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| **Cornell Notes**  **Topic:** Other Objects in Our Solar System  **Essential Question: What are the similarities and differences of the other objects of our solar system?**  **Questions/Main Ideas:** | **Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Block:** \_\_\_\_\_\_\_\_  **Date:** \_\_\_\_\_\_\_\_\_\_\_\_\_  **Notes:** |
| **Asteroids and Comets** | 1. |
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|  | 2. |
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|  | 3. |
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| Leftovers of the Solar System  Cometary material possibly originated out in the Oort Cloud, so it is a good source of information about the early Solar system. | 1.  2.  3.  4. |
| **Meteors and Meteorites** | 1. |
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|  | 2. |
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|  | 3. |
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| Heating of Meteors | 1. |
|  |  |
|  | 2. |
|  |  |
| Meteroites | 1. |
|  |  |
|  | 2. |
|  |  |
|  | 3. |
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|  | 4. |
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| 3 Flavors of Meteorites | 1. |
|  |  |
|  | 2. |
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|  | 3. |
|  |  |
| Classification | 1. |
|  |  |
|  |  |
|  | 2. |
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|  |  |
| Chondrules | 1. |
|  |  |
|  | 2. |
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|  | 3. |
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| Carbonaceous Chondrites | 1.  2. |
| **Asteroids** | 1. |
|  |  |
|  | 2. |
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|  | 3. |
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|  | 4. |
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| Asteroid Belt | Most asteroids reside in a region of space between the orbits of Mars and Jupiter called the Asteriod Belt.  Gravitational resonances maintain the distribution of asteroids in this region. |
| Size of Asteroids | 1. |
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|  | 2. |
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| Shape of Asteroids |  |
|  |  |
| Ceres | 1. |
|  | 2. |
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|  | 3. |
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| Asteroid Composition | 1. |
|  |  |
|  | 2. |
|  |  |
|  | 3. |
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| Origin of Asteroids | 1. |
|  |  |
|  | 2. |
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|  | 3. |
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|  | 4. |
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| Origins of Asteroids and Meteoroids | A  B |
| Asteroid Belt | 1. |
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|  | 2. |
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| Near Earth Objects | 1. |
|  |  |
|  | 2. |
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|  | 3. |
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| Pluto | 1. |
|  |  |
|  | 2. |
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|  | 3. |
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|  | 4. |
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| Pluto and Charon | 1. |
|  |  |
|  | 2. |
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|  | 3. |
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|  | 4. |
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| Size of Pluto and Charon | 1. |
|  |  |
|  | 2. |
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|  | 3. |
|  |  |
|  | 4. |
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| New Horizons | 1. |
|  | 2. |
|  | 3. |
| Dwarf Planets |  |
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| **Comets** | 1. |
|  | 2. |
|  | 3. |
| Parts of a Comet | 1. |
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|  | 2. |
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|  | 3. |
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| Structure of Comet | The comet head is composed of the nucleus (icy/rocky object around 10 kilometers across), the coma, a bubble of gas leaving the nucleus (about 100000 kilometers across) and the hydrogen envelope, a bubble of hydrogen around 10 million kilometers across.  The tail is gas and dust and can be longer than one astronomical unit! |
| The Comet’s Tail | 1. |
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|  | 2. |
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| Two Tails |  |
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| Tail Evolution | As a comet heads into the inner solar system, its tail forms gradually.  A gas coma forms when the comet is around three astronomical units from the Sun.  By the time the comet gets to one astronomical unit, the tail has formed, pointing away from the Sun.  The tail grows as the comet nears the Sun.  As the comet then moves away from the Sun, the process reverses. |
| Composition of Comet | 1. |
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|  | 2. |
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|  | 3. |
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|  | 4. |
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| Spacecraft Exploration | 1. |
|  |  |
|  | 2. |
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| Comet Tempel 1 | 1. |
|  |  |
|  | 2. |
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| Churymov-Gerosimenko | 1. |
|  |  |
|  | 2. |
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| Origins of Comets |  |
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| The Oort Cloud | 1. |
|  |  |
|  | 2. |
|  |  |
|  | 3. |
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|  | 4. |
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| Incoming Comet |  |
| Short Period Comets | 1. |
|  |  |
|  | 2. |
|  |  |
|  | 3. |
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| Short Per. Comet Origin | 1. |
|  |  |
|  | 2. |
|  |  |
|  | 3. |
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| Shooting Stars |  |
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| Comet Meteor Showers | 1. |
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|  | 2. |
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| Debris from Comets |  |
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| Names of Meteor Showers |  |
| Giant Impacts | 1. |
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|  | 2. |
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|  | 3. |
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| Giant Meteor Craters | 1. |
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|  | 2. |
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| Russian Meteor Explosion | 1.  2.  3. |
| Other Meteor Craters | 1. |
|  | 2. |
|  | 3. |
| Mass Extinctions | 1. |
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|  | 2. |
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|  | 3. |
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| Extinction Level Impact | 1. |
|  | 2. |
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|  | 3. |
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|  | 4. |
|  | 5. |
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| Summary: | |
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