STATES OF MATTER

Increasing Energy

| | SOLID | LIQUID | GAS |
|-------------------|-------|--------|-----|
| Shape | | | |
| Volume | | | |
| Compressibility | | | |
| Packing | | | |
| Particle Movement | | | |
| Particle Order | | | |
| Particle Energy | | | |
| | | | |
| *IMF | | | |

There are two states of matter in addition to the three in the table above. What are these two states of matter? Which state is at lower energy than solids? Which state is at higher energy than gases?

| Phase changes either absorb energy, making them | | , or release energy, described as | The six phase changes are |
|---|---|-----------------------------------|-------------------------------|
| Absorb Energy | | Release Energy | |
| ① | (solid $ ightarrow$ liquid) | ② | _ (liquid $ ightarrow$ solid) |
| 3 | (liquid $ ightarrow$ gas) | 4 | _ (gas → liquid) |
| (\$) | \longrightarrow (solid \rightarrow gas) | 2 | _ (gas → solid) |

^{*}IMF = intramolecular forces: physical forces holding particles together