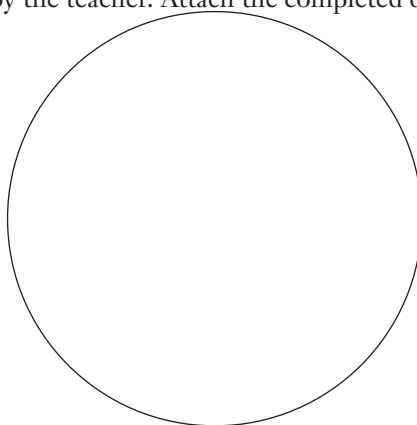


Chromatography Challenge Worksheet

Data Sheet

Draw a diagram in the circle below showing the pens and the pattern of ink spots (dots, lines, arcs, etc.) that were used to reproduce the art chromatogram created by the teacher. Attach the completed dry chromatogram to this worksheet.



Post-Lab Questions

1. List the brand of each pen tested in this activity and record the colors observed in each radial band pattern. For each pen, list the colors (pigments) from least mobile (greatest attraction to the paper—closest to the center) to most mobile (least attraction for the paper—closest to the outer edge).
2. Why does an ink separate into different pigment bands?
3. Do any of the pens or markers appear to contain common pigments? How can you tell if similar-colored pigments from different pens are actually the same compound? Do any similar-colored pigments appear to be different compounds?
4. Why were only water-soluble markers or pens used in this activity? How could the experiment be modified to separate the pigments in “permanent” markers or pens?