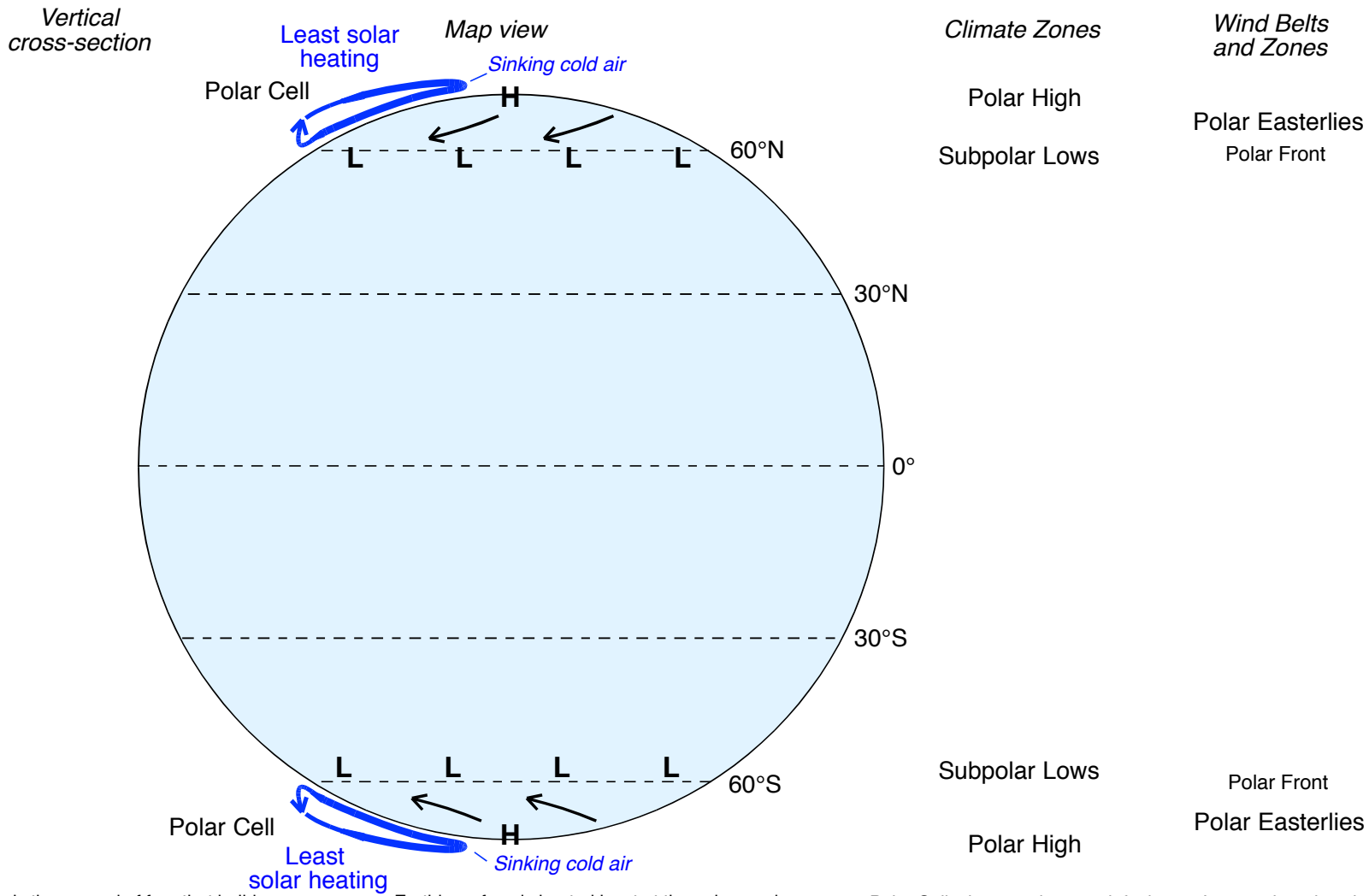
Global climate zones Ib: building an idealized simple view



This diagram is the second of four that build a typical schematic representation of Earth's surface atmospheric pressure, surface winds, and tropospheric circulation. This (Part Ib) and the previous (Part Ia) are pedagogical steps to the full representation in Part 1d. Parts II to V then expand on that model.

Earth's surface is heated least at the poles, and so air cools most there. That cold air sinks near the poles, as suggested above, and moves away from the poles across the Earth surface. That air finally warms enough to rise at about 60° N and S, and some of it returns high in the tropo-sphere to sink again at the poles and thus to close the Polar Cells that are shown at left above. In map view, the winds at Earth's surface turn according to the Coriolis Effect (right in the Northern Hemisphere; left in the Southern Hemisphere), making the Earth-surface winds of both cells easterlies.

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