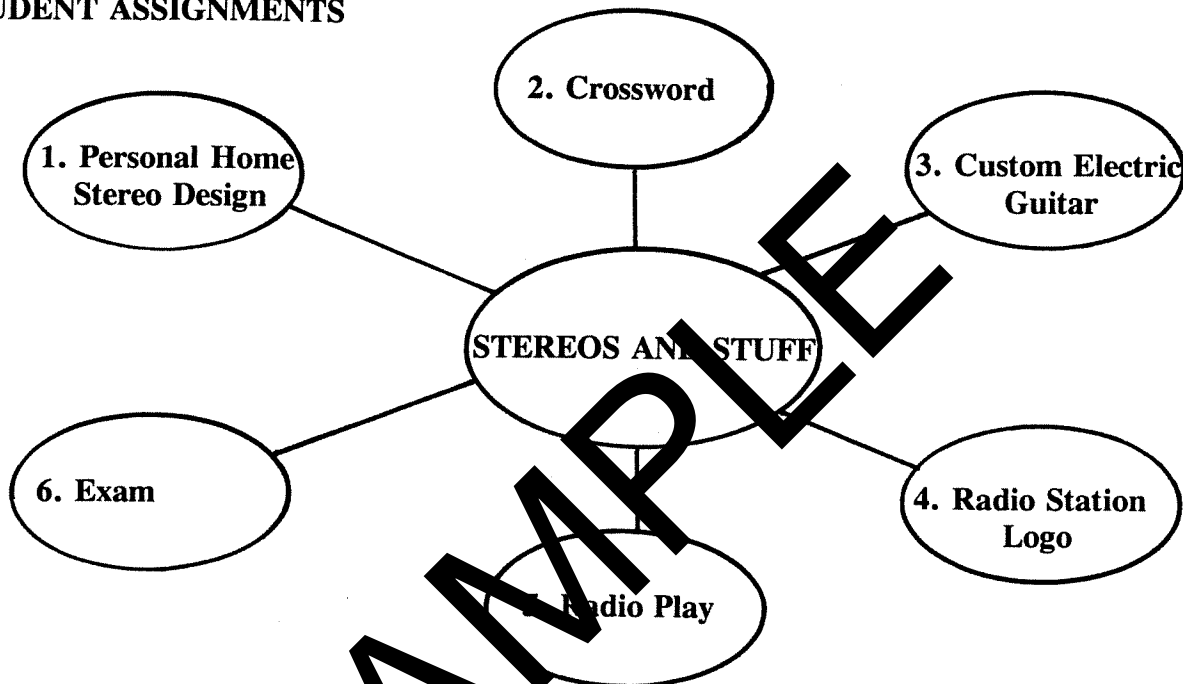


STEREOS AND STUFF

UNIT OVERVIEW

In this unit, students discover the workings of Hi-Fidelity stereo equipment such as Turntables (Record Players), Cassette Players, and Compact Discs. Students also look at the workings of AM and FM radio. Innovative assignments stress creative and critical thinking with many possibilities for drama in this unit. A major project concludes the unit with students writing fifteen-minute radio scripts.

