CASE FILE:
Vinny Vision

TOP SECRET

CONFIDENTIAL

VISION, V.

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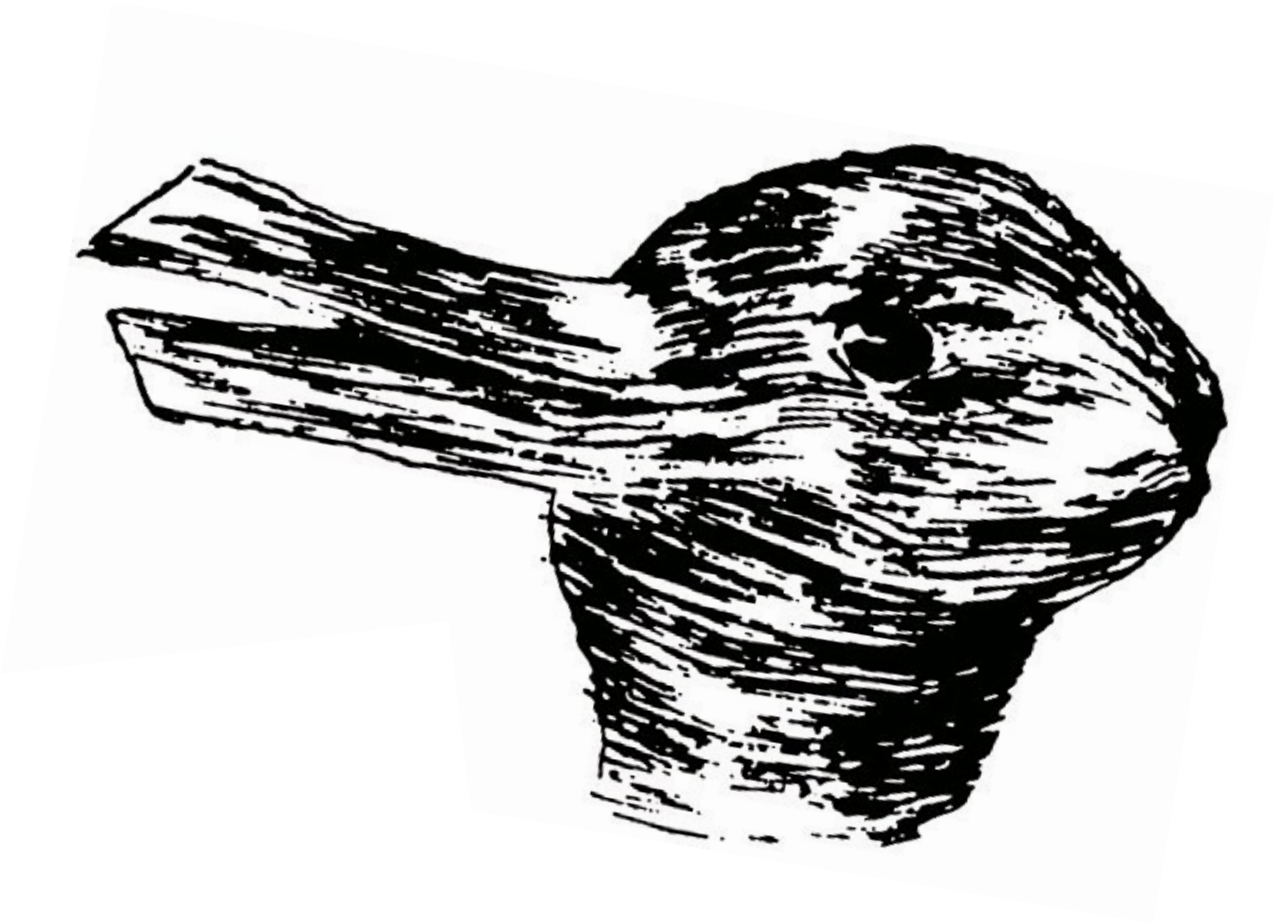
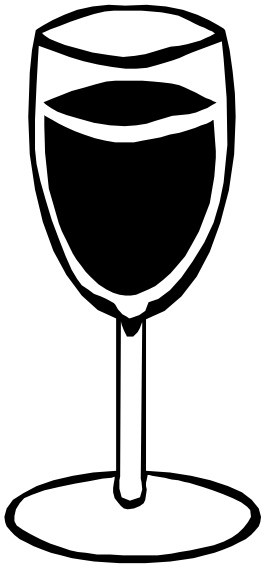
OPTICAL ILLUSION
EXAMPLE



