

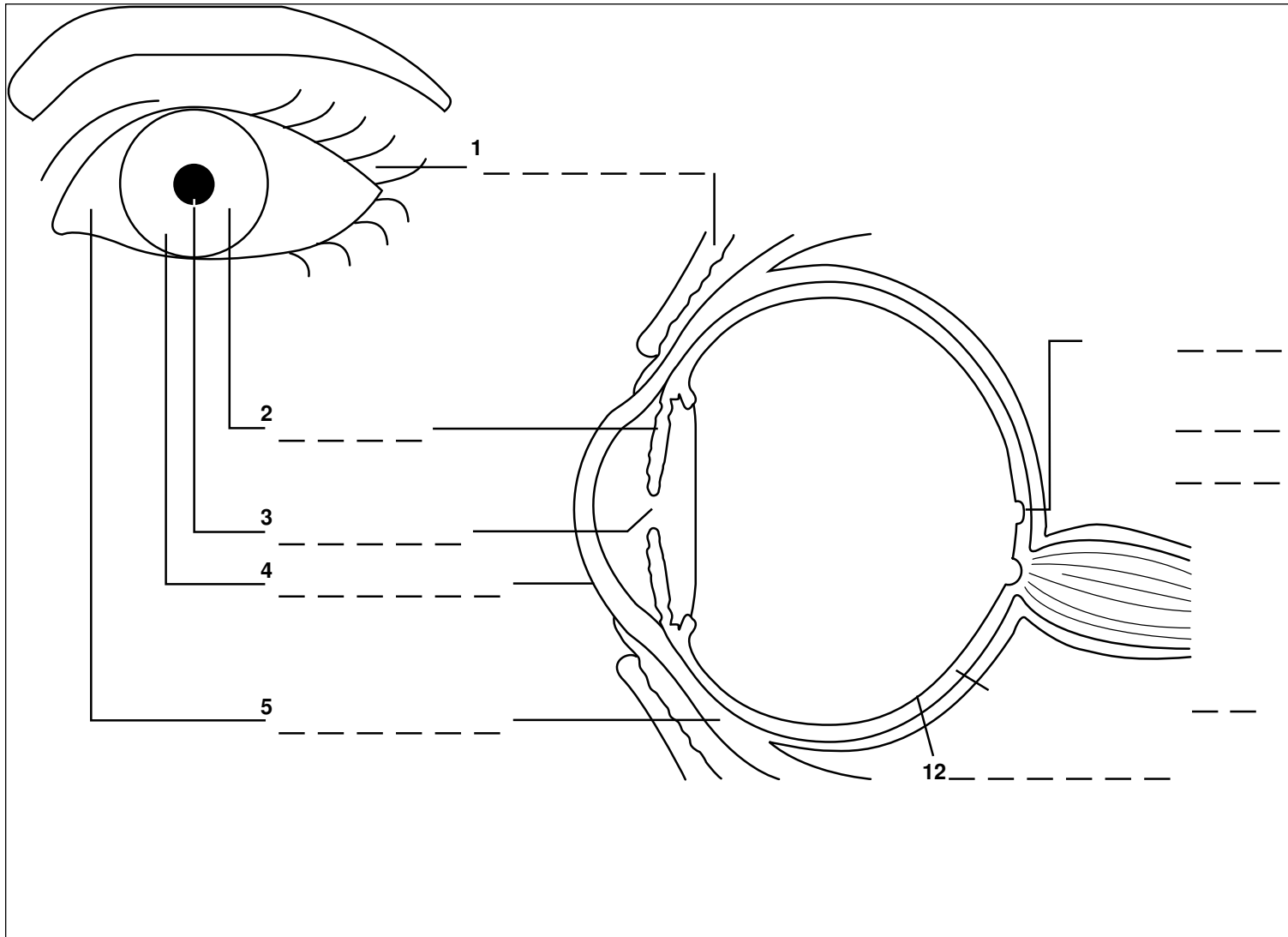


The Anatomy of the Eye

- ▲ **Choroid** (KOR-oyd)
A layer of blood vessels that feeds the retina.
- ▲ **Cornea** (KOR-nee-uh)
The clear outer part of the eye's focusing system located at the front of the eye.

- ▲ **Eyelid**
The skin-covered structure that protects the front of the eye; limits light entering the eye; spreads tears over cornea.
- ▲ **Fovea** (FOH-vee-uh)
The center of the macula; gives the sharpest vision.

