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| Wednesday, June 10, 2020 -  Optics | | |  |  |  |  |
|  | 10:00 | 10:45 | Session 1: Taking Light apart and putting it back together | | |  |
|  |  |  | 10:00 | 10:10 | Introduction to the equipment | Asia |
|  |  |  | 10:10 | 10:15 | Discuss Rainbows - demo with glass of water | Laurie |
|  |  |  | 10:15 | 10:25 | Make rainbow with triangular prism and flashlight | Laurie |
|  |  |  | 10:25 | 10:30 | Make rainbows with diffraction grating and flashlight | Laurie |
|  |  |  | 10:30 | 10:40 | Make different colors/white with colored flashlights | Asia |
|  |  |  | 10:40 | 10:45 | Make different colors bend differently | Asia |
|  | 10:45 | 11:00 | Break |  |  |  |
|  | 11:00 | 12:00 | Session 2: Reflection and Refraction | | |  |
|  |  |  | 11:00 | 11:10 | Laser Safety Talk | Adriana |
|  |  |  | 11:10 | 11:15 | Demo reflection/refraction with water tank | Laurie |
|  |  |  | 11:15 | 11:20 | Play with laser box and prisms | Asia |
|  |  |  | 11:20 | 11:45 | Snell's Law calculation | Hubert |
|  |  |  | 11:45 | 12:00 | Total Internal Reflection - Water bottle | Hubert |
|  | 12:00 | 1:00 | Social Lunch | |  |  |
|  | 1:00 | 2:15 | Session 3: The Wave Nature of Light | | |  |
|  |  |  | 1:00 | 1:10 | What is light? | Laurie |
|  |  |  | 1:10 | 1:25 | Definitions, wavelength, constructive/destructive interference | Hubert |
|  |  |  |  |  | Hubert's strips, EM chart | Hubert |
|  |  |  | 1:25 | 1:35 | Interference pattern - laser with diffraction grating | Laurie |
|  |  |  |  |  | Online Ripple Tank app |  |
|  |  |  | 1:35 | 1:55 | Interference pattern - cloth | Hubert |
|  |  |  |  |  | Calculate the wavelength of a laser |  |
|  |  |  | 1:55 | 2:15 | Talk about lasers | Adriana |
|  | 2:15 | 2:30 | Break |  |  |  |
|  | 2:30 | 4:00 | Session 4: | |  |  |
|  |  |  | Spectroscopy | |  |  |
|  |  |  | 2:30 | 2:50 | Astrophysics Lecture | Asia |
|  |  |  |  |  | Demo with the Rspect Explorer | Laurie |
|  |  |  | 2:50 | 3:15 | Build the spectroscope | Asia |
|  |  |  | Unseeable Wavelengths | | |  |
|  |  |  | 3:15 | 3:30 | Infrared demos (IR camera, temperature meter, rainbow temp) | Laurie |
|  |  |  | 3:30 | 3:45 | Ultraviolet |  |
|  |  |  |  |  | fluorescence and phosfl. Demos | Asia |
|  |  |  |  |  | Invisible ink pens - search for glowing objects |  |
|  |  |  | 3:45 | 4:00 | laser microscope | Laurie |