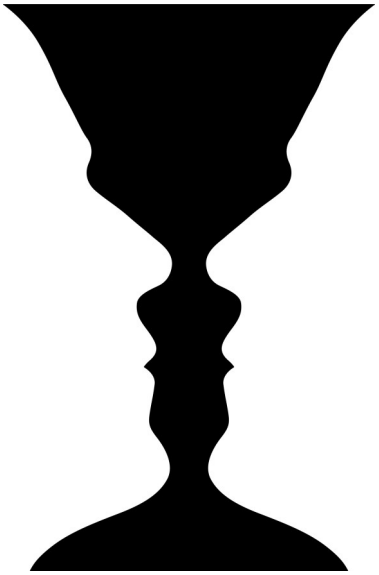
This is an optical illusion because although there are two animals in this picture, the brain recognizes only one animal at a time. Which do you see first, a duck or rabbit?

CLUE ONE

Option 1



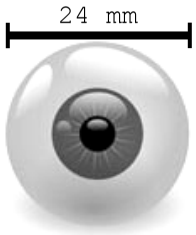
Option 2



Option 3

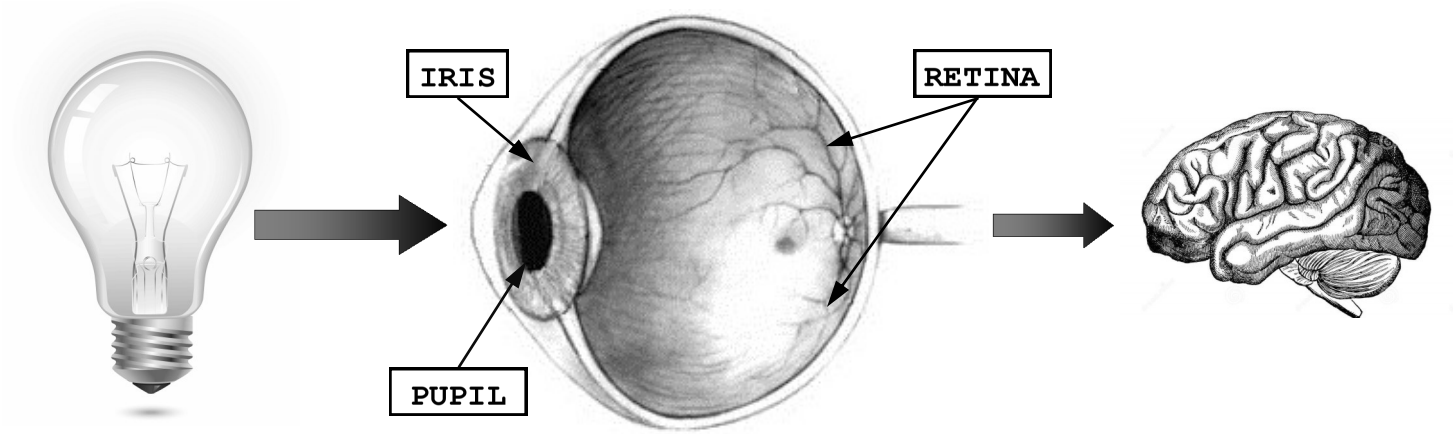
Option 4

HOW WE SEE



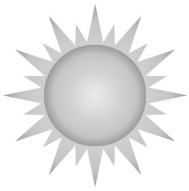
The actual size of a human eyeball is about 24 millimeters in diameter (almost 1 inch).