- ▲ **Iris**
The colored part of the eye; regulates the amount of light entering the eye.
- ▲ **Lens**
The clear part of the eye behind the iris that helps to focus light on the retina. Allows the eye to focus on both far and near objects.
- ▲ **Macula** (MAK-yoo-luh)
The small sensitive area of retina that gives central vision; contains the fovea.
- ▲ **Optic nerve**
The bundle of over one million nerve fibers that carries visual messages from the retina to the brain.



- ▲ **Pupil**
The opening at the center of the iris. The iris adjusts the size of the pupil and controls the amount of light that can enter the eye.
- ▲ **Retina** (RET-in-nuh)
The light-sensitive tissue lining the back of the eyeball; sends electrical impulses to the brain.
- ▲ **Sclera** (SKLEH-ruh)
The tough, white outer coat of the eye.
- ▲ **Vitreous Humor** (VIT-ree-us)
The clear gel filling the inside of the eye.

Word Search



Find these
words:

Glare
Safety Gear
Shield
Protect
Prevent
Goggles
Facemask
Eye Guards
Helmet

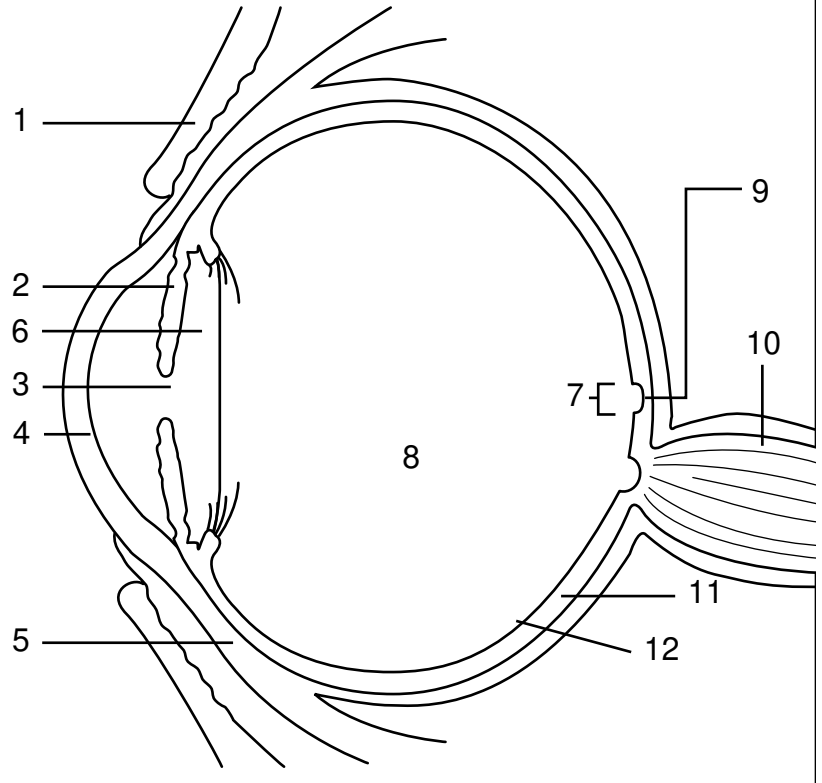
A	B	C	P	R	O	T	E	C	T
D	G	O	G	G	L	E	S	E	G
P	R	E	V	E	N	T	H	F	L
G	H	I	J	K	L	M	I	N	A
S	A	F	E	T	Y	G	E	A	R
H	E	L	M	E	T	O	L	P	E
Q	R	S	T	U	V	W	D	X	Y
Z	E	Y	E	G	U	A	R	D	S
F	A	C	E	M	A	S	K	A	B

Scramble and Word Search

Scramble

Unscramble the parts of the eye listed below. *Hint:* The location of each is shown on the diagram.

1. dyelie _____
2. siir _____
3. lpuip _____
4. onarce _____
5. rsleca _____
6. nesl _____
7. aclamu _____
8. stivorue mhuro _____
9. ovafe _____
10. pocit verne _____
11. drohcio _____
12. tranie _____



Photocopy from original for best quality.

WORD SEARCH

Can you find these hidden words?

- IRIS
- EYE
- RETINA
- LENS
- CORNEA
- MACULA
- PUPIL
- CELL
- NERVE

R A C L I N E R V E
 E E Y E Y T E A O Y
 R E T N E A C A C C
 P U P I L U E C L O
 N E S R N Y N O E R
 A P I I V A R T N N
 E I E S P A N Y S E
 M E I V A N I T E A
 E A S U O E R T I V
 T E C R A C U L A P
 O D D U T I E S D A
 F L E N L L D L N S
 D O R V E A M A L E



Eye-Opening Facts

History Tells Us...

▲ Abraham Lincoln was farsighted and had a “lazy eye.” His first pair of eye-glasses cost about 38 cents.



