TEACHERS Serving TEACHERS!®

Educational Innovations, Inc.®

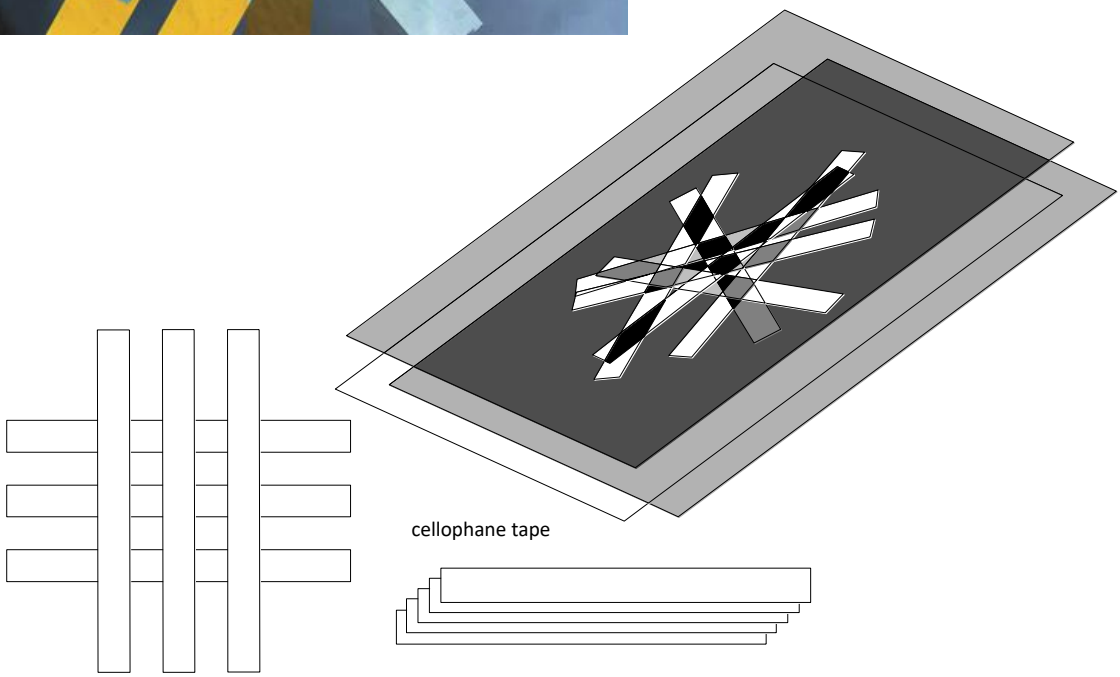
# Polarizing Tape Demo Kit

PF-7A

Use the special cellophane tape to create designs on a sheet of acetate.

Then examine the results by placing it between two crossed polarizing filters.

Rotate one of the filters.





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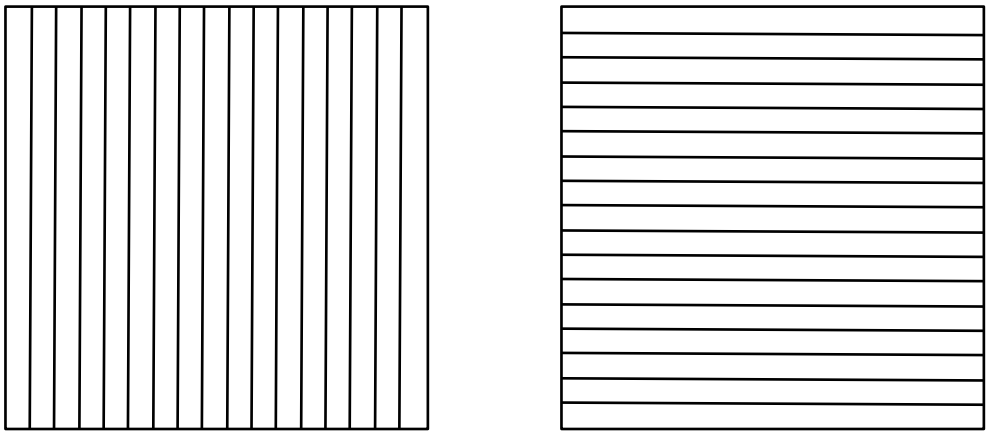
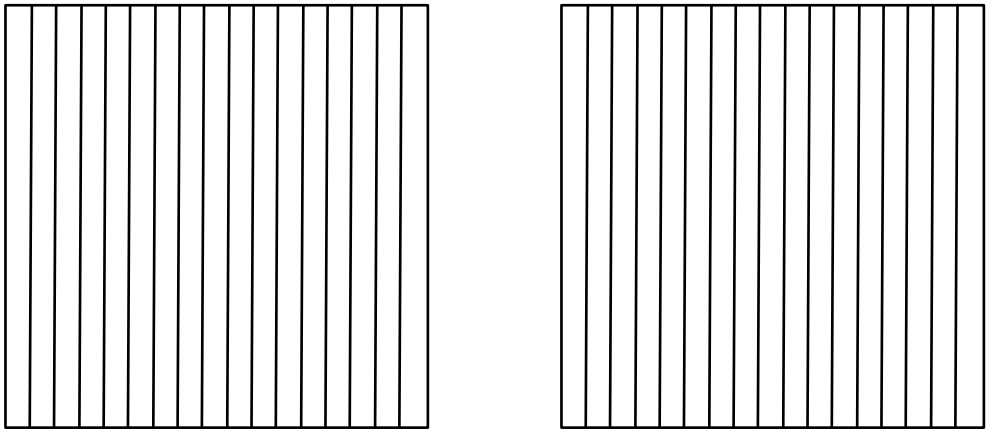
# POLARIZERS



