



**The World As We Know It ( 🧠 A Cognitive Health Story)**  
**(4<sup>th</sup> Grade – 9-10 yrs.)**  
**Game: Sensory Illusions**



**STORY CONNECTION – SLIDE 19 (Approx Time: 15-20 mins)**

Perceptions can change based on expectations. When we expect to see, hear, feel, taste, or smell one thing, this can change what we see, hear, feel, taste or smell. This is where we get sensory illusions. If you saw a picture and you had to choose whether the dot was closer to the top or the bottom of the triangle, what would you say? You would choose the top or the bottom – because my question made you think it was closer to the top or the bottom. But the dot is exactly in the middle of the triangle. Sensory illusions are lots of fun, but they also tell us that even though our sensory system may be getting the correct information, our brain must put everything together and the information we **perceive** is different from what we got.

**Materials needed:**

- Warmup Activity Link: <https://kids.niehs.nih.gov/games/riddles/illusions/lots-of-illusions/index.htm>
- Recording sheet (included below) or paper
- Illusions Chart (included below)
- Illusions Chart Explanations (answer key)
- Equipment to show websites and digital illusions
- Pencils

**Preparation needed:**

- Familiarize yourself with the Warmup Activity
- Print recording sheet (1 per student)
- Determine how to display illusions for student(s)
  - Project for whole group
  - Print in color for small groups/partners/individuals

**Instructions:**

1. In this activity, student(s) will have the opportunity to practice a variety of sensory illusions and compare their ideas with the other student(s) in the group.
2. Begin by having the student(s) do the Warmup Activity.
  - Follow the steps to the right of the flashing dots to complete the warmup.
  - Be careful not to scroll down too far or the answers to puzzles later in the activity will be revealed.
3. After the warmup, explain to student(s) they will play some “games” with additional sensory illusions. An image will be displayed, and they will be asked to write a response about what they see. They can earn points for their responses.
4. Give each student a recording sheet to record their responses as the images are shown.

5. Show each illusion to the student(s). Give them time to record a response to the image question.
6. After all of the puzzles have been shown, start at the beginning and go through each one.
  - Award points to student(s).
  - Each student gets a point regardless of what they see.
    - For example, “good” gets one point and “evil” gets one point.
  - When they start to notice that they are all getting the same points regardless of what they saw, explain that that is the point, perception is different based the individual and several factors (past experiences, what you are paying attention to, your emotional state, and your expectations).
7. In closing, review that sensory illusions are lots of fun, but they also tell us that even though our sensory system may be getting the correct information, our brain must put everything together and the information we **perceive** is different from what we got.

Activity Idea and Images Credit: <https://www.csus.edu/indiv/l/luenemannu/pdf/perception%20quiz.pdf>

<https://kids.niehs.nih.gov/games/riddles/illusions/lots-of-illusions/index.htm>

## Student Recording Sheet

<b>NAME:</b>	6. What do you notice?
1. What do you see?	7. What do you notice?
2. What do you see?	8. What do you notice?
3. What do you see?	9. What do you notice?
4. What do you see?	10. Count every "F". How many do you see?
5. What do you see?	11. Can you read this?

## Illusions for Student(s)

1. What do you see?



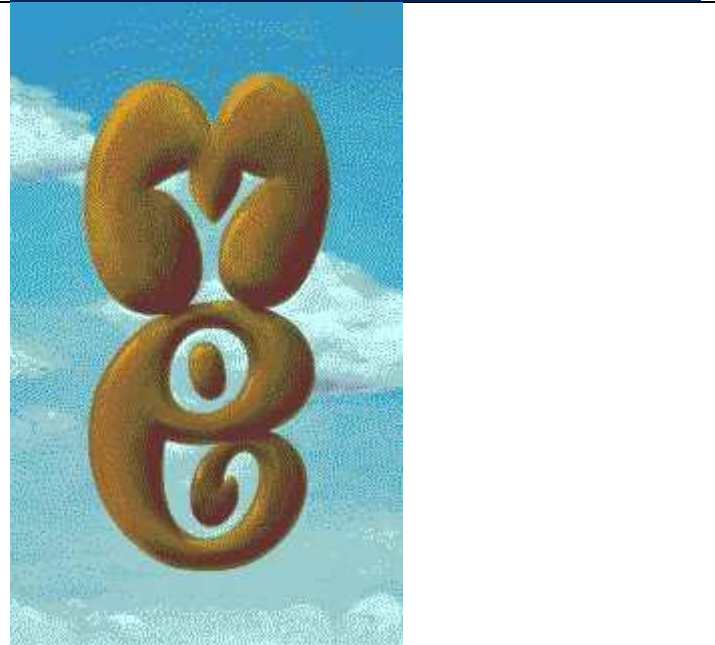
2. What do you see?



