Metal halide perovskites are promising materials for light harvesting. Power conversion efficiency (PCE) of such materials can be improved by tuning the band gap energy and suppressing the trap states. In particular, quantum confinement and shape control of nanostructures are two effective approaches to enhance the photovoltaic properties. Here we report femtosecond transient absorption (TA) spectroscopy studies on the photo-induced dynamics of a series of different nanostructures of methyl ammonium lead bromide (MALB) \( \text{CH}_3\text{NH}_3\text{PbBr}_3 \): nanoplatelets (2D), nanowires (1D), nanoparticles (0D), and nanocubes (0D). Experimentally obtained TA spectra are simulated using a global model in both the time and wavelength domains. The fit values of center wavelengths and time constants for various processes demonstrate that dimensional and structural confinement affects not only band structure but also exciton dynamics: Sub-picosecond electron and hole relaxation (in the conduction and valence band, respectively) have been observed, while the exciton recombination process is on the timescale of hundreds of picoseconds. Comparison between TA spectra of different nanostructures suggest that the confinement effect plays a significant role in tuning band gaps and minimizing trap states, which can be utilized to improve the PCE of photovoltaic devices.