Gear up!

Eye injuries among kids often
happen while playing sports.
Use protective eyewear.

<http://isee.nei.nih.gov>



Gear up!

There's more to lose than the game.
Use protective eyewear.

<http://isee.nei.nih.gov>



Clear up!

Most eye injuries in school-aged
kids are sports-related.
Use protective eyewear.

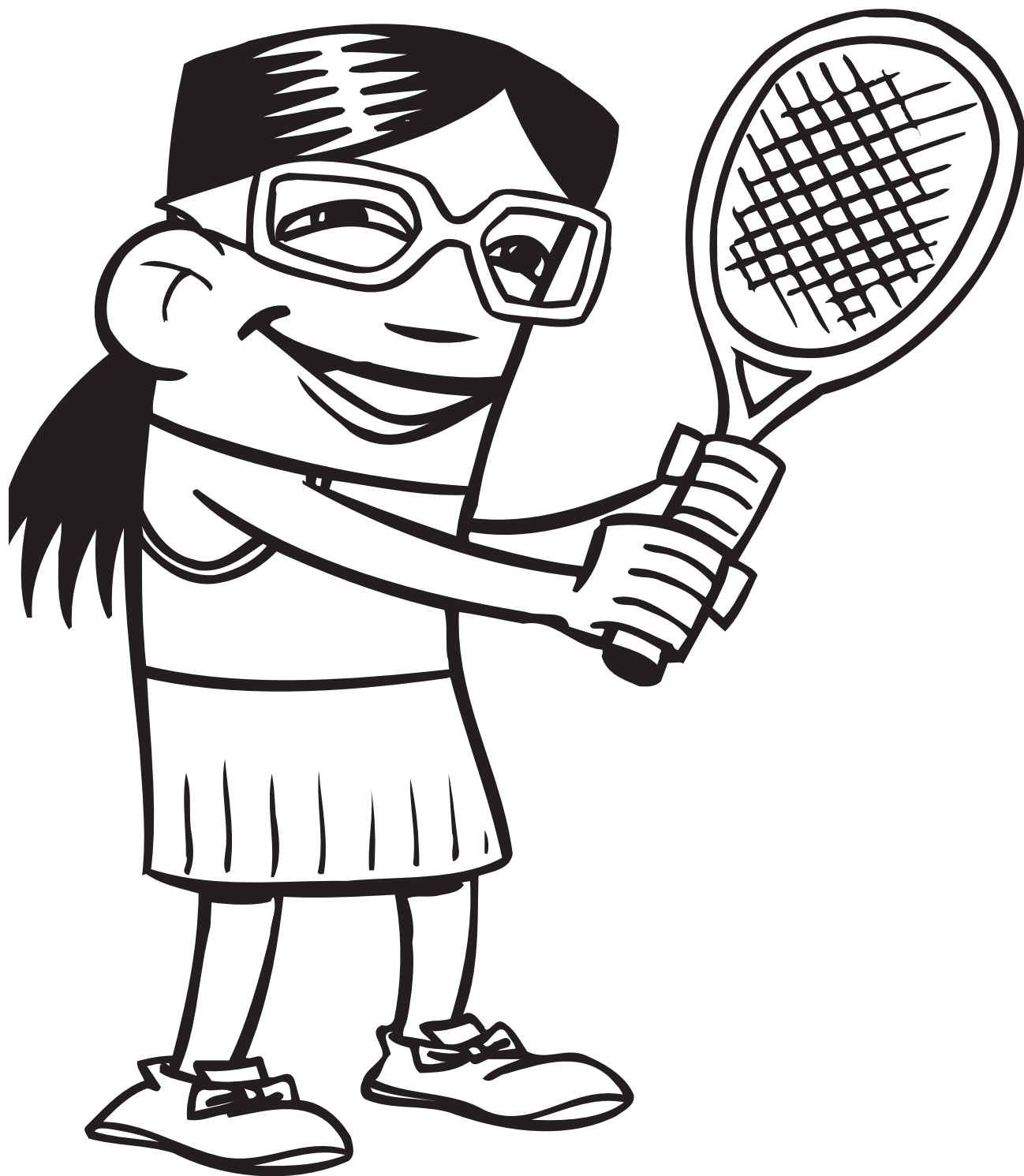
<http://isee.nei.nih.gov>



Clear up!

Most eye injuries can be prevented with good safety habits. Use protective eyewear.

<http://isee.nei.nih.gov>



Clear up!

