

Asteroids Data

This document explains the data stored in Asteroids JSON files.

Any strings representing file paths subscribe to the following conventions:

- All files exist in the assets folder, or some sub folder of the assets folder.
- File path strings do not start with a file separator and do not contain the word “assets”.

Example: If the file is in the images folder, which is in the assets folder, the path should be “images/planet0.png”.

The “Coordinate String” type is defined as a string containing an x coordinate and y coordinate separated by a comma. Example: “100,100”.

“asteroidsGame”: This object holds all of the data for the Asteroids game configuration.

“objects”: An array of strings. These strings represent the path to the image file for a background object. Can be empty.

“asteroids”: An array of Asteroid Types. Should not be empty.

Asteroid Type: Contains information describing an asteroid type.

“name”: String. The name of the asteroid type.

“image”: String. The path for the image file for the asteroid.

“imageWidth”: Integer. The pixel width of the asteroid’s image.

“imageHeight”: Integer. The pixel height of the asteroid’s image.

“type”: String. The type of the asteroid. This is used to determine the behavior and characteristics of the asteroid.

“levels”: An array of Levels. Should not be empty.

Level: Contains information describing a level.

“number”: Integer. The level number.

“title”: String. The level title.

“hint”: String. The level hint to be displayed with the title.

“width”: Integer. The pixel width of the level.

“height”: Integer. The pixel height of the level.

“music”: String. The path to the music file to be played with the level.

“levelObjects”: An array of Level Objects. Can be empty

Level Object: Contains information describing a level background object.

“position”: Coordinate String. The position in the level to draw the object.

“objectId”: Integer. The ID of the object to draw. An ID of 1 corresponds to the first object in the objects array.

“scale”: Float. The scale to draw the object at.

“levelAsteroids”: An array of Level Asteroids. Should not be empty.

Level Asteroid: Contains information describing the asteroids in a level.

“number”: Integer. The number of asteroids of this type to generate at the beginning of the level.

“asteroidId”: Integer. The ID of the asteroid type to generate.

“mainBodies”: An array of Main Body objects. Should not be empty.

Main Body Object: Contains information describing a main body part of the ship.

“cannonAttach”: Coordinate String. The point on the main body image where the cannon should be attached.

“engineAttach”: Coordinate String. The point on the main body image where the engine should be attached.

“extraAttach”: Coordinate String. The point on the main body image where the extra part should be attached.

“image”: String. The path to main body image.

“imageWidth”: Integer. The pixel width of the main body image.

“imageHeight”: Integer. The pixel height of the main body image.

“cannons”: An array of Cannon objects. Should not be empty.

Cannon Object: Contains information describing a cannon part of the ship.

“attachPoint”: Coordinate String. The point of the cannon image that attaches to the main body image.

“emitPoint”: Coordinate String. The point of the cannon image the projectile is emitted from.

“image”: String. The path to cannon image.

“imageWidth”: Integer. The pixel width of the cannon image.

“imageHeight”: Integer. The pixel height of the cannon image.

“attackImage”: String. The path to the cannon’s projectile image.

“attackImageWidth”: Integer. The pixel width of the cannon’s projectile image.

“attackImageHeight”: Integer. The pixel height of the cannon’s projectile image.

“attackSound”: String. The path to the cannon’s projectile sound file.

“damage”: Integer. The base damage for each projectile.

“extraParts”: An array of Extra Part objects. Should not be empty.

Extra Part Object: Contains information describing an extra part of the ship.

“attachPoint”: Coordinate String. The point of the extra part image that attaches to the main body image.

“image”: String. The path to extra part image.

“imageWidth”: Integer. The pixel width of the extra part image.

“imageHeight”: Integer. The pixel height of the extra part image.

“engines”: An array of Engine objects. Should not be empty.

Engine Object: Contains information describing an engine part of the ship.

“baseSpeed”: Integer. The base maximum velocity of the ship in pixels per second.

“baseTurnRate”: Integer. The base turn rate of the ship in degrees per second.

“attachPoint”: Coordinate String. The point of the extra part image that attaches to the main body image.

“image”: String. The path to extra part image.

“imageWidth”: Integer. The pixel width of the extra part image.

“imageHeight”: Integer. The pixel height of the extra part image.

“powerCores”: An array of Power Core objects. Should not be empty.

Power Core Object: Contains information describing a power core part of the ship.

“cannonBoost”: Integer. The value of extra damage that should be added to the cannon’s base damage.

“engineBoost”: Integer. Adds to the base speed of the engine.

“image”: String. The path to the extra part image.