Book of the Month - Product Requirements Document

1. Executive Summary

Product Name: Book of the Month
 Target Audience: Children ages 4-12
 Platform: Mobile (iOS/Android) and Web
 Core Value Proposition: An automatically generated monthly digital book that presents one interesting real-world event per day, tailored to children's comprehension levels and interests.

---

2. Product Overview

2.1 Vision

To create an educational and engaging reading experience that keeps children informed about the world around them through age-appropriate, daily discoveries compiled into a beautiful monthly digital book.

2.2 Mission

Spark curiosity and global awareness in young readers by delivering fascinating, verified facts from around the world in an accessible and delightful format.

2.3 Key Objectives

- Generate one complete digital book per month (28-31 daily entries)
- Ensure content is age-appropriate and educational
- Maintain high engagement through visual appeal and storytelling
- Build reading habits and global awareness in children

---

3. Target User Personas

Primary Persona: Young Readers (Ages 4-12)

- **Age 4-6:** Pre-readers and early readers who need visual support and read-aloud features
- **Age 7-9:** Developing readers interested in animals, nature, and simple science
- **Age 10-12:** Independent readers curious about technology, space, culture, and current events

Secondary Persona: Parents/Guardians

- Want educational screen time for their children
- Value curated, safe content
- Appreciate learning tools that build knowledge and reading skills
- Busy and need automated, trustworthy content delivery

---

4. Functional Requirements

4.1 Content Generation System

4.1.1 Daily Fact Collection

- **Automated News Aggregation:** System monitors global news sources, educational websites, scientific journals, and kid-friendly news outlets
- **Event Categorization:** Facts sorted by themes (animals, science, technology, sports, culture, nature, space, discoveries, human achievement)
- **Geographic Diversity:** Ensure events from different continents and countries
- **Timeliness:** Events from the previous day or recent past (within 1-7 days)

4.1.2 Gemini AI Integration

- **Fact Verification:** Use Gemini API to verify accuracy of potential events
- **Age-Appropriate Adaptation:** Transform complex news into 3 reading levels:
    - Level 1 (Ages 4-6): 50-100 words, simple vocabulary
    - Level 2 (Ages 7-9): 100-150 words, moderate complexity
    - Level 3 (Ages 10-12): 150-250 words, richer vocabulary
- **Educational Context:** Add "Did You Know?" sections with related facts
- **Question Generation:** Create 1-2 comprehension or discussion questions per entry
- **Content Safety:** Filter and exclude inappropriate topics (violence, tragedy, mature themes)

4.1.3 Visual Content Generation

- **Illustration Creation:** Generate or source one image per daily entry
    - Use Gemini's image generation capabilities or integrate with image APIs
    - Style: Colorful, child-friendly, educational illustrations

- **Infographics:** Create simple visual representations for complex topics (charts, maps, diagrams)

4.1.4 Book Compilation

- **Monthly Assembly:** On the 1st of each month, compile previous month's entries
- **Book Structure:**
    - Cover page with month/year and thematic illustration
    - Table of contents with dates
    - 28-31 daily entries
    - End-of-month quiz or activity page
    - "Parent's Guide" with discussion prompts
- **Format Options:** PDF, EPUB, and native app format

4.2 User Features

4.2.1 Reading Experience

- **Daily Notification:** Alert when new day's entry is available
- **Read-Aloud Function:** Text-to-speech for younger children
- **Interactive Elements:**
    - Tappable words for definitions
    - Zoom functionality for images
    - Highlight and bookmark features
- **Reading Progress Tracker:** Visual indicator of days completed
- **Offline Access:** Download books for reading without internet

4.2.2 Age Customization

- **User Profile:** Set child's age for appropriate content level
- **Multiple Profiles:** Support for multiple children in one household
- **Adaptive Reading Level:** Ability to switch between levels

4.2.3 Library & Archive

- **Personal Library:** Access to all previously generated monthly books
- **Search Functionality:** Find entries by topic, date, or keyword
- **Favorites:** Bookmark favorite stories for easy return