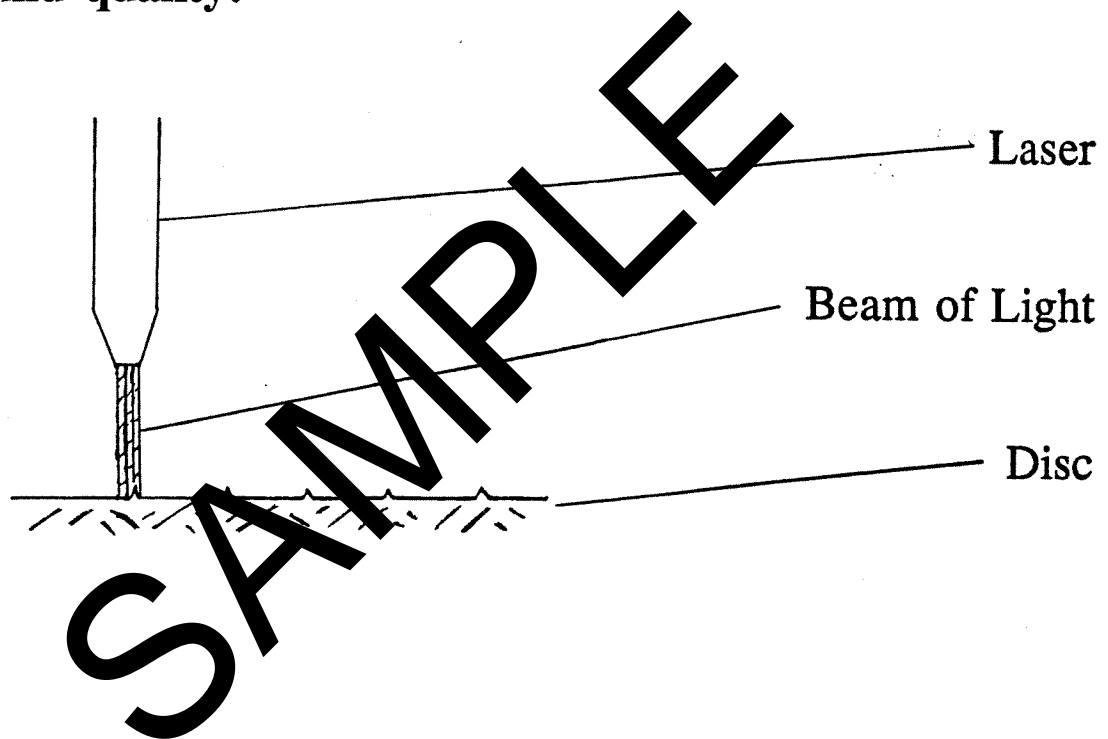
STUDENT ASSIGNMENTS



1. **Personal Home Stereo Design** - Students design their own personal stereo system complete with any extra luxuries they wish to add.
2. **Crossword** - Students learn about music equipment used by modern rock bands.
3. **Custom Electric Guitar** - Students design, customize and paint an electric guitar. Graphic colors should be used.
4. **Radio Station Logo** - Students design draw and color the logo for an imaginary radio station.
5. **Radio Play** - (Major Project) In pairs, students write a script for 15 minutes of radio time. News weather, sports, songs, commercials and D.J. talk should all be included. Students should try to proportion the time spent on each portion based on a real radio broadcast.
6. **Exam** - Sample exam included.

LASER DISCS (CDs)

Laser discs (CDs) work like records in that the laser disc has many tiny grooves and bumps on it. (Like a Fisher Price record) However, instead of reading the bumps with a needle, a CD player uses light. For this reason CDs do not wear out, since all that touches the disc is a narrow beam of light. (laser) Over the last ten years, CD's have replaced records mainly because of the near-perfect, digital sound quality.



Pros:

- no wear (there is an almost perfect reproduction of sound)
- portable
- digital sound recording makes them better than records

Cons:

