

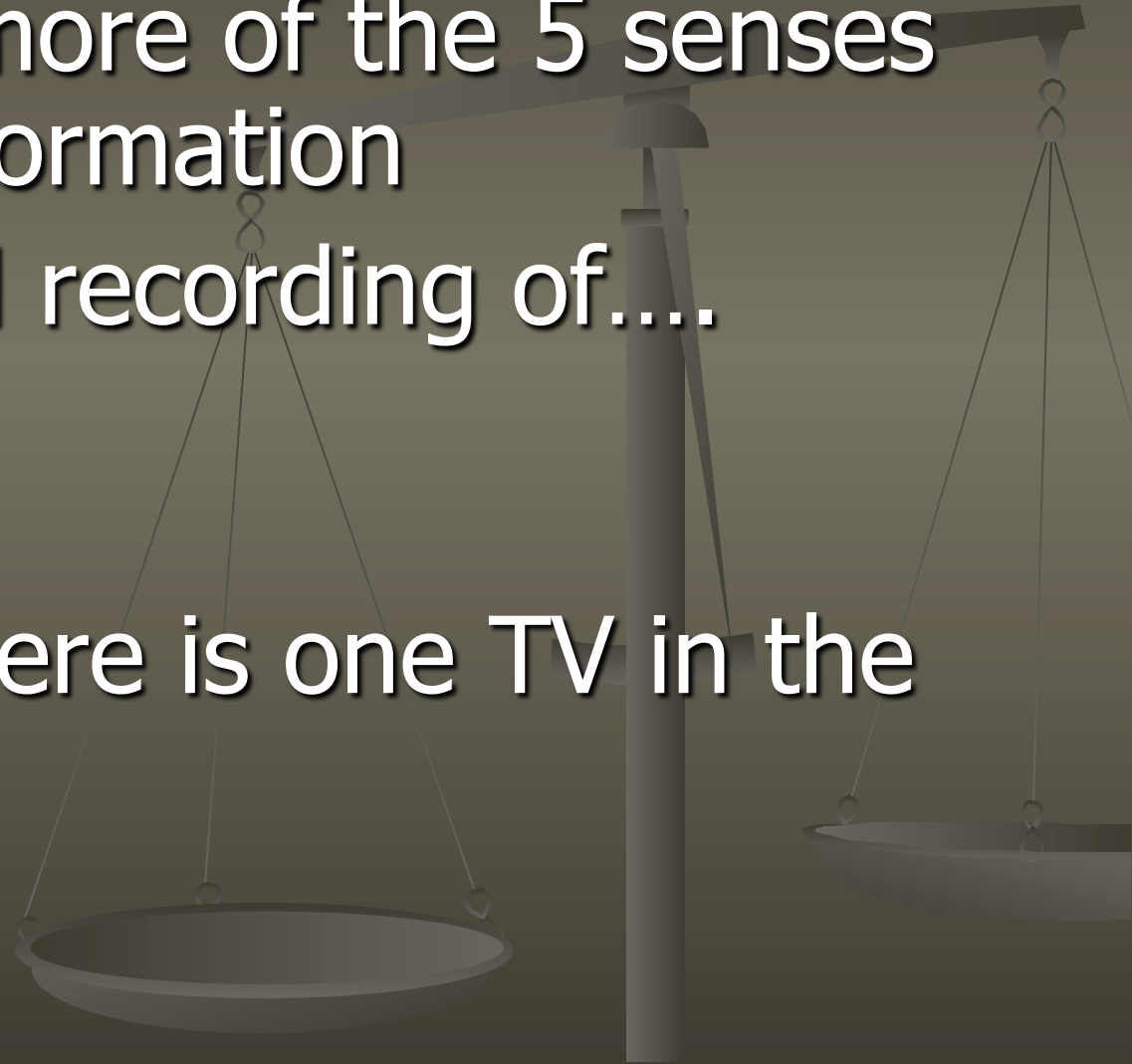
A test of your observation skills...

Contributions by D. Padilla, D. Johnson, & E. Marconi

For more optical illusions go to: <http://www.123opticalillusions.com/>

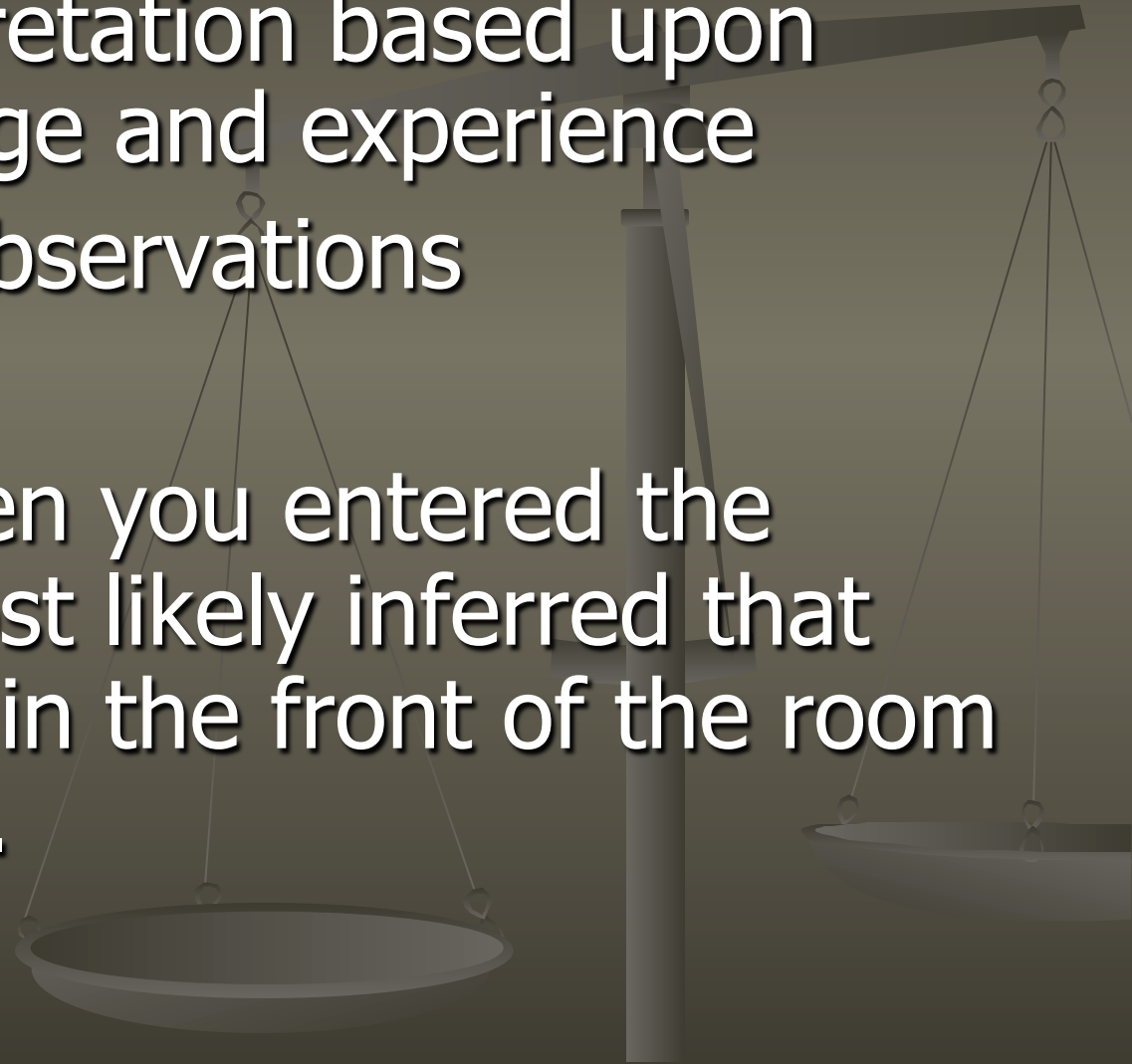
Observations

- Use one or more of the 5 senses to gather information
- A noting and recording of....
FACTS!!!
- *Example:* There is one TV in the room.



Inferences

- Logical interpretation based upon prior knowledge and experience
- Based upon observations
- *Example:* When you entered the room, you most likely inferred that the individual in the front of the room is the teacher.

