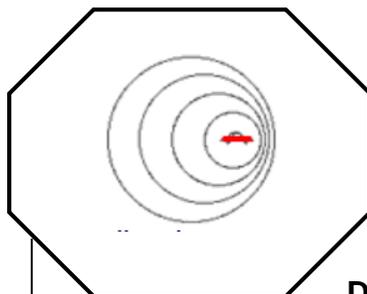


# The FRAME

## Key Topic The Doppler Effect

*is about . . .*

gathering evidence for how objects move in our universe using evidence from wave behavior.



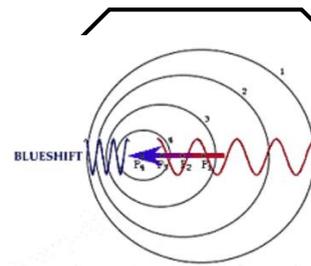
**Main Idea**

sound

**Details**

High pitch moving toward you  
Low pitch moving away from you

- \_\_\_\_\_
- Police sirens moving toward  
and away from you shift pitch
- Police RADAR uses the doppler  
effect
- Allows you to predict the  
velocity of a moving object



**Main Idea**

light

**Details**

Blue shift moving toward you  
Red shift moving away from you

- \_\_\_\_\_
- Almost everything is red shifted based  
on Hubble Telescope Observations
- Only stars move fast enough for this  
effect to be observed
- Means the universe is  
expanding
- Called Red Shift

Extension:  
Draw and  
explain how the  
doppler effect  
would come into  
play for a bug  
walking on  
water.

**So What?**

We can use our observations of red shift and the doppler effect to support the big bang theory and the doppler effect to understand the shifts in frequency moving objects have.