Computer-Assisted Instruction

What is it...

A self-learning technique, usually offline/online, involving interaction of the student with programmed instructional materials.

Computer-assisted instruction (CAI) is an interactive instructional technique whereby a computer is used to present the instructional material and monitor the learning that takes place.

CAI uses a combination of text, graphics, sound and video in enhancing the learning process. The computer has many purposes in the classroom, and it can be utilized to help a student in all areas of the curriculum.

CAI refers to the use of the computer as a tool to facilitate and improve instruction. CAI programs use tutorials, drill and practice, simulation, and problem solving approaches to present topics, and they test the student's understanding.

Examples of Computer-Assisted Instruction:

1. **Drill-and-practice** Drill and practice provide opportunities or students to repeatedly practice the skills that have previously been presented and that further practice is necessary for mastery.

2. **Tutorial** Tutorial activity includes both the presentation of information and its extension into different forms of work, including drill and practice, games and simulation.

3. **Games** Game software often creates a contest to achieve the highest score and either beat others or beat the computer.

4. **Simulation** Simulation software can provide an approximation of reality that does not require the expense of real life or its risks.
5. Discovery Discovery approach provides a large database of information specific to a course or content area and challenges the learner to analyze, compare, infer and evaluate based on their explorations of the data.

6. Problem Solving This approach helps children develop specific problem solving skills and strategies.

Rationale:

One-to-one interaction
Great motivator, freedom to experiment with different options,
Instantaneous response/immediate feedback to the answers elicited,
Self-pacing - allow students to proceed at their own pace,
Helps teacher can devote more time to individual students,
Privacy helps the shy and slow learner to learns,
Individual attention,
Learn more and more rapidly,
Multimedia helps to understand difficult concepts through multi-sensory approach, elf-directed
Learning – students can decide when, where, and what to learn

References:

