Observation & Inference

modified by Jen Owens from original posted at:
*www.science-class.net/PowerPoints/**Observation_Inference**_8th.ppt*

Observations

Definition: Any information collected with the senses.

Two types of Observations

- Quantitative
- Qualitative

Observations (cont.)

- **Quantitative –**
  - – measureable or countable

Examples

  - » 3 meters long
  - » 4 marbles
  - » 50 kilograms
  - » 35 degrees Celsius

Always Includes Numbers

- **Qualitative –**
  - – describable, not measureable

Examples

  - » red flowers
  - » smells like fresh baked cookies
  - » Tastes bitter
  - » Heard a loud “pop”

No Numbers!

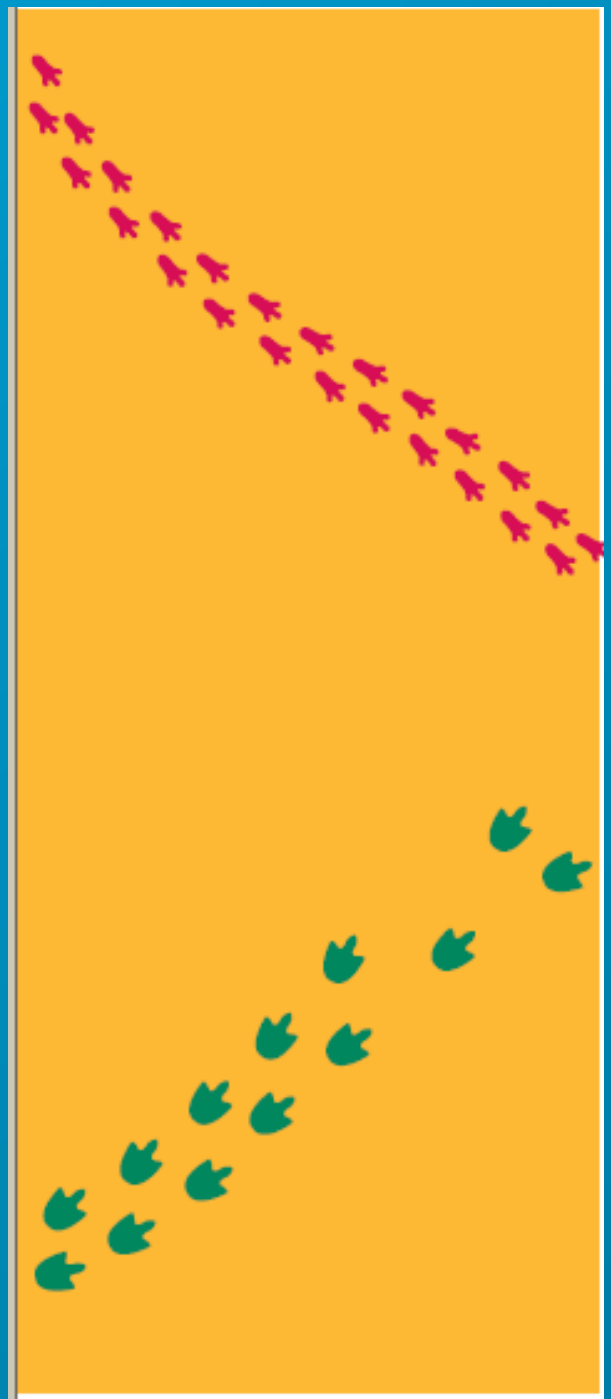
Inference

- Definition: Conclusions or claims based on observations.

Inferences are educated guesses. It is okay if your inference is different from your classmates as long as it is logical and realistic.

