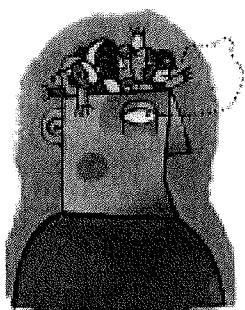


USE "Eye" Notes

to complete this  
assignment



## THE EYE-BRAIN CONNECTION

# 3

Seeing happens in the brain. Your eyes take in information from the world around you in the form of light. That information is then sent to the brain, which makes sense of what your eyes are seeing. (See illustration of the human visual system in Chapter 1 of this book.)

Sometimes your eyes see things that your brain doesn't understand. These are optical illusions — pictures that play tricks on your eyes and confuse your brain. Besides being fun, optical illusions can help us to better understand vision. They demonstrate just how closely our eyes and brain work together to help us see.

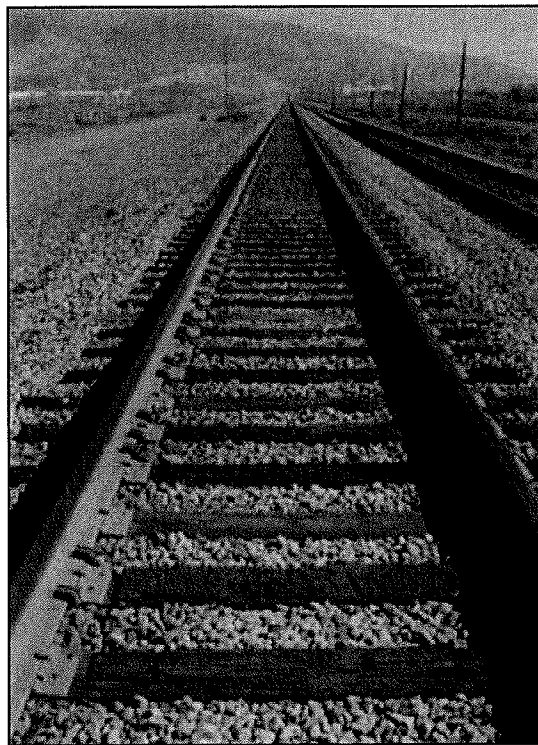
Scientists have studied the phenomenon of optical illusions and they still don't completely understand or agree on how they work. However, many scientists believe that some optical illusions fool us when the information taken in by our eyes conflicts with how our brain interprets that information. The brain can't make sense of what the eyes are seeing, so it falls back on its previous experience. It turns the unfamiliar into something familiar.

### WHAT'S IN THIS CHAPTER?

#### activities 7 OPTICAL ILLUSIONS

- #1: Train Tracks
- #2: Rotating Staircase
- #3: Barrel
- #4: Kissing Lovebirds
- #5: Smiling Frogs
- #6: Two Straws
- #7: Two Flowers

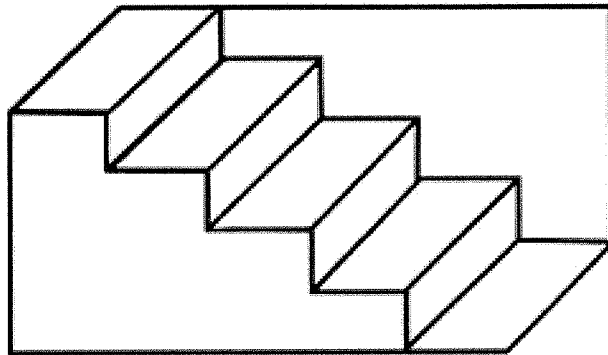
# #1 train tracks



activity

- What seems to be happening to the train tracks in this picture? *Both sets of*

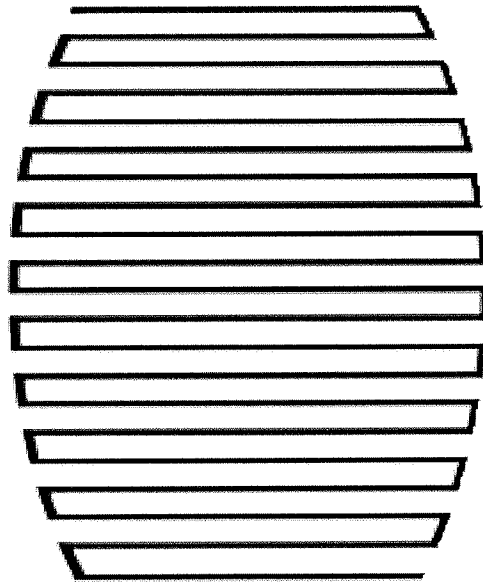
## #2 rotating staircase



activity

- What do you see when you look at this picture? A staircase running from left to right or an upside-down staircase?
- Put the paper on the table in front of you and spin it slowly in a circle. What happens to the staircase?

