Guidelines for reading papers:

1. Introduction:

What is the general topic addressed by this paper? Why is the study important? Why should we care?

This information is usually found as the first sentence of the Abstract and/or the beginning of the Introduction.

What was previously known that led the scientists to start on this set of experiments?

What questions did the authors wish to address?

This information is usually found in the Introduction or the beginning of the Results sections.

2. Claims: What do the authors claim to have demonstrated?

This information is found in the abstract, and is sometime repeated in the end of the introduction or the beginning of the discussion depending upon the style of the paper. We will list the claims and then evaluate whether or not they are well supported after we have analyzed the experiments and data.

Think about the claims with respect to the terms: necessary, sufficient, required, mechanism, model.

3. Results:

For each Figure think about the following questions:

1. What is the question being asked?
2. What type of experiment is being performed?
   (ex. Pulse-chase, CTL lysis, FACS)
3. What are the controls? Is there a positive control? A negative control?
4. What are the experimental data points?
5. Based on the data, what can we conclude?
6. Based on our conclusions, what question would we want to ask next?

Where will you find this information?

Figure legend title:

Often tells you what type of experiment, what the important result is.

Figure legend text:

Often tells you how the experiment was done in rough terms

Can provide essential information for better labeling the figure for easy interpretation and reference.

Good place to find controls.

Text of the results section: Provides answers to all of the above questions, particularly:

What is the question being asked.

Rationale for these particular experiments.

Data not shown but that serves as control or alternative route of investigation that turned out to not be informative or exciting.

What the authors conclude.

What the authors wanted to investigate next (links to the next Figure).

4. Discussion: In summary, what do the authors conclude and what are the implications?

Revisit the claims and ask yourself if the data is sufficient to support the claims. If the data is not sufficient, what else would you want to see evidence of? How would you find this evidence, what experiment could you do?

Does the data and claims leave some things open to interpretation and discussion? What are some potential models to explain the data? Are any of them more or less likely than the others?

Where would you go from here? What line of exploration is most interesting to you?