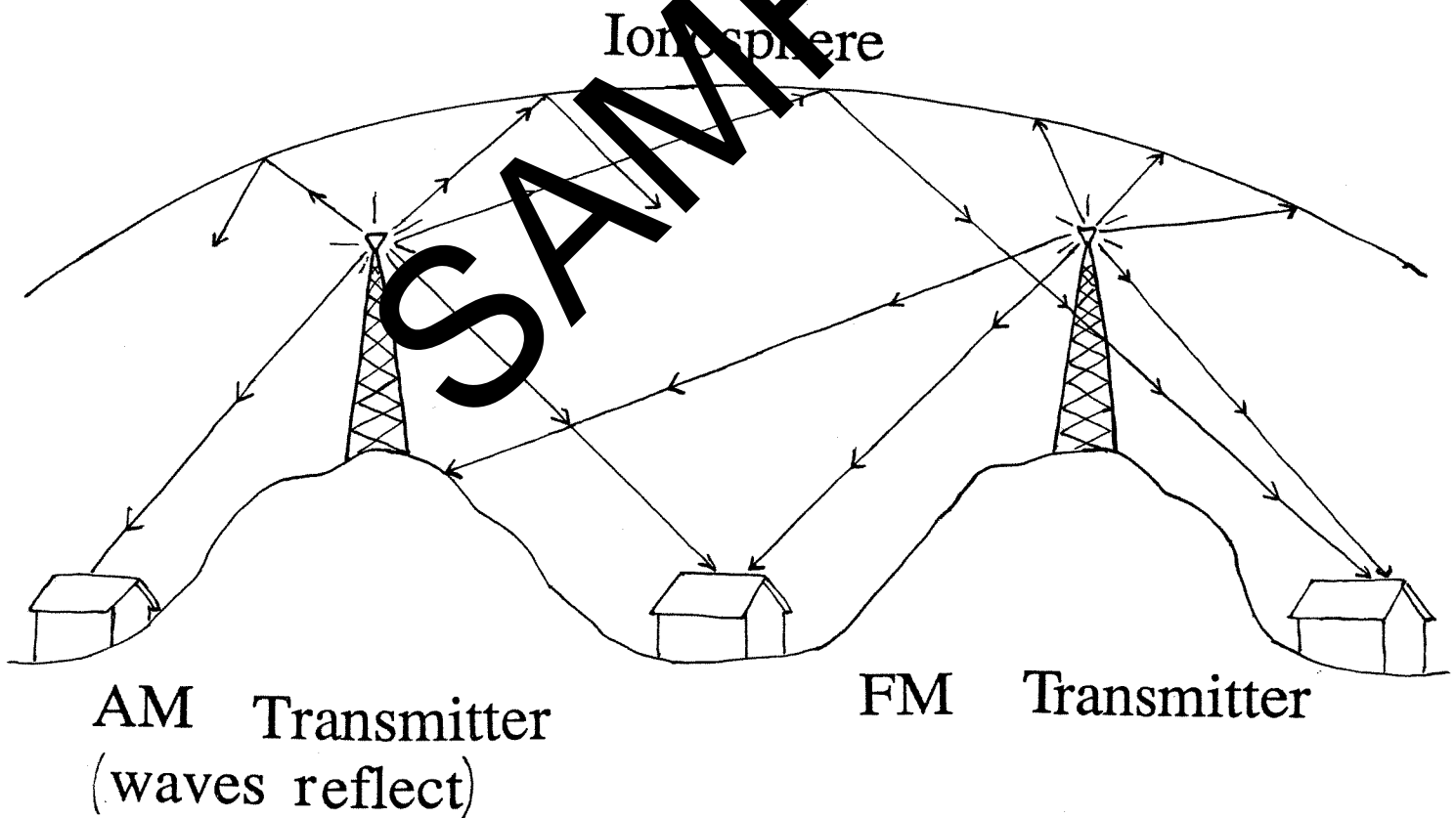
- cannot record on them
- CDs sometimes skip
- fairly expensive

AM RADIO

AM (amplitude modulation) waves have a much longer wavelength than FM waves and are measured in kilohertz. They can travel directly from the transmitter to the radio or bounce off of layers in the atmosphere.

FM RADIO

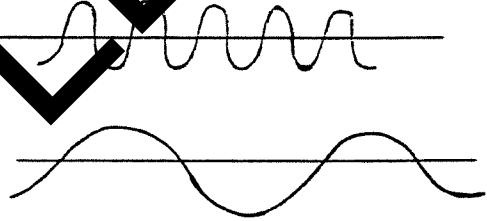
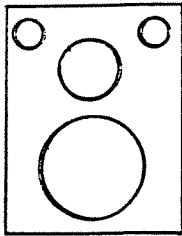
FM (frequency modulation) waves have a short wavelength and are measured in megahertz. They do not reflect off of the sky so the range is much smaller than AM. However, FM waves give a clearer, more defined sound.



4. Describe how speakers work. (Use a diagram)

5. What two things do good quality speakers have?

6. Label: tweeters, mid range, woofers, high frequency sound, low frequency sound.



7. Draw a picture showing how FM and AM radio waves travel.

SAMPLE

8. Describe either Digital Audio Tape or Laser Videodisc.

9. Give reasons why cassette tape is better than records.