

Activity: Describing and Identifying Substances

Name: _____

Mark: _____ / 130

Most scientific experiments depend on accurate description of matter. The properties in the following table are commonly used to distinguish between one sample of matter from another.

PROPERTY OF SUBSTANCE	DESCRIPTION CHOICES
1. physical state	solid, liquid, gas
2. colour	could be any colour -- red, blue, green, yellow, etc.
3. odour	spicy, sweet, sour, strong, nauseating, lemony, etc.
4. clarity	clear, cloudy, opaque (cannot see through it)
5. lustre	shiny, dull
6. texture	how does it feel? -- fine, coarse, smooth, silky, waxy
7. malleability	can it be bent or flattened? -- malleable, non-malleable
8. viscosity	how does it flow? -- thin, thick, runny, syrupy

PROCEDURE:

- Examine each sample of matter carefully and describe it as thoroughly as possible, using the checklist of properties from the table above (you will not use all 8 properties for every sample of matter). Fill in the "Table of Substances" found on the back of this page. Identify each substance in the table by choosing from the following list of substances:

bluestone	salt	parafin wax	flour	cornstarch
sulphur	aluminum foil	detergent	sugar	alcohol
vegetable oil	water	talcum powder	vinegar	ginger
cinnamon	air	chlorine gas		

- Answer the Discussion Questions 1-4, immediately following the table, in the spaces provided.

Table of Substances:

SUBSTANCE #	DESCRIPTION	IDENTITY
1	1. 2. 3. 4. 8.	
2	1. 2. 3. 4. 5. 6.	
3	1. 2. 3. 4. 8.	
4	1. 2. 3. 4. 5. 6.	
5	1. 2. 3. 4.	
6	1. 2. 3. 4. 5. 6. 7.	
7	1. 2. 3. 4.	
8	1. 2. 3. 4. 8.	

9	1. 2. 3. 4. 5. 6.	
10	1. 2. 3. 4. 5. 6.	
11	1. 2. 3. 4. 8.	
12	1. 2. 3. 4. 5. 6. 7.	
13	1. 2. 3. 4. 8.	
14	1. 2. 3. 4. 5. 6.	
15	1. 2. 3. 4. 5. 6.	
16	1. 2. 3. 4. 5. 6.	

17	1. 2. 3. 4. 5. 6.	
18	1. 2. 3. 4. 5. 6.	

DISCUSSION:

1. a) Of the 8 properties used, which was the easiest to determine? Why?

b) Of the 8 properties used, which was the most difficult to determine. Why?

2. Of the 18 substances, which was the easiest to identify? Why?

3. Why is it important to be able to identify substances?

4. Choose a sample of matter (not from the lab) and describe it using all of the physical properties from the table.
