

Project Brief: Lightit MVP

Project Name: lightit contents/experiments

Vision:

A web platform that allows educators to upload and share complete laboratory experiment materials in a structured way. Students can access videos, experiment descriptions, materials used, procedures, precautions, results, and discussions in a single location to enhance learning outside of the physical lab environment.

Problem Statement:

Many students in Ethiopia and beyond have limited access to well-organized laboratory content, especially in environments with constrained lab resources. Educators struggle to share full experiments beyond just video demonstrations. Light it contents/experiments aims to solve this by offering a centralized educational platform.

Target Users:

- **Primary** and **secondary** school students

Core MVP Features:

1. Educator Registration/Login (Authentication)
2. Upload Experiment:
 - Title (categorized by grade and subject)
 - Video (upload or embedded link)
 - Materials used (list)
 - Step-by-step procedure
 - Safety precautions
 - Results observed
 - Discussion/Analysis
3. Student Interface:
 - View list of experiments based on grade and subject

- Search/filter experiment titles by category
- View full experiment details with video
- Interact through ratings, comments, and likes

4. Admin user interface:

- Add/edit experiment titles for specific grade and subject
- Control visibility and manage experiment content
- Moderate comments and user interactions

Updated Route Structure (Based on Visual Map):

- `/lightit/contents`
 - `/experiments`
 - Students/Visitors:
 - Select grade → choose subject → list experiment titles
 - Click title → `/experiments/:grade/:title/:id` to see full details
 - Mentors:
 - Same flow as students, but may see more detailed views
 - Admin:
 - Full access to title list → edit visibility → add/edit title forms
 - Full access to each experiment → 3-dot menu for edit options

User Stories:

- As an educator, I want to upload full experiment details so that students can understand all aspects of the lab work.
- As a student, I want to view experiments with all relevant information so I can prepare for or review labs independently.
- As an admin, I want to manage experiment titles and their visibility to organize and moderate the content.

Suggested Tech Stack:

- **Frontend:** React.js with Tailwind CSS for fast UI layout
- **Backend:** Node.js with Express
- **Database:** MongoDB

Design References:

- Visual: Lightit/contents Web Path (Lucid Map)

Communication & Task Management:

- Communication via WhatsApp + Zoom check-ins_____
- Task tracking using Trello or Google Docs task sheet

Initial Deliverables:

- Work plan with task list
- Working MVP hosted on Netlify or Vercel (or localhost demo)