Lesson 3 Using Electromagnetic Waves

Skim Lesson 3 in your book. Read the headings and look at the photos and illustrations. Identify three things you want to learn more about as you read the lesson. Record your ideas in your Science Journal.

--- Main Idea --- Details

How do you use electromagnetic waves?

I found this on page _____

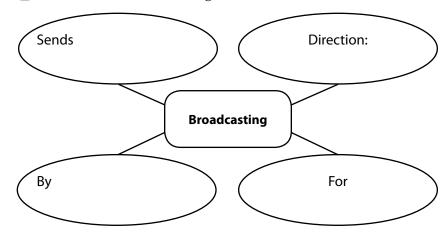
Radio Waves

I found this on page ___

I found this on page _____

Identify three examples of electromagnetic wave uses in a typical day in a household.

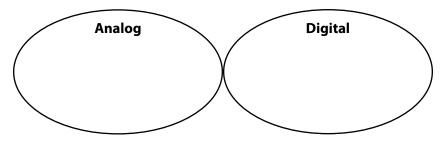
Describe broadcasting.



Differentiate two methods by which broadcasters modulate carrier waves.

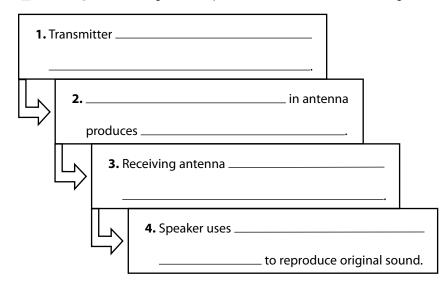
Туре	 modulation	 modulation
Abbreviation		
Definition		
Description		

Contrast broadcasting *signals*. *Circle the clearer type of signal*.



I found this on page ___

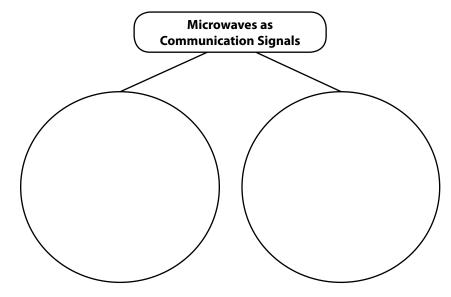
Sequence *the process of radio transmission and reception.*



Microwaves

I found this on page ____

Distinguish two ways in which microwaves are better than radio waves for communication signals.



Copyright © Glencoe/McGraw-Hill, a division of The McGraw-Hill Companies, Inc.

Lesson 3 | Using Electromagnetic Waves (continued)

Main Idea	Details
I found this on page	Order the relay of microwave signals that occurs in the use of cell phones.
	Your phone sends and receives signals from your nearest cell tower. The signal is received from the nearest cell tower by the phone you called.
I found this on page	Explain how the Global Positioning System works.
Infrared Waves I found this on page	ldentify three uses of infrared waves. 1 2 3
Light I found this on page	Identify technologies that use light produced on Earth.
	Uses of Light

Lesson 3 | Using Electromagnetic Waves (continued)

Jitraviolet Waves	Details Classify uses of ultraviolet waves			
found this on page	Uses of Ultraviolet Waves			
	Kill ger	rms	Produce visible light .	
(-Rays found this on page	Disti	inguish uses of X-ra	ays.	
iouna triis on page		Security	Medical Imaging	
			Medical or dental:	
	Description		CT scan:	
Gamma Rays found this on page	Para	phrase the function	of a PET scan.	
Connect It Identify you might encounted			f electromagnetic radiation tha	

Review Electromagnetic Waves

Chapter Wrap-Up

Use this checklist to help you study.

Now that you have read the chapter, think about what you have learned. Complete the final column in the chart on the first page of this chapter.

☐ Complete your Foldables [®] Chapter Project.				
☐ Study your <i>Science Notebook</i> on this chapter.				
☐ Study the definitions of vocabulary words.				
☐ Reread the chapter, and review the charts, graphs, and illustrations.				
☐ Review the Understanding Key Concepts at the end of each lesson.				
☐ Look over the Chapter Review at the end of the chapter.				
Summarize It Reread the chapter Big Idea and the lesson Key Concepts. Summarize what types of electromagnetic waves are around you right now and in what relative proportions.				

Challenge Find out more about photons. Are there other particles that also behave like both waves and particles? Write a short report about "things" that exhibit the properties of both waves and particles. Share your report with your class.