Practice:

- **Observations**:
  - I hear people screaming
  - I smell cotton candy, popcorn, and hamburgers
  - I see a lot of people
- **Inference = ?**



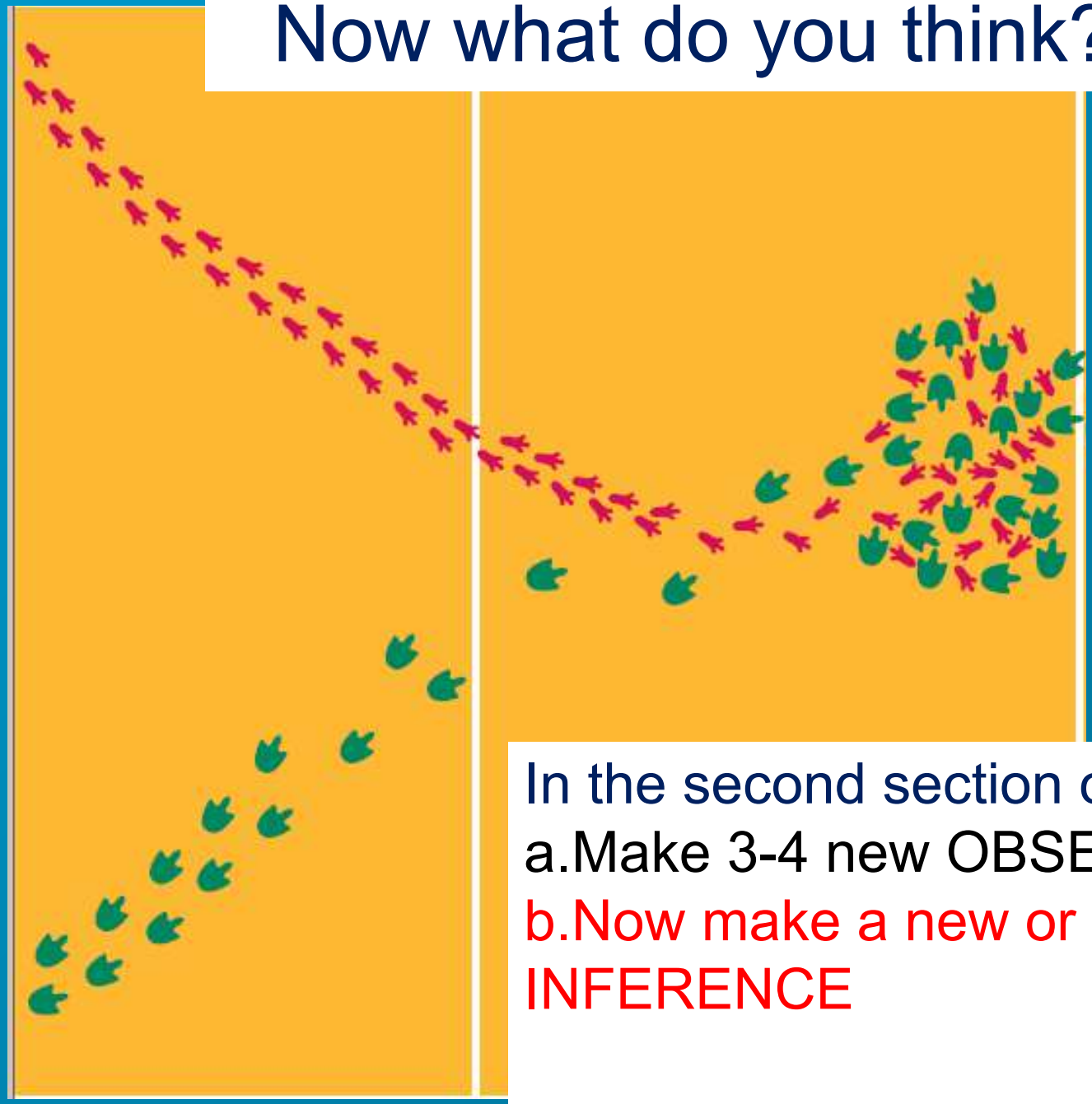
1. Turn your paper over to Mystery Footprints
2. Look at these two sets of animal tracks pictured.
3. In the first section on your paper…

a. Make 3-4 OBSERVATIONS of what you see.

Remember, observations are things you literally see in the picture.

b. Now make an INFERENCE of what is going to happen.

Now what do you think?

