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Experimental spectroscopy for the high-school Physics curriculum RAJEEV KINRA, A&M Consolidated High School, ADONIOS KARPETIS, Texas A&M University — The present work explores the feasibility of including spectroscopic experiments in high-school physics curricula. Two experimental optics "modules" were constructed for this purpose: (a) a simple CCD detector, in combination with appropriate filters, was used for the measurement of solar spectra and the determination of the sun's surface temperature; (b) the same detector was used, in combination with a transmissive diffraction grating and some miniature optics, to form a spectrophotometer that can be used for the determination of spectra with high resolution. Both modules were designed and constructed with portability and low cost in mind, and their objective is to introduce experimental spectroscopy to high school students in an intriguing, educational and phase-appropriate manner without sacrificing scientific rigor. A large variety of experiments may be designed around the basic devices that were built during this work, and a number of possible examples will be presented, from research on plant phototropism to human color cognition.

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