

The Milky Way Galaxy, our beautiful home

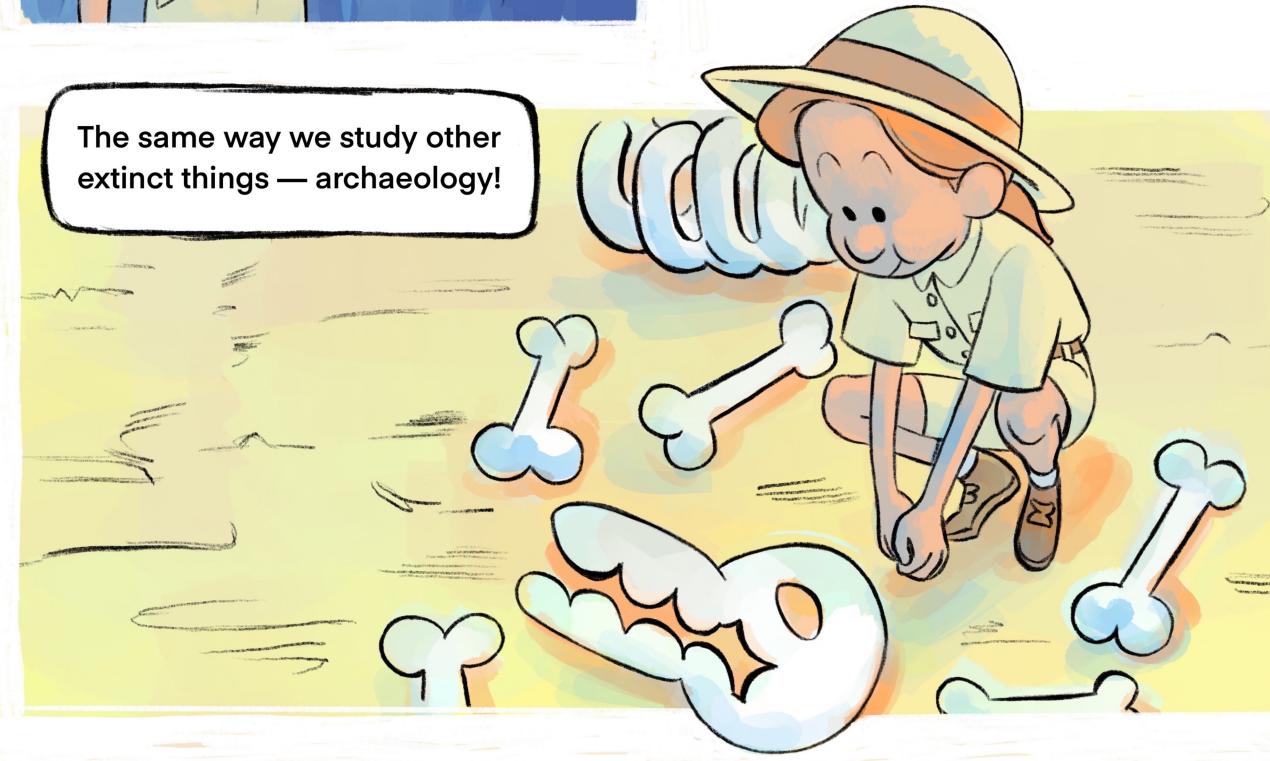
More like our beautiful scrapyard!

Wait, what!?

The stars in our galaxy didn't all just appear together. They include stars from tons of older, smaller galaxies that formed long ago.

