Pressure

Pressure: Amount of force acting over a specific area. (newtons per square meter, pounds per square inch)

Compression: A decrease in volume produced by force, gasses are compressible, solids and liquids can not be compressed.

Deformation: A change in shape without decreasing volume.

Pressure in a container

Particles are constantly bumping into the edge of the container. This creates force.

If the material is compressed or heated the particles in it will be hitting the side more often, creating greater force. Since the area stays the same this means a greater pressure.