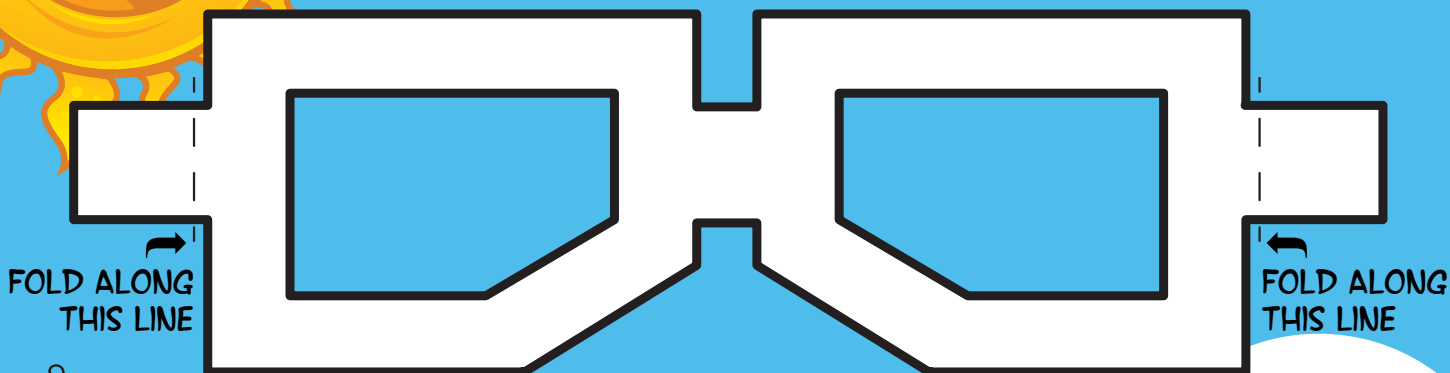
IF YOU PLAY TENNIS OR OTHER SPORTS...
USE PROTECTIVE EYEWEAR.

<http://isee.nei.nih.gov>



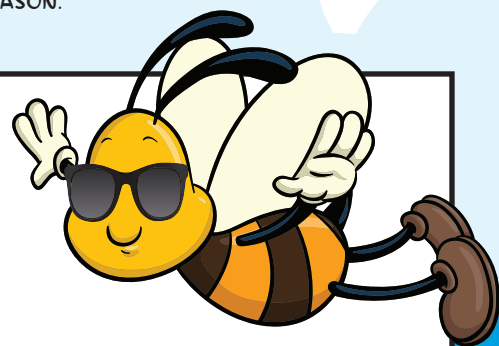
SUN SMART ACTIVITY PAGES

DECORATE YOUR OWN GLASSES!



DECORATE AND MAKE YOUR OWN GROOVY GLASSES USING THE TEMPLATE ABOVE! COLOR YOUR GLASSES ANY WAY YOU WANT, ASK AN ADULT TO HELP YOU CUT THEM OUT AND PUT THEM TOGETHER, AND WEAR THEM PROUDLY!

WARNING: THESE CUT-OUT GLASSES ARE INTENDED FOR INDOOR USE ONLY. WEARING THEM AS SUNGLASSES WILL NOT PROVIDE ANY EYE PROTECTION FROM THE SUN'S HARMFUL ULTRAVIOLET (UV) RAYS. ALWAYS WEAR SUNGLASSES WITH LENSES THAT PROTECT AGAINST UVA AND UVB RAYS (BOTH CAN DAMAGE EYES) WHEN OUTDOORS, WHETHER IT IS SUNNY OR CLOUDY, AND DESPITE THE SEASON.



BUSY BEE IS GOING ON VACATION!

HELP HIM PACK HIS BAG BY DRAWING EVERYTHING HE'LL NEED FOR HIS TRIP. DON'T FORGET TO INCLUDE A FEW PAIRS OF COOL SHADES! WHEN YOU TRAVEL, REMEMBER TO PACK YOUR SUNGLASSES TO PROTECT YOUR EYES FROM THE SUN!





