



## Seeds

<p><b>Title</b></p>	<p><b>SPECTROSCOPE</b></p>
<p><b>Description</b></p>	<p>Natural processes must be investigated and understood. Statement n. 8 in the Ethical Charter sets knowledge as the fundamental requirement to enable us to act sensibly, responsibly and in full awareness.</p> <p>“Light” is one of the many fascinating mysteries in this world which is worth while investigating, be it the one coming from the Sun or that coming from other sources, like the Moon, the comets, the stars... but also, why not, from the different kinds of light bulbs that illuminate our cities.</p> <p>So, creating a simple piece of equipment to investigate light is an important step to gain a deeper awareness of the world that surrounds us.</p> <p>The spectroscope is a particularly ancient instrument. Its origin may date back to Newton’s experiment when, while decomposing white light, he realized that it was actually made up of the rainbow colours. Spectroscopy investigates the nature of light and matter: through a dispersive element, it makes it possible not only to study light but also to create its ‘identity card’.</p>
<p><b>Materials and Time needed</b></p>	<p>Necessary materials</p> <ul style="list-style-type: none"> <li>• Spectroscope Card (see “Materials” Section in the Manual)</li> <li>• Scissors</li> <li>• Sticky tape</li> <li>• Cutter</li> <li>• CD (an old one, to be sliced)</li> </ul>
<p><b>Instructions</b></p>	<ul style="list-style-type: none"> <li>• Cut out the Spectroscope Card along the broken line (see “Materials” Section)</li> <li>• With the cutter, be very careful to cut the two slits along the broken lines</li> <li>• Fold up, following the instructions on the card, making sure the inner side to be the black one</li> <li>• Cut up the CD into 5 identical slices (while cutting, the reflecting side may flake out in splinters, in which case, these pieces will have to be discarded)</li> <li>• Insert a slice of the CD into the slit which formed by folding the instrument up</li> <li>• Cover the openings with sticky tape, making sure light cannot filter through</li> <li>• Set your eye on one slit (as shown in the figure) and position the other slit towards a source of light</li> <li>• Observe</li> </ul> <p>White light is not white and not all whites are the same shade; every light has a different composition.</p>

