**Nuclear Reactions**

 Studies of the nucleus of atoms can help us explain what we see in our environment.

From this chart, we can see a notable trend about the abundance of elements in our Universe.

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Though there are some weird points:

**Binding Energy**: the energy that is used to keep the nucleus together.

**Induced Nuclear Reactions**

 To start a nuclear reaction we \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ an atom with \_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_.

**Example:**

**Nuclear Equation Rules:**

1. The mass numbers on either side of the arrow will add to the same number.
2. The charge (atomic numbers) of either side of the arrow will add to the same number.

**Example: the fission of Uranium**

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| --- | --- |
| **Fission** | **Fusion** |
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