3. What do you see?



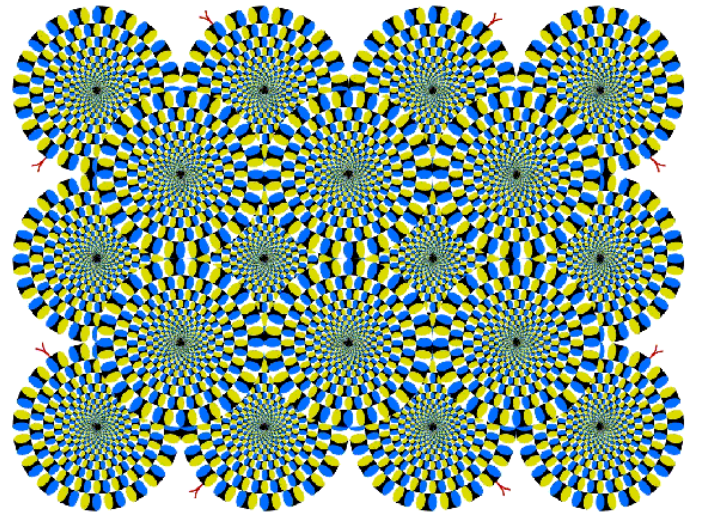
4. What do you see?



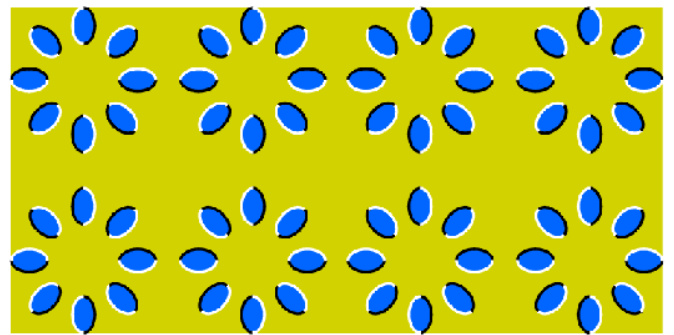
5. What do you see?



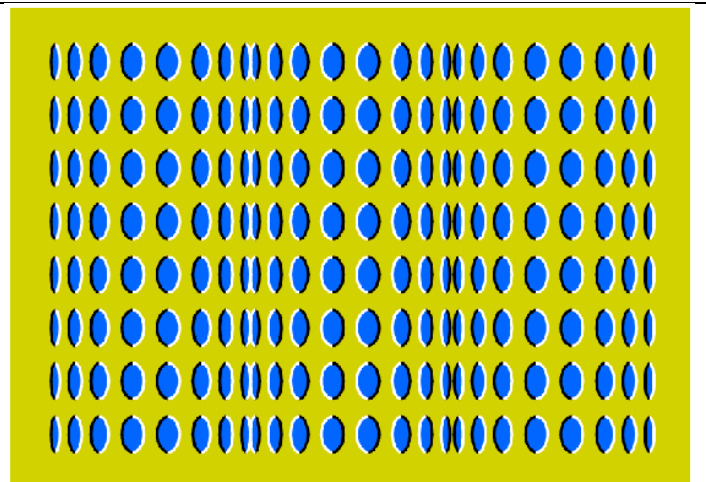
6. What do you notice?