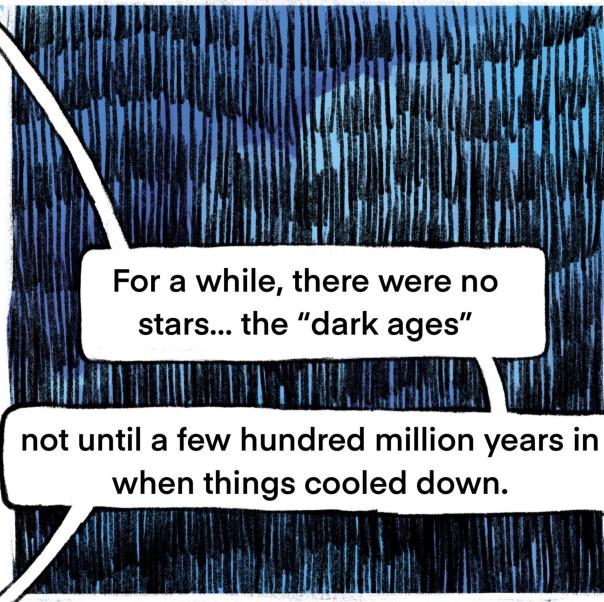
How do you know about something from so long ago?

The same way we study other extinct things — archaeology!



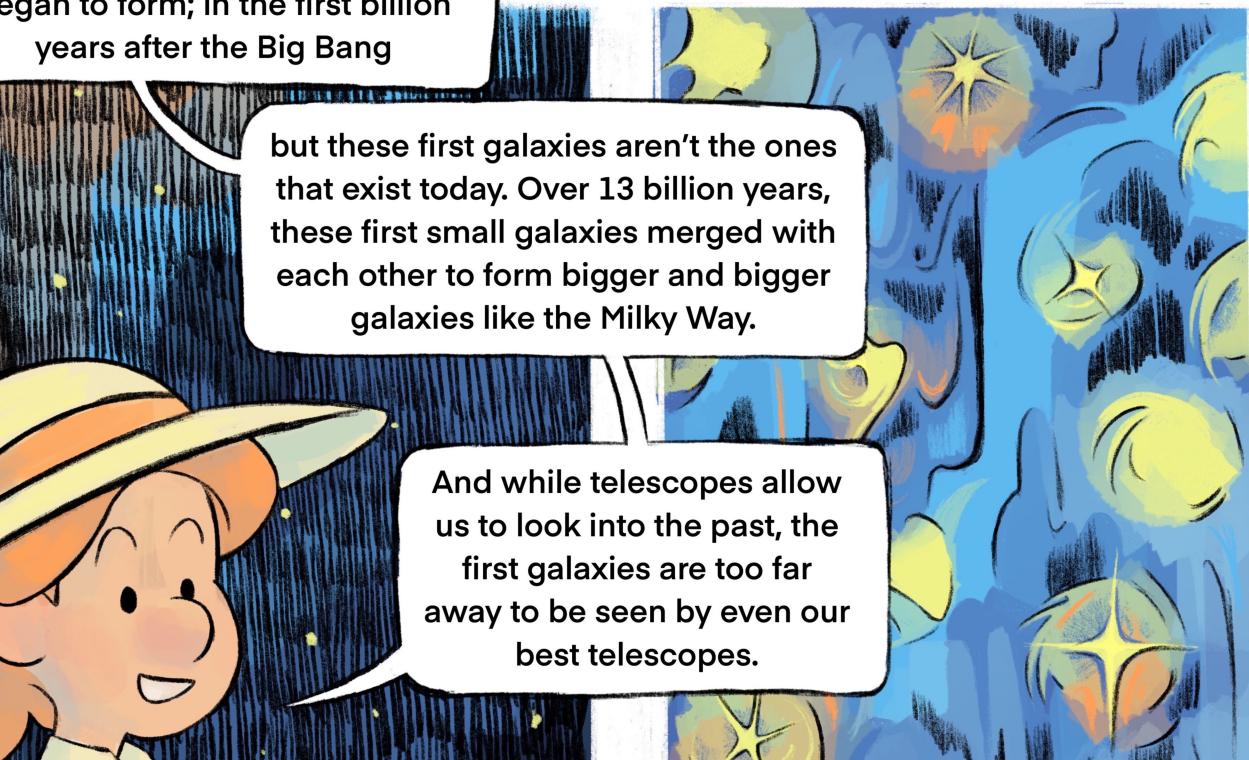


Time started about 13.7 billion years ago with the Big Bang, and at first everything was hot and dense