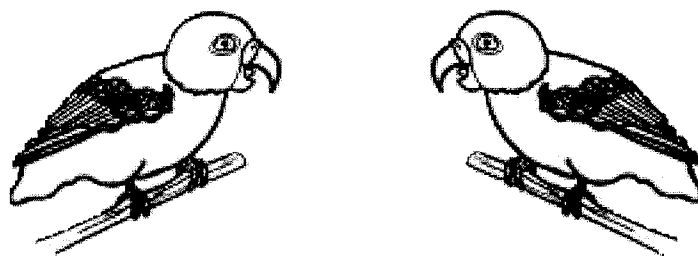
## #3 barrel



activity

- What do you see when you look at this picture?
- Do you see eleven separate bars or one continuous line?
- Trace the line with a pencil or your finger.
- What did you discover?

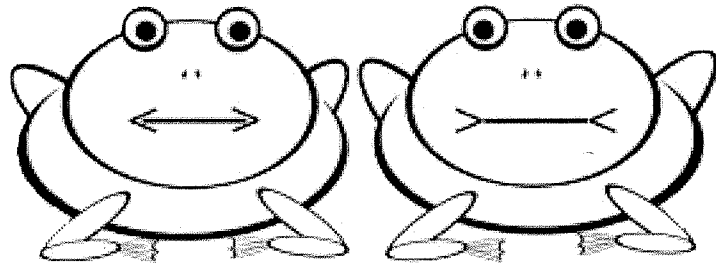
## #4 kissing lovebirds



activity

- Hold the drawing of the lovebirds at arm's length.
- Stare at the blank spot between the lovebirds' beaks.
- Slowly bring the paper closer to your face.
- Do you see the two birds kissing?

# #5 smiling frogs



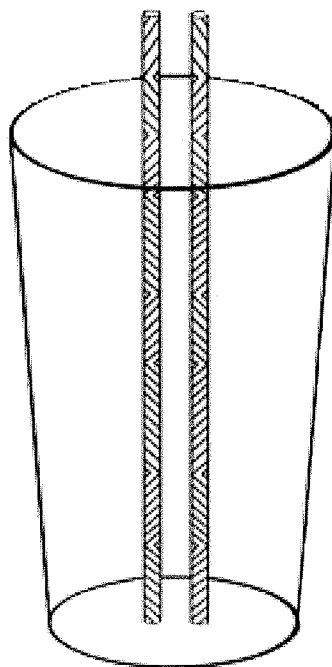
OPIE

CLEO

activity

- Which frog has the longest mouth, Opie or Cleo?
- Measure each smile with a ruler.
- What did you discover?

## #6 two straws

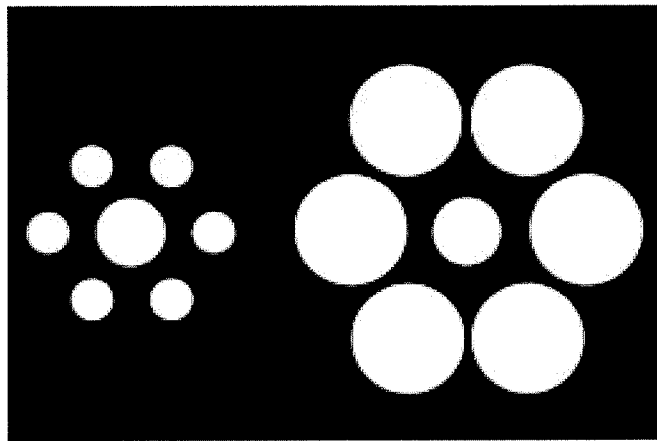


activity

- Hold the drawing of two straws at arm's length.
- Are the straws straight or crooked? (Most people see crooked straws.)
- Lay the ruler along the length of the straw — is the straw straight or crooked?
- Now hold the drawing flat, like a tray, and put it right under your nose.
- How do the straws look now? (The straws should appear straight.)



# #7 two flowers



activity

- Look closely at the two clusters of circles.
- Now look at the two middle circles.
- Which one is bigger?
- Measure across the middle (the diameter) of each circle.
- What did you discover?