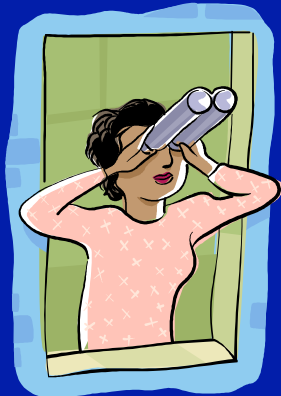


Note the Differences

- In laboratory exercises, record observations *NOT* inferences
- Inferences may be used when writing the conclusion in your lab report.
- Let's test your observation skills...

Let's Practice....

Look at the picture & decide if the statement is an



**OBSERVATION
OR
INFERENCE**

The narrow windows were used
as rifle slits.



Victorian Gardens near Citadel on Alcatraz - circa 1869

There was a garden located
outside the Citadel.



Victorian Gardens near Citadel on Alcatraz - circa 1869

Gardens were an important part of everyday life during the military years on Alcatraz Island.



Victorian Gardens near Citadel on Alcatraz - circa 1869

People in the garden are in mourning.



Victorian Gardens near Citadel on Alcatraz - circa 1869

Men were required to wear jackets and
women were required to wear dresses



Victorian Gardens near Citadel on Alcatraz - circa 1869

The citadel was made of brick.



Victorian Gardens near Citadel on Alcatraz - circa 1869

There is a picket fence.



Victorian Gardens near Citadel on Alcatraz - circa 1869

People used to spend more time outside.



Victorian Gardens near Citadel on Alcatraz - circa 1869

There are eight people in the photograph.



Victorian Gardens near Citadel on Alcatraz - circa 1869

The garden provided food for the families living on Alcatraz.

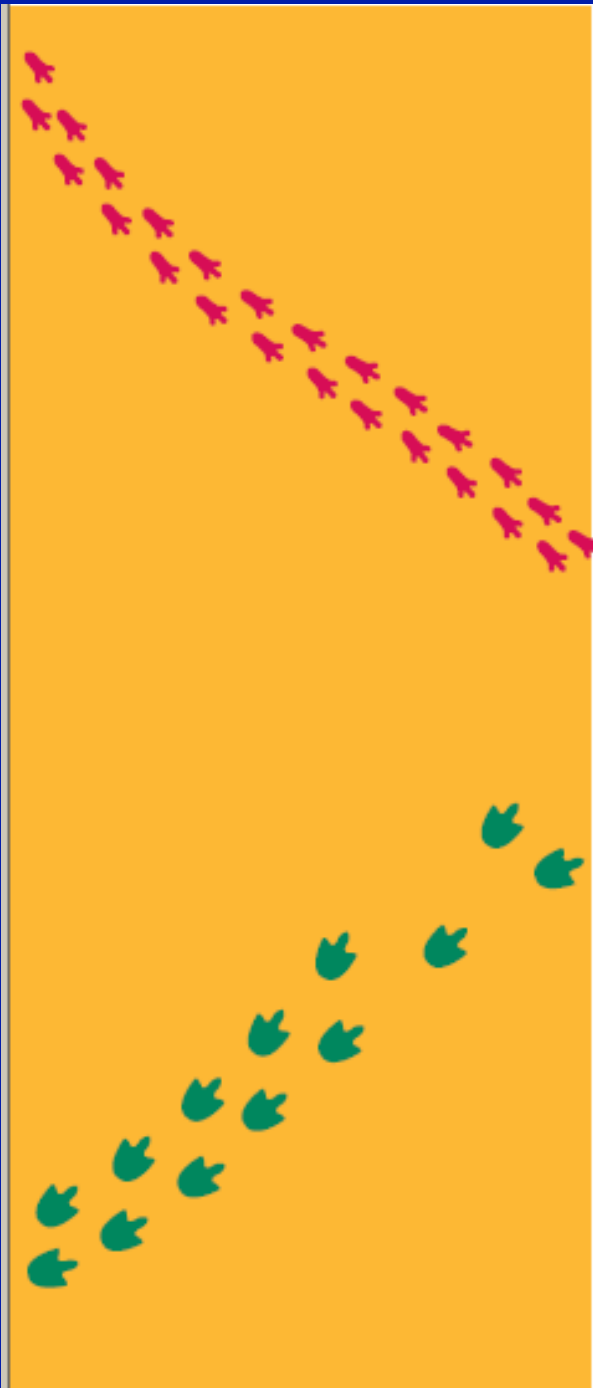


Victorian Gardens near Citadel on Alcatraz - circa 1869

There were no cannons on Alcatraz..



Victorian Gardens near Citadel on Alcatraz - circa 1869

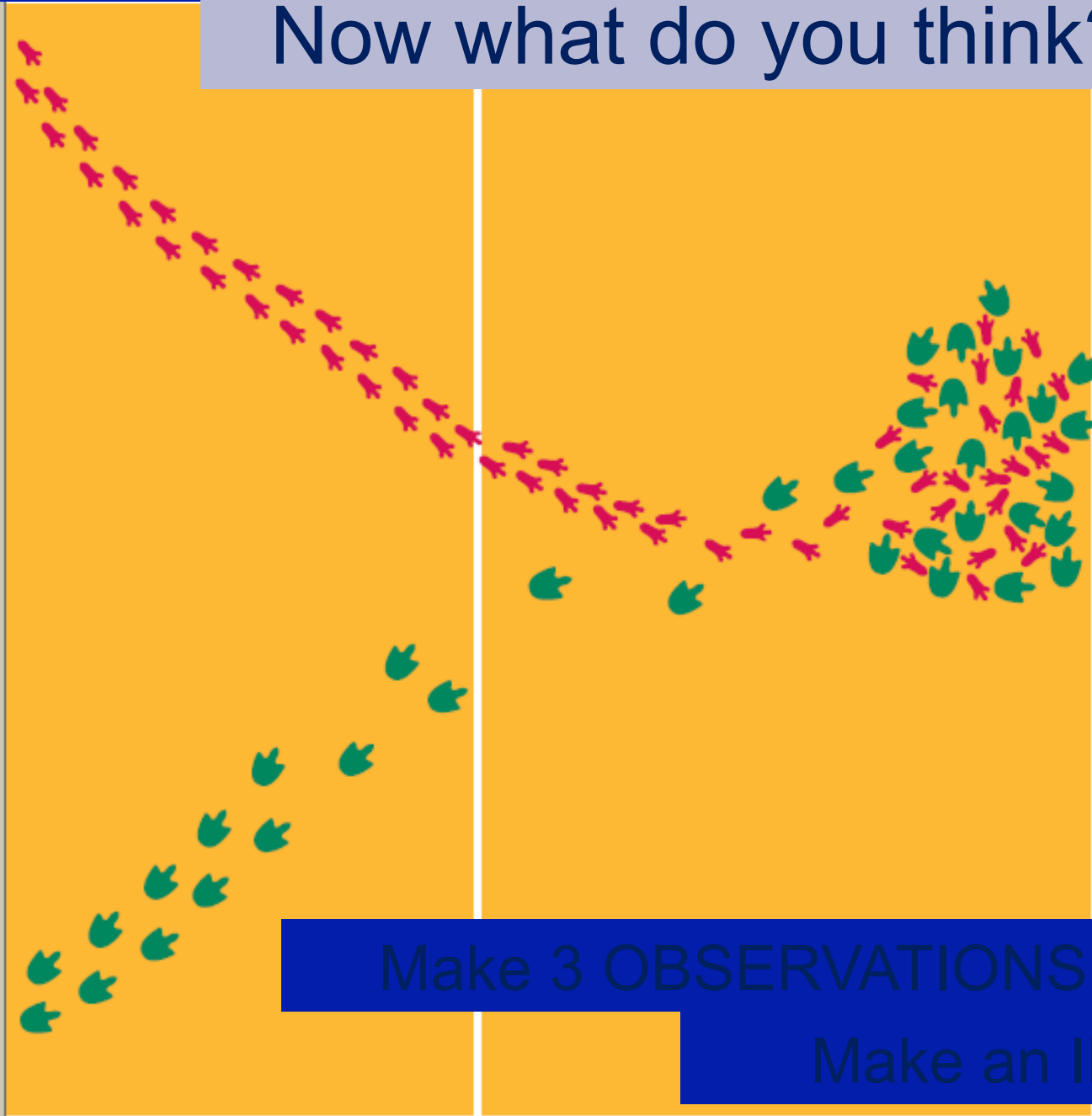


Look at these two sets of animal tracks.

