It is a common refrain that language is one of the defining traits of our species. Yet for all its claimed importance, most cognitive scientists have worked under the assumption that language, while important for communicating pre-existing thoughts, plays a minor if any role in the construction of those thoughts. Counter to this prevailing view, I will argue that we should view language as a high level control system for the mind. I will review behavioral evidence of linguistic effects on basic cognitive and perceptual processes, and argue that language helps construct mental representations that might not otherwise exist. I will end by discussing several design features of language that make it an especially powerful tool for programming the mind, and discuss the implication of this work for the controversial thesis of linguistic relativity.