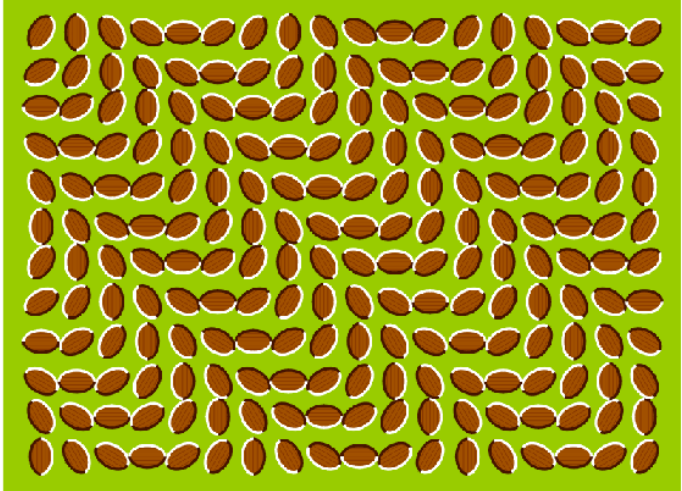


7. What do you notice?



8. What do you notice?

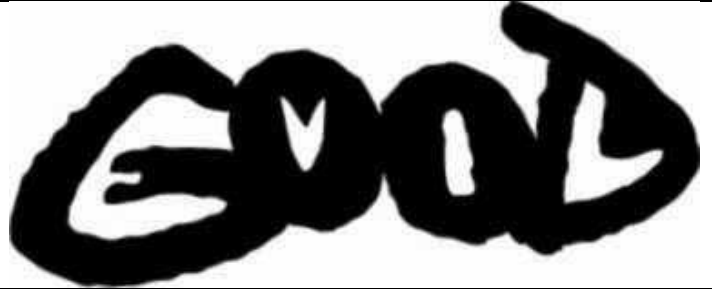


<p>9. What do you notice?</p>	
<p>10. Count every "F". How many do you see?</p>	<p>FINISHED FILES ARE THE RESULT OF YEARS OF SCIENTIFIC STUDY COMBINED WITH THE EXPERIENCE OF YEARS...</p>
<p>11. Can you read this?</p>	<p>Olny srmata poelpe can raed tihs. I cdnuol't blveiee taht I cluod aulacty uesdnatnrd waht I was rdanieg. The phaonmneal pweor of the hmuan mnid, aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it deosn't mttar in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit a porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe. Amzanig huh? And I awlyas tghuhot slpeling was ipmorantt!</p>

## Illusions Chart Explanations

1. What do you see?

In black you can read the word **GOOD**;  
but the word **EVIL** also appears in white  
letters inside each black letter.



2. What do you see?

You may not see it at first, but the white  
spaces create the word **OPTICAL**,  
while the blue landscape spells out  
**ILLUSION**.



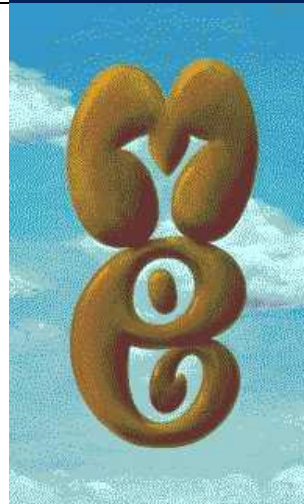
3. What do you see?

This one is quite tricky! The word  
**TEACH** reflects **LEARN**.



4. What do you see?

You probably read the word **ME** in  
brown, but...  
when you look through **ME**  
You will see **YOU**!



5. What do you see?

**The Man in the Coffee Beans**

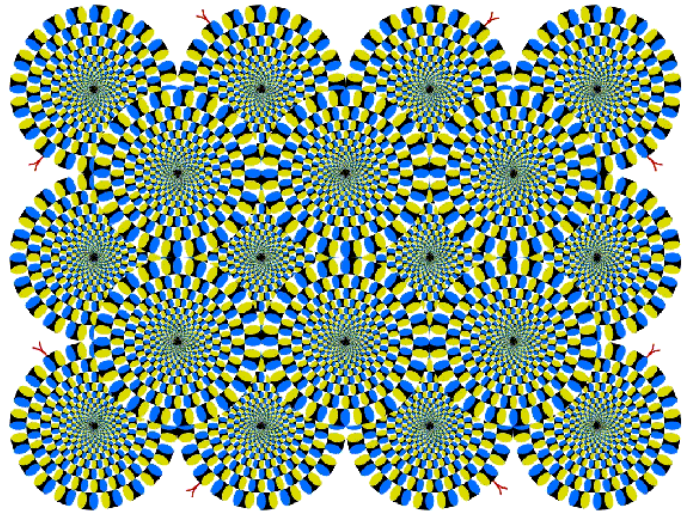
The "illusion" is that this is just a picture of coffee beans; but it is not. Can you find a man's face among the beans? Some say that if you find the man in 3 seconds or less, the right half of your brain may be more well developed than most.

**PS: This is not a trick. A man's face is really hidden among the beans.**



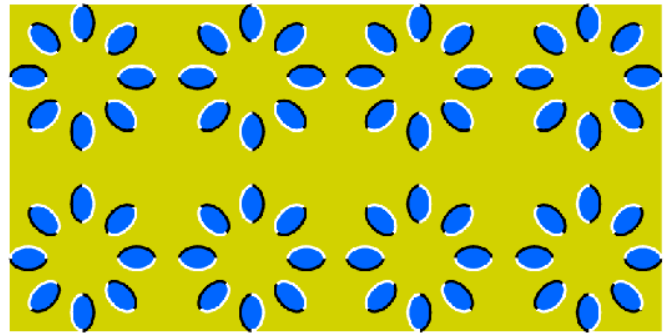
6. What do you notice?

