Reading a preprint

Introduction
Gives background to the problem and the question addressed

Methods
How the work was done
An especially important section
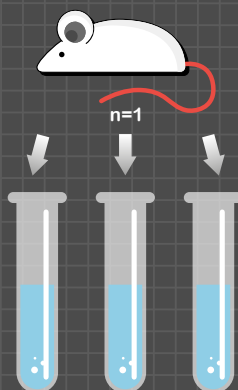
Results
What was found

Discussion
Places the findings into context and highlights why the work is important

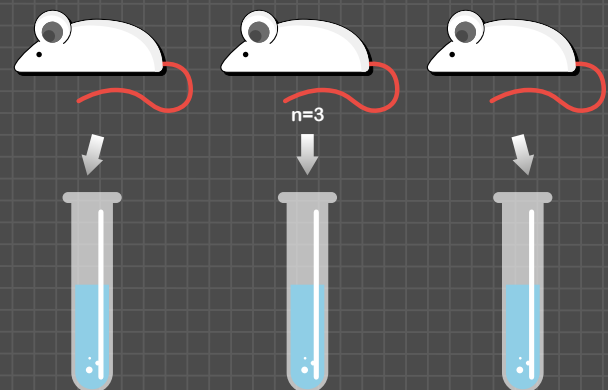Remember, when reading a preprint **YOU** are performing peer-review. Focus on the methods and results

Technical replicates
The same test on the same sample but done at different times

n=1

Biological replicates
The same test on biologically distinct samples

n=3

Power
The likelihood that what you are seeing is real

What kind of replicate was used?

Have the authors taken appropriate averages

Statistical tests
Some estimations suggest that a majority of the biological literature contains inappropriate statistical tests[1]

Is the test appropriately powered?

Are the authors comparing to an appropriate control?

Methods
Are the chosen methods and techniques the most appropriate to answer the question being addressed?

Source:
1. Ioannidis JPA (2005) Why Most Published Research Findings Are False. PLoS Med 2(8): e124. https://doi.org/10.1371/journal.pmed.0020124