**Wiser.me BBT Main Idea Handout** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_

Use the following website to complete the questions: [https://app.wizer.me/learn/](https://app.wizer.me/learn/UCPAUE)[VB86YH](https://app.wizer.me/learn/VB86YH)

**Who’s Important**

What electromagnetic property did Edwin Hubble discover? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What observation did Hubble make to discover the property? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The Doppler Effect**

Long wavelength = Low \_\_\_\_\_\_\_\_\_\_ Small wavelength = High \_\_\_\_\_\_\_\_\_\_

Sketch a picture of the doppler effect – copy the one on the site or create your own. Focus on the difference in the waves around the object.

Describe how the sound heard by each individual in the picture is different and why.

Burglar:

Police officer:

**What is Red Shift? –** Watch the video!

**Electromagnetic Spectrum**

Spectrum – range of wavelengths, shown as a band of colors.

Copy down the facts.

What color are the longest wavelengths on the visible light spectrum? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Which color light has the lowest frequency? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Copy/write the completed “Fill-in-the-blanks” statement in the space below.

**Red Shift on EM Spectrum**

How do scientists used the black lines shown on the spectrum?

If a star is moving away from us what color will the light appear? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Absorption Line Challenge Question**

What 3 elements are in the Mystery Sun?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Red Shift Conclusion**

Rewrite the conclusion in your own words to explain red shift.

**Who’s Important / Cosmic Microwave Background (CMB) Radiation**

Cosmic Microwave Background is left over \_\_\_\_\_\_\_\_\_\_\_\_\_ from the Big Bang.

Where is CMB coming from? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Where scientists looking for CMB? Yes or No

**Composition of the Universe**

What elements does the universe mainly consist of and in what percent?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_

**Who’s Important?**

Who coined the phrase “Big Bang”? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Summarize the 3 main pieces of evidence for the Big Bang Theory in the space below.