4.2.4 Engagement Features

- **Monthly Quiz:** Interactive quiz based on the month's content
- **Reading Streaks:** Track consecutive days/months of reading
- **Badges & Achievements:** Earn rewards for reading milestones
- **Share Function:** Share favorite facts with family (via parent-controlled sharing)

4.3 Parent Dashboard

4.3.1 Content Controls

- **Topic Filters:** Ability to exclude certain topic categories
- **Reading Level Override:** Manually adjust reading complexity
- **Preview Mode:** Parents can review content before it's shown to children

4.3.2 Progress Monitoring

- **Reading Analytics:** Time spent reading, pages completed, streaks
- **Comprehension Insights:** Track quiz performance
- **Monthly Reports:** Summary of child's reading activity and favorite topics

4.3.3 Settings

- **Notification Management:** Customize when and how reminders are sent
- **Subscription Management:** Manage billing and plan details
- **Privacy Controls:** Data sharing preferences

---

5. Technical Requirements

5.1 Architecture

5.1.1 Backend

- **Content Pipeline:**
  - Daily cron jobs to fetch and process news/events
  - Gemini API integration for content generation and verification
  - Content moderation and safety filters
  - Database storage for generated content
- **API Layer:** RESTful API for mobile/web clients
- **Cloud Infrastructure:** Scalable hosting (AWS, Google Cloud, or Azure)

5.1.2 Frontend

- **Mobile Apps:** Native iOS (Swift) and Android (Kotlin) or React Native
- **Web App:** Responsive React/Vue.js application
- **Offline Support:** Local caching and offline reading capabilities

5.1.3 Third-Party Integrations

- **Gemini API:** Google's generative AI for content creation

- **News APIs:** Reuters, NewsAPI, child-friendly news sources
- **Image Sources:** Stock photo APIs or Gemini image generation
- **Text-to-Speech:** Google Cloud TTS or similar
- **Analytics:** Firebase/Google Analytics
- **Payment Processing:** Stripe or similar for subscriptions

5.2 Data Management

5.2.1 Content Database

- Daily entries with metadata (date, category, reading level, source)
- Compiled monthly books
- User-generated data (bookmarks, progress, quiz responses)

5.2.2 User Data

- Profile information (age, reading level, preferences)
- Reading history and progress
- Parental controls and settings
- **Privacy Compliance:** COPPA-compliant data handling for children under 13

5.3 Performance Requirements

- **Content Generation:** New daily entry ready by 6 AM user local time
- **App Performance:** Load time under 2 seconds
- **Image Loading:** Progressive loading, optimized for mobile
- **API Response Time:** Under 500ms for most requests

5.4 Security & Privacy

- **COPPA Compliance:** Full compliance with Children's Online Privacy Protection Act
- **GDPR Compliance:** For international users
- **Data Encryption:** End-to-end encryption for sensitive data
- **Secure Authentication:** Parent login required for account management
- **Content Safety:** Multi-layer filtering to ensure age-appropriate content

---

6. Content Strategy

6.1 Daily Content Criteria

Events must meet ALL of the following criteria:

- **Educational Value:** Teaches something new or reinforces learning
- **Positive or Neutral Tone:** Avoids fear, sadness, or controversy
- **Age-Appropriate:** Suitable for the youngest target audience
- **Verifiable:** Based on credible sources
- **Interesting:** Captures wonder, discovery, achievement, or uniqueness
- **Diverse:** Represents various cultures, regions, and fields

6.2 Content Categories (Balanced Distribution)

Category Distribution (Monthly):

- Animals & Nature: 6-8 entries
- Science & Discovery: 5-7 entries
- Space & Earth: 4-5 entries
- Technology & Innovation: 3-5 entries
- Sports & Human Achievement: 3-4 entries
- Arts & Culture: 3-4 entries
- World Records & Fun Facts: 2-3 entries

