

# EdGame – MVP Bill of Materials v2.0

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**Status:** Ready to Order

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Lean BoM for a 2-3 person team building EdGame MVP. Aligned with the phased architecture strategy: start simple with Supabase + Vercel, scale only when usage demands it.

## Executive Summary

Category	Monthly Cost	6-Month Total	Notes
AI Coding Tools	\$240	\$1,440	Cursor, Claude, Copilot
Cloud Infrastructure	\$200	\$1,200	Supabase Pro + Vercel Pro
Development Tools	\$50	\$300	Essential SaaS only
Third-Party Services	\$60	\$360	Email, analytics, error tracking
Monthly Total	~\$550/month	\$3,300	
One-Time Setup		\$150	Domain, legal basics
Game Art Contractor	\$3,000/month	\$18,000	Part-time asset creation
6-Month MVP Budget		~\$21,500	Excluding founder salaries

## 1. AI-Assisted Development Tools

The core of modern development — these tools dramatically accelerate a 2-person team.

Tool	Plan	Monthly Cost	Annual Cost	What We Get
Cursor Pro	Pro	\$20/user	\$240/user	AI-native IDE, Claude/GPT integration, codebase-aware completions, multi-file edits
Claude Pro	Pro	\$20/user	\$240/user	Long-context reasoning for architecture decisions, documentation, debugging
GitHub Copilot	Individual	\$10/user	\$100/user	Inline completions in any editor/IDE
v0 by Vercel	Free tier	\$0	\$0	UI component generation, React code from descriptions
Bolt.new	Free tier	\$0	\$0	Full-stack app scaffolding, rapid prototyping

**Per-developer cost:** ~\$50/month for the AI toolkit

**For 2 founders:** ~\$100/month total (both need Cursor + Claude; Copilot optional backup)

## Why These Tools

- **Cursor Pro** is our main coding environment — better than VS Code + Copilot alone because of multi-file edit capabilities
- **Claude Pro** handles complex reasoning: system design, debugging gnarly issues, writing detailed specs
- **v0 / Bolt.new** free tiers are sufficient for scaffolding — don't pay until we hit limits

## 2. Cloud Infrastructure (Phase 1)

### Recommended Stack: Supabase + Vercel

Service	Plan	Monthly Cost	What We Get	Migration Trigger
<b>Supabase</b>	Pro	\$25	PostgreSQL, Auth, Realtime, Storage, 8GB DB, 50GB bandwidth, 500K auth users	>50K MAU or >8GB data
<b>Vercel</b>	Pro	\$20	Unlimited deployments, 100GB bandwidth, Edge Functions, Analytics	>100K requests/day sustained
<b>Cloudflare</b>	Free	\$0	DNS, DDoS protection, CDN for assets	Never (keep on free tier)
<b>Upstash Redis</b>	Free	\$0	10K commands/day — rate limiting, sessions	>10K commands/day
<b>Total</b>		<b>\$45/month</b>		

### Why This Stack

1. **Supabase Pro (\$25)** — PostgreSQL + Auth + Realtime in one managed service. No DevOps needed. RLS handles authorization at the database level.
2. **Vercel Pro (\$20)** — Automatic deployments from GitHub, edge functions for API routes, built-in analytics. Better DX than AWS.
3. **Cloudflare Free** — No-brainer for DNS and CDN. Free tier handles everything we need for years.
4. **Upstash Free** — Redis for rate limiting and session caching. Free tier is generous for MVP scale.

### Migration Triggers (When to Scale Up)

Trigger	Current Limit	Action
>50K MAU	Supabase Pro	Upgrade to Supabase Team (\$599/mo)
>5K concurrent	Supabase Realtime	Add dedicated Realtime server
>100K requests/day	Vercel Pro	Upgrade to Vercel Enterprise or migrate API to AWS

Multiplayer launch	N/A	Add SpacetimeDB or Colyseus for game state sync
>100 schools	Supabase Pro	Consider self-hosted Supabase on AWS for compliance

### 3. Development Tools

Tool	Plan	Monthly Cost	Annual	Purpose
GitHub	Team	\$4/user	\$48/user	Repos, Actions (CI/CD), Issues
Linear	Free	\$0	\$0	Project management (better than Jira for small teams)
Figma	Free (Starter)	\$0	\$0	Design, prototyping (upgrade when we hire designer)
Notion	Free	\$0	\$0	Docs, wiki, knowledge base
1Password Teams	Team	\$8 (total)	\$96	Secrets management, shared credentials
Total		~\$16/month		For 2 users

