



# ASSUMPTION ENGLISH SCHOOL

## SCIENCE DEPARTMENT

### Lower Secondary Science

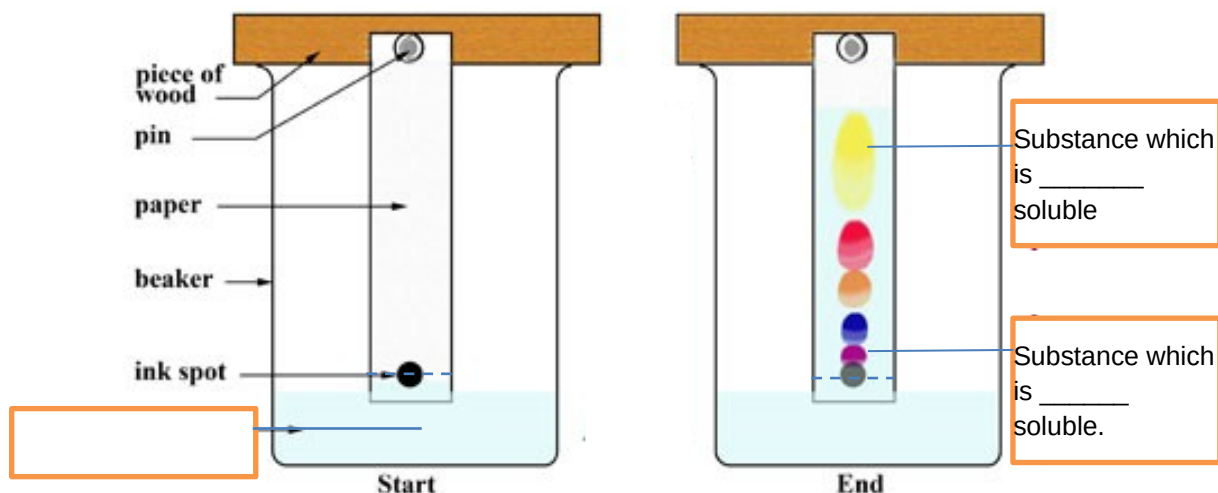
Chap 4 – Exploring Diversity of Matter Using Separation Techniques  
WS 4.4B – Paper Chromatography

Overall Attainment  
Level:



Name: ..... ( ) Class: ..... Date: .....

- 1 Fill in the blanks in the boxes of a paper chromatography set-up.



- 2 What is the use/purpose of paper chromatography?

To separate a \_\_\_\_\_ into \_\_\_\_\_

- 3 How can paper chromatography help to identify pure substances?

\_\_\_\_\_

- 4 What property must the ink spots have to be investigated using paper chromatography?

\_\_\_\_\_

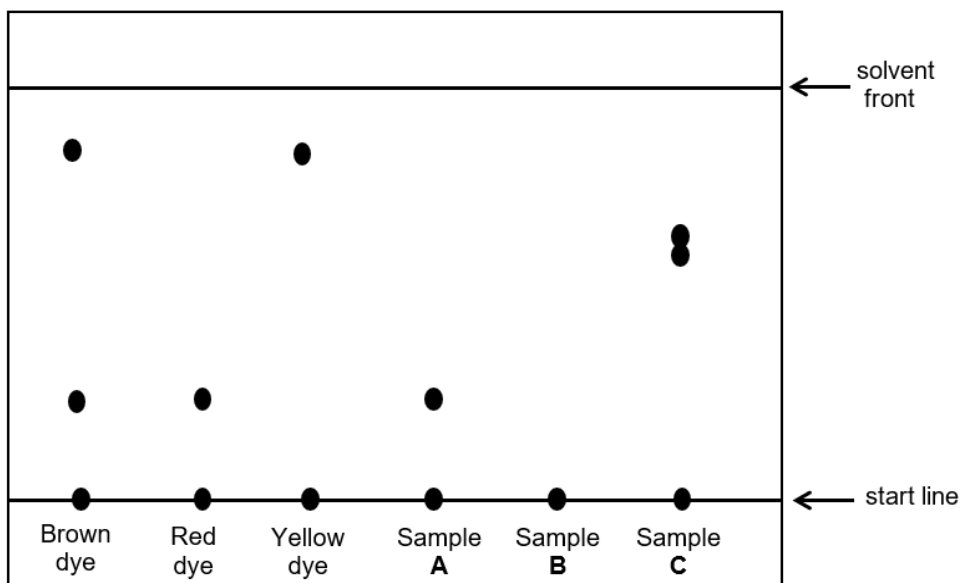
- 5 Why should the start line be written in pencil instead of a pen?

\_\_\_\_\_

### Assessing my Learning





No	Criterion	Attainment Level 1	Attainment Level 2	Attainment Level 3	Attainment Level 4	Level Achieved
1	I am able to label all parts of a paper chromatography.	1 to 3 blanks	4 to 5 blanks	6 to 7 blanks	8 blanks	
2,3,4,5	I understand the uses of paper chromatography.					

- 6 A student carried out paper chromatography on some samples of food colouring samples, **A**, **B** and **C**. The results are compared with approved brown, red and yellow dyes. The result of the chromatogram is shown below.



- (a) Which of the samples **A**, **B** or **C**, is a pure substance?  
Explain your answer.
- \_\_\_\_\_
- (b) Suggest a reason why sample **B** does not separate into its components.
- \_\_\_\_\_
- (c) Sample **C** separates into two components which overlap in the chromatogram.  
Suggest what can be done to ensure that the components are well-separated.
- \_\_\_\_\_
- (d) Which approved dye is present in Sample **A**?
- \_\_\_\_\_
- (e) Which dye, red or yellow, is more soluble in the solvent?  
Explain your answer.
- \_\_\_\_\_

### Assessing my Learning

No	Criterion	Attainment Level 1 	Attainment Level 2 	Attainment Level 3 	Attainment Level 4 	Level Achieved
6	I am able to interpret paper chromatography.	1 to 2 parts	3 parts	4 parts	All 5 parts	