6.3 Editorial Guidelines

Tone: Enthusiastic, curious, encouraging
Vocabulary: Age-appropriate with gentle stretching for learning
Structure:

- Engaging opening hook
- Clear explanation of the event
- Why it matters or what's special
- Connection to child's world when possible

Prohibited Content:

- Violence, death, disasters
- Political controversy
- Mature themes
- Graphic or disturbing imagery
- Advertising or commercial content

---

7. User Experience (UX) Design

7.1 Visual Design Principles

- **Colorful & Playful:** Bright, engaging color palette
- **Clear Typography:** Large, readable fonts (age 4-6), moderate (age 7-9), standard (age 10-12)
- **Illustration Style:** Friendly, diverse, educational art style
- **Intuitive Navigation:** Simple, icon-based navigation for young users

7.2 User Flows

First-Time User Flow:

1. Parent downloads app
2. Create account (parent email/password)
3. Add child profile(s) with age
4. Choose notification preferences
5. View onboarding tutorial
6. Access first daily entry or current month's book

Daily Reading Flow:

1. Receive notification
2. Open app to today's entry
3. Read text (or listen to read-aloud)
4. View illustration
5. Answer optional comprehension question
6. Mark as complete (visual checkmark)
7. Preview tomorrow's teaser (optional)

Monthly Book Access Flow:

1. Notification that new monthly book is available
2. View animated cover reveal
3. Browse table of contents
4. Read/revisit favorite entries
5. Complete monthly quiz
6. Receive digital certificate or badge

7.3 Accessibility Features

- **Dyslexia-Friendly Font Options:** OpenDyslexic font choice
- **Adjustable Text Size:** 5 size options
- **High Contrast Mode:** For visual impairments
- **Screen Reader Support:** Full compatibility
- **Read-Aloud:** Built-in for all content

8. Monetization Strategy

8.1 Subscription Model (Freemium)

Free Tier:

- Access to current month's daily entries
- Basic reading features
- Limited archive access (last 2 months)

Premium Tier ($4.99/month or $49.99/year):

- Full archive access (all historical books)
- Downloadable PDF/EPUB formats
- Ad-free experience
- Multiple child profiles (up to 5)
- Advanced parental analytics
- Priority customer support
- Exclusive monthly bonus content (activity pages, extended facts)

Family Plan ($7.99/month):

- All premium features
- Up to 10 child profiles
- Family sharing capabilities

8.2 Additional Revenue Streams

- **Educational Institution Licensing:** Bulk subscriptions for schools/libraries
- **Print-on-Demand:** Optional physical book printing service
- **Merchandise:** Age-appropriate educational products (future consideration)

---

9. Success Metrics & KPIs

9.1 Product Metrics

- **Daily Active Users (DAU):** Target 60%+ of subscribers
- **Monthly Active Users (MAU):** Target 85%+ of subscribers
- **Reading Completion Rate:** Target 70%+ of daily entries read
- **Monthly Book Completion:** Target 50%+ complete full month
- **User Retention:**
  - Week 1: 80%

- ○ Month 1: 60%
  - ○ Month 3: 45%
  - ○ Month 6: 35%

9.2 Business Metrics

- **Conversion Rate (Free to Premium):** Target 15-20%
- **Churn Rate:** Target under 5% monthly
- **Customer Lifetime Value (LTV):** Target $120+
- **Customer Acquisition Cost (CAC):** Target under $20
- **Net Promoter Score (NPS):** Target 50+

9.3 Content Quality Metrics

- **Content Accuracy Rate:** 99%+ (verified facts)
- **Age-Appropriateness Score:** Parent ratings 4.5+/5
- **Engagement per Entry:** Average read time >2 minutes
- **Parent Satisfaction:** 4.5+/5 stars

9.4 Technical Metrics

- **Content Generation Success Rate:** 99%+ daily entries generated on time
- **App Crash Rate:** Under 0.1%
- **API Uptime:** 99.9%
- **Page Load Time:** Under 2 seconds

---

10. Development Roadmap

Phase 1: MVP (Months 1-4)