#### Why These Choices

- **GitHub Team** over free: Private repos, required reviews, Actions minutes for CI/CD
- **Linear free**: Generous free tier, better UX than alternatives
- **Figma free**: Starter plan has 3 files — enough for MVP wireframes
- **1Password**: Non-negotiable for secure credential sharing

### 4. Third-Party Services

Service	Plan	Monthly Cost	Purpose	Usage Limit
Resend	Free → Pro	\$0 → \$20	Transactional email (assignments, reports)	3K emails/mo free, then \$20
PostHog	Free	\$0	Product analytics, event tracking	1M events/mo free
Sentry	Free	\$0	Error tracking, performance	5K errors/mo free
Stripe	Pay-as-you-go	~\$30	Payment processing (2.9% + \$0.30)	Only pay on transactions
Total		~\$30-50/month		Scale with usage

#### Email Strategy

- Start with Resend free tier (3K emails/month)
- Covers ~100 teachers × 30 emails/month = MVP scale

- Upgrade to Pro (\$20/month, 50K emails) when we hit the limit

### **Analytics Strategy**

- **PostHog** for product analytics (funnels, retention, feature usage)
- **Supabase Dashboard** for database metrics
- **Vercel Analytics** for web vitals
- **Sentry** for error tracking

All free tiers are sufficient for 10,000+ MAU.

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## **5. Game Development Assets**

### **Game Engine: Phaser 3 (Free, MIT Licensed)**

Asset Type	Source	Cost	Notes
<b>2D Game Assets</b>	itch.io packs	\$50-200 one-time	Placeholder art for MVP
<b>UI Kits</b>	itch.io / Figma community	\$0-50	Interface elements
<b>Sound Effects</b>	Freesound.org, Kenney.nl	\$0	CC0 licensed
<b>Music</b>	Uppbeat (free tier)	\$0	Attribution required

### **Contract Game Artist (Recommended)**

Role	Rate	Monthly Hours	Monthly Cost
<b>2D Game Artist</b> (part-time)	\$40-60/hr	50-75 hrs	\$2,000-4,500

**Recommendation:** Budget \$3,000/month for a part-time contract artist to create:

- Character sprites for 3 environments
- Background art for Math Arena, Chemistry Lab, Physics Sim
- UI elements and icons
- Animation frames

### **Finding artists:**

- Fiverr / Upwork for quick assets
  - ArtStation for higher quality
  - Game dev Discord communities
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## **6. Domains & Basics**

Item	Cost	Notes
<b>Domain (edgame.io or similar)</b>	\$15-50/year	Get it early; .io or .com
<b>Google Workspace</b>	\$7/user/month	Professional email (optional — can use free Gmail)

<b>Legal (privacy policy, ToS)</b>	\$0-500	Termly.io free tier or lawyer review
<b>LLC Formation</b>	\$100-500	State-dependent; use Stripe Atlas or Clerk

**MVP minimum:** Domain (\$30) + Legal templates (\$0 via Termly) = **~\$30 one-time**

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## 7. 6-Month MVP Budget

### Phase 1: Months 1-3 (Build Core MVP)

Category	Monthly	3-Month Total
AI Tools (2 founders)	\$100	\$300
Supabase Pro	\$25	\$75
Vercel Pro	\$20	\$60
GitHub Team	\$8	\$24
1Password	\$8	\$24
Third-party services	\$30	\$90
Game artist (contract)	\$3,000	\$9,000
<b>Monthly total</b>	<b>\$3,191</b>	<b>\$9,573</b>

**Milestone:** 1 game environment (Math Arena), basic teacher dashboard, 10 school pilots launched

### Phase 2: Months 4-6 (Expand & Validate)

Category	Monthly	3-Month Total
AI Tools	\$100	\$300
Supabase Pro	\$25	\$75
Vercel Pro	\$20	\$60
GitHub Team	\$8	\$24
1Password	\$8	\$24
Third-party services	\$50	\$150
Game artist (contract)	\$3,000	\$9,000
Conference (GESS Dubai)	-	\$3,000
Travel (GCC school visits)	\$500	\$1,500
<b>Monthly total</b>	<b>\$3,711</b>	<b>\$14,133</b>

**Milestone:** 3 game environments, Google Classroom integration, 50+ school pilots, \$20K MRR target

## 6-Month Total Budget

Category	Total
Infrastructure + Tools	\$1,506
Game Art	\$18,000
Marketing/Travel	\$4,500
One-time setup	\$150
Buffer (10%)	\$2,400
<b>6-Month Grand Total</b>	<b>~\$26,500</b>

**Note:** This excludes founder salaries. Assumes founders are funded by savings, angel investment, or working part-time. First engineering hire (if seed-funded) would add ~\$8K-12K/month.