Cross Section of a Human Eye



1. We need **LIGHT** to see.
2. Light enters our eye through the **PUPIL,** which is really a hole!
3. The **IRIS** is a muscle that controls how much light gets in the eye.
4. Light gets projected onto the **RETINA** like a movie screen - but the image is upside down!
5. Our **BRAIN** interprets the information sent from the eye and flips the image right side up!

THE IRIS CONTROLS THE SIZE OF THE PUPIL TO GET THE CORRECT AMOUNT OF LIGHT IN OUR EYES.



In bright light the iris muscle makes the pupil (hole) smaller.

In dark light the iris muscle relaxes to make the pupil (hole) bigger.

CLUE TWO

Option 1

Option 2

Option 3

Option 4

WHAT'S UP WITH VINNY?

NEARSIGHTED

When looking far away, things appear blurry and out of focus

The board might be blurry if you're nearsighted.

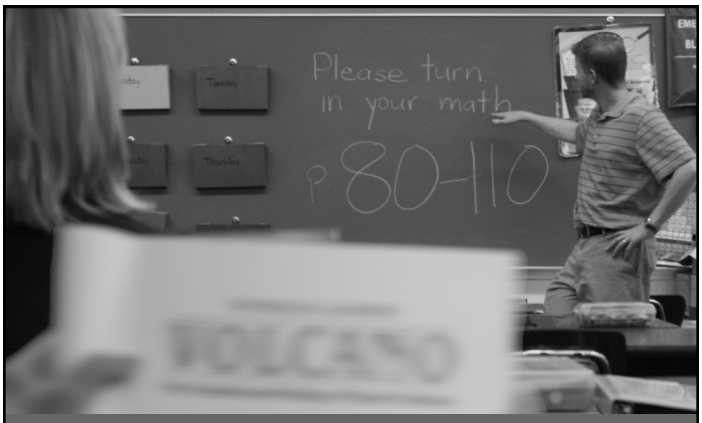
Symptoms

- Rubbing eyes
- Squinting eyes
- Objects in the distance are blurry or fuzzy
- Trouble reading the board in class
- Trouble reading signs on the street

It's probably hard to read street signs clearly if you're nearsighted.

FARSIGHTED

When looking up close, things appear out of focus



Books might be blurry if you're farsighted.

Symptoms

- Headaches & eye strain
- Close objects are blurry or not clear
- Hard to see the computer
- Difficulty reading well
- Eyes get tired while reading and/or it's hard to concentrate

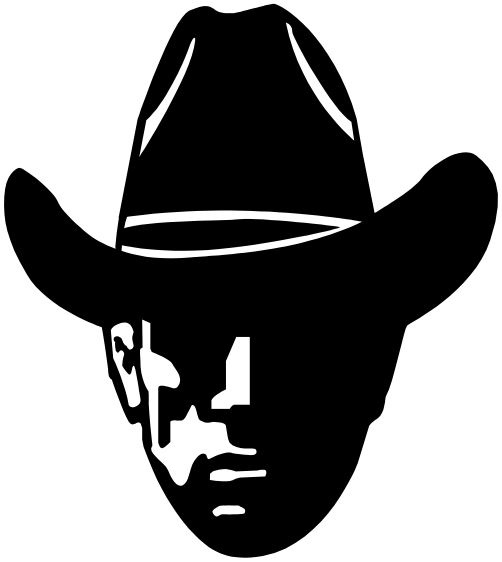
It's probably hard to read the screens on a tablet or computer clearly if you're farsighted.

CLUE THREE

Option 1

Option 2

Option 3



Option 4

CLUE FOUR

Option 1

Option 2

Option 3

Option 4

HOW CAN YOU PROTECT YOUR EYES?

