Grade 10-12
Distance Learning Module 10: Week of:

Physics Level 2 - *Modified from Unit # 8: Light*

Targeted Goals from Stage 1: Desired Results

Content Knowledge:

- light may be represented by a wave or a particle based on observations made
- the electromagnetic spectrum is divided into subsegments based on the energy of the wave and the applications to society
- the speed of all electromagnetic waves is the same ; higher energy waves have higher frequencies and lower wavelengths
- light reflects off of surfaces; smooth surfaces cause images to form and rough surfaces do not
- optical instruments make use of the reflection and refraction of light
- light bends as it moves from one media to another due to the change of the speed of light in the media

Vocabulary:

- Waves
- Crests
- Troughs
- Frequency
- Wavelength
- Amplitude
- Speed of wave travel
- Longitudinal
- Transverse
- Period
- Energy
- Vibration
- Reflection
- Refraction
- Constructive Interference

- Destructive Interference
- Electromagnetic radiation
- Wave model of light
- Particle model of light
- Medium
- Color mixing
- Polarization
- Mirrors
- Lenses
- optical instruments

Skills:

- calculate the wavelength, frequency or speed of an electromagnetic wave given 2 of the 3 variables
- calculate the angle of refraction of light
- determine the direction of bending of light based on the index of refraction of the media

Expectation:

Description of Task (s):	**Resources and Materials:**	**Daily Checks (Return to Google Classroom or snapshots from a cell phone)**
Monday:	• Weekly schedule that is posted on the Google Classroom • Notes that are posted on the Google Classroom • Posted videos - On Google Classroom • Kurzgesagt video on light • UTexas • Physics Classroom Light • Textbook, posted on the Google Classroom	Students are to watch video and leave comments/attend live class section where they comment what they've learned or else questions that they have

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Tuesday: Students are to attend live class session as needed Students are to complete brief UTexas on material from day before	• Weekly schedule that is posted on the Google Classroom • Notes that are posted on the Google Classroom • Posted videos - On Google Classroom • Kurzgesagt video on light • UTexas • Physics Classroom Light • Textbook, posted on the Google Classroom	Students are to attend live sessions as needed Students are to complete UTexas assignment
Wednesday: Students are to watch video(s) reviewing the material and take notes	• Weekly schedule that is posted on the Google Classroom • Notes that are posted on the Google Classroom • Posted videos - On Google Classroom • Kurzgesagt video on light • UTexas • Physics Classroom Light • Textbook, posted on the Google Classroom	Students are to attend live sessions as needed Students are to complete UTexas assignment
Thursday: Students are to work on UTexas that is due Friday review videos as needed	• Weekly schedule that is posted on the Google Classroom • Notes that are posted on the Google Classroom • Posted videos - On Google Classroom • Kurzgesagt video on light • UTexas • Physics Classroom Light • Textbook, posted on the Google Classroom	Students are to watch video and leave comments/attend live class section where they comment what they've learned or else questions that they have
Friday: Students will take end of unit quiz/quest on UTexas platform	• Weekly schedule that is posted on the Google Classroom • Notes that are posted on the Google	Participation in Google Meets meetings as required/needed Use of UTexas platform

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
	Classroom ● Posted videos - On Google Classroom ● Kurzgesagt video on light ● UTexas ● Physics Classroom Light ● Textbook, posted on the Google Classroom	

Week criteria for success (attach student checklists or rubrics):*Greater than 75 % earned on University of Texas on-line Homework and Assessment (accounts required), checking in with teacher regarding Zoom/e-mail as needed, completing the comments/questions as needed on Google Classroom/E-mail/in person sessions*

Supportive resources and tutorials for the week (plans for re-teaching): Khan Academy, PhET, Physics Classroom Tutorials, Flipping Physics videos, teacher made videos, Crash course physics videos, textbook