## 8. What We DON'T Need Yet

Save money by avoiding these until they're actually necessary:

Item	Why Not Now	When to Add
AWS/GCP	Supabase + Vercel handles everything at MVP scale	>50K MAU or enterprise compliance requirements
Kubernetes	Massive overkill for a 2-person team	>10 microservices, >100K concurrent users
Data warehouse (Snowflake/BigQuery)	PostgreSQL handles analytics at our scale	>1M events/day, complex cross-school analytics
Kafka/Flink	Real-time streaming unnecessary until massive scale	>100K concurrent game sessions
Full-time designer	Use Figma, v0, and contractor for MVP	After seed funding
Marketing automation (HubSpot)	Spreadsheet + Notion works fine	>1,000 leads to manage
Customer support platform	Email/Slack works at pilot scale	>100 paying customers
SpacetimeDB	Only needed for multiplayer	Phase 2 multiplayer launch

## 9. Scaling Path

**When MVP is validated and we need to scale:**

**Trigger: \$20K MRR achieved, 50+ paying schools**

Addition	Monthly Cost	Why

Supabase Team	\$599	More connections, dedicated support
First engineer hire	\$10,000	Speed up game environment development
Implementation manager	\$6,000	Handle school onboarding
<b>Post-seed monthly</b>	<b>~\$17,000</b>	

#### Trigger: Multiplayer launch (Phase 2)

Addition	One-time / Monthly	Why
SpacetimeDB	~\$200/month	Real-time game state sync
Mobile app deployment	\$100/year (App Store)	iOS/Android distribution
Push notification service	\$50/month	Firebase Cloud Messaging

#### Trigger: 100+ schools, enterprise sales

Addition	Monthly	Why
AWS migration	\$2,000+	Compliance, custom infrastructure
Sales team (2 AEs)	\$20,000	Outbound sales motion
SOC 2 compliance	\$20,000 one-time	Enterprise requirement

## 10. Alternative: Ultra-Lean Setup

If we're pre-revenue and maximizing runway:

Category	Tool	Monthly Cost
<b>Coding</b>	Cursor Pro only	\$20
<b>Backend</b>	Supabase Free	\$0
<b>Hosting</b>	Vercel Free	\$0
<b>Email</b>	Resend Free	\$0
<b>Analytics</b>	PostHog Free	\$0
<b>Domain</b>	Cloudflare Registrar	~\$1
<b>Total</b>		<b>~\$21/month</b>

This works for prototyping but hits limits quickly:

- Supabase Free: 500MB database, 2GB bandwidth, limited API requests
- Vercel Free: 100GB bandwidth, 10-second function timeout

**Recommendation:** Don't go ultra-lean. The \$45/month for Supabase Pro + Vercel Pro is worth it for:

- Larger database (8GB vs 500MB)

- More bandwidth
  - Longer function timeouts
  - Better support
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## 11. Order Checklist

### Week 1: Foundation

- Register domain (Cloudflare Registrar)
- Create GitHub org, enable Team plan
- Set up Supabase project (Pro plan)
- Connect Vercel to GitHub repo
- Configure Cloudflare DNS
- Set up 1Password team vault

### Week 2: Development Setup

- Install Cursor Pro (all developers)
- Subscribe to Claude Pro (all developers)
- Set up Sentry project
- Configure PostHog analytics
- Set up Resend for transactional email

### Month 1: Game Development

- Find and hire contract game artist (Upwork/ArtStation)
- Purchase placeholder asset packs from itch.io
- Set up Phaser development environment

### Month 3: Pre-Launch

- Create Stripe account (for future payments)
  - Generate privacy policy (Termly)
  - Set up Google Classroom developer account (LTI integration)
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*Start lean. Ship fast. Scale when we have users paying us. Every dollar spent before product-market fit is a dollar that could have extended our runway.*