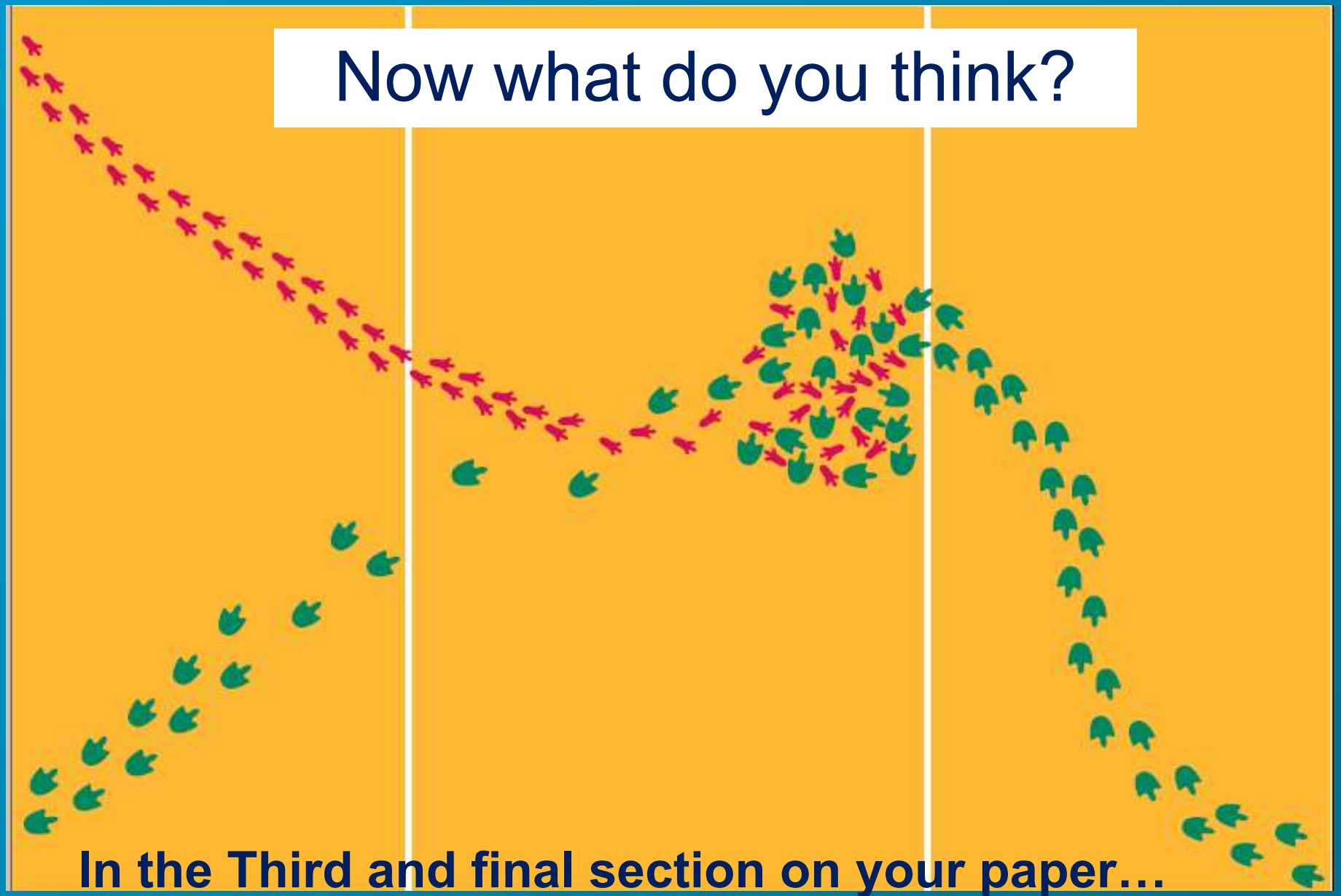


In the second section on your paper…

a.Make 3-4 new OBSERVATIONS

b.Now make a new or more specific INFERENCE

Now what do you think?



In the Third and final section on your paper…

a.Write your 4 strongest OBSERVATIONS

b.What is your final INFERENCE *(conclusion)*

Activity Page

www.middleschoolscience.com/footprints-isn.pdf

Source of graphic:

http://bob.nap.edu/html/evolution98/evol6-e.html