Worksheet. Questions to support students’ analyzing decisions.

We regularly hear about climate change from a variety of sources, but no one is very clear about what it is. My mom often says, “it’s so hot today, how could anyone think that the climate isn’t changing?” But does this statement accurately reflect what climate change really is?

**Investigation Question: Is the climate changing where we live?**

1. Start by describing what the difference between climate and weather is:
2. If the climate were changing, what data do you think you would need to collect in order to see evidence of climate change? Why that data?
3. How would you analyze the data to determine whether or not the climate was changing?
4. Now that you know what data you have, what will you do to analyze the data? Write down the process you plan to use here. Be specific, what tools might you need that you do not already have? For example, do you know how to quickly average data using Google Docs or Excel?
5. Why did you choose to analyze your data in this way? What will you find with your analysis? What will you not know based on how you analyzed the data?
6. Now that you have analyzed your data, how will you represent the data to show any possible patterns? Draw a picture of how you expect the data to look using your representation of choice, and explain why are you using that method for representing your data?
7. What patterns do you notice in your data? Is it consistent across the whole representation? Are there parts of the data that fit a pattern, but other parts do not? Be precise in your description of the patterns.
8. What conclusions can you reach based on your data? Can you make a claim about whether or not the climate in your location is changing? If so, what claim can you make and what evidence do you have to support that claim?
9. Can you make a claim about global climate change based on your data? If so, what claim? And what evidence do you have to support that claim? If not, what additional data might you need to be able to make a claim about global climate change?