

Game Library Embedding Guide

Host + register + embed any web game into the Arcade library

Version: v1.1 **Last updated:** 2026-01-05

One sentence: games live at stable URLs under /public, are registered in public/arcade-games.json, and are loaded in a secured iframe with ArcadeBridge messaging.

1. Core rules

- Keep **gameId** stable forever. Treat it like a contract address.
- Use **relative asset paths** (`./assets/...`) so the game works under `/games/`.
- In embeds, games must use **run gating** and never submit leaderboards directly.
- The parent validates **origin + channel + gameId** for every message.
- Wallet transactions happen in the Arcade UI (Wallet tab), not inside the iframe.

2. Recommended folder structure

```
public/games/<gameId>/
  index.html
  game.js
  assets/...
```

(Or: `public/<gameId>/ ...`)

Avoid:

- Service workers
- Absolute asset paths
- Direct `/api/run/submit` calls from inside the iframe

3. Catalog registration (`public/arcade-games.json`)

Each entry describes how the Arcade loads and scores the game. For multi-metric leaderboards, define `defaultMetric` plus a list of allowed metrics.

```
{
  "id": "stormhouse2",
  "name": "Storm the House 2 (Remaster)",
  "url": "/games/stormhouse2/index.html",
  "usesCreditsInRun": true,
  "rankedSpendCapAC": 25,
  "defaultMetric": "waves",
  "metrics": [
    { "id": "waves", "direction": "desc" },
    { "id": "efficiency", "direction": "desc" },
    { "id": "durationMs", "direction": "desc" },
    { "id": "inRunSpendAC", "direction": "desc", "clamp": { "max": 250 } }
  ]
}
```

Validate catalog/metrics before shipping:

```
node tools/validate-arcade-catalog-metrics.mjs
```

4. Security notes

- Sandbox the iframe when possible.
- Validate `postMessage` channel + gameId + (when possible) origin.
- Clamp and round metric values server-side to reduce spoofing impact.
- If hosting games cross-origin later, add per-game allowlists.

5. Release checklist

- Game runs standalone by opening its URL directly.
- Embedded mode: READY → REQUEST_RUN → RUN_GRANTED → RUN_RESULT works.
- No absolute asset paths or service workers.
- No direct leaderboard or payout API calls from the iframe.