SUN SMART ACTIVITY PAGES

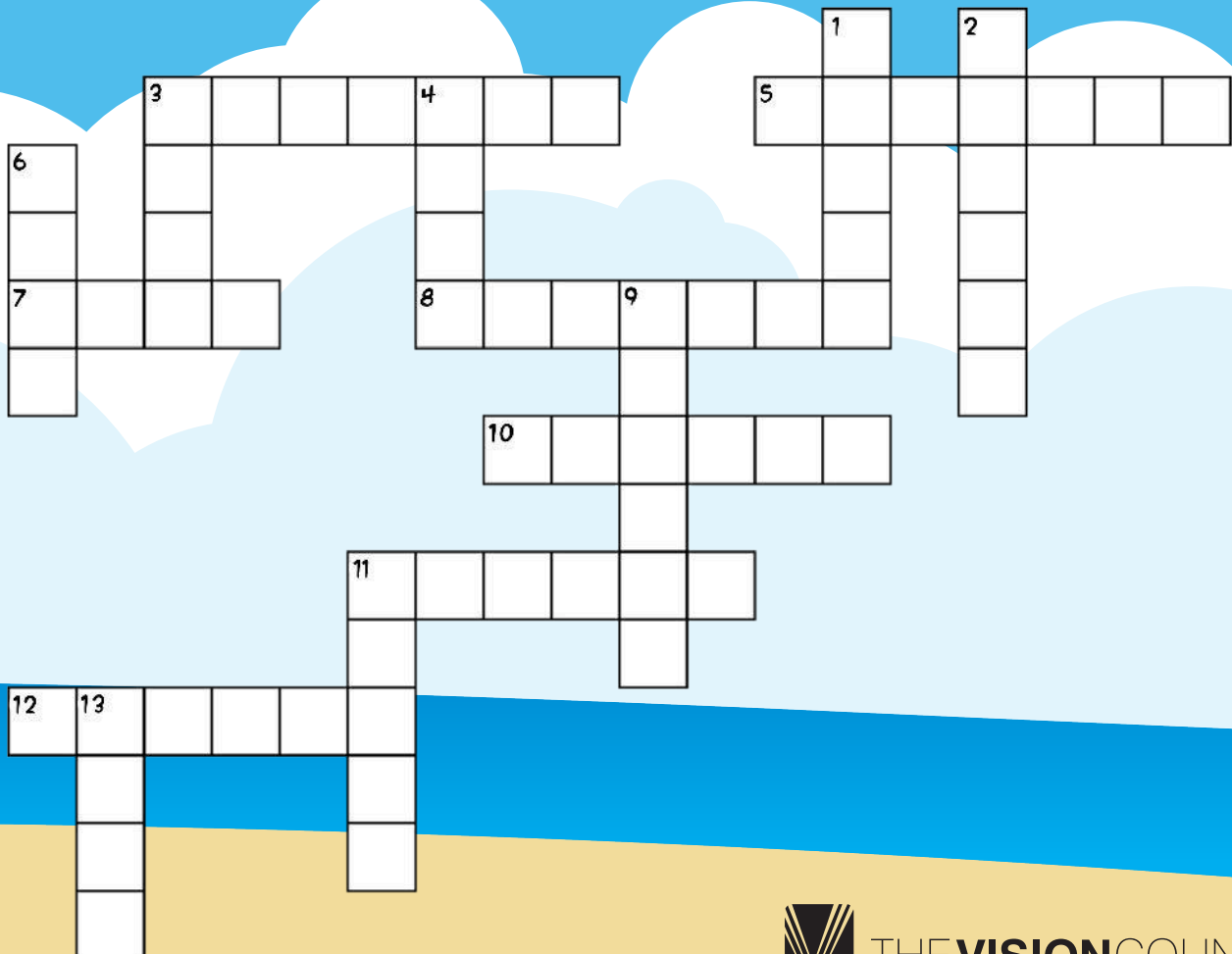
CROSSWORD PUZZLE

DOWN

1. WEAR YOUR FAVORITE SHADES HERE ALL DAY LONG, JUST BE CAREFUL NOT TO LOSE THEM IN THE OCEAN!
2. IT'S IMPORTANT TO ALWAYS WEAR YOUR SUNGLASSES OUTSIDE, EVEN IF THE SKY IS
3. ALWAYS WEAR YOUR SHADES HERE, WHETHER YOU'RE SWIMMING OR JUST LOUNGING BY THE SIDE!
4. GOOD QUALITY SUNGLASSES NOT ONLY PROTECT YOUR BUT THE SKIN AROUND THEM TOO!
6. STAY IN THE SUN! PUT ON THOSE SHADES!
9. THIS IS THE PART OF YOUR SUNGLASSES THAT BLOCKS THOSE HARMFUL UV RAYS!
11. PROTECTING YOUR EYES NOW WILL HELP ENSURE MANY YEARS OF HEALTHY TO COME.
13. WHETHER YOU'RE ON THE SWINGS OR IN THE SANDBOX, ALWAYS TAKE YOUR SUNGLASSES WHEN YOU VISIT HERE.

