

## **Can Planet X Support Life?**

Planet X revolves around a star of type F8 that puts out 1/3 the amount of light as our sun. This planet X is twice as dense as earth, has 180 days in its year, and its axis of rotation points 25 degrees above its plane of revolution. It orbits its star in an almost perfect circle about 50 million miles out. Large amounts of Nitrogen and Oxygen have been detected in its atmosphere. This fictional solar system has an age of 3 billion years.

1. What will conditions be like on the surface of planet X? Why?
2. Will Life exist on Planet X? Why or Why Not?
3. What would you like to measure with an unmanned probe to this system?

## **Can Planet Z Support Life?**

Planet Z revolves around a star of type F8 that puts out 1.33 time the amount of light as our sun. This planet Z is 90 percent as dense as earth, has 480 days in its year, and its axis of rotation points 90 degrees above its plane of revolution. It orbits its star in an almost perfect circle about 100 million miles out. Large amounts of Nitrogen and small amounts Water have been detected in its atmosphere. This fictional solar system has an age of 4 billion years.

1. What will conditions be like on the surface of planet Z? Why?
2. Will Life exist on Planet Z? Why or Why Not?
3. What would you like to measure with an unmanned probe to this system?