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| **Worksheet on Neptune** |  |

**Word Bank**:

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| 1846 largest eighth Earths eyes | 119 rings moons mass red | Neptune winds gravitational hollow Sun |

Neptune is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ planet from the Sun in our Solar System. It is the fourth \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ planet in our Solar System. This giant, frigid planet has a hazy atmosphere and strong \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This gas giant is orbited by eight \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and narrow, faint \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ arranged in clumps. Neptune's blue color is caused by the methane (CH4) in its atmosphere; this molecule absorbs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light. Neptune was visited by NASA's Voyager 2 in August, 1989. Before this visit, virtually nothing was known about Neptune.

Neptune cannot be seen using the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ alone. Neptune was the first planet whose existence was predicted mathematically in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ independently by J.C. Adams and Le Verrier (the planet Uranus's orbit was perturbed by an unknown object which turned our to be another gas giant, Neptune). Neptune was then observed by J.G. Galle and d'Arrest later that year. Neptune was named for the mythical Roman god of the seas.

Neptune is about 30,775 miles (49,528 km) in diameter. This is 3.88 times the diameter of the Earth. If Neptune were \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, it could hold almost 60 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Neptune's mass is about 1.02 x 1026 kg. This is over 17 times the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the Earth, but the gravity on Neptune is only 1.19 times of the gravity on Earth. This is because it is such a large planet (and the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ force a planet exerts upon an object at the planet's surface is proportional to its mass and to the inverse of its radius squared). A 100-pound person would weigh \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pounds on Neptune.

Each day on Neptune takes 19.1 Earth hours. A year on Neptune takes 164.8 Earth years; it takes almost 165 Earth years for Neptune to orbit the Sun once. Since \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was discovered in 1846, it has not yet completed a single revolution around the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.