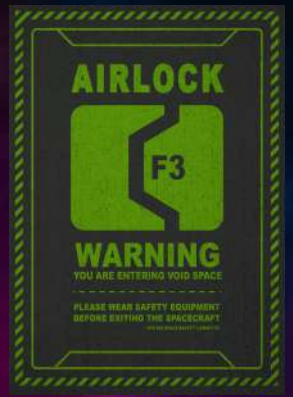
1.3 Evidence for Big Bang Part 2

Warning!

- When the slides say turn and talk, do this.
- When the slides say check with a teacher, do that!
- Moving ahead without understanding what you are learning will cause a lot of confusion.



Work with at least 1 other person. Get team points

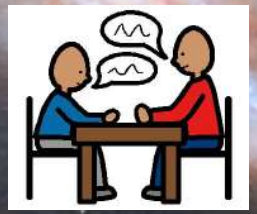
Symbols For This lesson

DO NOT need to write

SOMETHING to write in notebook

Read

Talk to a neighbor at your table, yes really do this!

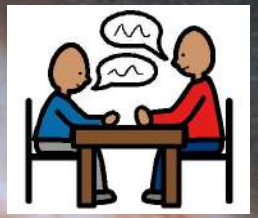


Talk to the teacher!

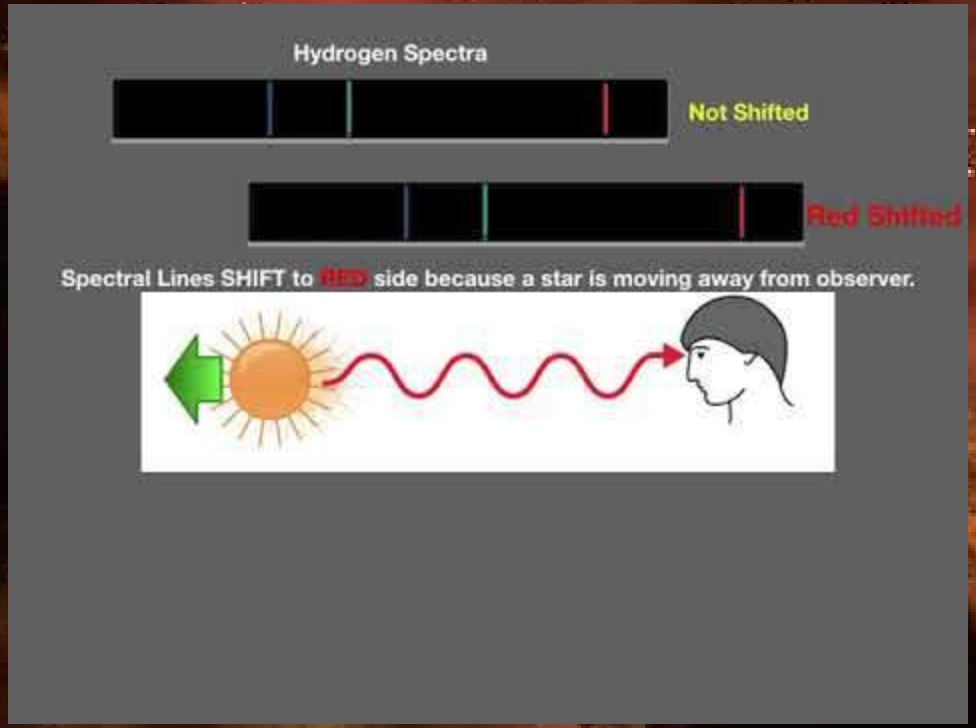
Review Again, This is a big Deal

What elements do we find in all stars?