Goal: Launch core functionality with manual content curation

Features:

- User registration and child profiles
- Daily entry display with single reading level
- Basic Gemini integration for content adaptation
- Manual fact selection and verification
- iOS app only
- Simple monthly book compilation
- Basic parent dashboard

Milestone: 100 beta users, 90% daily engagement

Phase 2: Automation & Growth (Months 5-7)

Goal: Automate content pipeline and expand platform

Features:

- Fully automated daily content generation
- Three reading levels
- Android app launch
- Web app launch
- Enhanced image generation
- Reading streak tracking
- Offline mode
- Premium subscription launch

Milestone: 1,000 paying subscribers

Phase 3: Enhancement & Scale (Months 8-12)

Goal: Rich features and market expansion

Features:

- Interactive quizzes and activities
- Achievement system and badges
- Advanced parental analytics
- Multi-language support (Spanish initially)
- Improved personalization (topic preferences)
- Social features (parent-approved sharing)
- Print-on-demand books
- Educational institution licensing

Milestone: 10,000 paying subscribers, 4.5+ app store rating

Phase 4: Ecosystem Expansion (Year 2+)

Goal: Build comprehensive educational platform

Features:

- Video content integration
- Interactive AR experiences
- Curriculum alignment for schools
- Teacher resources and lesson plans

- Reading comprehension assessments
- Expanded age ranges (3-14)
- Podcast/audio-only version
- API for third-party educational apps

Milestone: 50,000+ subscribers, education market leader

---

11. Risk Analysis & Mitigation

11.1 Content Risks

Risk	Impact	Mitigation
Inappropriate content passes filters	High	Multi-layer review: AI filtering + human editorial review + parent reporting system
Inaccurate information published	High	Fact-checking protocol, credible sources only, corrections policy
Content becomes stale or repetitive	Medium	Diverse source pool, category balancing algorithms, user feedback integration
Insufficient daily events	Medium	Expanded source pool, evergreen backup content, historical "on this day" facts

11.2 Technical Risks

Risk	Impact	Mitigation
Gemini API outage or rate limiting	High	Backup AI providers, content queue buffer, graceful degradation
Scalability issues	Medium	Cloud auto-scaling, performance monitoring, load testing
Data privacy breach	High	SOC 2 compliance, regular security audits, encryption, limited data collection
Poor content generation quality	High	Quality scoring system, human review for outliers, continuous model training

11.3 Business Risks

Risk	Impact	Mitigation
Low conversion to premium	High	Strong free tier value, clear premium benefits, trial periods
High user acquisition costs	Medium	Organic growth focus, referral programs, educational partnerships
Competitive pressure	Medium	Unique value proposition, quality focus, community building
Regulatory changes (children's privacy)	Medium	Legal monitoring, compliance-first design, adaptable architecture

12. Competitive Analysis

12.1 Direct Competitors

- **Epic! Books for Kids:** Digital library but not auto-generated daily content
- **Newsela:** News for students but targets older kids (grades 2-12)
- **National Geographic Kids:** Static content, not personalized or daily

12.2 Competitive Advantages

1. **Automated Daily Generation:** Fresh, relevant content every day
2. **Age-Adaptive:** Three reading levels for personalized learning
3. **Monthly Compilation:** Creates collectible, keepsake value
4. **Global Perspective:** Worldwide events, not just local/US-focused
5. **AI-Powered:** Leverages cutting-edge Gemini AI for quality and scale
6. **Habit-Building:** Daily cadence creates reading routine

13. Marketing & Go-to-Market Strategy

13.1 Target Customer Acquisition Channels

Primary Channels:

- **App Store Optimization (ASO):** Keyword optimization, compelling descriptions
- **Content Marketing:** Parent blogs, educational content about child development
- **Social Media:** Pinterest, Instagram, Facebook parent groups

- **Influencer Partnerships:** Parenting influencers, teacher influencers
- **Educational Partnerships:** Libraries, schools, homeschool networks

