



Education and Research: Testing Hypotheses

## **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.