Research – I Wonder

Teacher Notes: you can use the following as a guide to begin discussing things wonder about or use it as the introduction to a written assignment.

Duration: 20 – 30 minutes initially. Then have students log 5-10 thoughts over the next 2-3 days outside of class. Part 5 is about 20 minutes after the students have logged on their own for 2-3 days.

Materials: You can use the template below to create a handout, google doc, or what I do is have them create the I Wonder log in their notebook or even create a log on their phone. The benefit for them doing this on their phone is that they can add to their thoughts as they think of things.

Student Part

Do you ever just wonder? Remember that natural curiosity you had just a few short weeks ago, the why is the sky blue, why does my dog get excited to see me before he sees me, how does my parent know when I am not doing what I am supposed to be doing?

Science is driven by curiosity. Think of that picture we all have seen of Isaac Newton sitting under the tree and an apple falling on his head. He went onto discover gravity because he wanted to know why the apple fell. Bacteria was discovered and diseases were prevented because a physician decided to start washing his hands in between delivering babies. Now adays, we think it is gross when someone doesn't wash their hands.

For this next activity, you will be journaling in your notebook or even your phone about things you wonder about.

Part 1:

For the next five minutes, write down what you spend your time looking up online, watching on TikTok, what/who you follow on Instagram (or other social media) that is not your friends/family, what videos have you seen, books you have read that make you wonder how they did that, how did they know that? This first part is just a brain dump. Create a heading titled Brain Dump and write down underneath the heading the first things that come to you in your notebook. You can also create a note on your phone too so you can keep these ideas nearby.

Part 2:

What do you want to change in the world? What makes you stop and go why is this problem not solved? It can be big, little, effect only you or the whole world. For the next five minutes, just write down the things you would change in the world if you could. Create a heading titled Things I Would Change and write down underneath the heading and write down the first things that come to you in your notebook. You can also create a note on your phone too so you can keep these ideas nearby.

Part 3:

Field trip time, for the next 15 minutes, we will go outside and observe. For this part, we will be in the quad. Find a quiet spot, sit down, and watch. For the next five - ten minutes, just write down the things you observe that grab your interest. Create a heading titled Field Trip and write down underneath the heading and write down the first things that come to you in your notebook. You can also create a note on your phone too so you can keep these ideas nearby.

Part 4:

For the next two – three days, you will be wondering, brainstorming on your own. As an idea "POPS" into your head write it down in your log. You may log it under either heading that you created, or you can create new headings. When we see each other again, we will be going over these so set reminders to make sure you do it.

Part 5:

Open your journal. If you used your phone, it might be easier to copy your notes into a Google doc and do the next part on the document.

1. Look at your thoughts. Any thoughts stand out as something you are no longer interested in? Yes? Draw a line through them.
2. The top ten thoughts that really interest you, highlight in yellow.
3. Look over the thoughts that interest you and circle your top five.
4. Share your top five with your team.
    a. Which ones get your team talking?
    b. Which ones do your team not respond to?
        i. Oftentimes if you are truly passionate about something, the people you are talking about it to will sense that and get excited with you. While not the most accurate gauge, it can help you narrow down your top five even more.
5. Write a new heading in your journal titled, Potential Research Topics. You have heard your teacher state that you will be doing a research project this year and now write down thoughts from your top five, thoughts generated from talking to your team, and any other ideas you have about a potential research topic. No idea is too silly, too crazy, or too hard, as a team, we will figure out ways to help you design a project or build something that interests you.
6. Turn in your journal as directed by your teacher with your top three favorite potential research topics circled.