For a while, there were no stars... the "dark ages"

not until a few hundred million years in when things cooled down.



that's when our first galaxies began to form; in the first billion years after the Big Bang

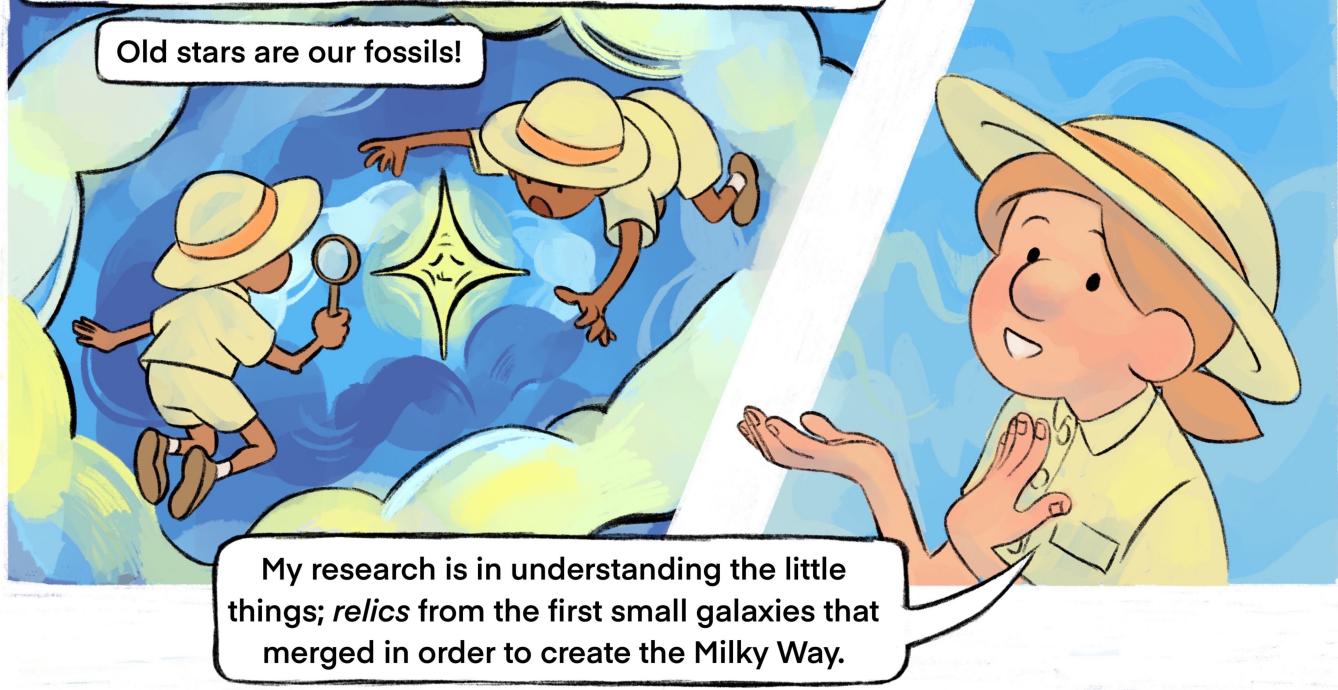
but these first galaxies aren't the ones that exist today. Over 13 billion years, these first small galaxies merged with each other to form bigger and bigger galaxies like the Milky Way.



And while telescopes allow us to look into the past, the first galaxies are too far away to be seen by even our best telescopes.

We galactic archaeologists study the history of the Milky Way Galaxy by observing the old stars we can find today.

Old stars are our fossils!

