Student Log for Tackle box of Tools and Technologies

Use this handout as you work through the VoiceThread that your teacher will be displaying

Slide #1

*“Collecting data in the field is not always easy or even safe. Continue on this slide to watch a short video from a research cruise in the Ross Sea in January of 2011.”*

Slide #2

*“Sometimes researchers trying to collect polar data are trapped in the ice for days and even weeks.”*

Slide #3

*“You may have brainstormed about marine science research and have an understanding of the difficulties of making sense of our world. Even if you haven't, you are going to learn about some tools and technologies that scientists use to study our world (emphasis on polar environments).”*

Slide #4

*“After watching this short video, leave a comment about any questions you would have for Dr. Kohut (or just any comments in general).”*

Slide #5

*“After watching this short video, leave a comment about any questions you would have for Dr. Kohut (or just any comments in general).”*

Slide #6

“*After listening to the data explanation, what questions do you still have? Do you think that other technologies could have given you as detailed a picture of this three dimensional environment?”*

Slide #7

*“After listening to Dr. Johnson discuss an Argo float, what questions do you have for him?”*

Slide #8

*“Everyone one of these dots is an Argo float that is sending data. These floats last 5-7 years. What advantage do you think these floats have over ship observations? What disadvantages? Questions?”*

Slide #9

*“After reading the slide and listening to the data explanation, what questions do you still have?”*

Slide #10

*“Listen to Dr. Ari Frielaender discuss collecting data on whales (no comment required).”*

Slide #11

*“Here is a photo from a National Geographic article that discusses his work. Don't forget to click on the link icon on the right to find out more.” Link to article* <http://adventureblog.nationalgeographic.com/2016/03/30/hunting-gators-in-antarctica/>

Slide #12

“*These are what the multisensory tags that look like (about the size of a TV remote). How do you think these are attached to a whale?”*

Slide #13 and/or Slide #14

*“Click on the LINK icon to watch this data visualization (and the one on the next slide). What do you think you are watching? How do you think the raw data from the multisensory tags is displayed in these animations?”*

Slide #15

*“These humpback whales eat krill like these in a sample.” No comment is required for this slide.*

Slide #16

*“Enjoy listening to Dr. Alma Parada from Stanford University discuss the benefits of using a niskin rosette and CDT.”*

Slide #17

“*From the information on this slide, what physical parameter of ocean water do you think conductivity is used to measure?”*

Slide #18

*“As the slide says, this is very complicated data, but it takes a water sample to start the process.”*

No need to make a comment on this slide.

Slide #19

“*What do you think of Daniel De Leon’s work?”*

Slide #20

*“What do you think of the hydrophone project (linked from the VoiceThead slide)?*

Slide #21

“The picture on this slide shows the decrease in length of glacier ???? from satellite images from 1972 to 2011” WAITING FOR VIDEO FILE FROM Dr.