EdGame – Bill of Materials v2.0

Document Version: 2.0
Status: Order-Ready (Phased)
Last Updated: February 2026

This document provides a complete, order-ready Bill of Materials for EdGame infrastructure, software licenses, and services. Unlike the original BoM (which specified $605K Year 1 costs for enterprise infrastructure), this version aligns with our phased architecture strategy: **start lean, scale when usage demands it.**

---

1. Executive Summary

Category	Year 1 Total	Monthly Avg	Notes
Cloud Infrastructure	$5,400	$450	Supabase + Vercel (Phase 1 stack)
Software Licenses	$3,600	$300	AI tools, dev tools, SaaS
Third-Party Services	$1,800	$150	Email, analytics, integrations
Contractors (Game Art)	$36,000	$3,000	Part-time 2D artist
Marketing & Travel	$10,000	~$830	GCC school visits, conferences
Total Year 1	**~$57,000**	**~$4,750**	**90% lower than original**

Why the dramatic reduction?

- Original BoM assumed AWS EKS, Kafka, Spark, 35-person team from Day 1
- This BoM follows successful EdTech playbook: start simple, scale when needed
- Supabase + Vercel handles 50K+ MAU before requiring migration

---

2. Cloud Infrastructure (Year 1)

2.1 Primary Stack: Supabase + Vercel

Service	Plan	Monthly	Annual	What We Get
Supabase	Pro	$25	$300	PostgreSQL (8GB), Auth, Realtime, Storage, 500K MAU, daily backups
Vercel	Pro	$20	$240	Unlimited deploys, Edge Functions, 100GB bandwidth, Analytics
Cloudflare	Free	$0	$0	DNS, CDN, DDoS protection, SSL
Upstash Redis	Free → Pay-as-go	$0-30	$0-360	Rate limiting, caching (free to ~10K commands/day)
Year 1 Total		**$45-75**	**~$900**	

2.2 Phase 2 Additions (When Triggered)

These are NOT ordered in Year 1 unless migration triggers are hit:

Service	Trigger	Monthly	Purpose
SpacetimeDB	Multiplayer launch	$200-500	Real-time game state sync
Supabase Team	>50K MAU	$599	More connections, dedicated support
Vercel Enterprise	>100K requests/day sustained	Custom	Higher limits, SLA
AWS (EC2/RDS)	Enterprise compliance	$2,000+	Self-managed infrastructure

2.3 Phase 3 Additions (Year 3+)

Service	Trigger	Monthly	Purpose
AWS EKS	>50K concurrent, SLA requirements	$3,000+	Container orchestration
AWS MSK (Kafka)	Real-time streaming analytics	$1,500+	Event streaming
Snowflake/BigQuery	>1M events/day, complex analytics	$1,000+	Data warehouse
AWS ElastiCache	High-throughput caching	$500+	Managed Redis cluster

Year 1 infrastructure remains at ~$900 total — we don't pre-purchase capacity we don't need.

---

3. Software Licenses

3.1 AI Development Tools

Tool	Plan	Users	Monthly/User	Annual Total	Purpose
Cursor Pro	Pro	2	$20	$480	AI-native IDE with multi-file editing
Claude Pro	Pro	2	$20	$480	Long-context reasoning, architecture
GitHub Copilot	Individual	2	$10	$240	Inline code completion
Subtotal				**$1,200**	

3.2 Development & Collaboration

Tool	Plan	Users	Monthly	Annual	Purpose
GitHub	Team	2	$4/user	$96	Repos, Actions, Issues
Linear	Free	2	$0	$0	Project management

Figma	Free (Starter)	2	$0	$0	Design, prototyping
Notion	Free	2	$0	$0	Documentation, wiki
1Password	Teams	2	$8 (total)	$96	Secrets management
Subtotal				**$192**	

3.3 Game Development

Tool	License	Cost	Purpose
Phaser 3	MIT (Free)	$0	Game engine
Tiled	Free	$0	Level/map editor
Aseprite	One-time	$20	Pixel art creation
TexturePacker	One-time	$40	Sprite sheet generation
Audacity	Free	$0	Audio editing
Subtotal		**$60**	One-time purchases

3.4 Asset Packs (One-Time)

Source	Type	Budget
itch.io	2D game assets, UI kits	$200
Humble Bundle	Game dev asset bundles	$50
Kenney.nl	Free CC0 assets	$0
Subtotal		**$250**

