

NAME: \_\_\_\_\_

Complete the Table

DUE next time we meet

| Draw the Lewis Dot structure for the substance | State the substance's <u>ICAO</u> | Indicate the <u>geometry</u> about each atom in the substance | Is the substance <u>polar</u> or <u>nonpolar</u> ? | Is the substance <u>soluble</u> or <u>insoluble</u> in water? |
|------------------------------------------------|-----------------------------------|---------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------|
| H <sub>2</sub> O (water)                       |                                   |                                                               |                                                    |                                                               |
| NH <sub>3</sub> (ammonia gas)                  |                                   |                                                               |                                                    |                                                               |
| HF (hydrofluoric acid)                         |                                   |                                                               |                                                    |                                                               |
| HCl (hydrogen chloride)                        |                                   |                                                               |                                                    |                                                               |
| H <sub>2</sub> S (dihydrogen sulfide)          |                                   |                                                               |                                                    |                                                               |
| CO (carbon monoxide)                           |                                   |                                                               |                                                    |                                                               |
| SO <sub>2</sub> (sulfur dioxide)               |                                   |                                                               |                                                    |                                                               |

$\text{CH}_4$  (methane gas)

$\text{C}_2\text{H}_4$  (ethene gas)

$\text{F}_2$  (fluorine gas)

$\text{I}_2$  (iodine solid)

$\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$  (n-propyl amine)

$(\text{CH}_3)_3\text{N}$  (trimethyl amine)

$(\text{CH}_3\text{CH}_2)_2\text{O}$  (diethyl ether)

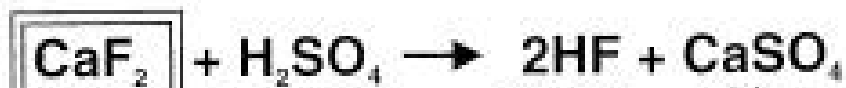
$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$  (n-butanol)

Written & directed by James Cameron, the Abyss (1989) - 80% of the movie was filmed underwater

<http://www.youtube.com/watch?v=9MdlyM7w8PM> or Google "abyss rat" (click here)

Fluid Breathing System - San Diego, Alliance Pharmaceuticals

## Minerals to Medicines



identify  
substance type  
ICAO

CaF<sub>2</sub>

H<sub>2</sub>SO<sub>4</sub>

HF

CaSO<sub>4</sub>

CHCl<sub>3</sub>

SbF<sub>5</sub>

CHF<sub>2</sub>Cl

CHFCI<sub>2</sub>

CHF<sub>3</sub>

CF<sub>2</sub>

CF<sub>2</sub>=CF<sub>2</sub>

I<sub>2</sub>

SbF<sub>5</sub>

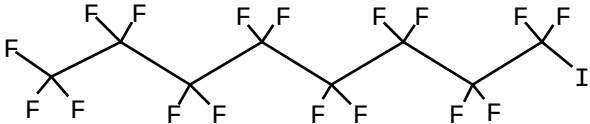
C<sub>2</sub>F<sub>5</sub>I

SbF<sub>3</sub>

C<sub>8</sub>H<sub>17</sub>I

Br<sub>2</sub>

C<sub>8</sub>H<sub>17</sub>Br

|                                                                                                                                        |                                 |                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------|
| CaF <sub>2</sub>                                                                                                                       | H <sub>2</sub> SO <sub>4</sub>  | HF                                                                |
| CaSO <sub>4</sub>                                                                                                                      | CHCl <sub>3</sub>               | CHF <sub>2</sub> Cl                                               |
| CHFCl <sub>2</sub>                                                                                                                     | CHF <sub>3</sub>                | HCl                                                               |
| CF <sub>2</sub> (unstable, disobeys octet)                                                                                             | I <sub>2</sub>                  | SbF <sub>5</sub>                                                  |
| CF <sub>2</sub> =CF <sub>2</sub>                                                                                                       | C <sub>2</sub> F <sub>5</sub> I | SbF <sub>3</sub>                                                  |
| C <sub>8</sub> F <sub>17</sub> I (line angle drawn)  | Br <sub>2</sub>                 | C <sub>8</sub> F <sub>17</sub> Br (draw the line angle structure) |