Lights, Camera, MEDIA Literacy!

Lesson Plan # 23

Topics:

Journal Writing
Technology of Radio
Citizen's Guide to the Airwaves
Creating Instructional Films About Radio

Outcomes:

Students will follow organizational procedures.
Students will see, hear, and use applicable vocabulary.
Students will compare the steps of radio transmission to information in a 1937 instructional film.
Students will interpret "**The Citizen's Guide to the Airwaves"** in order to answer related questions.
Students will create instructional videos showing how radio works.

Materials:

Writing journals
LCD projector
Chart paper
Post-its
Individual student pocket folders
Camcorders
Computers with editing software
Tripods
Mini-DV Tapes or memory cards

LEAFLET/FOLD-OUT POSTER:"The Citizen's Guide To The Airwaves"

HANDOUTS: The Technology Of Radio
The Citizen's Guide To The Airwaves

CD SET: ***OLD TIME RADIO COMEDY & LAUGHTER (Smithsonian Collection)***

New Vocabulary: microphone, modulator, oscillator, aerial, receiver, demodulator, loudspeaker, frequency, amplitude modulation (AM), frequency modulation (FM), hertz

Sequence of Events:

I. Journal Writing (15)

1. Prompt:

What are your feelings about the 1938 radio broadcast *WAR OF THE WORLDS?*

II. The Technology of Radio (45)

1. Point out to students that they are now going to learn what most take for granted…the scientific principles for the workings of radio. Review the eight steps of transmission and reception.

HANDOUT: The Technology Of Radio

2. Before watching the 1937 instructional film ON THE AIR, point out to students that this 10 minute film begins with an actual 1937 radio broadcast seen from the studio. (They will notice how similar it appears to the radio show in the ShirleyTemple film THE POOR LITTLE RICH GIRL.) The film then explains the four transmission and four reception steps reviewed on the handout.
   http://www.youtube.com/watch?v=g0Qz2jp4FAU
   (Note: The "detector" is the same as the "demodulator.")

3. Show students the following webpage:
   http://images.autoanything.com/images/buttons/shopping_guide/AM-FM-Signal-Modulation.gif …and explain:

   …when sound waves are combined with **amplitude modulation (AM) carrier waves**, the size of the carrier waves vary and the spacing between them stays the same.

   …when sound waves are combined with **frequency modulation (FM) carrier waves**, the spacing of the carrier waves vary and the size of the waves stay the same.

4. Tell students that frequencies are measured in hertz (Hz). Ask where they have heard "HERTZ" before in this course…
   (History of Radio handout: Heinrich Hertz)

5. Tell students that the radio frequency spectrum ranges are shown on a chart called

"THE CITIZEN'S GUIDE TO THE AIRWAVES."

Either hand out copies of this chart to students or show it on the internet:
http://www.newamerica.net/files/spectrum_front.pdf
Point out that a lot of information is crammed into this guide. Direct them to the middle graphic entitled *"Frequency Assignments used by Everyday Devices."* Show them that the devices are depicted under their frequencies. They will use this graphic to answer the first five questions on the handout and then continue as indicated in the directions on the handout.

HANDOUT: THE CITIZEN'S GUIDE TO THE AIRWAVES

6. After allowing time to complete, review answers together.

III. Create an Instructional Film about Radio (125)

1. Assign groups the task of creating their own short films, using drawings as visuals, to explain how radio works.

2. As groups finish, allow them to listen to the radio shows from the CD: "The Golden Age of Radio."

3. When all have completed their films about how radio works, show each film to the class and discuss the accuracy of each.

IV. Reflection (15)

1. Direct students to the hanging chart paper labeled:

What did you learn about how radio works?

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.