

Dynamic Web Design

Submission 1 report

Moodboard:

An educational platform about science, with a main focus on astrophysics e.g. solar system, space.

We understand that learning is a stressful process and we aim to create a platform with human-centered design that really calms, supports and inspires the user through their learning journey. We are also hoping to reach users from a wide spectrum of ages and backgrounds.

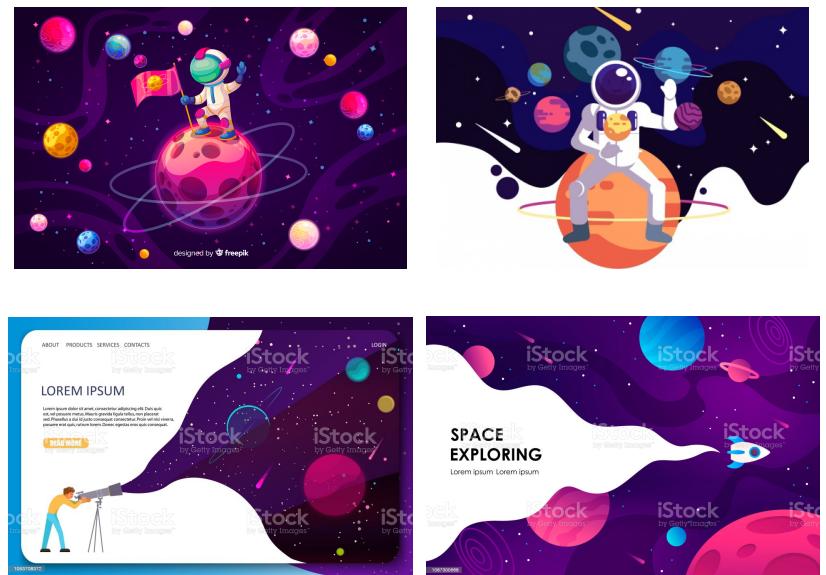
Regarding revenue, ideally this would be a non-profit platform, funding based. If we had to monetize our content we could through paid newsletters or extra modules [e.g. deep sea]

At the moment, we are presenting part of the first module which is the Solar System-Jupiter, and we might include more provided time allows it. As expected, most things on our webpage are not finalised, but we hope the alpha version can show our intentions.

Several changes are in progress, for example, we aim to include the reading and resources as expandable fields next to the quiz. We also aim to create microinteractions like animations which will spark excitement and increase engagement.

We mentioned in the first tutorial that we are interested in including NASA resources and our tutor Jon proposed this API which we intent to implement in our platform for the beta submission <https://api.nasa.gov/>

We have encountered several issues with editing/connecting HTML, CSS and PHP, we have progressed a lot but it's still a learning process for all of us.



Moodboard Resources:

https://www.freepik.com/free-vector/hand-drawn-colorful-space-background_4792337.htm#page=1&query=space&position=24

https://all-free-download.com/free-vector/download/astronomy-background-astronaut-planets-icons-cartoon-design_6838718.html

<https://www.dreamstime.com/space-web-banner-template-vector-illustration-man-seeing-stars-planets-using-optical-telescope-astronomy-science-concept-space-image127768731>

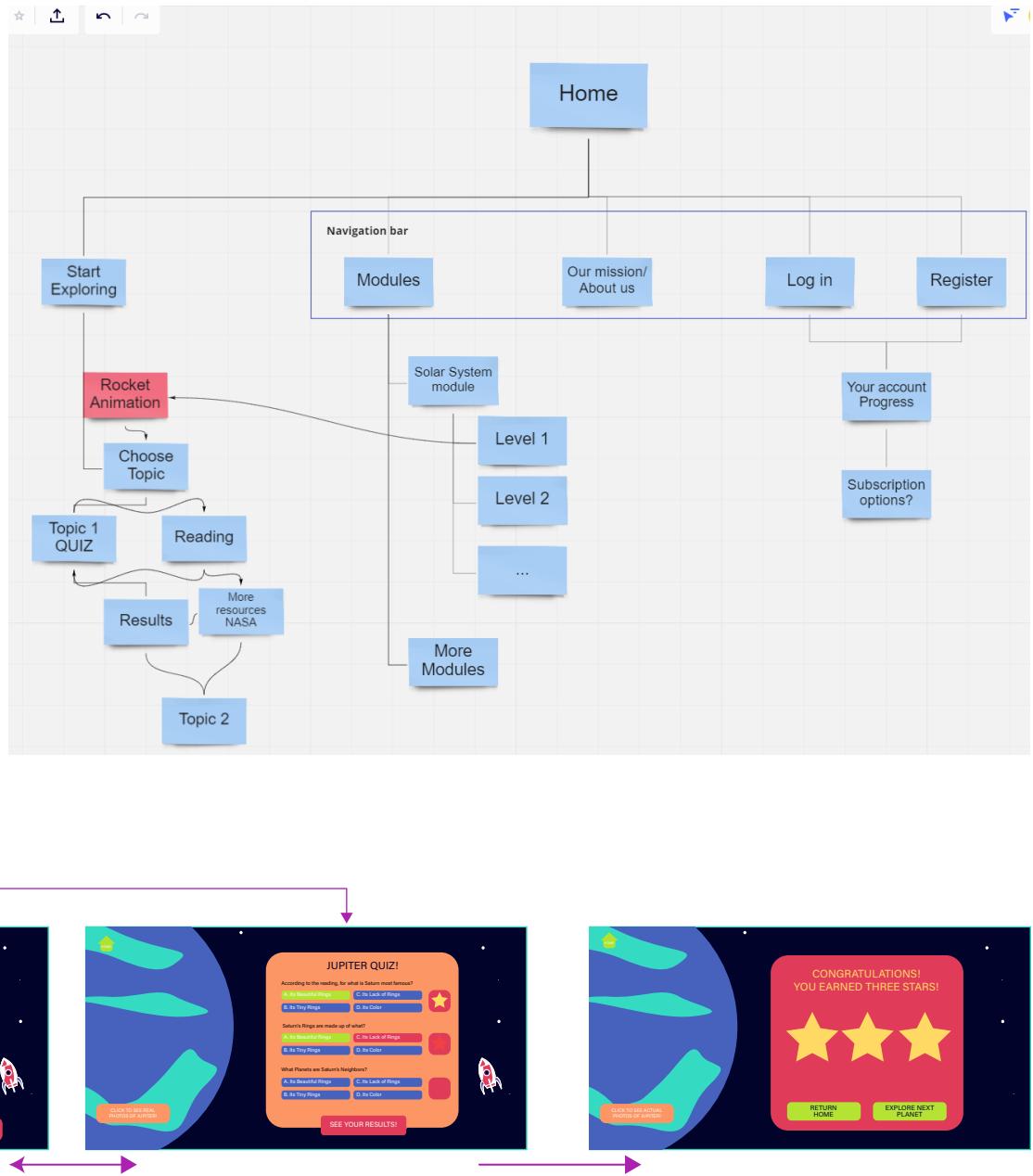
<https://www.istockphoto.com/vector/vertical-space-background-with-abstract-shapes-and-planets-web-design-space-gm1087300568-291714797>