The following pictures are NOT animated. Your eyes are making them move. To test this, stare at one spot in each picture for a few seconds and everything will stop moving; OR look at the black center of each circle in the first picture, and it will stop moving; but when you move your eyes to the next black center, the previous one will move after you take your eyes away from it.



7. What do you notice?

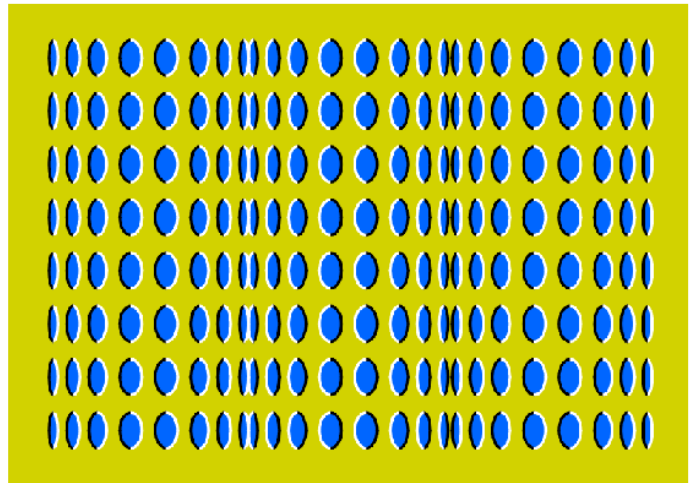
The following pictures are NOT animated. Your eyes are making them move. To test this, stare at one spot in each picture for a few seconds and everything will stop moving; OR look at the black center of each circle in the first picture, and it will stop moving; but when you move your eyes to the next black center, the previous one will move after you take your eyes away from it.





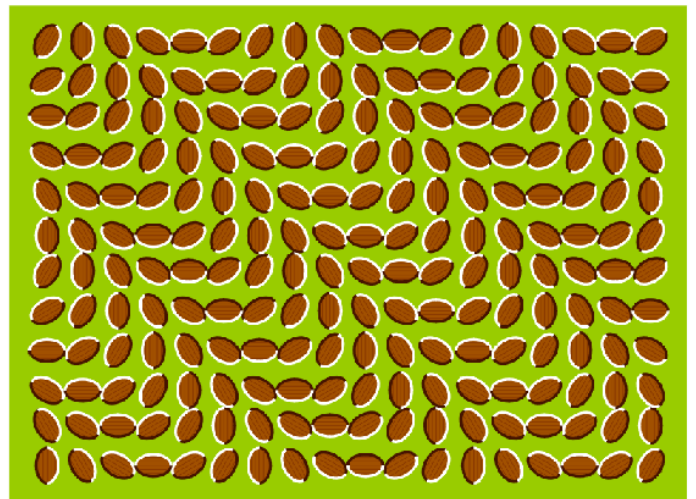
8. What do you notice?

The following pictures are NOT animated. Your eyes are making them move. To test this, stare at one spot in each picture for a few seconds and everything will stop moving; OR look at the black center of each circle in the first picture, and it will stop moving; but when you move your eyes to the next black center, the previous one will move after you take your eyes away from it.



9. What do you notice?

The following pictures are NOT animated. Your eyes are making them move. To test this, stare at one spot in each picture for a few seconds and everything will stop moving; OR look at the black center of each circle in the first picture, and it will stop moving; but when you move your eyes to the next black center, the previous one will move after you take your eyes away from it.



10. Count every "F". How many do you see?

There are six.

FINISHED FILES ARE THE  
RESULT OF YEARS OF  
SCIENTIFIC STUDY  
COMBINED WITH THE  
EXPERIENCE OF YEARS...

11. Can you read this?

From Cambridge University

Explanation is within the reading passage.

Only smart people can read this. I couldn't believe that I could actually understand what I was reading. The phenomenal power of the human mind, according to a research at Cambridge University, it doesn't matter in what order the letters in a word are, the only important thing is that the first and last letter be in the right place. The rest can be a total mess and you can still read it without a problem. This is because the human mind does not read every letter by itself, but the word as a whole. Amazing huh? And I always thought spelling was important!