In Python, data types are like different kinds of tools used to handle information. Integers ('int') are for whole numbers, while floats deal with numbers that have decimals. Strings ('str') are for text, where anything inside quotes is considered a string. Booleans ('bool') are like yes/no answers, giving either 'True' or 'False'. Lists are flexible collections that can hold multiple items and can change, while tuples are similar but cannot be changed. Sets store unique items, making sure there are no duplicates, and dictionaries ('dict') help store data in pairs, like a word and its meaning. Each type has a specific purpose, making it easier to work with different kinds of data in Python.