List 3 OBSERVATIONS

Make an INFERENCE

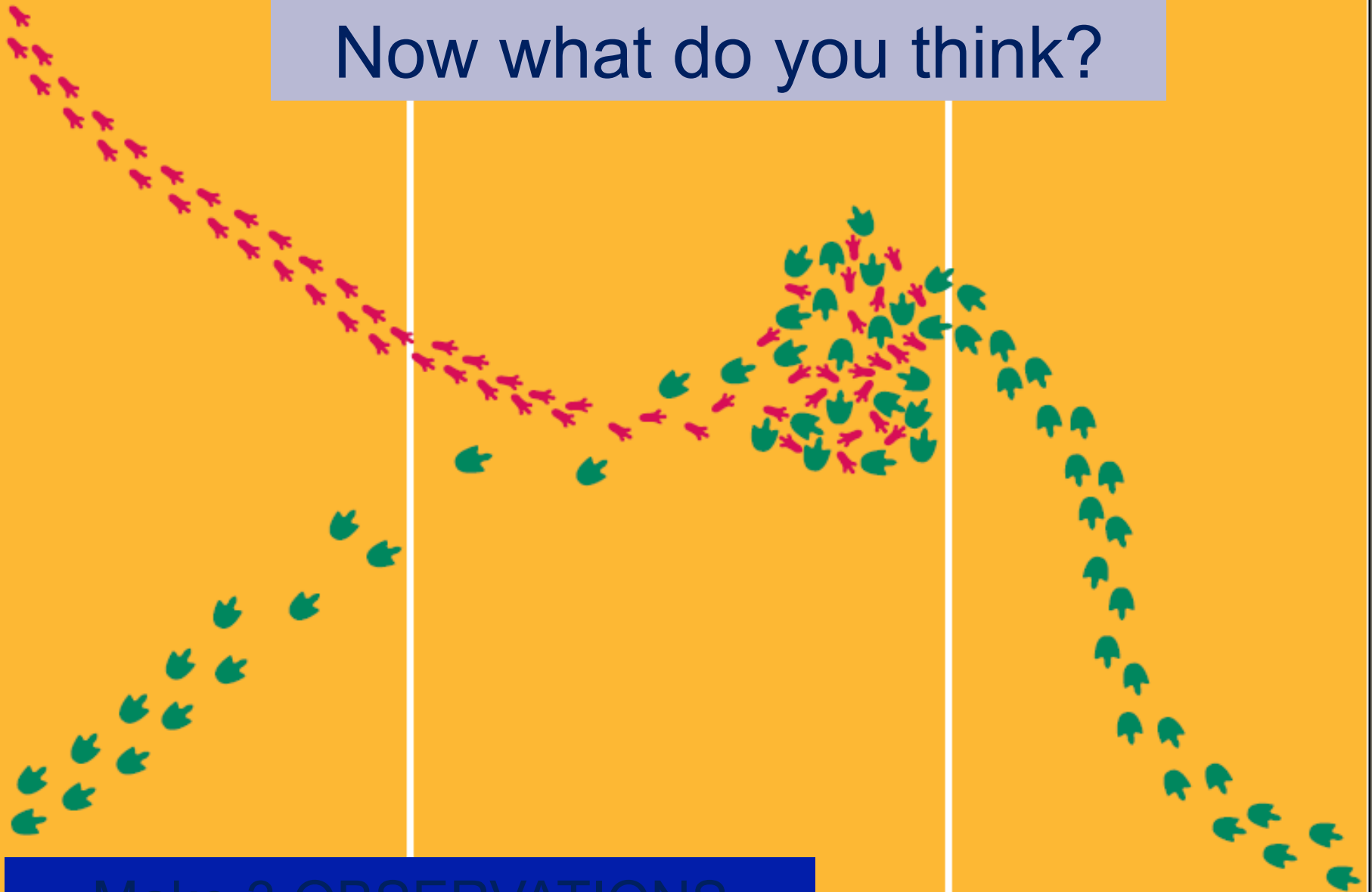
Now what do you think?



Make 3 OBSERVATIONS

Make an INFERENCE

Now what do you think?



Make 3 OBSERVATIONS

Make an INFERENCE

When to use observation & inference...

- **During experiments, record observations *NOT* inferences**
- **Inferences may be used when writing the conclusion in your lab report.**

References

- [*www.middleschoolscience.com/...**Observation Inference-isn.ppt***](http://www.middleschoolscience.com/...)
- [*www.learnnc.org/lp/pages/998*](http://www.learnnc.org/lp/pages/998)
- [*www.nps.gov/.../upload/
Questioning Artifacts-
Observation worksheet.pdf*](http://www.nps.gov/.../upload/)



SPEED
LIMIT
35



Question 1

Are there cars parked on the sides of the road?

Question 2

What color is the pickup truck driving in the road?

Question 3

Any minivans around?

Question 4

What does the blue sign say?

Question 5

What's the speed limit?

Question 6

Are there any pedestrians on the road?

Handwritten note on a tree trunk, possibly containing a name and address.



SPEED
LIMIT
35



Answers

1. Yes
2. Blue
3. Yes
4. Yard Sale
5. 35 mph
6. No

Handwritten note on a tree trunk, possibly containing a name and address.



SPEED
LIMIT
35



Observation Activity #2

- Choose several people to be observers and choose two people to be investigators.
- Allow the observers to look at the [picture](#) or [this picture](#) for 30 seconds. The investigators should not look at the picture.
- After 30 seconds, the investigators should begin questioning the observers. Each Investigator should question each observer. Then, the Investigators should attempt to reconstruct the scene based on the "eyewitness testimony".



Questions Asked

- **How many cars were in the intersection?**

Answer: 2

- **Across the street, are there any parked cars on the side?**

Yes

- **Can you describe at least one of the cars driving through the intersection?**

- **Are there any other potential witnesses?**

*If they answer yes, ask the following question: **What was this witness doing? Where was he?***

They should have noticed a person mowing a lawn across the street.

