

Observations vs. Inferences

A test of your observation skills...

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An Observation Is...

- Noting or recording facts by using one or more of the five senses.
- **Qualitative** observations use adjectives to describe characteristics.
 - Ex: The car is red.
- **Quantitative** observations use numerical measurements.
 - Ex: The car has a mass of 2000 kg.

An Inference Is

- A logical *interpretation* based upon prior knowledge and experience

- *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...**

Take a good look at this picture



Question 1

Were there cars parked on the sides of the road?

Question 2

What color was the pickup truck driving in the road?

Question 3

Any minivans around?

Question 4

What was the speed limit?

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



SPEED
LIMIT
35



Question 5

Is the truck speeding?

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



SPEED
LIMIT
35



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.