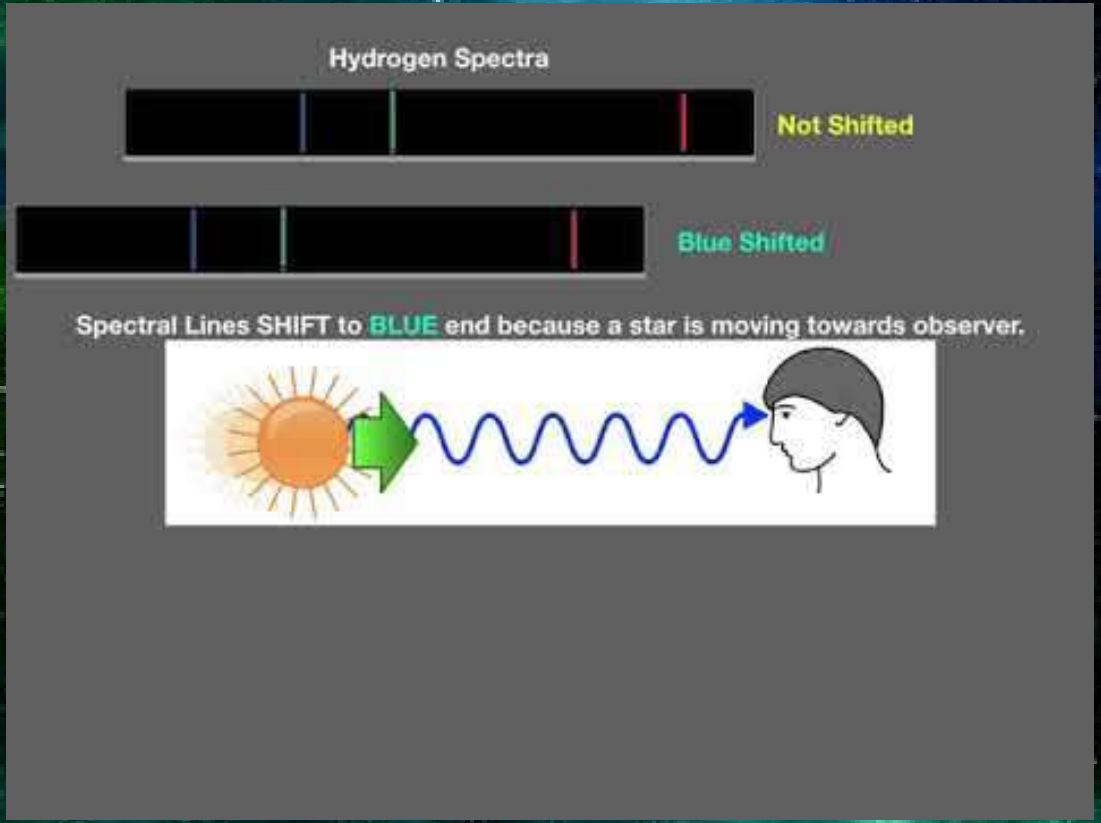
Tell the teacher your answer!