- **What was the speed limit?**

35

- **Was there anyone parked in the first parking spot?**

No

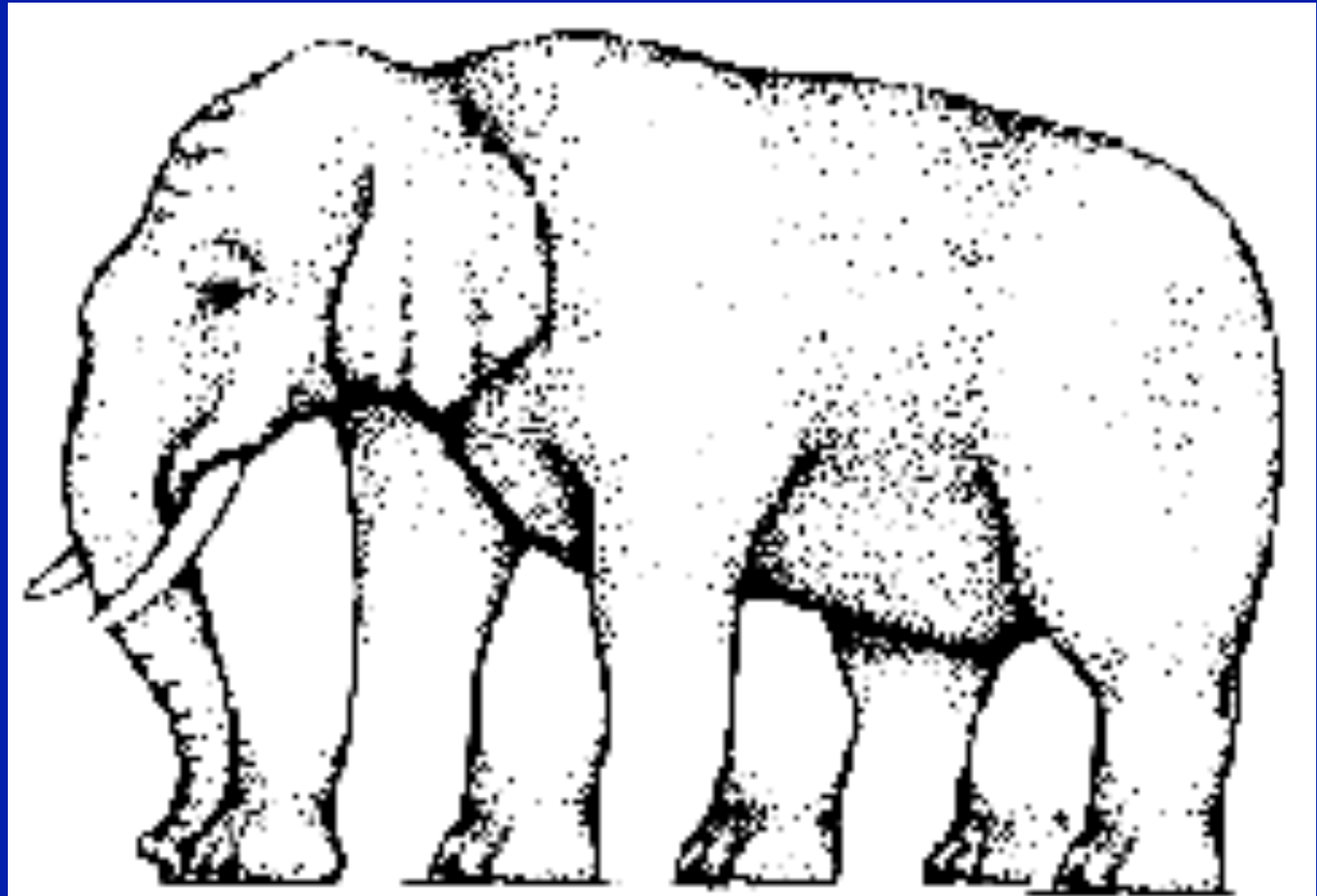
Observation vs Inference

- On the next slide, state whether the statement is an observation or an inference.



1. There is a representation of a face on one side of the coin.
2. The Latin word "Dei" means "God."
3. The coin was made by deeply religious people.
4. The date 1722 is printed on one side of the coin.
5. The coin was made in 1722.
6. The face on the coin is a representation of the nation's president.

How many legs does the elephant have?



What do you see?



Who is in this picture?



- Do you see former President Bill Clinton and Al Gore?
- Actually, it's Clinton's face twice with 2 different hair cuts!

What do you see?

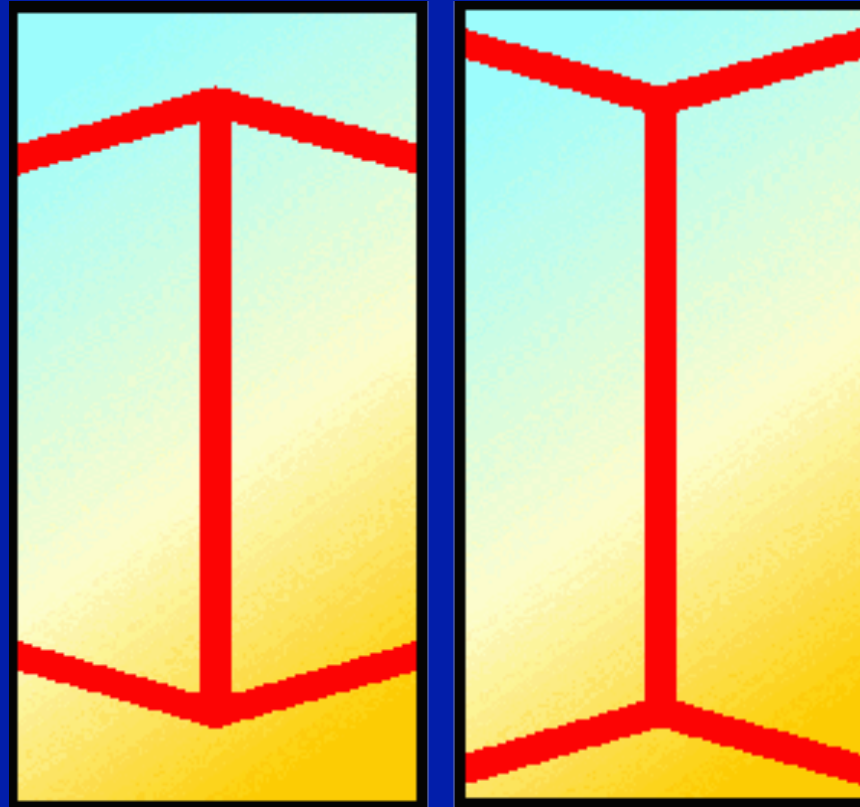


Hint:

There are
3 images.

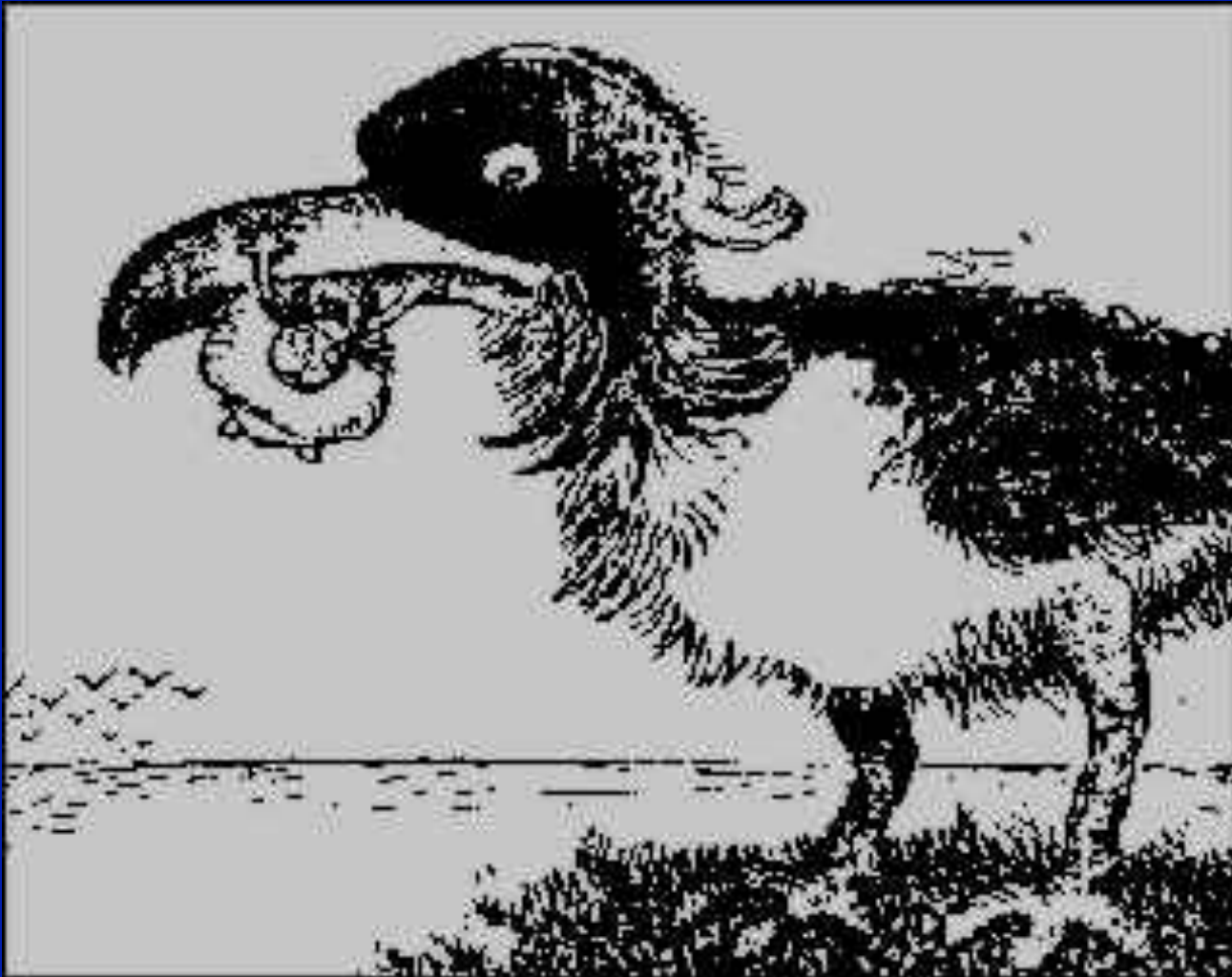
1. An old lady
2. A young woman
3. A man with a big brown mustache

Take a very close look at the 2 vertical lines.
Is one line is longer than the other?



