

Grade Level: 5

Materials

Logic blocks to accommodate several groups of students.

Prerequisite Skills

Student should be familiar with the concepts taught in the previous lesson.

Standards

CCG 2

Gr5 3

Big6 3.1, 6.1, 6.2

ILS 2, 4, 10

Lesson Objectives

Students will understand the application of Boolean operators in a fun and engaging game.

Anticipatory Set

Ask students to state the Boolean operators and how they are used. Tell the students that in order to better understand and visualize the use of Boolean operators, we will use no computer technology in this lesson.

Stated Objective and Purpose

“Today, we will apply what we learned about Boolean operators using two fun class games.”

Learning Activities/Procedures

- Have students sit in a large circle on the floor.
- Have a review discussion about Boolean operators and have students give examples of how they would be used.
- Introduce Boolean game one. Instruct students that I will be calling out descriptions using AND, OR, NOT. They are to determine if they fit the description and stand up. For example, “Stand up if you are wearing jeans and sneakers.” After each round, have students analyze why they are or are not standing up. Have them take note about number differences based on the Boolean operator used.
- After first game, group students in teams of three to four each.
- Distribute logic blocks to each team.
- Within each team, each student will take a turn calling out descriptive questions about the logic blocks (shape, size, and color) and each student will take a turn answering each question by selecting the appropriate blocks. Have students analyze the results and how Boolean operators determined them.

Adaptation for Special Needs & Multiple Intelligence's

None

Closure

Review some of the scenarios that were played out and have students reason why results were different based on which Boolean operator(s) were used. Tell students that the next lesson will allow them to do hands-on practice of Boolean operators.

Assessment

Teacher observation of class participation in games will be used to assess students.

Reflection

Without a doubt, this was the best-received lesson of the entire unit. The students were so engaged that once they understood how to play the games, they pretty much ran it themselves. For the most part, staying on task was not a problem. However, I had to remind them a few times to analyze the results during each round to maintain the connection to the objective of the lesson. After this lesson, students had a very good understanding of the concept of Boolean logic. We will apply that knowledge to practice searches during the next lesson.