Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Binder \_\_\_\_\_\_\_\_\_\_

**FIB Notes: Absolute Dating**

**Absolute Dating**>>>>>>>>>>>>>>>>>>\*Identifies the A\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ D\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an event.

**Tree Rings** >>>>>>>>>>>>>>>>>>>>>> \*1 ring = O\_\_\_\_\_\_\_\_ Y\_\_\_\_\_\_\_\_\_\_\_\_

 \*Ring W\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ indicates the W\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of growing season.

 \*Ring P\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dated to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ B.C.

**Radioactive Isotopes** >>>>>>>>>>>>>> \*A\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the same chemical E\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with different A\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ M\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ numbers.

 \*These A\_\_\_\_\_\_\_\_\_\_\_\_\_ give off radiation and D\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at a set rate.

**Half-Life**>>>>>>>>>>>>>>>>>>>>>>>>> \*The time it takes for H\_\_\_\_\_\_\_\_\_\_ of the atoms to D\_\_\_\_\_\_\_\_\_\_\_ to a S\_\_\_\_\_\_\_\_\_\_\_\_\_\_ end product.

 \*Every radioactive A\_\_\_\_\_\_\_\_\_\_\_\_ has its O\_\_\_\_\_\_\_ rate of decay.

 **U-238** = \_\_\_\_\_\_\_\_\_ billion years **C-14** = \_\_\_\_\_\_\_\_\_\_ years

**Radiocarbon Dating**>>>>>>>>>>>>>>>>\*All L\_\_\_\_\_\_\_\_\_\_\_\_\_ things take in Carbon \_\_\_\_\_\_ and Carbon \_\_\_\_\_

 \*When they D\_\_\_\_\_\_, the C\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -14 decays.

 \*The R\_\_\_\_\_\_\_\_\_\_\_\_\_ of C-14 to C-12 can be U\_\_\_\_\_\_\_\_\_\_ to tell when the P\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or A\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ died.

 **Carbon-12 Carbon-13 Carbon-14**

 \_\_\_\_\_\_\_% 1.1% less than 0.1%

 \_\_\_ protons \_\_\_ protons \_\_\_ protons

 \_\_\_ neutrons \_\_\_ neutrons \_\_\_ neutrons

 **Disadvantages**

 \*It can only date things that once L\_\_\_\_\_\_\_\_\_\_\_\_\_, like logs or B\_\_\_\_\_\_\_\_\_\_\_.

 \*The half-L\_\_\_\_\_\_\_\_\_\_ is short. It can only D\_\_\_\_\_\_\_\_\_\_\_\_\_ things to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ years ago.

**Potassium-Argon Dating**>>>>>>>>>>>> \***Half-life** = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ billion years

 \***Adv/Disad**= found in many I\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, Sedimentary, and Metamorphic R\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Uranium-Lead Dating**>>>>>>>>>>>>>> \***Half-Life**= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ billion years

 \***Adv/Disad**= Can date the O\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rocks on earth

 Found in I\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rocks, rare in S\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and metamorphic rocks.

**Rubidium-Strontium Dating**>>>>>>>>> \***Half-Life**= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ billion years

 \***Used** to verify U\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dating results