They are the SAME length!

Compare this picture to the next
one...



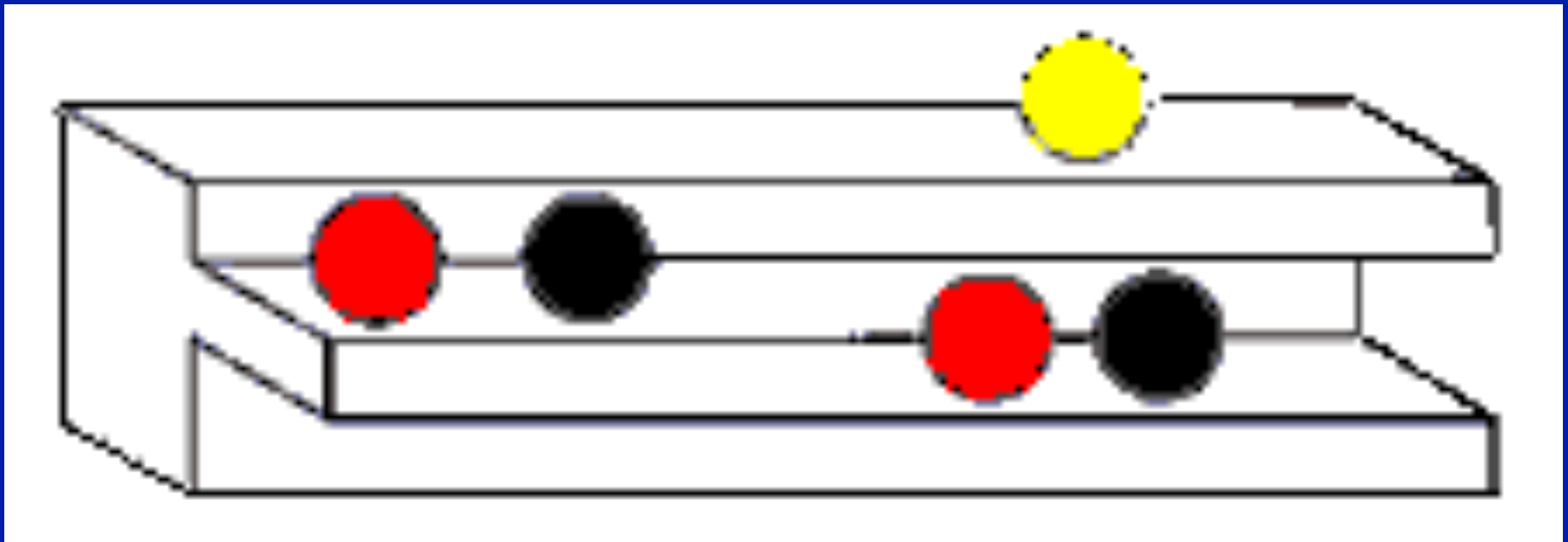
What's the difference?



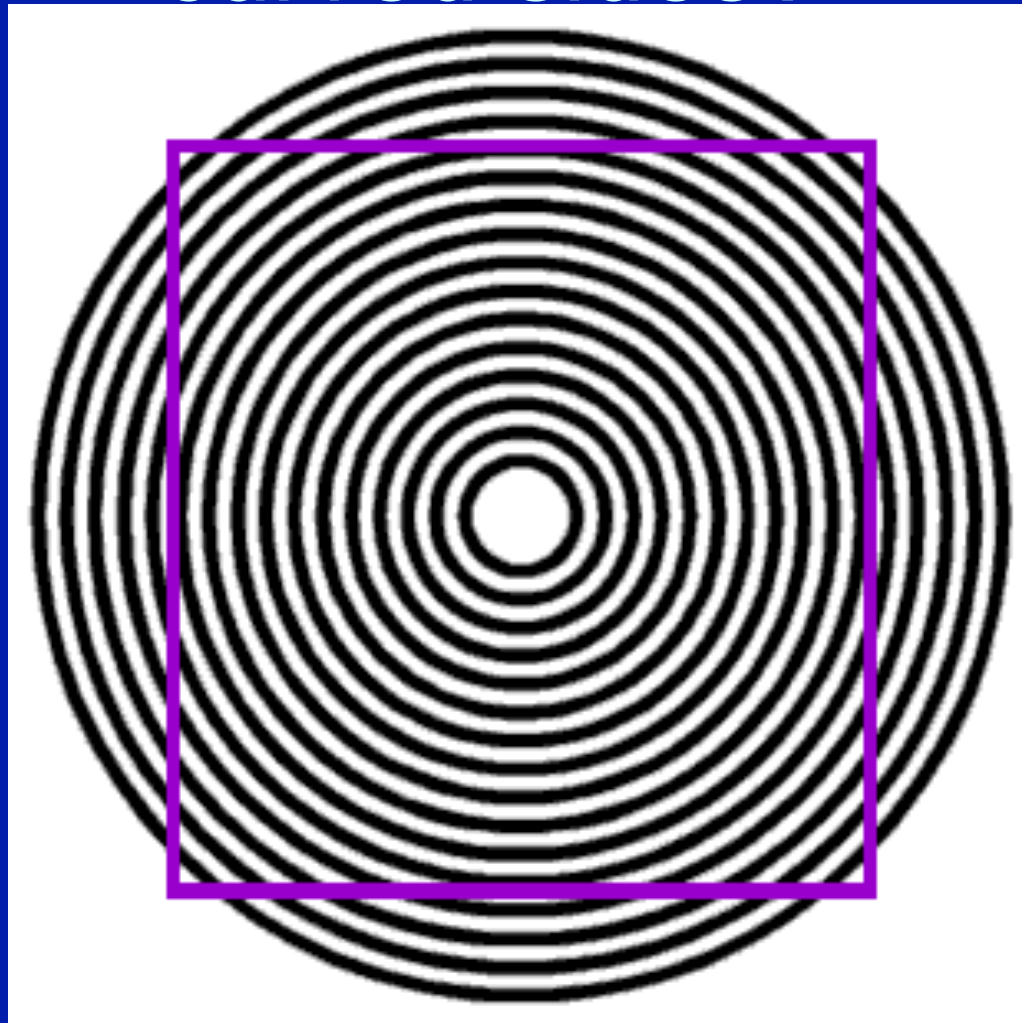
What do you see?



Can you build these shelves?



Does the square have
curved sides?





