Drake Equation Challenge

$$N = R_* \cdot f_p \cdot n_e \cdot f_l \cdot f_i \cdot f_c \cdot L$$

Welcome to the second Solar System challenge! This challenge will be an **individual challenge** that aims to help your research skills. The Drake Equation is a hypothetical expression that can be used to calculate the total amount of alien civilizations that humans could make contact with.

Your goal is to find reasonable values for each of the values in the equation above. However, you can't just make up values and say that they make sense. Your values could have been calculated in the past in a scientific paper, or published in a documentary, but there needs to be something behind each of the numbers. If you are borrowing a number from a source, explain in your own words how they were able to come up with it, and if it is reasonable.

The final product of this challenge can be anything you like (a base Google Doc, an infographic, etc.), as long as it includes the following things:

1. Plausible values of all variables in the Drake Equation
    a. Why are they plausible?
    b. Do observations support these values?
2. Calculating N
    a. Is this reasonable?
3. A short explanation describing why your calculated N differs from the observed N (0)
4. **Your Sources** (how did you get your values?)

Scoring Guidelines

We will score it on the following guidelines:

1. **(25%) Research** Did you just make your values up or were you able to find reputable sources to support your findings? It's important to recognize when a source is weak.

2. **(50%) Drake Equation Values** Do your values make sense? How effectively are you able to justify them and compare them to observed values?

3. **(25%) Final Explanation** One of the greatest skills a scientist can have is being able to explain incorrect or implausible results. How effectively are you able to apply this to your own work?

Besides that, **you will have until Friday (7/29) to complete this challenge**. Have fun and we hope to see some great artwork!

Email us at origamiking2000@gmail.com and shreyashrsingh@gmail.com for questions!

- Vy and Shreyash