student accountability must be present
   c. Group kids according to gender
   d. Appointed team leaders and flexible memberships

According to the research by Slavin, each student in a Jigsaw cooperative learning group receives a topic on which to ...
   a. Teach the whole class
   b. Write an essay
   c. Become an expert
   d. Develop an outline

Cooperative learning methods fall into two broad categories. One category might be called group study methods, while the other category is often called project-based learning or:
   a. Passive learning
   b. Observational learning
   c. Active learning
   d. Indirect learning

Research has favored cooperative learning as long as two essential conditions are met. First, there must be some kind of recognition or small reward provided to groups that do well so that group
members can see that it is in their interest to help their group-mates learn. What is the second essential condition?
   a. Group accountability  
   b. Individual accountability  
   c. Teacher accountability  
   d. Whole class accountability

In general, people who do well on tests of creative problem solving
   a. Seek short cuts to the solution  
   b. Resist change  
   c. Resolve issues by giving in to the group  
   d. Do not worry about making mistakes

What is the term for considering all possibilities before trying out a solution?
   a. Barnstorming  
   b. Suspension of judgment  
   c. Analysis  
   d. Expository learning

One important principle of creative problem solving is to
   a. Seek the expertise of those who have greater knowledge of the problem  
   b. Quickly find a solution  
   c. Realize that the solution may be impossible  
   d. Avoid rushing to a solution

During the incubation period of creative problem solving, teachers must avoid
   a. Putting time pressures on students  
   b. Interacting with students  
   c. Letting students work together  
   d. Providing information that could foster additional in-depth thinking

After providing students with a great deal of practice on a wide variety of problem types, the most effective way to teach creative problem solving is to give students
   a. Incubation time  
   b. Feedback on the process by which they arrived at the solutions  
   c. More time on the task at hand  
   d. Additional practice

Students are given the opportunity to develop as many solutions to a problem as they can, no matter how seemingly ridiculous. What is this problem solving process called?
   a. Feedback  
   b. Wasted time  
   c. Whirl winding  
   d. Brainstorming