Drake Equation Activity

You have learned about star formation, investigated some unusual life forms, and traveled to the stars and galaxies. Now you get to decide what you think are the chances of finding life using science, based on Frank Drake's famous equation, one in a slightly different form than is used in your text book.

1. Access the NOVA Origins site http://www.pbs.org/wgbh/nova/origins/drake.html and click on Launch interactive. Complete the following table. Be sure to complete column C before you change any of the estimates using the sliders.

Drake Equation Parameters and Estimates

A	B	C	D	E
Parameter	Brief description	Drake's numerical estimate	Your numerical estimate	Your scientific rationale for selecting your numerical estimate
R				
f_p				
n_e				
f_l				
f_i				
f_c				
L				
N	Drake's estimate for N:		Your estimate for N:	

2. Is your estimate for N higher or lower than Drake's? Explain.

3. Assuming that the number Drake calculated is accurate, how likely do you think we are to encounter, via long distance technology, such as light or radio, another civilization, and, if you think we will, when do you think that will occur? Explain your reasoning.

4. Assuming that the number you calculated is accurate, how likely do you think we are to encounter, via long distance technology, such as light or radio, another civilization, and, if you think we will, when do you think that will occur? Explain your reasoning.

5. Which parameters are most likely to change or become more accurate based on technological breakthroughs and discoveries? Explain your reasoning.

6. Would the changes in these parameters increase or decrease Drake's estimate?   Explain your reasoning.

7. Would the changes in these parameters increase or decrease your estimate? Explain your reasoning.