Year 1 Software Total: ~$1,700

---

4. Third-Party Services

4.1 Email & Communications

Service	Plan	Monthly	Annual	Purpose
Resend	Free → Pro	$0-20	$0-240	Transactional email (assignments, reports)
Google Workspace	Business Starter	$7/user	$168	Professional email (optional)
Subtotal			**$168-408**	

4.2 Analytics & Monitoring

Service	Plan	Monthly	Annual	Purpose
PostHog	Free	$0	$0	Product analytics (1M events/mo)
Sentry	Free	$0	$0	Error tracking (5K errors/mo)
Vercel Analytics	Included	$0	$0	Web vitals
Subtotal			**$0**	

4.3 Payments & Billing

Service	Model	Cost	Notes
Stripe	Pay-as-you-go	2.9% + $0.30/txn	Only pay when we charge customers
Stripe Atlas	One-time	$500	Delaware C-Corp formation (optional)

4.4 Authentication & Integrations

Service	Plan	Cost	Purpose
Supabase Auth	Included	$0	Auth is part of Supabase
Google Cloud	Free tier	$0	OAuth, Classroom API (free for education)
Clever	Partner	$0	Free for EdTech vendors

Year 1 Third-Party Total: ~$500-1,000

---

5. Contractors & Services

5.1 Game Art (Critical Hire)

Role	Rate	Hours/Month	Monthly	Annual
2D Game Artist	$50/hr avg	60	$3,000	$36,000

Scope: Character sprites, backgrounds, UI elements, animations for 3 Phase 1 game environments (Math Arena, Chemistry Lab, Physics Simulation).

Where to find:

- ArtStation (high quality)
- Upwork (vetted freelancers)
- Fiverr Pro (fast turnaround)
- Game dev Discords (indie-friendly)

5.2 Optional Contractors

Role	Rate	When to Hire	Annual Budget
Sound Designer	$40/hr	When environments need audio	$2,000

Curriculum Consultant	$75/hr	Standards alignment review	$3,000
Legal Review	$300/hr	Privacy policy, ToS	$1,500

Year 1 Contractor Total: ~$36,000 (game artist) + $6,500 (optional) = $42,500 max

6. Marketing & Sales (Year 1)

6.1 Conferences

Event	Location	Date	Cost	Purpose
GESS Dubai	UAE	March	$3,000	Demo booth, GCC school leads
BETT UK	London	January	$4,000	UK school leads (attend, no booth)
EdTechX	Virtual	June	$500	Networking
Subtotal			**$7,500**	

6.2 Travel (GCC School Visits)

Item	Unit Cost	Quantity	Total
Flights (Saudi/UAE)	$300	6 trips	$1,800
Hotels	$150/night	12 nights	$1,800
Ground transport	$50/day	12 days	$600
Subtotal			**$4,200**

6.3 Content & Community

Item	Cost	Purpose
Teacher community gifts	$500	Pilot teacher appreciation
Content creation tools	$200	Canva Pro, Loom
Subtotal	**$700**	

Year 1 Marketing Total: ~$12,400

7. One-Time Setup Costs

Item	Cost	Notes
Domain registration	$30	edgame.io or similar (.io premium)
LLC/C-Corp formation	$500	Stripe Atlas or state filing
Privacy policy generator	$0	Termly free tier

Apple Developer Account	$99	Required for iOS app (Phase 2)
Google Play Developer	$25	Required for Android (Phase 2)
Trademark search	$300	Basic search before brand commit
Total	**~$950**	

8. Year 1 Budget Summary

Quarterly Breakdown

Category	Q1	Q2	Q3	Q4	Year 1 Total
Infrastructure	$270	$270	$270	$270	$1,080
Software/Tools	$425	$425	$425	$425	$1,700
Third-Party	$150	$150	$200	$250	$750
Game Artist	$9,000	$9,000	$9,000	$9,000	$36,000
Marketing/Travel	$5,000	$2,000	$2,000	$3,400	$12,400
One-Time Setup	$950	-	-	-	$950
Quarterly Total	**$15,795**	**$11,845**	**$11,895**	**$13,345**	
Cumulative	$15,795	$27,640	$39,535	$52,880	

Final Year 1 Total

Category	Amount	% of Budget
Cloud Infrastructure	$1,080	2%
Software & Tools	$1,700	3%
Third-Party Services	$750	1%
Game Art Contractor	$36,000	68%
Marketing & Travel	$12,400	23%
One-Time Setup	$950	2%
Buffer (10%)	$5,300	-
Year 1 Grand Total	**~$58,000**	100%