Playing Outside

From Sparklers

Doing Yard Work

Playing Baseball

Using Tools

From Sharp Objects

Doing Lab Activities

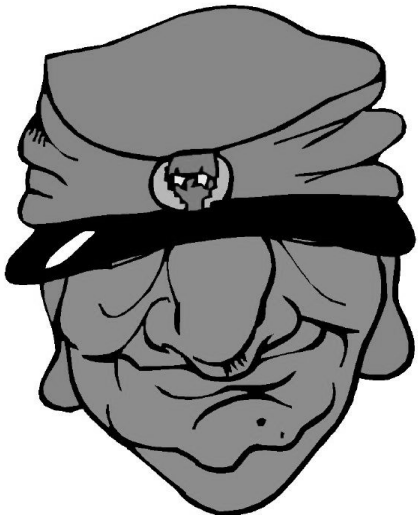
From Popping Grease

From a Family History of Vision Problems

CLUE FIVE

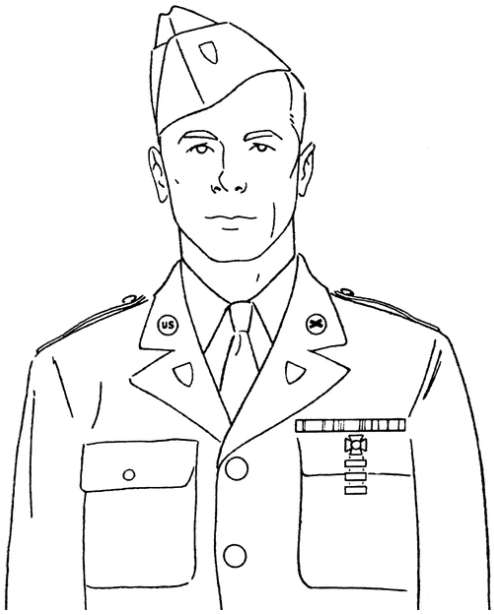
Option 1

Option 2

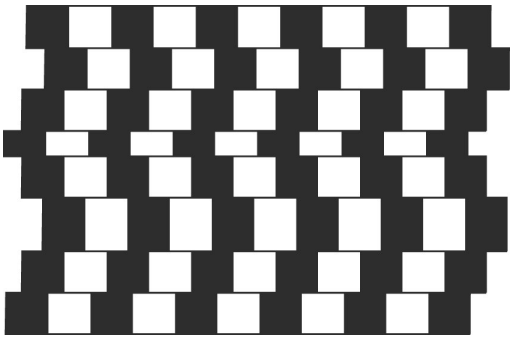


Option 3

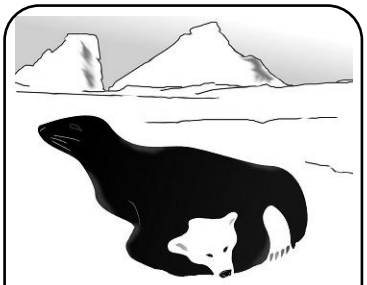
Option 4



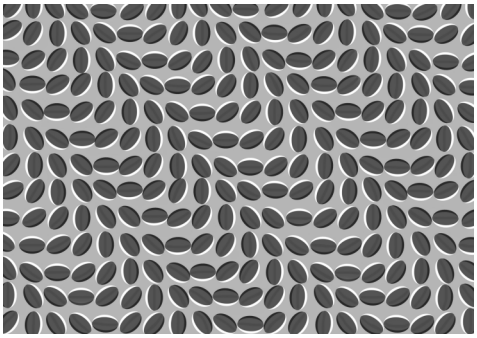
More Cool Optical Illusions



Are these lines straight?
Use your ruler to be sure.