Secondary Channels:

- **Paid Advertising:** Google Ads, Facebook/Instagram ads (targeted to parents)
- **PR:** Education technology and parenting media outlets
- **Referral Program:** Incentivize existing users to invite friends
- **Community Building:** Discord/forum for parents and educators

13.2 Launch Strategy

- **Beta Period:** 2-3 months with 500 selected families
- **Soft Launch:** App stores with limited geographic rollout (US only)
- **PR Campaign:** Coordinate with back-to-school season or New Year
- **Launch Promotion:** Extended free trial (60 days) for early adopters

---

14. Support & Community

14.1 Customer Support

- **In-App Help Center:** FAQs, troubleshooting guides
- **Email Support:** Response within 24 hours
- **Parent Community Forum:** Peer support and discussion
- **Teacher Resources:** Classroom integration guides

14.2 Feedback Mechanisms

- **In-App Ratings:** Rate each daily entry
- **Monthly Surveys:** User satisfaction and feature requests
- **User Testing:** Regular sessions with parents and children
- **Bug Reporting:** Easy-to-use in-app reporting tool

---

15. Legal & Compliance

15.1 Required Compliance

- **COPPA (Children's Online Privacy Protection Act):** Full compliance for users under 13

- **GDPR:** For EU users
- **CCPA:** For California users
- **Accessibility Standards:** WCAG 2.1 AA compliance

15.2 Terms & Policies

- Comprehensive Privacy Policy
- Terms of Service
- Parental Consent Mechanisms
- Content Guidelines & Editorial Policy
- Refund Policy

15.3 Content Licensing

- Proper attribution for sourced facts
- Licensed images or AI-generated content only
- Clear rights to all generated content

---

16. Future Considerations

16.1 Potential Features (Year 2+)

- AI tutor for answering child questions about entries
- Collaborative reading features (read with grandparents remotely)
- Themed special editions (space month, ocean month)
- Integration with smart speakers for audio-only experience
- Augmented reality visualizations of concepts
- Personalized learning paths based on child interests

16.2 International Expansion

- Translation to major languages (Spanish, Mandarin, French, German)
- Regional content customization
- Cultural sensitivity adaptations
- Local news source partnerships

---

17. Appendix

17.1 Sample Daily Entry Structure

Title: "Dolphins Learn Each Other's Names!"

Age 4-6 Version (75 words): "Scientists discovered something amazing about dolphins! Dolphins give each other special names using clicks and whistles. When a dolphin wants to talk to their friend, they use that friend's special sound-name. It's like how you have a name that your family calls you! The scientists listened to dolphins in the ocean and heard them calling to each other. Isn't that cool? Dolphins are very smart animals!"

Did You Know? Dolphins are mammals, just like you! They need to breathe air.

Discussion Question: What would your dolphin name sound like?

17.2 Sample Monthly Book Table of Contents

Amazing Facts from October 2024

- Oct 1: New Rainbow-Colored Fish Discovered in Indonesia
- Oct 2: 10-Year-Old Invents Robot to Help Elderly People
- Oct 3: Scientists Grow Pizza-Shaped Tomatoes in Space
- Oct 4: Rare White Giraffe Spotted in Kenya
- Oct 5: World's Oldest Tree Celebrates 5,000th Birthday
- [continues through Oct 31]

17.3 Technology Stack Recommendations

Backend:

- Node.js/Express or Python/Django
- PostgreSQL database
- Redis for caching
- Google Cloud Platform or AWS

Frontend:

- React Native for mobile apps
- React for web app
- TypeScript for type safety

AI & Content:

- Google Gemini API
- NewsAPI for news aggregation
- Google Cloud Natural Language API
- Google Cloud Text-to-Speech

DevOps:

- Docker containers
- Kubernetes for orchestration
- CI/CD with GitHub Actions
- Monitoring with DataDog or New Relic

Document Version Control

Version: 1.0
Last Updated: December 14, 2025
Document Owner: Product Team
Next Review Date: January 15, 2026