ACROSS

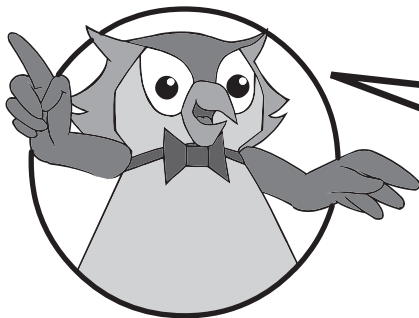
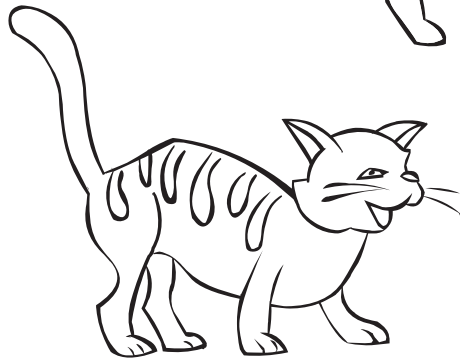
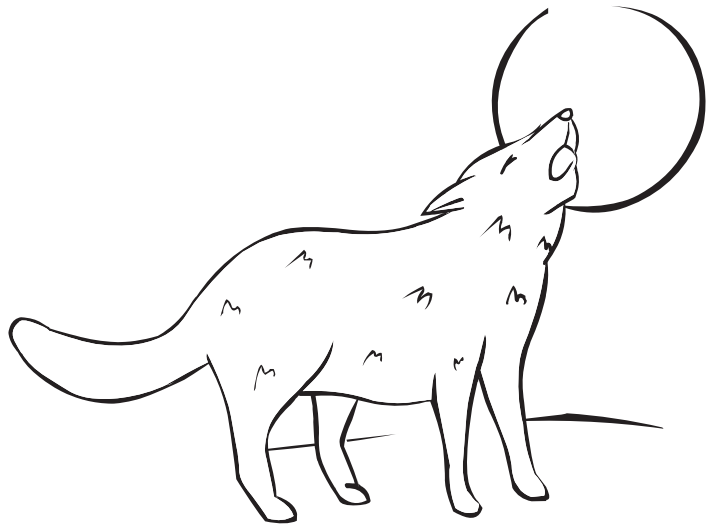
3. WEARING SUNGLASSES IS THE BEST WAY TO YOUR EYES FROM THE SUN'S RAYS.
5. WEARING YOUR SHADES, WHETHER YOU'RE OUTSIDE OR RIDING IN THE CAR, WILL HELP KEEP YOUR EYES FOR YEARS TO COME.
7. THE SUN DOESN'T DISAPPEAR WHEN SUMMER IS OVER! TAKE YOUR SUNNIES BACK TO SCHOOL WITH YOU IN THE
8. WEARING SUNGLASSES WILL NOT ONLY MAKE YOU LOOK SMART, YOU'LL ALSO BE TOTALLY
10. EVEN THOUGH IT'S USUALLY COLD OUTSIDE DURING THIS SEASON, THE SUN'S RAYS NEVER GO AWAY! MAKE SURE TO PUT ON YOUR SUNGLASSES BEFORE YOU GO OUT AND PLAY IN THE SNOW!
11. THIS IS THE SEASON OF VACATIONS AND TRAVEL - MAKE SURE TO KEEP A CLOSE EYE ON YOUR SHADES!
12. THIS SEASON, RIGHT BEFORE SUMMER, IS A GREAT TIME TO PICK UP A NEW PAIR OF COLORFUL SUNNIES!



What is Night Vision?

Animals with NIGHT VISION can see well in the dark because they have large PUPILS to let in more light. They also have many more RODS in their RETINAS than humans. RODS help animals detect motion, even at night.

Color these animals with night vision.



BLIND AS A BAT?
Bats aren't blind at all. In fact, many bats can see very well.

H A N D O U T

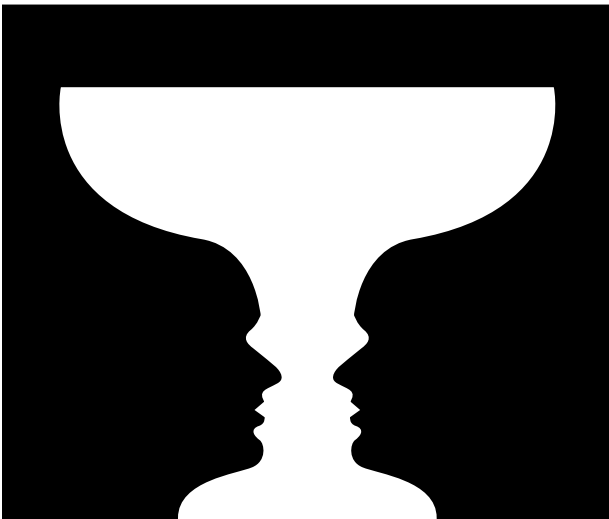
Optical Illusions

Sometimes your eyes play tricks on you. The pictures on this page are called “optical illusions.”

