Journal Club Workshop

Presented by: Michael Penn and Brittany Schweiger
What is a Journal Club?

Informal presentation/conversation based on one or more scientific articles
A way to spread new scientific insights, especially about new findings or theories
About 1 minute per slide, 5-7 slides
Why Are They Important?

Formal presentations take a lot of time and effort.
Sometimes a small group can mutually learn faster.
Science can move rapidly, and journal clubs can facilitate more advances.
How to Prepare:

MINIMUM REQUIREMENTS:
Print out the article
Read the article
Read the article
Annotate the article
Read the article

ALWAYS BE PREPARED TO DEFEND POINTS
Into the Luminiferous Aether

It’s OK to be wrong: http://xkcd.com/892

It’s not OK to be ignorant of your own paper, or wrong in spite of evidence you were too lazy to look up
How to Quote Authority Figures

“Don’t %#@!ing do it,”
--Michael Penn

“Edit this out, please. It’s unprofessional,”
--Drs. Maine and Menke
How to Prepare: Annotation

Take notes on:

1) the hypotheses
2) evidence for/against hypotheses
3) weaknesses
4) anything that might confuse you later--be sure to look up any words you don’t understand
5) anything that might go into a Powerpoint slide later
Ingredients of a JC Presentation

Read the guidelines of any handouts from the instructors

“Roadmap” unnecessary, though it is wise to check with instructor

Should mirror the format of the paper selected
The Intro
Check out relevant background references
Pay CAREFUL attention to the hypotheses
It’s usually a good idea to post a quick definition of technical/difficult words
The Methods

How are the methods used gather data relevant to the hypotheses?

Techniques

Statistical analysis

Understand each aspect of each test/experiment/process, *look words up* if you don’t know their meaning
This is a lot of clutter, and much of it is irrelevant unless a lot of time is sunk into its explanation. Try to stay away from tables. Use figures.

### Tables:

<table>
<thead>
<tr>
<th>Landscape type</th>
<th>Number of sites</th>
<th>Mean ± 1 SD</th>
<th>Median ± 1 SD</th>
<th>Low ± 1 SD</th>
<th>High ± 1 SD</th>
<th>% pans found ± 1 SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>City/town</td>
<td>16</td>
<td>43.7 ± 27.9</td>
<td>38.4 ± 42.7</td>
<td>8.8 ± 9.0</td>
<td>111.7 ± 55.9</td>
<td>93 ± 09</td>
</tr>
<tr>
<td>Suburban</td>
<td>9</td>
<td>48.1 ± 39.2</td>
<td>38.4 ± 40.9</td>
<td>6.9 ± 8.3</td>
<td>119.2 ± 65.0</td>
<td>82 ± 22</td>
</tr>
<tr>
<td>Agricultural</td>
<td>8</td>
<td>108.0 ± 68.5</td>
<td>105.8 ± 80.3</td>
<td>77.4 ± 77.4</td>
<td>162.4 ± 37.9</td>
<td>57 ± 30</td>
</tr>
<tr>
<td>Forest (near human)</td>
<td>7</td>
<td>52.3 ± 53.0</td>
<td>50.6 ± 68.2</td>
<td>9.3 ± 11.9</td>
<td>107.4 ± 82.0</td>
<td>64 ± 36</td>
</tr>
<tr>
<td>Other†</td>
<td>5</td>
<td>60.4 ± 37.8</td>
<td>43.2 ± 49.3</td>
<td>12.0 ± 8.3</td>
<td>137.2 ± 68.3</td>
<td>82 ± 24</td>
</tr>
<tr>
<td>City park</td>
<td>4</td>
<td>122.5 ± 53.2</td>
<td>122.3 ± 55.9</td>
<td>88.3 ± 61.2</td>
<td>157.0 ± 54.2</td>
<td>61 ± 36</td>
</tr>
<tr>
<td>Forest (control)</td>
<td>10</td>
<td>99.0 ± 60.2</td>
<td>97.6 ± 63.8</td>
<td>72.9 ± 64.2</td>
<td>132.8 ± 67.9</td>
<td>38 ± 49</td>
</tr>
</tbody>
</table>

† Sites not easily classified as one of the landscape types enumerated.
Graphs: What Not to Do

No axes labelled, no title, no real connection to the data for the audience
Graphs: What to Do

Make sure the graph serves a purpose

Clear axes, error bars, and meaning

Good way of clarifying relationships
Conclusions

Arguably the most important slide

Conclusions must be linked to the hypotheses

Place critiques in the Discussion slide
Future Studies/Discussion

Some people merge these together for time constraints, but those people don’t usually have a whole hour to bore you with. Your opinions relevant. Many authors add predictions to the paper.
Example JC

How much time--for Bio 220 plan on 5-7 minutes.

Argonne--10-15 minutes
Student symposium 25-30
Senior thesis 45 minutes
Aesthetics

Blue text on blue background? Probably a bad idea
Pointing it out? Doesn’t make it better

Typical JCs use far less text, and more talking (but this is a workshop, not a JC)
Images

In general there should be an image or visual on each page.

Ex. image of organism being studied
    map of area being studied
Body Language

Eye contact
Movement/gestures
Use the space

Make sure your volume is high enough to be heard
Body Language, con’t.

Practice

with partners

with no notes

to a brick wall
Don’t be That guy
Humor

If it distracts from your point, get rid of it

Follow the guidelines
Building a Rapport

Pretending to Like People 101:

Smile
Empathize
Respect
Cite Your Sources

Plagiarism can ruin you life
Your professors have seen it all
Even accidental plagiarism can get you kicked out of school or a job
https://owl.english.purdue.edu/owl/resource/560/04/
Helpful Tools for Citations:

EndNote
zotero.org
Easybib (Warning!)
https://owl.english.purdue.edu/owl/resource/560/01/
Hacker book
Tips for Finding E-Pub dates

http://www.ehow.com/how_8429035_publication-date-website.html
Double Check Everything

If you don’t, you might accidentally copy a slide, or make a spelling error, or use a garish color by mistake.
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