9. Comparison: Original vs. Revised BoM

Category	Original v1.0	Revised v2.0	Reduction

Cloud Infrastructure	$312,000	$1,080	**99.7%**
Software Licenses	$89,400	$1,700	**98%**
Third-Party Services	$156,000	$750	**99.5%**
Hardware (Dev)	$48,000	$0	**100%**
Team (35 people)	~$3,500,000	$0 (founders)	**100%**
Contractors	-	$36,000	New
Marketing	-	$12,400	New
Total Year 1	**$605,400** + salaries	**~$58,000**	**90%+**

Why the difference?

The original assumed:

- AWS EKS from Day 1 (we use Vercel + Supabase)
- Kafka/Flink for streaming (we use PostgreSQL)
- 35-person team (we have 2 founders + 1 contractor)
- $48K in dev hardware (we use laptops we already own)
- Enterprise compliance tools (we defer until enterprise customers)

The revised approach matches how every successful EdTech started: lean infrastructure, prove value, scale with revenue.

10. Year 2-5 Scaling Budget

Year 2 (Post-Seed, ~$1M ARR target)

Category	Monthly	Annual	Notes
Infrastructure	$700	$8,400	Supabase Team + SpacetimeDB
Team (10 people)	$80,000	$960,000	4 eng, 2 game, 2 sales, 2 ops
Software	$800	$9,600	Scaled tooling
Marketing	$5,000	$60,000	Conference presence, content
Contractors	$5,000	$60,000	Additional artists, consultants
Year 2 Total		**~$1.1M**	

Year 3-5 (Scaling Phase)

Year	Team Size	Infrastructure	Total Budget
Year 3	26	$50,000	~$2.5M
Year 4	39	$200,000	~$4.5M
Year 5	49	$1,000,000	~$8.4M

Infrastructure scales from $1K to $1M over 5 years — we only pay for capacity when we have users requiring it.

---

11. Order Checklist (Year 1)

Immediate (Week 1)

- ☐ **Domain**: Register via Cloudflare Registrar (~$30)
- ☐ **Supabase**: Create Pro project ($25/mo)
- ☐ **Vercel**: Connect to GitHub, upgrade to Pro ($20/mo)
- ☐ **Cloudflare**: Set up DNS (free)
- ☐ **GitHub**: Create org, enable Team ($4/user/mo)
- ☐ **1Password**: Create team vault ($8/mo)

Week 2

- ☐ **Cursor Pro**: Subscribe for all developers ($20/user/mo)
- ☐ **Claude Pro**: Subscribe for all developers ($20/user/mo)
- ☐ **PostHog**: Create project (free)
- ☐ **Sentry**: Create project (free)
- ☐ **Resend**: Create account (free tier)

Month 1

- ☐ **Game Artist**: Find and contract via Upwork/ArtStation ($3,000/mo)
- ☐ **Asset Packs**: Purchase from itch.io (~$200 one-time)
- ☐ **Legal**: Generate privacy policy via Termly (free)

Month 3

- ☐ **LLC/Corp**: File via Stripe Atlas or state ($500)
- ☐ **Stripe**: Create account (free, pay-as-you-go)
- ☐ **Google Cloud Console**: Set up for OAuth (free)

Month 6 (Pre-Launch)

- ☐ **Google Workspace**: Set up professional email (optional, $7/user/mo)
- ☐ **Conference registration**: GESS Dubai booking (~$3,000)

---

12. Vendor Contacts & Links

Service	URL	Pricing Page
Supabase	supabase.com	supabase.com/pricing
Vercel	vercel.com	vercel.com/pricing
Cloudflare	cloudflare.com	Free plan sufficient
Cursor	cursor.sh	cursor.sh/pricing
Claude	claude.ai	anthropic.com/pricing

GitHub	github.com	github.com/pricing
PostHog	posthog.com	posthog.com/pricing
Sentry	sentry.io	sentry.io/pricing
Resend	resend.com	resend.com/pricing
Stripe	stripe.com	stripe.com/pricing
1Password	1password.com	1password.com/teams

This BoM reflects the reality of building an EdTech startup: start with tools that let a small team move fast, prove the product works, then scale infrastructure alongside revenue. The $58K Year 1 budget is achievable with modest angel investment or founder savings, and positions EdGame to reach profitability without requiring massive infrastructure spend.