**TUCSON HIGH MAGNET SCHOOL**
**BIOLOGY & RESEARCH METHODS**

**Teacher:** Margaret Wilch  
**Fellow:** Rebecca Stockbridge

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**OUR GOALS**

By combining our biological and mathematical expertise, we encourage students to:

- think critically about procedures and data analysis,
- recognize the benefits of viewing science through a mathematical lens,
- and communicate scientific ideas through a variety of media.

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**HONORS RESEARCH METHODS**

Research Methods students spend the year developing and carrying out independent research projects. They must read and summarize eight published articles, write a project proposal, a literature review, and a final paper, as well as present regularly to their peers along the way.

Rebecca works one-on-one with students to help them progress on their research projects and develop their scientific writing and presenting skills.

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**STUDENT QUOTES**

“Rebecca has improved my ideas about and understanding of the statistical analyses necessary to do to quality research.”

“Rebecca has helped me with understanding how to identify the central question in journal articles.”

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**HONORS BIOLOGY**

In-class labs provide a great opportunity for students to use mathematical thinking. Rebecca often asks questions to probe students’ understanding of experimental procedures, and encourages students to analyze both the methodology and their results.

Students developed and analyzed their pipetting skills during a lab.

To determine how accurately they use the pipets, students calculated the standard deviation of their measurements.

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**Evaluating Science in the Media**

Each week, students read and analyze a science article from the popular press, focusing on the presentation and clarity of the content.

In the fall, students studied how a brief mention of a connection between processed meat and cancer in a report from the World Cancer Research Fund became sensationalized and misreported in the international media.

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**Is anything safe to eat?**

- The Daily Mail