

Dear Explorer:

Welcome to our research team! In preparation for our Antarctic Adventure, scan the QR code to go online and complete the following tasks:



- ✓ **Pack your bags:** Drag and drop the items into the three categories: “Items for Living”, “Tools for Science”, and “Luxury and Mental Wellness.”
- ✓ **Packing list:** Choose three items from the list to pack and explain why.
- ✓ **Choose a science tool and watch the video.** Write down in your journal which scientist used it, and how it is helpful.

Please bring your journal to the research team meeting. Thank you and look forward to seeing you soon.

Sincerely,

*Dr. Megan Cimino and the research team*



Dear Explorer:

I am glad you are packed and ready for our long journey to Antarctica. Next we are going to learn about climate change to better prepare us for our mission to save the penguins. Before our next meeting, please scan the QR code and complete the following tasks:



- ✓ **Fill out the join the team chart in your research journal with your skills and interests**
- ✓ **Watch *Hear from a Scientist – Kasey Walsh***

We will be discussing climate change and why our mission is so important. You will also earn your first badge!

Sincerely,

*Dr. Megan Cimino and the research team*



Dear Explorer:

I hope you learned a lot about climate change in our last meeting. We must collect data to really understand how things are changing in Antarctica.



In preparation, please scan the QR code and do the following tasks:

- ✓ **Play a virtual card game and make up a data story!**

I look forward to our next meeting where we will be discussing data and why our mission is so important. By completing these tasks, you will earn your Data badge.

Sincerely,

*Dr. Megan Cimino and the research team*



Dear Explorer:

WOW... we sure did dive into data! It was fun to use delicious M&Ms as data points to discuss graph making and data analysis.



We are going to start looking at penguins and understanding where they live. For this week, check out the following tasks by scanning the QR code:

- ✓ **Watch my *scientist spotlight* video** and answer a question in your journal.
- ✓ **Learn more about my research site and Antarctic travel** using the interactive map.
- ✓ **Learn how to identify the penguin species.**

Sincerely,

*Dr. Megan Cimino and the research team*



**Join the Team!**



**Let's pack our bags and  
Go to the Poles!**



**Dive into Data!**



**Penguins Need  
Our Help!**



Dear Explorer:

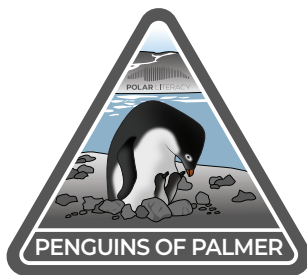
It is time to combine our knowledge of the penguin species and our ability to work with the data. In preparation for this research club meeting, please scan the QR code to:

- ✓ **View the *data story*** and answer some questions in your journal.

We will be using something called CODAP – Common Online Data Platform to analyze the penguin population data. As researchers, we must learn new tools all the time. I know this can be challenging but it will be worth it! I really need your help analyzing this data and helping me save the penguins. You will earn your third badge in this session.

Sincerely,

*Dr. Megan Cimino and the research team*



Dear Explorer:

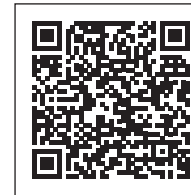
Thanks for all your hard work with the penguin data. I know it is challenging to interpret and analyze this data, and I am proud of what you have accomplished. The birder team is very interested in figuring out what this data tells us about the penguins. Before the next meeting accomplish these tasks:

- ✓ **Set a timer for 3 minutes.**
- ✓ **Write down as many questions about the penguin data that you can in your research journal.**

In your next meeting, you will be working with your fellow researchers to prioritize your questions for further exploration.

Sincerely,

*Dr. Megan Cimino and the research team*



Dear Explorer:

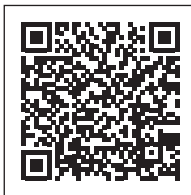
Do you have your questions ready? This is the most exciting part of the scientific process. Researchers must think creatively about what can be happening and why. In preparation for the next meeting, please scan the QR code to:

- ✓ **Watch the *ICE* video** and answer questions in your journal.

We will explore another data set – sea ice extent, which might give us some insight into what is happening with the penguins. In addition, we are going to practice creating a Data Jam and sharing our understanding of the sea ice data.

Sincerely,

*Dr. Megan Cimino and the research team*



Dear Explorer:

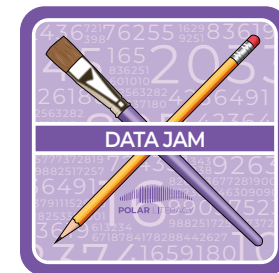
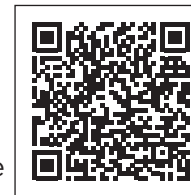
In our final research club meeting, you will be doing the most important part of our work together – communicating what we have learned through a Data Jam. Please scan the QR code to:

- ✓ **Review the rules for how we Data Jam including watching *What is data?* video.**
- ✓ **Brainstorm ways that you can share what you have learned with your family, friends, and community.**

I can't wait to see what you come up with. Please share what you have done!

Thank you and see you on the next research mission,

*Dr. Megan Cimino and the research team*



# Questionland!



# Penguins of Palmer



# Communicate Science with a Data Jam



# Exploring Ice as Habitat