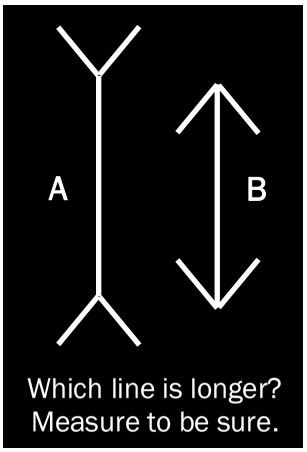
What two animals do you see in this picture?



It appears that the coffee beans are moving even though they are still.

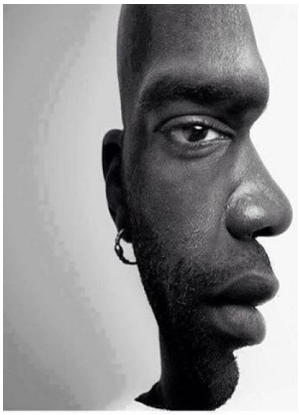
What 2 words are hidden in this optical illusion?

Do you see the **good** and **evil** in this picture?



Which line is longer?
Measure to be sure.

What does it say inside this triangle?
Read it slowly and carefully to be sure.

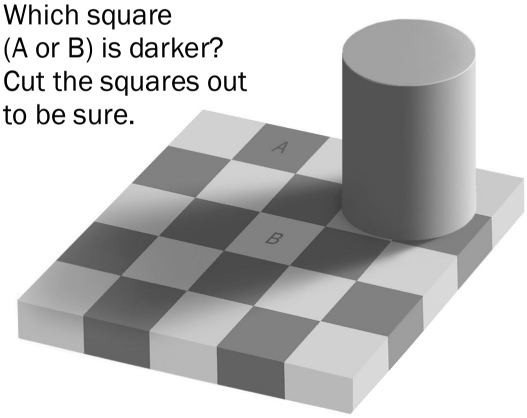


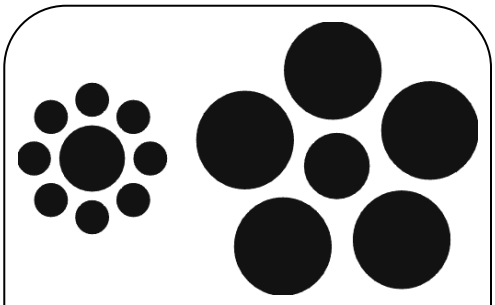
Which way is this man facing? Are you sure?

Do you see all 3 tigers?

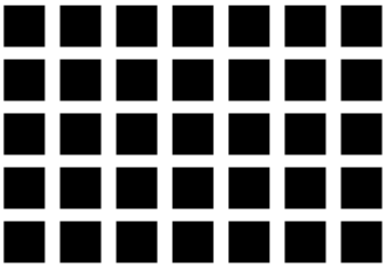
See if you can get the thumb print under the magnifying glass.
Look in-between the glass and the thumb print. Slowly bring the paper closer to your nose and relax your eyes. Did the print go inside the circle of the magnifying glass?

Which square (A or B) is darker?
Cut the squares out to be sure.





Are the two center circles the same size? Use a ruler to be sure.



Are there gray dots flashing?
Stare at one. What happens?

