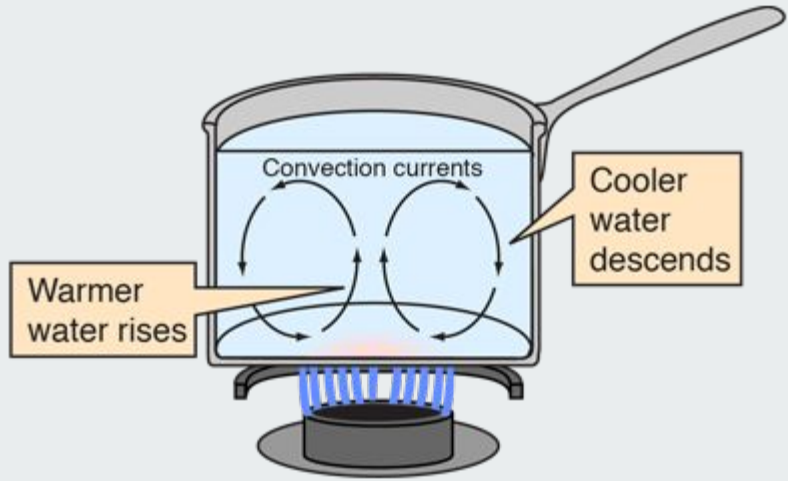



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# Convection



Definition:



The transfer of heat due to the bulk movement of molecules within fluids, including molten rock.

Two mechanism:

Advection: To transport with the mean fluid flow.

Diffusion: The transport of compounds through the action of random motions.

$$Q = hA\Delta T$$

$Q$  = heat transfer rate

$h$  = convection heat-transfer coefficient

$A$  = exposed surface area

$\Delta T$  = temperature difference