Graphing Microplastics in the Antarctic

Dalton Cooper, Walton High, DeFuniak Springs, FL
Katherine Edwards, Gulf Breeze High, Gulf Breeze, FL
Suzanna Findeisen, First City Arts Center, Pensacola, FL
Elizabeth Miller, Pace High, Pace, FL

Summary

Students will analyze microplastic data collected in two locations in Antarctica; discover types of microplastics found in the marine environment; represent this data in three types of graphs then draw conclusions from the data.

[Graphing, analyzing data, microplastics, human impact, Antarctica, marine science, ecosystems, environmental]

Key Concepts

• HS-LS2-4
• HS-ESS2-2
• MAFS.912.N-Q

Objectives

• Observe and identify different types of microplastics (microfibers, microfragments, and microbeads) collected in the Antarctic waters.
• Represent collected data in the form of three graphs (bar, line, and creative pie chart).
• Demonstrate the ability to extrapolate given data to draw conclusions.
• Communicate results by presentation of graphs.

Materials

• Antarctic PowerPoint presentation
• Student Handout (packet)

Procedure

1. Present PowerPoint to class whole group. Discuss data collection and importance of microplastic environmental impact.
2. Divide students into groups of 2-3.
3. Provide students with handouts and colored pencils.
4. Guide students as they work through creating graphs and answering discussion questions.
Assessment

• **Performance**— analyze data and draw conclusions in small groups.
• **Product**— Three graphs representing microplastic data and answered discussion questions.

Additional Resources

Please list any Web sites, books, publications, or other resources that would be helpful for teachers or students preparing for this lesson.