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| **Cornell Notes**  **Topic:** Jovian Planets (Outer Planets)  **Essential Question: What are the similarities and differences of the Jovian planets?**  **How do the Jovian Planets compare to the Terrestrial planets?**  **Questions/Main Ideas:** | **Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Block:** \_\_\_\_\_\_\_\_  **Date:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **Notes:** |
| The Outer Worlds | 1. |
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|  | 2. |
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|  | 3. |
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|  | 5. |
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| **Jupiter Draw/Label** | 1.  2.  3. |
| Cloud Tops | 1. |
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|  | 2. |
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|  | 3. |
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| Jupiter’s Interior  1.  2.  3.  4. | Jupiter may have a small, rocky core, but hte vast majority of its cmakeup is hydrogen in milecular 9gaseous) and liquid form. |
| Jupiter’s Interior | 1. |
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|  | 3. |
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| Jupiter’s Atmosphere  Zones are high-altitude clouds that represent the top of a convection cell that carries heat outward from the planet's interior.  Belts are regions where the gas has cooled and is sinking back inwards. | 1.  2. |
| Jupiter’s Jetstream | Jupiter's rapid rotation means that it has a very strong Coriolis effect.  Rising and sinking gasses are steered into high-speed horizontal winds. |
| Jupiter’s Wind |  |
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| The Giant Red Spot |  |
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| Jupiter’s Magnetic Field | 1. |
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|  | 2. |
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|  | 3. |
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| Aurora and Lightning | 1. |
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|  | 2. |
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| Jupiter’s Rings | 1. |
|  |  |
|  | 2. |
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|  | 3. |
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| Moons of Jupiter | 1. |
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|  | 2. |
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|  | 3. |
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| Planets in Miniature | 1. |
|  |  |
|  | 2. |
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| Io | 1. |
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|  | 2. |
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| Europa | 1. |
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|  | 2. |
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|  | 3. |
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| Europa’s Water |  |
| Ganymede and Callisto | 1. |
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|  | 2. |
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|  | 3. |
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|  | 4. |
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| Other Observations | 1. |
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|  | 2. |
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| **Saturn Draw / Label**  Interior of Saturn | 1.  2.  3.  4.  Saturn's interior is similar to Jupiter's.  It also emits more radiation than it receives from the Sun, just like Jupiter. |
| Storms on Saturn | Saturn's north pole is surrounded by an unusual hexagonal jet stream. Within it, clouds and storms can be seen, with a deep hurricane-like vortex over the pole where gas spirals downward. |
| Rings of Saturn | 1. |
|  | 2. |
|  | 3. |
|  | 4. |
|  | 5. |
| Ring Structure | 1. |
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|  | 2. |
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|  | 3. |
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|  | 4. |
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|  | 5. |
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| Ring Gaps | 1. |
|  |  |
|  | 2. |
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|  | 3. |
| Destructive Tidal Forces | 1. |
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|  | 2. |
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| The Roche Limit | If a moon gets too close to its planet, the planet’s gravity could rip the moon apart. This disruption occurs because the planet pulls harder on one side of the satellite than on the other. If the difference in this pull exceeds the moon’s own internal gravitational force, the moon will be pulled apart. |
| Saturn’s Moon | 1. |
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|  | 4. |
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|  | 5. |
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| Ice World’s |  |
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| Titan | 1. |
|  | 2. |
|  | 3. |
|  | 4. |
|  | 5. |
| Iapetus | 1. |
|  |  |
|  | 2. |
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| Enceladus | 1. |
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| **Uranus** | 1. |
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|  | 2. |
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|  | 3. |
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| Uranus Atmosphere | 1. |
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|  | 2. |
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| Uranus Composition | 1. |
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|  | 3. |
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| Interior of Uranus | The interior of Uranus is mostly water, with dissolved methane and ammonia.  This resembles a partiular glass cleaning product... |
| Uranus’s Odd Tilt | 1. |
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|  | 2. |
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|  | 3. |
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| Rings of Uranus | 1. |
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|  | 2. |
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|  | 3. |
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| Moons of Uranus | 1. |
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|  | 2. |
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|  | 3. |
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| **Neptune Draw/Label** | 1.  2.  3. |
| Interior of Neptune | Like Uranus, Neptune's interior is made of the same water and ammonia mixture. |
| Neptune’s Atmosphere | 1. |
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|  | 2. |
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|  | 4. |
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| Rings of Neptune | 1. |
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|  | 2. |
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|  | 3. |
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|  | 4. |
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| Triton | 1. |
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| Summary: | |
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