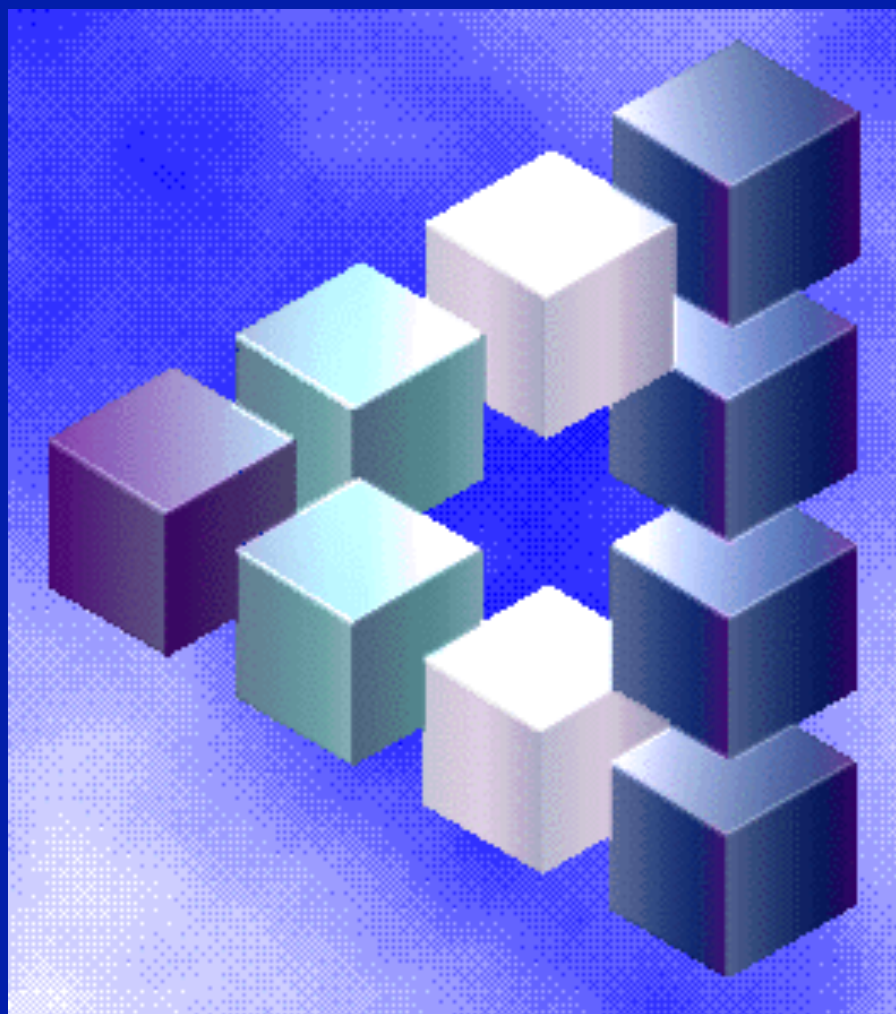
Read this sign



What do you see?



Can you stack these blocks?



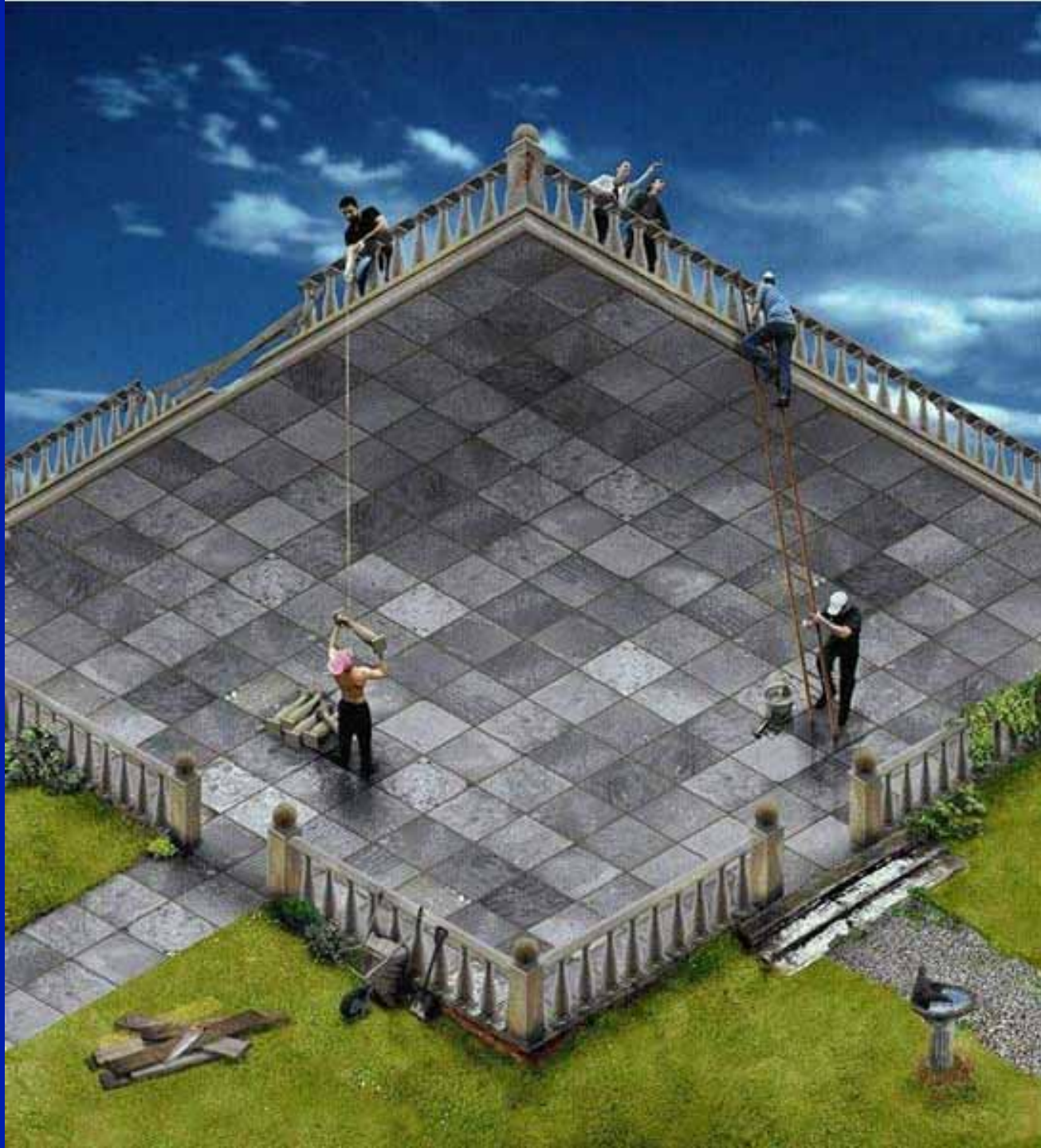
What animal do you perceive?



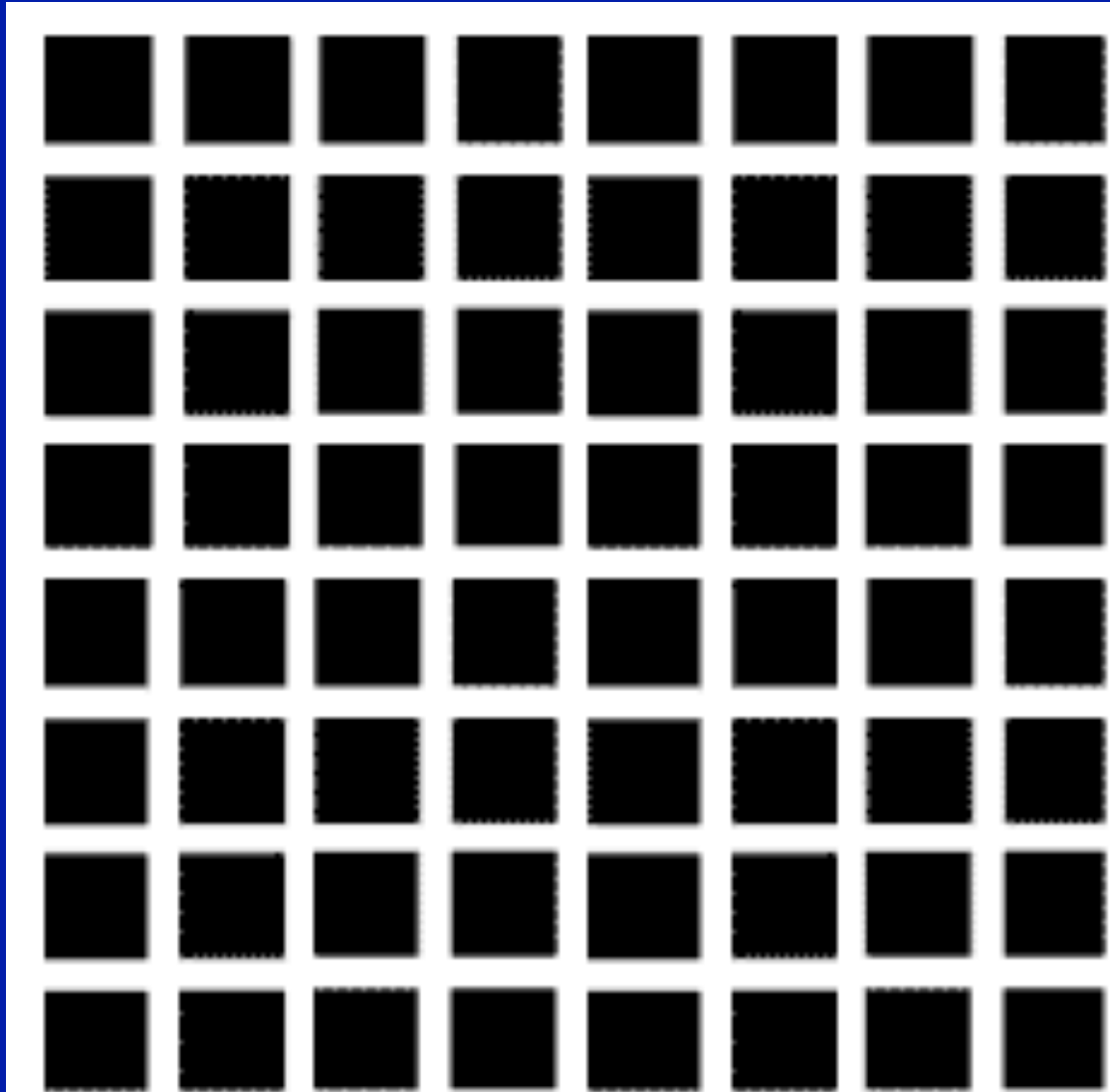
A Duck, Bunny, or BOTH?



