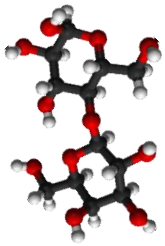
Student Number:

Name:



Molecules big and small, and Designer Stuff

Pgs. 146-148

ENGLISH	
Melting Point	
Guttering	
Cross-links	
Now that	
Tangle	
Rub	
Sulfur	
Weaken	
Bond	
Added	
Vulcanisation	
Plasticisers	
Crack	
Frame	
Lock	
Harden	
Lump	
Only that it did	
Bend	
Durable	
Rubber	
Pull apart	
Represent	
PVC	
Slide	
Rub away	
Wear away	
Wax	
Oily Liquid	
Inventor	
Separate	
Jumble	

	JAPANESE
1	ロウ
2	かたまり
3	結合
4	滑るように進む
5	融点・溶解点
6	引き離す
7	ごちゃ混ぜになる
8	ひびが入る
9	からまる
10	曲げる
11	すり減る、擦り切れる
12	発明者
13	単にそうなった
14	からみあう
15	クロスリンク、架橋
16	ゴム
17	表す
18	かたくなる、固まる
19	硫黄
20	加硫、硫化
21	こする
22	今や--- なので
23	こすって消す
24	分離する
25	加えられて
26	弱める
27	ポリ塩化ビニル
28	油を含んだ液体
29	枠
30	耐久性のある
31	可塑剤
32	溝

Molecules big and small

When taking notes please draw lots of pictures

1. In a polymer, what does the length of the molecules effect?

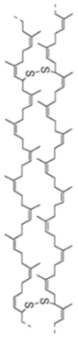
2. When materials are pulled apart, what happens to the molecules and why?

3. Which is stronger: wax or polythene? Explain in terms of the size of the molecules and the strength of the forces between them.

4. Why is a milk bottle made of polythene instead of wax?

Designer stuff

5. What does the process of vulcanization do?



Cross Links

6. What are cross-links? What do cross-links do to rubber?

7. Explain the differences in the properties of natural rubber and cross-linked rubber. Use ideas about molecules in your answer.

Plasticisers

8. Write down two properties of PVC that make it good for making window frames, and two properties of plasticised PVC that make it good for clothing.

9. What is a plasticiser? What does it do?

10. Explain the differences in the properties of the two types of PVC. Use ideas about molecules to answer.