Extension Activity for Light Year As A Distance Lab

Directions: Copy (or print out) and fill in data table. You may use a calculator and do not have to write out your calculations. (ly = 10,000,000,000,000 km)

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| --- | --- | --- | --- |
| Object | Light-Years from Earth | Kilometers from Earth (km) ORScientific Notation (# x 10x) km | Student Minutes from Earth (m) ORScientific Notation (# x 10x) m |
| Sun (Sol) | 8 (light minutes) |  |  |
| Proxima Centauri (closest star to Sun) | 4.2 |  |  |
| Sirius A/B (brightest start visible from Earth) | 8.6 |  |  |
| Antares (nearest Red Supergiant star to Sun) | 550 |  |  |
| Orion Nebula (located in same arm of Milky Way as our Sun) | 1,350 |  |  |
| Center of the Milky Way (location of a supermassive black hole) | 27,000  |  |  |
| Large Magellanic Cloud (3rd closest galaxy to Milky Way) | 160,000  |  |
| Andromeda Galaxy (nearest spiral galaxy) | 2.5 million (2.5 x 10^6)  |  |
| Whirlpool Galaxy (site of ‘recent’ galaxy collision; a fate that awaits the Milky Way in the future) | 23 million |  |
| Virgo supercluster (our Local Group neighbor) | 65 million |  |
| Laniakea super galaxy cluster (Virgo supercluster along with 300+ other clusters) | 200 million |  |
| Z8\_GND\_5296 (farthest galaxy we can see) | 13.7 billion |  |

Explanation of Conversions and Debrief.

You can type or write out your responses. You don’t have to show your work, but you could show one in each section as an example.

1. How did you convert from light minutes to kilometers?
2. How did you convert from kilometers to scientific notation?
3. How did you convert from light years to kilometers?
4. How did you convert from kilometers to student minutes?
5. What did you learn from this activity?