This image contains a picture and a word. Do you see both of them?



Where are those dots coming from?!



*Your
brain!*

Look at the chart and say the color,
NOT the word

YELLOW	BLUE	ORANGE
BLACK	RED	GREEN
PURPLE	YELLOW	RED
ORANGE	GREEN	BLACK
BLUE	RED	PURPLE
GREEN	BLUE	ORANGE

Your right brain tried to say the color,
but your left brain was reading the word.

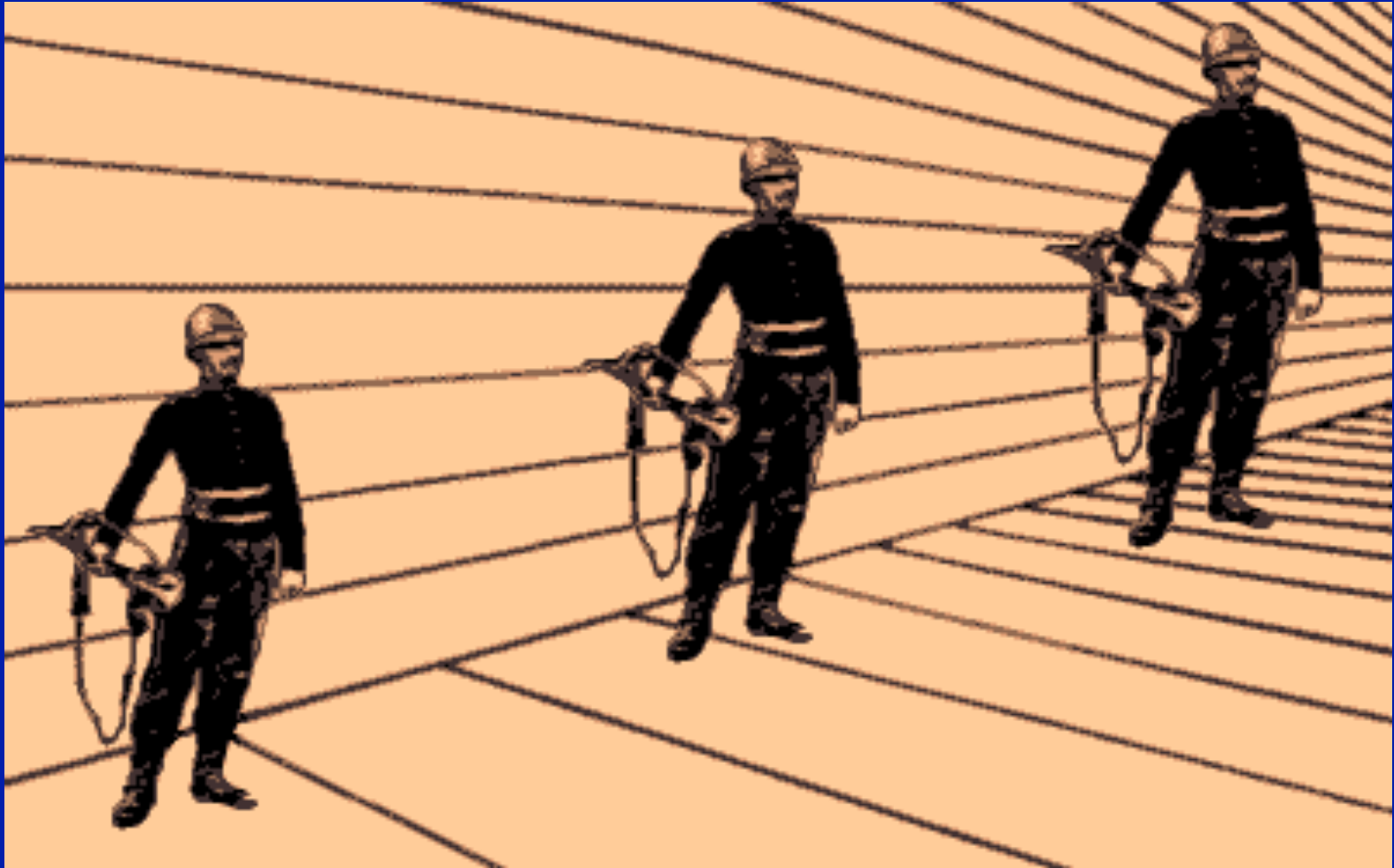
Read across..

12
A13C
14

What images do you see?



Can you pick the tallest soldier?



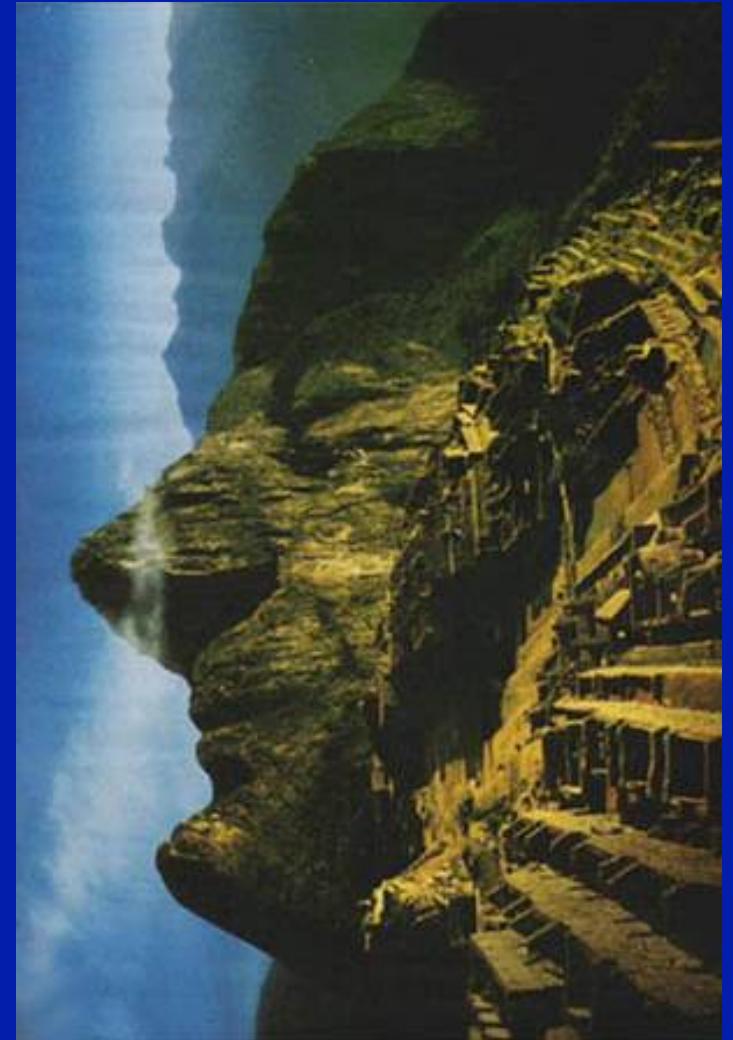
They are all the same height!

What do you see?