Only vertically oriented light waves may pass through the polarizing filter on the left. Only horizontally oriented light waves may pass through the filter on the right. If the filter on the left is placed on top of the filter on the right, no light will be able to pass through at all.



If the polarizing filters are aligned parallel to each other, light may pass freely through both filters. By placing transparent objects between two polarizing filters, it is possible to identify those materials which rotate polarized light!

***Try sandwiching a plastic baggie between two filters and stretching it. When certain plastics are put under stress, they rotate polarized light. Try placing transparent tape between two polarizing filters. Some brands of tape work better than others. The more layers of tape, the more the light is rotated.***

***GOOD LUCK!***

# Take Your Lesson Further

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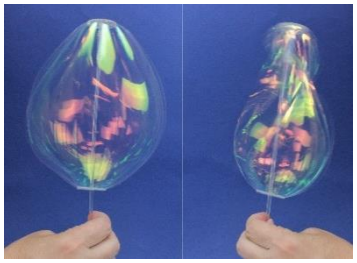
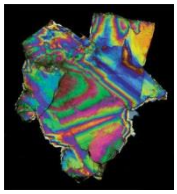
To extend your lesson, consider these Educational Innovations products:

## Centripetal Spinner (PHY-250)



The prettiest demonstration of centripetal force and inertia we've ever seen! This perky, iridescent device reflects a dazzling rainbow as it spins. Twirl the stick and the thin ribbons spread into a bubble shape. The faster you spin, the wider the bubble becomes! It can be gently twisted by hand to make a delicate "flower" that neatly tucks itself into a tight ball. Endlessly fascinating!



## Mica Demo Kit (PF-8)

When placed between two crossed polarizing filters, beautiful colors can be observed. Each different thickness appears as a different color. When one polarizing filter is rotated, the colors change. Each piece of mica is approximately 8 cm x 8 cm and about as thick as card stock. Includes two 2" x 2" polarizing filters to view effects.

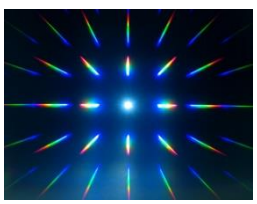
## Polarizing Filters (PF-3A, PF-4, PF-5 and PF-12)

These high quality plastic polarizing filters are perfect for all kinds of experimentation. Can be cut with scissors or an ordinary paper cutter. Available in various sizes from 2.75" to 39".

## Bismuth Crystal (RM-520)

These beautiful man-made crystals float to the top of a super-cooled bismuth melt and form within minutes. Bismuth is one of the few materials that have a greater density as a liquid than as a solid. Only a few other materials such as water, gallium, and germanium exhibit this property. The trigonal crystal structure accounts for the cubic formations. The iridescent rainbows of colors observed are caused by light scattering off thin layers of bismuth oxide formed when the surface of the hot bismuth reacts with the air. Specimens range from 12 to 17 g with a density of 9.81 g/cc. Great for teaching about crystals, states of matter, or even as a gift!

## Prism Glasses (PG-1)



These highly efficient, double axis, holographic diffraction grating lenses separate light from any source into its spectral components for study and analysis. Lenses are mounted in sturdy cardboard frames. Sold in sets of 10.