

Illumination

API Documentation v1.0

API Overview

Base URL

```
Development:
<http://localhost:3000/api> Production:
```

Authentication:

All endpoints require a Clerk authentication token.

```
Authorization: Bearer {clerk_session_token}
```

Authentication

Headers

```
Authorization: Bearer
{clerk_session_token} Content-Type:
```

Error Response Format

```
{
  "error": {
    "message": "Error
description", "code":
"ERROR_CODE"
  }
}
```

Endpoints

Topics

Get All Topics

```
GET /topics
```

Response:

```
[
  {
    "id": "physics",
    "name": "Physics",
    "icon": "atom",
    "description": "Learn physics
concepts", "lessonCount": 24,
    "isActive": true,
    "order": 1
  }
]
```

Get Topic Details

```
GET /topics/:id
```

Parameters:

Name	Type	Description
id	string	Topic identifier

Response:

```
{
  "id": "physics",
  "name": "Physics",
  "icon": "atom",
  "description": "Learn physics concepts",
  "lessonCount": 24,
  "lessons": [
    {
      "id": 1,
      "title": "Introduction to Physics"
    }
  ]
}
```

Lessons

Get Topic Lessons

```
GET /topics/:id/lessons
```

Parameters:

Name	Type	Description
id	string	Topic identifier

Response:

```
[
  {
```

```
    "id": 1,  
    "topicId": "physics",  
    "title": "Introduction to  
Physics", "content": "Physics  
content...",  
    "duration": "15 min",  
  }  
  "order": 1  
]
```

Get Lesson Details

```
GET /topics/:id/lessons/:lessonId
```

Parameters:

Name	Type	Description
id	string	Topic identifier
lessonId	number	Lesson identifier

Response:

```
{  
  "id": 1,  
  "topicId": "physics",  
  "title": "Introduction to  
Physics", "content": "Physics  
content...",  
  "duration": "15 min",  
  "order": 1  
}
```

Quizzes

Get All Quizzes

```
GET /quizzes
```

Response:

```
[
  {
    "id": "physics-1",
    "title": "Quantum
Mechanics", "subject":
    "Physics",
    "duration": 1500,
    "difficulty":
    "Advanced", "xp": 50
  }
]
```

Get Quiz Details

```
GET /quiz/:id
```

Parameters:

Name	Type	Description
id	string	Quiz identifier

Response:

```
{
  "id": "physics-1",
  "title": "Quantum
Mechanics", "subject":
  "Physics",
  "questions": [
    {
      "id": 1,
      "question": "What is the Schrödinger equation used fo
```

```
    "options": ["Option 1", "Option 2", "Option 3", "Option 4"],
    "correctAnswer": 0,
    "explanation": "Explanation text"
  }
],
"duration": 1500,
"difficulty":
"Advanced", "xp": 50
}
```

Submit Quiz

```
POST /submit-quiz
```

Request Body:

```
{
  "quizId":
  "physics-1",
  "answers": [0, 1, 2,
  1]
```

Response:

```
{
  "score": 75,
  "results": [
    {
      "isCorrect": true,
      "correctAnswer": "Correct option
      text", "explanation": "Answer
      explanation"
    }
  ]
}
```

User Progress

Get User Progress

```
GET /user-progress
```

Response:

```
{
  "clerkId":
  "user123", "xp":
  1500,
  "streak": {
    "current": 5,
    "lastActivityDate":
    "2024-03-15T10:00:00Z"
  },
  "completedQuizzes": [
    {
      "quizId":
      "physics-1",
      "score": 85,
      "completedAt": "2024-03-15T10:00:00Z"
    }
  ],
  "completedLessons": [
    {
      "topicId":
      "physics",
      "lessonId": 1,
      "completedAt": "2024-03-15T10:00:00Z"
    }
  ]
}
```

Complete Lesson

```
POST /complete-lesson
```

Request Body:

```
{
  "topicId":
  "physics",
  "lessonId": 1
}
```

Response:

```
{
  "success":
  true,
  "xpEarned":
  100,
}
```



Data Models

Topic

```
{
  id: string; // Unique identifier
  name: string; // Topic name
  icon: string | // Icon identifier
  null; description: // Topic description
  string; // Number of lessons
  lessonCount: // Availability
  number; isActive: status
  boolean; // Display order
  order: number;
}
```

Lesson

```
{
  id: // Unique
  number; identifier
}
```



```

    topicId:
    string; title:
    string;
    content:
    string;
    duration:
    string;
    order: number;
  }

```

Quiz

```

{
  id: string;    // Unique identifier
  title: string; // Quiz title
  subject: string; // Subject area
  questions: Question[]; // Array of questions
  duration: number; // Time limit in seconds
  difficulty: string; // Difficulty level
  xp: number; // XP reward
}

```

UserProgress

```
{
```

```
  clerkId:
```

```
    // User identifier
```

```
  string; xp:
```

```
    // Experience  
    points
```

```
  number;
```

```
  streak: {
```

```
    current:
```

```
    // Current  
    streak
```

```
    number;
```

```
    lastActivityDate:
```

```
    Date;
```

```
  };
```

```
  completedQuizzes:
```

```
    Array<{ quizId:
```

```
      string;
```

```
      score: number;
```

```
      completedAt: Date;
```

```
    }>;
```

```
  completedLessons:
```

```
  Array<
```

```
    topicId:
      string;
    lessonId:
      number;
    completedAt:
      Date;
  }>
}
```

Rate Limits

100 requests per minute per

IP 1000 requests per hour per

user

Headers included in response:

```
X-RateLimit-Limit: 100
X-RateLimit-Remaining: 99
X-RateLimit-Reset: 1640995200
```

Status Codes

Code	Description
200	Success
201	Created
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
429	Too Many Requests

500	Server Error
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Testing

Base URL for testing:

```
<http://localhost:3000/api>
```

Example curl request:

```
curl -X GET "<http://localhost:3000/api/topics>" \\  
-H "Authorization: Bearer your_clerk_token"
```



Support

For API support and inquiries:

Email:

support@tech-titans.com

GitHub Issues: [Submit Issue](#)