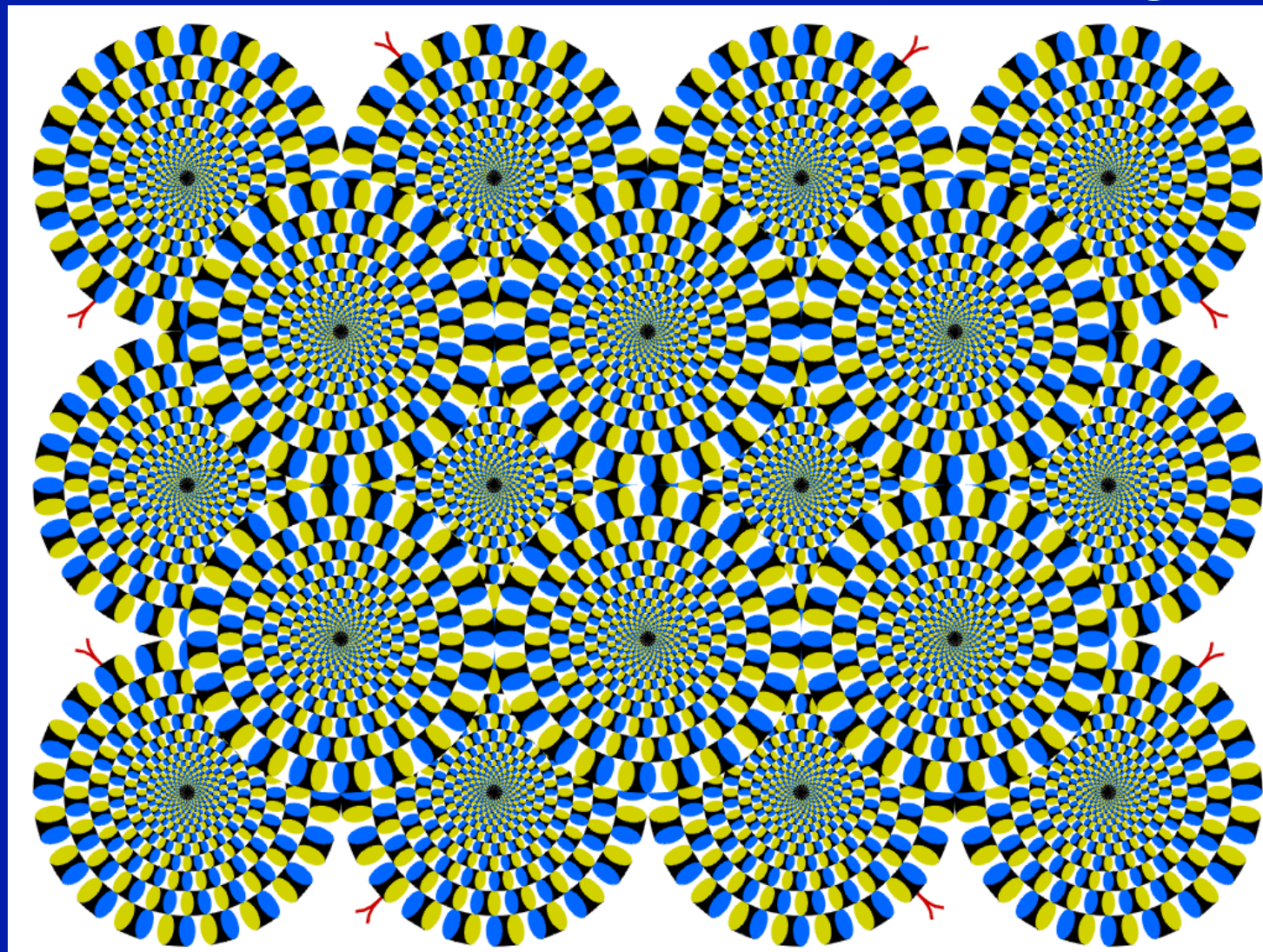
The Landscape of Faces

Do you see the face on Earth?

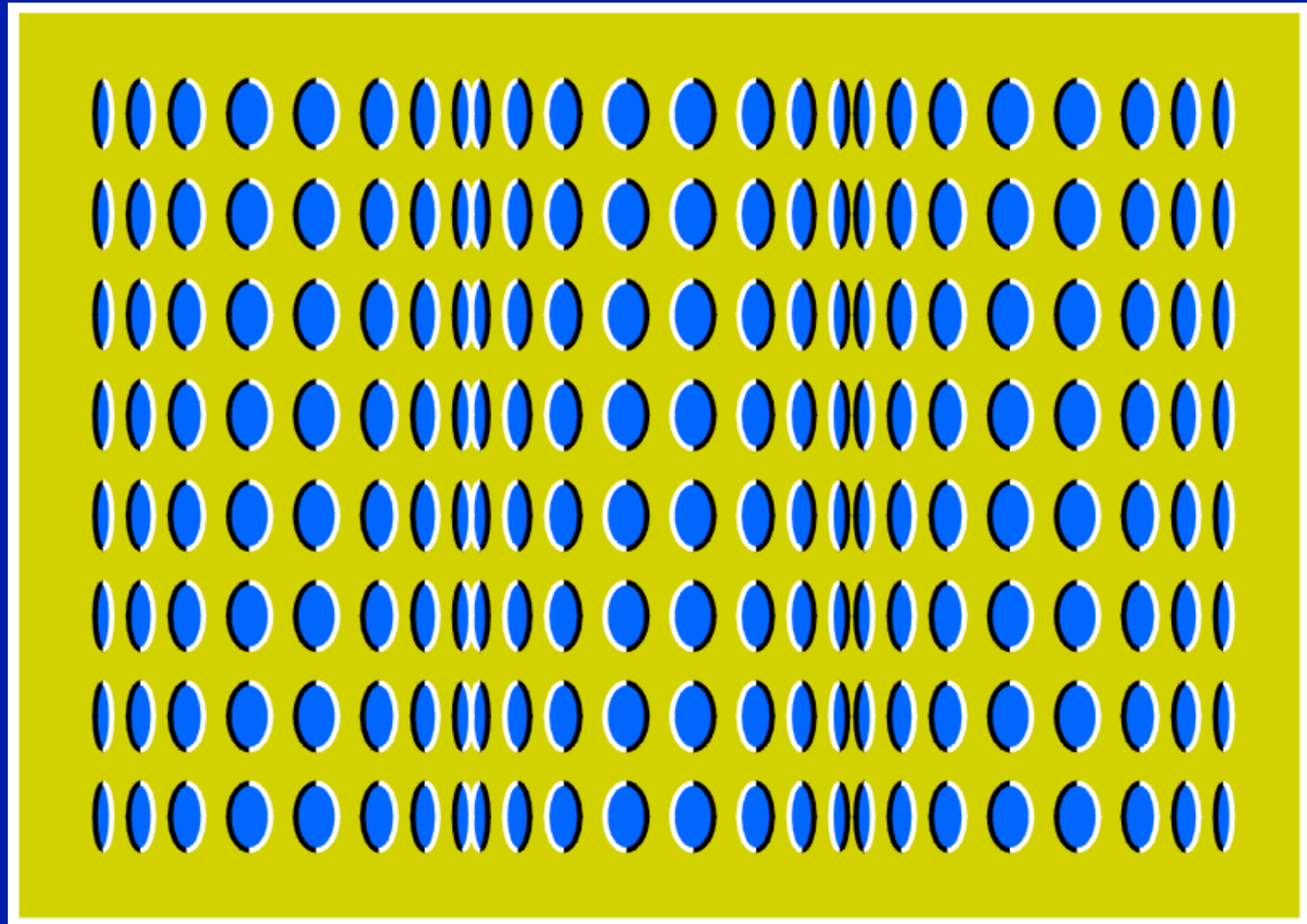


How about now?

These circles are not moving, your brain is making them appear to move. Try focusing on one circle. It will stop moving.



Are these dots moving?



Does this image appear to be moving?

```
  \ \
    .001.^
    u$0N=1
    z00BAI
    |..=~.
    ;s<''.
    NRX~=-\
    z0c^<X^
    ~B0s~^^
    @0$H~'
    n$0=XN;. \
    iBBB0vU1=~' \
    \ $000cRr \ vul
    FAHZuqr-'
    ZZUFA@FI. \
    ;BRHv n$U^~
    \ARN1 ^@si
    '0nv~ 01.'
    c0qr ns. \
    aUU \ ul \
    \R0- :. \
    nn~ \ -=.~|-\
    =1^' .. \ :. \
```

- It's NOT!
- Just kidding, this one is actually moving