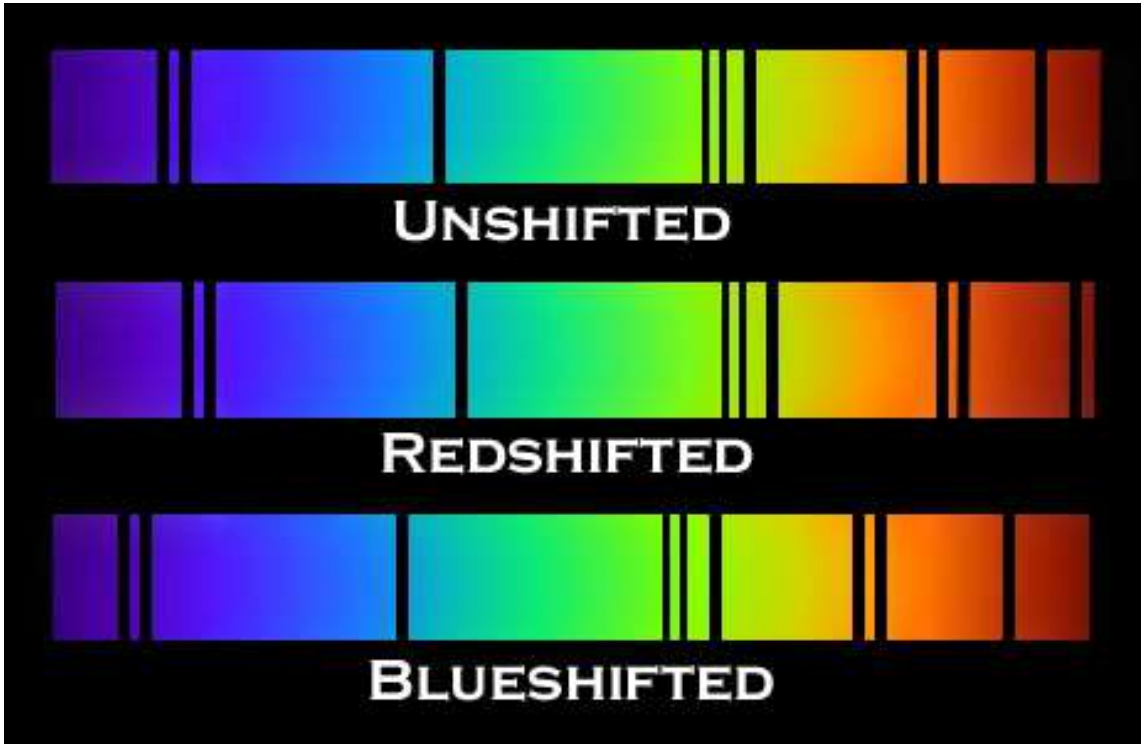
Redshift Animation



Blue Shift Animation



Redshift and Blueshift on Spectra

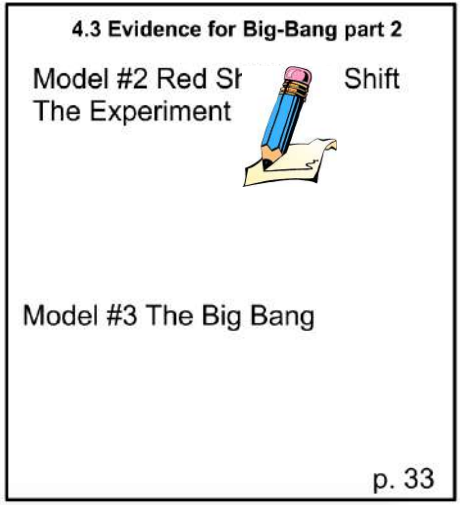


What happens to the spectral lines if a star is moving away from you? Towards you?

Experiment Question

What does the evidence from the stars tell us about the direction stars in the universe are moving?

Do not answer the question yet!



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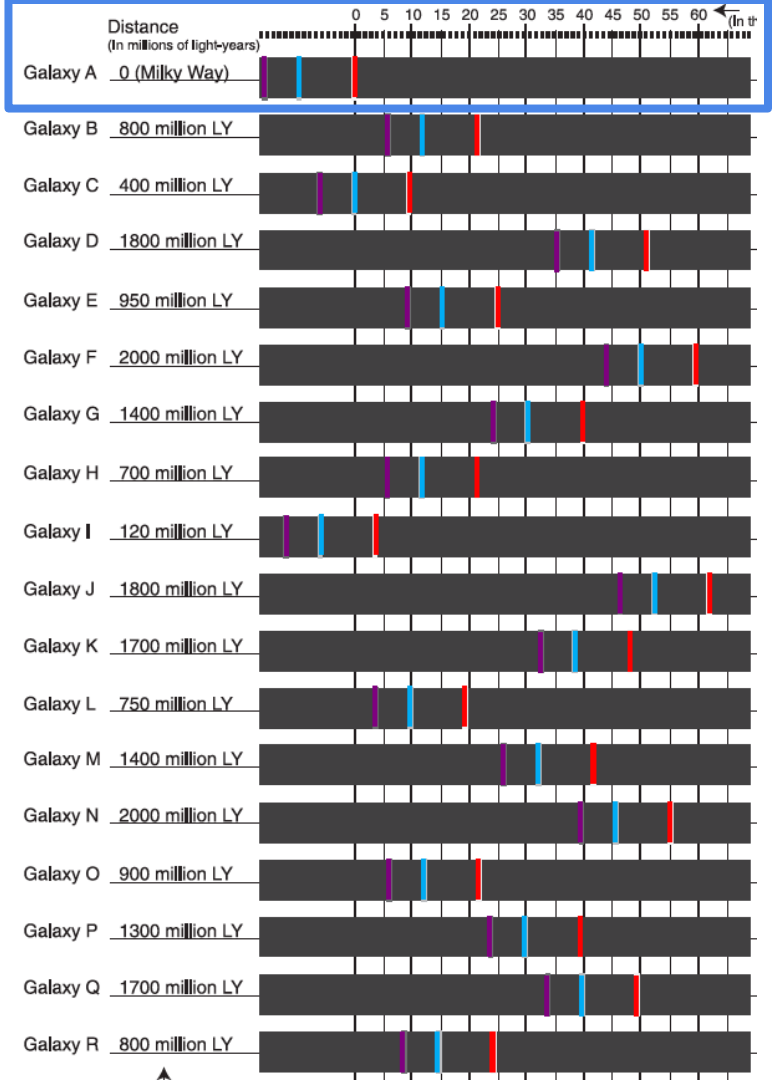
Interpreting the data

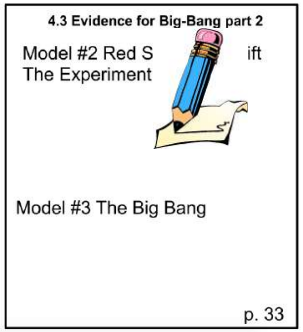
Galaxy / Light-years away	Wave length (cm) 21.00	21.10	21.20	21.30
Stars in the Milky Way / A few light-years	II			
Ursa Major / 1,000,000,000		II		
Corona Borealis / 1,400,000,000		II		
Bootes / 2,500,000,000			II	
Hydra / 3,960,000,000				II

Our Home Galaxy

Our Home Galaxy

Explore MORE Data





Write a Claim and Evidence

Write a claim that answers our experiment question: What does the evidence from the stars tell us about the direction stars in the universe are moving relative to the observer on Earth? Remember that a good claim includes a short description of how the data was collected. Evidence will include numbers

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