**Noteguide for The Curve of Binding Energy- Videos 30O Name**

The curve of binding energy:

Define:

Binding energy per nucleon -

What’s more and less stable –

Mark where fusion (joining) and fission (splitting) can release energy. Where are the most stable nuclei?

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| --- | --- |
| Fusion powers the sun:Energy comes primarily from the Proton-Proton cycle:1H + 1H = 2H + e+ + ν1H + 2H = 3He + γ3He + 3He = 4He + 1H + 1H | Helium can also fuse:4He + 4He = 8Be + γ4He + 8Be = 12C + γCarbon can fuse as well:12C + 12C = 24Mg + γ16O + 16O = 28Si + 4He |



Finding Q-Value from Binding Energy per nucleon: (We did these before using mass)



K-40 has a BE of 8.538080 MeV per nucleon

Ca-40 has a BE of 8.551299 MeV per nucleon (Q = +0.529 MeV (Exo))

 (-12.30 MeV)