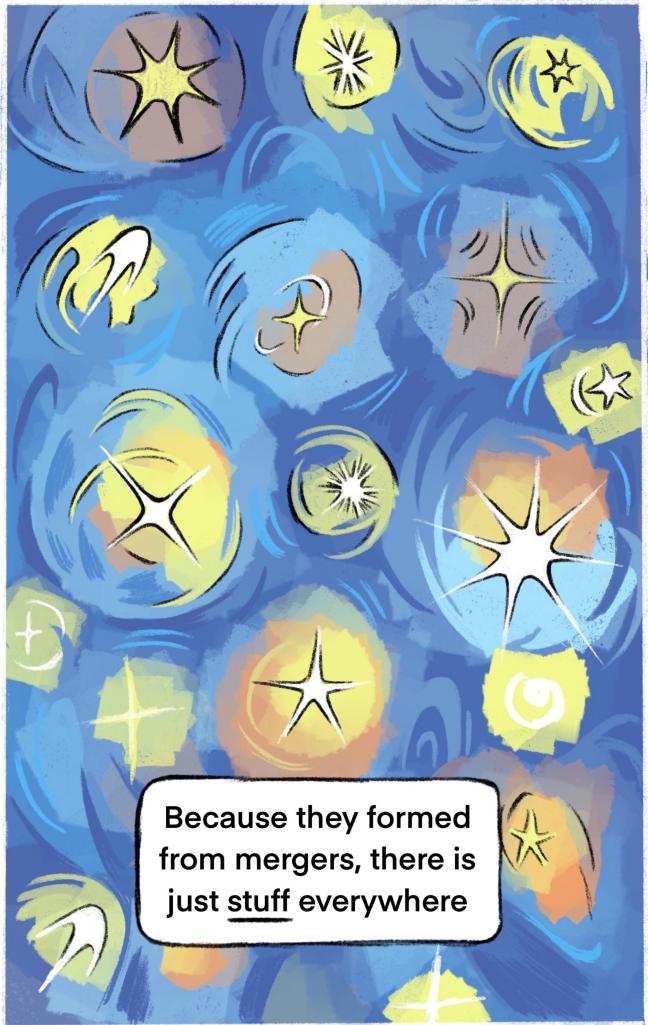


My research is in understanding the little things; *relics* from the first small galaxies that merged in order to create the Milky Way.

Galaxies are our dig sites



Because they formed from mergers, there is just stuff everywhere



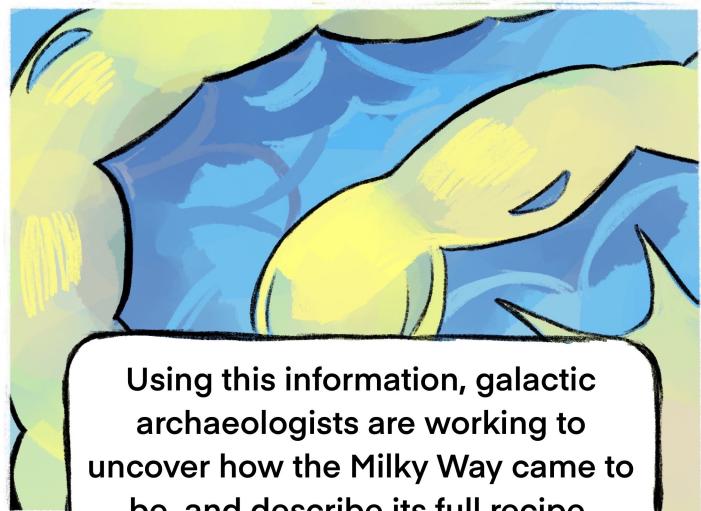
I find and classify fossils through  
chemical abundances—



Measuring this gives you the  
“barcode” of *chemical composition*  
of the star, helping us place where  
and when it’s from.



when light comes through a prism,  
you’re able to see the intensity at  
different wavelengths of light



Using this information, galactic  
archaeologists are working to  
uncover how the Milky Way came to  
be, and describe its full recipe.

Just beautiful. Glad our Milky  
Way is now here to stay.

Actually, it’s going to  
merge with another galaxy  
in 4.5 billion years!

Wait, what??