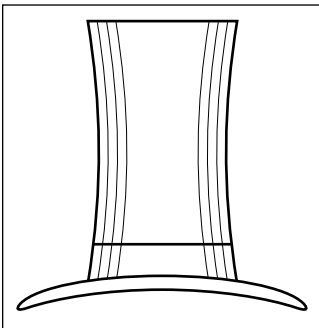
Optical means vision. An illusion is something that isn't what it seems to be. An optical illusion is something that plays tricks on your vision. Optical illusions teach us about how the eye and brain work together to create vision. In our everyday three-dimensional (3-D) world, our brain gets clues about depth, shading, lighting, and position to help us interpret what our eyes see. But when we look at two-dimensional (2-D) images that lack some of these clues, the brain can be fooled.

Can you figure out these optical illusions?

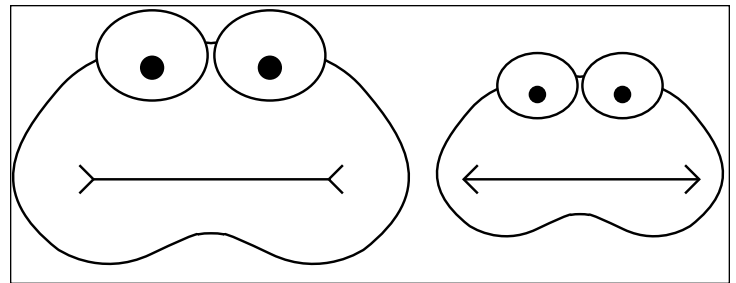
Photocopy from original for best quality.



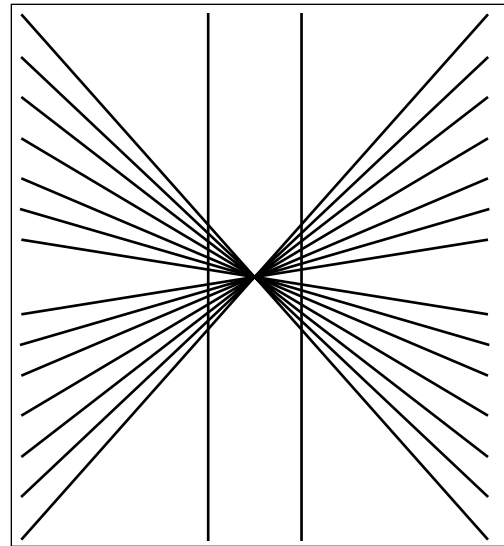
1. Is this a picture of a vase? Or two faces looking at each other? Do you see both?



3. Is the hat taller than it is wide?



2. Which frog has a bigger mouth? Are you sure? Measure to find out.



4. Are the up and down lines straight or bent? Use a ruler to check.

Word Hunt

Circle sixteen hidden words about eyes.

Starfish
have an
eye at
the end of
each leg.



A C U G R Z S T P L O C D
O P T O M E T R I S T Y E
B C E S L Y E A T U C A L
T R R I F E F N O M A I U
E E M G L A S S E S P R N
A T Q H E G I L Q U S I E
R I K T N S L E C B D S Y
S N V I S I O N Z O I S E
L A E A R G G S E E P E L
S F J Z O H B E S T L B I
S S A F E T Y F F U N H D
H E A L T H O A T R V S E
F F O C U S N C O R N E A
G A R E F L E C T I O N E

A falcon can
see 20 times
better than a
human.
Even while diving
at 100 miles
per hour!



Cornea

Eye

Glasses

Iris

Safety

Eyelid

Focus

Health

Retina

Tears

See

Reflection

Lens

Optometrist

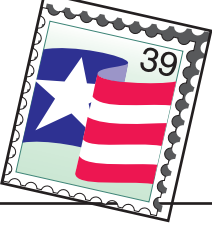

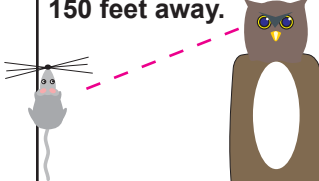
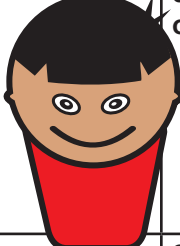
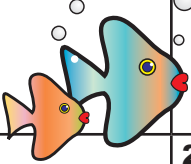