OHIO OPTOMETRIC ASSOCIATION

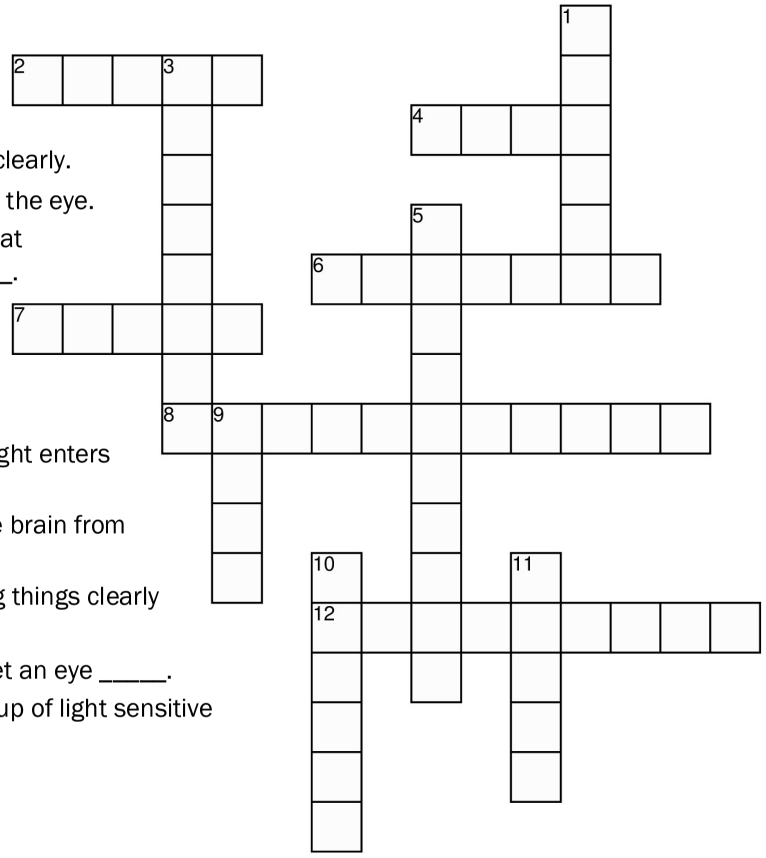
save our Sight™ KEEPING KIDS' EYES HEALTHY

Education Initiative teaching students about eye health and safety.

Realeyes

SHARE THIS PAGE WITH YOUR PARENTS!

A local optometrist came to our class and presented the ***Realeyes Classroom Initiative*** today.
We had fun and learned about eyes and eye safety!
Realeyes is a vision education program sponsored by the Ohio Optometric Association and made possible through the Ohio Department of Health **Save Our Sight Program**.



ACROSS:

2. The eyes send information to the _____ in order to interpret an image.
4. The _____ can be many different colors.
6. Some people need _____ to help them see clearly.
7. The _____ is a hole that allows light to enter the eye.
8. If it is blurry and out of focus when you look at something in the distance, you may be _____.
12. Visit the _____ to be sure you are seeing your best.

DOWN:

1. The iris is a _____ that controls how much light enters the eye.
3. An optical _____ is something that tricks the brain from seeing the whole picture.
5. You may be _____ if you have trouble seeing things clearly that are close to you.
9. Visit an optometrist or ophthalmologist to get an eye _____.
10. The _____ is the back wall of the eye made up of light sensitive cells.
11. The iris gives our eyes their _____.

Did You "Realeyes"...?

- 1 in 4 children has an eye disorder that can affect their learning.
- Undetected vision disorders are the #1 health problem in children.
- 80% of what a child learns under normal circumstances is through their eyes. A vision disorder can affect learning. **Is your child seeing as well as possible?**
- Not all eye problems have obvious symptoms. A regular eye exam by an eye doctor is the only way to find out the overall health of your child's eyes and vision.
- **An eye exam by an eye doctor for every child is recommended shortly after birth, at six months of age, before entering school (age 3 or 4) and periodically throughout the school years.**
- The sun's UV rays can cause long-term damage to the eyes. Children are at greater risk than adults. The effects are cumulative, and 80% of UV exposure happens before age 18.

- Has your child had an eye exam by an eye doctor?
- When was your child's last eye exam?
- Is there a family history of vision problems or diseases?
- Does your child wear sunglasses or a hat when playing outside?

OHIO OPTOMETRIC ASSOCIATION
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ACROSS: 2) brain 4) iris 6) glasses 7) pupil 8) nearsighted 12) eye doctor
DOWN: 1) muscle 3) illusion 5) farsighted 9) exam 10) retina 11) color