Certain words (e.g., star, shoe) are implicitly associated with locations in space (e.g., up, down) and can bias visual attention toward those locations (e.g., hearing “bird” and looking up; Gozli, Pratt, Martin, & Chasteen, 2016). Research often attributes these shifts in attention to the processing of associations between words and space, although a lack of research with infants has left the developmental origins of this phenomenon unexplored. Visual attention, measured through the Intermodal Preferential Looking Paradigm (IPLP), provides insight into infants’ cognitive processes (Golinkoff, Ma, Song & Hirsh-Pasek, 2013). The current study analyzes 24 to 36 month old toddlers’ (8 boys, 7 girls) performance on a IPLP task with words implicitly associated with upper or lower locations in space. Of particular interest was whether the presentation of implicitly spatial words would cause shift in attention to upper and lower locations in anticipation of the referents’ at their typical locations in space. We further examine whether performance on the task is related with gender. Analyses found girls in our sample to make significantly more congruent shifts in attention to upper and lower locations following implicit spatial word processing than boys \( \chi^2 (1, N = 33) = 4.164, p < .05 \). Our results suggest 24 to 36 month girls to be engaging in more accurate shifts in attention to upper and lower locations in space upon processing implicitly spatial words than boys of the same age. Such findings offer a first look into the development of conceptually-driven shifts in attention.