

Lights, Camera, MEDIA Literacy!

Lesson Plan # 31

Topics:

Journal Writing
How Computers "Play Games"
The Binary Code
History of the Computer

Outcomes:

Students will follow organizational procedures.

Students will see, hear, and use applicable vocabulary.

Students will compare the game *Twenty Questions* to a Computer 's "game playing."

Students will create a "programmed game" for others to play.

Students will locate information in a non-fiction text.

Students will write words in binary code.

Students will identify key sentences while viewing *THE CREATION OF THE COMPUTER*.

Materials:

Writing journals

LCD projector

Chart paper

Post-its

Individual student pocket folders

HANDOUTS: *Teaching The Computer To Win*
Great Inventions - The Computer
The Creation Of The Computer

DVD: *MODERN MARVELS -THE CREATION OF THE COMPUTER*

BOOK: *GREAT INVENTIONS - THE COMPUTER*

New Vocabulary: abacus, microchip, Binary code

Sequence of Events:

I. Journal Writing (15)

1. Prompt:

What are your feelings about classic television shows?

II. Twenty Questions (20)

1. Tell students that you would like to introduce the next unit, by playing another game called "Twenty Questions." The class will be figuring out a secret word. Each student, in turn, will ask a YES OR NO question. In order for the class to win, the word must be guessed correctly in 20 or less questions. In order for the teacher to win, the correct word cannot be guessed in only twenty questions.

2. Play the game a few times, using these as the "hidden" words:

COMPUTER

INTERNET

CELL PHONE

(Point out to students that they should think carefully about the questions they ask in order to narrow down choices quickly.. As an example...asking, "Is it something we use in the classroom?" could bring them more information than asking "Does it begin with the letter 'A'?"

III. Teaching the Computer to Win (20)

1. Tell students that the way their brain works while playing Twenty Questions is similar to how a computer "plays" a game. Just as there are only two possible answers and choices are narrowed down based on these answers, the computer's programs do the same thing. *(Example; If the question, "Is it a food?" were asked and the answer is "No," the class would not ask additional "food" questions, but rather would go in another direction to narrow down their choices. So would the computer.)*

2. To demonstrate this visually, introduce the programming game on the handout to the class. *(Students will need a game piece to move on the board and torn bits of paper to cover the squares.)*

HANDOUT: Teaching The Computer To Win

3. After reading the directions, do a few moves together.
4. When students understand the procedure, allow them to finish on their own.
5. Review the final solution together.

IV. Create a Programmable Game (60)

1. Assign students the task of individually creating a simple original programmable game.
2. Allow students time to complete their games either individually or in pairs.
3. As students finish, assign them to follow the directions on the "Great Inventions- The Computer" handout.

BOOK & HANDOUT: *GREAT INVENTIONS - THE COMPUTER*

4. As they finish this worksheet, students should try some of the programmable games made by their classmates.
5. When all are finished, make sure every student has a book and a handout. Review answers on the worksheet together and allow time for students to fill in the correct answers.

V. History of the Computer (70)

1. Direct students to their handout where some of the contributors to the invention of the computer are listed. Tell the class that the history of the computer is complex and is changing "as we speak." They will be watching one of the best explanations of how the computer began. Once again, they will follow a guide.

DVD: *MODERN MARVELS -THE CREATION OF THE COMPUTER*

HANDOUT: The Creation Of The Computer

2. Watch the DVD in its entirety.

3. Discuss and clarify afterward.

VI. Reflection (15)

1. Direct students to the hanging chart paper labeled:

What did you learn about binary code?

2. Hand out Post-its on which students write and post.
3. Review the comments on the Post-Its with the class, so students have a sense of what was learned. Make sure to clear up any misconceptions.