Faculty Stats, Sessions 4 and 5

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Analysis of Variance (ANOVA)

- When things differ, can variation be attributed to one factor more than another?
- Example: Species richness due to diet, geographic location, climate, predators, human influences, invasive species, etc.
- Example: Runoff due to precipitation, soil type, plant life, urban infrastructure, slope, permeability, etc.
- What matters most?



Iris data: For the three species, what varies significantly?



Anova: Single factor





ANOVA: Two-factor with replication

Video

| 1 | | Substrate | | | |
|----|------------|-------------|--------------|---------|--|
| 2 | Fertilizer | BrickRubble | ColierySpoil | Subsoil | |
| 3 | | 12 | 11 | 16 | |
| 4 | | 13 | 10 | 12 | |
| 5 | | 10 | 8 | 14 | |
| 6 | | 12 | 10 | 15 | |
| 7 | | 11 | 12 | 14 | |
| 8 | Control | 12 | 9 | 12 | |
| 9 | | 10 | 6 | 14 | |
| 10 | | 11 | 9 | 14 | |
| 11 | | 12 | 10 | 13 | |
| 12 | | 8 | 8 | 15 | |
| 13 | | | | | |
| 11 | | | | | |