19. What happens to light rays when they travel through a concave lens?

the concave lens diverges the light rays outward, this puts the focal point backwards on the same side of the object. This helps make an object appear smaller. This corrects for near-sightedness

20. What type of image can a concave lens form?

a virtual image, not a real one.

OPTICAL INSTRUMENTS AND REFRACTION

Match the correct description with the correct term. Write the letter in the space provided.

shutter **21.** opens and closes to control the amount of light that enters the camera

lens **22.** focuses light on the film

film **23.** stores an image

a. film
b. lens
c. shutter

24. What does a digital camera use to record images?

a memory chip

25. What do the eyepiece lens and the objective lens in a refracting telescope do?

they refract (bend) the light rays in order to enlarge the image and focus it into your eye.

26. Name one way that a light microscope is similar to a refracting telescope.

They both bend light rays to change the size of the image to make it easier to see.

27. Name one way that a light microscope differs from a refracting telescope.

The light microscope is enlarging a small object,
The telescope is making a far object appear closer.

Name _____ Class _____ Date _____

Skills Worksheet

Vocabulary and Section Summary B

The Electromagnetic Spectrum

VOCABULARY

After you finish reading the section, try this puzzle! Then, put the letters in the matching numbered squares on the next page to reveal a quote by Thomas Edison.

1. a type of electromagnetic wave that is used to kill bacteria on food

U	l	t	r	a	v	i	o	l	e	t		l	i	g	h	t
		1	18				13								2	

2. a very narrow range of wavelengths in the electromagnetic spectrum that humans can see

v	i	s	i	b	l	e		l	i	g	h	t
	21										20	19

3. a type of electromagnetic wave that warms Earth

i	n	f	r	a	r	e	d		w	a	v	e
			12			3					5	

4. the distance from any point on a wave to an identical point on the next wave

w	a	v	e	l	e	n	g	t	h
		16			22		8		

5. the range of colors

v	i	s	i	b	l	e		s	p	e	c	t	r	u	m
	6											14			

6. the entire range of electromagnetic waves, such as light, radio waves, microwaves, and X rays

e	l	e	c	t	r	o	m	a	g	n	e	t	i	c
							10		23					

s	p	e	c	t	r	u	m
7				4			

7. the visible light of all wavelengths combined

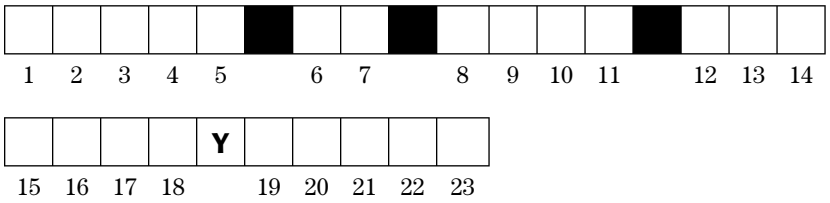
w	h	i	t	e		l	i	g	h	t
			9							

8. a wave that consists of changing electric and magnetic fields that vibrate at right angles to each other

e l e c t r o m a g n e t i c | w a v e

11 13 17 15

What Thomas Edison said: There is time for everything



SECTION SUMMARY

Read the following section summary.

- Light is an electromagnetic wave (EM wave). An EM wave can travel through matter or space.
- The entire range of EM waves is called the *electromagnetic spectrum*.
- Infrared waves from the sun warm Earth and everything on Earth.
- Visible light is the narrow range of wavelengths in the electromagnetic spectrum that humans can see.
- Humans see different wavelengths of visible light as different colors.
- Ultraviolet light is both harmful and helpful to living things.