

## **Data Analysis and Presentation**

**Ages: 11+**

**Tuesdays 12:30-1:25pm**

### **Tentative Syllabus**

(Exact timing of topics will be determined by student progress.)

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Students learn the basics of analyzing scientific data, from good experimental design and creating data files in Excel (or other spreadsheet software), to using basic statistical analysis and creating appropriate tables and figures. Students practice writing lab reports, learn to create scientific presentations in Powerpoint or similar software) and practice presenting scientific results to an audience. Students will need a laptop or tablet with spreadsheet (Excel, Numbers, etc.) and presentation creation software (Powerpoint or similar) during class.

Course fee: \$240. Maximum of 15 students.

### **Tentative Syllabus**

Week 1 – Introduction, Types of Data, Experimental Design and Research Ethics

Week 2 – Data Collection: Experimental Design and Organization

Week 3 – Data Analysis: Data Transcription and Digital Data Organization

Week 4 – Data Analysis: Data Organization and Analysis

Week 5 – Mini Lab

Week 6 – Data Analysis: Basic Statistics

Week 7 – Data Interpretation: Graphs Versus Tables

Week 8 – Data Interpretation: Creating Graphs and Tables

Week 9 – Writing Lab Reports

Week 10 – Mini Lab

Week 11 – Oral Presentation Strategies

Week 12 – Presentations

Week 13 - Presentations

Week 14 – Poster Presentation Strategies

Week 15 - Poster Presentation Gallery (Parents Invited)

At home assignments will be used to supplement in-class learning. Take-home and in-class assessments will be used throughout the semester to evaluate student understanding.