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 HYDROVILLE CURRICULUM PROJECT
 

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**Student Background Theme Evaluation**  
**Activity 4: Using Paper Chromatography**  
**(Questions 41 – 60 on Scantron Sheet)**

Now that you have completed the Using Paper Chromatography Activity, we would like you to answer a few questions about what you did and what you learned.

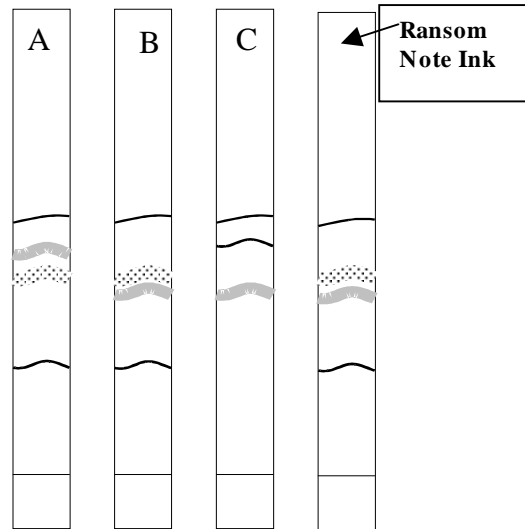
**CRIME SCENE INK**

Band #	Distance Traveled by Band (mm)	Distance Traveled by Solvent (mm)
1	25	100

41. The retention factor for Band #1 can be calculated as follows:

- A.  $R_f = 1/100$
- B.  $R_f = 25/100$
- C.  $R_f = 100/25$
- D.  $R_f = 25/75$

42. Which pen was likely to have been used to write the ransom note?



- A. Pen A
- B. Pen B
- C. Pen C
- D. None of the inks match the ransom note

43. Chromatography is a useful analytical tool because

- A. it identifies who committed a crime.
- B. it indicates what dyes are in inks.
- C. it is colorful.
- D. it separates mixtures of compounds into separate components.

**Listed below are a number of things that you did as part of the activity. Please indicate how interesting each one was to you.**

44. Preparing the ink samples for chromatography.

- A. Not at all interesting
- B. Slightly interesting
- C. Somewhat interesting
- D. Very interesting
- E. I didn't do this part

45. Conducting the chromatography test.

- A. Not at all interesting
- B. Slightly interesting
- C. Somewhat interesting
- D. Very interesting
- E. I didn't do this part

46. Calculating the retention factors for each of the dyes you analyzed.

- A. Not at all interesting
- B. Slightly interesting
- C. Somewhat interesting
- D. Very interesting
- E. I didn't do this part

47. Using the results of the chromatography analysis to solve problems.

- A. Not at all interesting
- B. Slightly interesting
- C. Somewhat interesting
- D. Very interesting
- E. I didn't do this part

48. Working together on this activity with other students as a team.

- A. Not at all interesting
- B. Slightly interesting
- C. Somewhat interesting
- D. Very interesting
- E. I didn't do this part

49. How much writing have you done in your Hydroville Learning Log about this activity? (mark only one answer)

- A. Quite a bit (a page or more)
- B. Some writing (about a half page)
- C. A little bit (a few lines)
- D. I haven't done any writing

50. If you HAVE NOT done any writing in your Hydroville Learning Log about this activity, what are your reasons? (mark all answers that apply)

- A. I haven't started a Hydroville Learning Log
  - B. I don't have time
  - C. I don't know what to write about
  - D. I'm not a good enough writer
  - E. Other:
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**Part of this activity involved working with other students in a team. In working on this activity, how difficult did you find each of the teamwork elements listed below?**

51. Expressing my ideas verbally to others.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

52. Listening to others.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

53. Staying on task with the group.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

54. Asking teammates for help.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult

E. Too difficult for me to do  
55. Receiving criticism from other team members.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

56. Giving praise to the ideas or work of others.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

57. Getting along with everyone on the team.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

58. Using my time efficiently.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

59. Overall, how well would you say your team worked together on this activity?

- A. Worked very well
- B. Worked well
- C. Worked OK
- D. Worked poorly
- E. Worked very poorly

60. Overall, how would you rate your experience of teamwork on this activity?

- A. Very positive
- B. Positive
- C. Neither positive nor negative
- D. Negative
- E. Very negative