**Chapter 13 – Measuring Properties of Stars**

KUDO’s (Know, Understand and Do!)

**Section 13.1 – Measuring Star’s Distance**

**Know:** Triangulation, Parallax, Parsec, Method of Standard Candles

**Understand:**

* Measure Distance by Triangulation and Parallax
* Measure Distance by the Standard-Candle Method

**Be able to DO:**

* Measure distance to Sirius

**Assignments:**

1. Read pages 337-341

2. Guided Notes & PPT

3. Vocabulary from Know

4. Whiteboard questions: **QFR:** 1-3; **Problems:** 1, 2

**Section 13.2 Measuring The Properties of Stars from Their Light**

**Know:** Wiens’ Law, Luminosity, Inverse-Square Law, Giants, Dwarfs, Magnitudes

**Understand:**

* The temperature of the stars and how it’s related to properties
* The luminosity is related to its properties
* The inverse-square law and measuring a Star’s luminosity
* The radius is related to the star’s properties
* The magnitude is related to the brightness of stars.

**Be able to DO:**

* Be able to solve Wein’s law problems

**Assignments:**

1. Read pages 341-348

2. Guided Notes & PPT

3. Vocabulary to know

4. Whiteboard questions: **QFR:** 4-7 **Problems:** 5,6

**Section 13.3 Spectra of Stars**

**Know:** Spectral Types, Radial Velocity

**Understand:**

* Measuring a Star’s Composition
* How Temperature Affects a Star’s Spectrum
* Classification of Star Spectra
* Definition of Spectral Types
* Measure a star’s motion

**Be able to DO:**

* Determine the speed of a star

**Assignments:**

1. Read pages 3

2. PPT & guided notes

3. Whiteboard questions: **QFR:**  13-17 **TQ**: 9

**Section 13.4 & 13.5 Binary Stars (Summary)**

**Know:** Binary Stars, Spectroscopic Binary, Eclipsing Binary

**Understand:**

* Visual & Spectroscopic Binaries
* Measuring Stellar Masses with Binary Stars
* Eclipsing Binary Star

**Be able to DO:**

* Calculate the mass of a binary mass

**Assignments:**

1. Read pages 355-358

2. Guided Notes & PPT

3. Whiteboard questions: **QFR:** 11-13 **Problems** EC 13 & 14

**Section 13.6 H-R Diagram**

**Know:** H-R Diagram, Main Sequence, Red Giants, White Dwarfs, Mass-Luminosity Relation

**Understand:**

* Giants & Dwarfs
* Mass-Luminosity Relation
* Luminosity Classes

**Be able to DO:**

* Analyze & Construction a H-R Diagram

**Assignments:**

1. Read pages 3355-364

2. Guided Notes & PPT

3. Whiteboard questions: **QFR:** 14-18

4. H-R Activity

**Section 13.7 Variable Stars & 13.8 Finding a Star’s Distance by the Method of Standard Candles**

**Know:** Variable Stars, Period

**Understand:**

* Variable Stars
* Standard Candles Method

**Be able to DO:**

* Calculate distance by the Method of Standard Candles

**Assignments:**

1. Read pages 364-365

2. Guided Notes & PPT

3. Whiteboard questions: **QFR:** 19-21