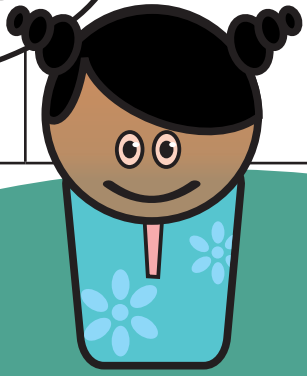
Vision

Sight

Make every day **A HEALTHY**

VISION DAY

31 FUN EYE-RELATED FACTS FOR CHILDREN

	<p>1 Each eye weighs $\frac{1}{4}$ ounce, measures less than 1 inch in diameter, and is shaped like a slightly flattened ball.</p>	<p>2 When you blink, you shut your eyes for 0.3 seconds. That's a total of 30 minutes each day!</p>	<p>3 One in every 12 males is color blind. Color blind does not mean you see in black and white, but that you have trouble telling the difference between certain colors.</p>	<p>4 The retina is about the size of a postage stamp. It has 130 million light-sensitive cells.</p> 	<p>5 Your eye is always making tiny, jittery movements. Each time your eye moves, it receives new information. This continuous supply of new information helps you see images.</p>	<p>6 Certain patterns confuse your eyes and brain, causing you to misjudge the size of a circle or the length of a line.</p>
<p>7 People sometimes have red eyes in photographs, especially those taken with a flash, due to the light that reflects off the blood vessels of the retina.</p> 	<p>8 Light-sensitive cells in the retina include rods and cones. Rods let us see shape and movement. Cones combine the three main colors—red, blue, and green—to let us see thousands of colors.</p>	<p>9 Around the world, an adult goes blind every five seconds and a child goes blind every minute.</p>	<p>10 Many animals have good night vision. For example, on a moonlit night, an owl can see a mouse moving more than 150 feet away.</p> 	<p>11 Your dog's or cat's eyes glow in the dark because of tapetum, silver "mirrors" in the back of its eyes. This gives them superior night vision.</p>	<p>12 Can you look in opposite directions at the same time? A chameleon can.</p> 	<p>13 Scorpions have as many as 12 eyes, and some flatworms have more than 100 eyes scattered all over their bodies.</p>
<p>14 Hawks' and eagles' eyes are specialized to let them see almost eight times better than humans.</p>	<p>15 Tropical fish and many bright-colored animals have more color vision cells than do humans. They can see colors humans cannot.</p> 	<p>16 When using a computer, adjust the lighting and sit at least 20 inches away from the screen in order to reduce glare.</p>	<p>17 In "lazy eye" (amblyopia), both eyes don't work well together. These vision problems can often be corrected if detected early.</p>	<p>18 Smoking increases the risk of some eye diseases such as age-related macular degeneration and cataracts.</p> 	<p>19 Your body protects your eyes. Bony sockets guard against impact; eyebrows provide shade; eyelids and eyelashes keep things out of eyes; and tear ducts moisten eyes.</p>	<p>20 Blinking helps you lubricate your eyes. You blink every two to 10 seconds. Be sure to blink while you read or work on the computer.</p>
<p>21 Choose polycarbonate lenses for eyewear and sun wear. They are strong, durable, and impact resistant.</p>	<p>22 The most effective sunglasses provide at least 98 percent protection from both UVA and UVB rays.</p> 	<p>23 More than half of all people in the United States use some type of lens to correct their vision.</p>	<p>24 Myth: Reading in dim light is harmful to your eyes. Fact: Although reading in dim light makes your eyes feel tired, it is not harmful.</p>	<p>25 Myth: Using a computer, or video display terminal (VDT), is harmful to the eyes. Fact: Using a VDT may strain or tire your eyes, but it is not harmful.</p>	<p>26 Myth: You can wear your eyes out. Fact: Eyes do not wear out. You can use them as much as you want.</p>	<p>27 Myth: NEVER sit too close to the TV. Fact: There is no scientific evidence that sitting too close to the TV is bad for your eyes.</p> 
<p>28 Myth: If you need glasses, your eyes are not healthy. Fact: Wearing eyeglasses has nothing to do with eye health, but with normal changes in parts of your eyes.</p>	<p>29 Myth: There is no need to check your eyes until you are in your 40s and 50s. Fact: Eye disease can happen any time.</p>	<p>30 Myth: If you eat carrots, you will have good eyesight. Fact: The vitamin A in carrots helps eyes function well, but it is just one important factor for good eyesight.</p> 	<p>31 Myth: Benjamin Franklin invented bifocals. Fact: The English optician Samuel Pierce invented bifocals around 1775.</p>	<div style="border: 2px solid black; border-radius: 50%; padding: 20px; text-align: center;"> <p>SEE ALL YOU CAN SEE visit: http://isee.nei.nih.gov</p> </div> 		



National Eye Institute

NATIONAL INSTITUTES OF HEALTH

www.nei.nih.gov