Alpha Website:

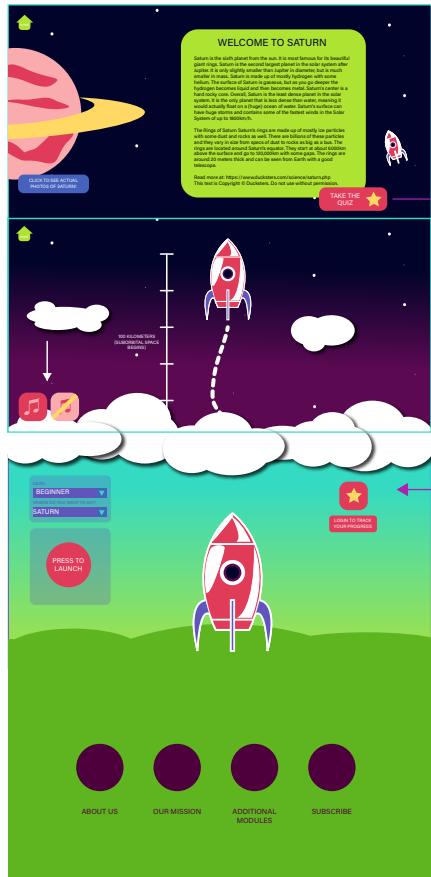
<http://megnielsen.edinburgh.domains/fatfree/space-odyssey-2021>

Screencast: https://media.ed.ac.uk/media/t/1_dl124i5j

Flowchart



Wireframe:



Features:

- Illustrations - Animations
- Quizzes [optional-different levels]
- Reading comprehension
- Sign in and track progress
- Rewards
- Fun facts [optional]
- Newsletter/Subscribe
- Links to free reliable resources, including APIs e.g. NASA images

Goals:

- Make learning fun and accessible
- Inspire-Motivate-Reward
- Spark curiosity and excitement about the “magic of the universe”
- Boost confidence around science topics
- Promote self-motivated study
- Human-centered design
- Experiment with gamification of learning

Considerations:

- User log-in/sign-up not necessary, but helpful for tracking (long-term) progress
- Constant access to navigation menu from all screens
- Non-linear access to quiz, readings and resources
- Illustrations to help user engage/memorise
- General satisfying feel through micro interactions and animations
- Rewarding activities like gathering progression stars
- Ways to assist users that feel “lost” in information on the internet
- Avoid overwhelming the user, focused amount of information on each screen
- Positive reinforcement via direct and indirect ways, e.g. reward users, show progress, focus on wording (avoid words like difficult, quit etc).
- Allowing users to “cheat” on quizzes from studying linked resources to alleviate stress
- Explore ways for supporting the user’s continuous independent study like weekly newsletters
- Consider ways for supporting access for the visually impaired community
- Test the platform with people from different ages and backgrounds

Inspiration - Innovative educational platforms:

- <https://brilliant.org/> “For ages 10 to 110!” - “Stress less, learn better!” - “See science in a new way”
- <https://schoolyourself.org/>
- <http://datamonkey.pro/>
- <https://teamtreehouse.com/>
- <https://www.codecademy.com/>
- <https://www.pbs.org/wgbh/nova/topic/space/>
- <https://betterexplained.com/>

A collection of information resources with a similar approach to learning, which we are considering to link to the website:

- <https://solarsystem.nasa.gov/planets/overview/#:~:text=Interesting%20Planet%20Facts&text=Mars%20E2%80%93%20Mars%20was%20a%20wet,axis%20by%20almost%2090%2Ddegrees>
- <https://www.startalkradio.net/>
- <https://www.albert.io/earth-and-space-science>
- <https://spacerockethistory.com/>
- <http://www.astronomycast.com/>
- <https://www.youtube.com/user/minutephysics>
- <https://www.youtube.com/user/TheRoyalInstitution>
- Also looking for free online libraries or something relevant.

Quiz information resource:

Spaceplace.nasa.gov. 2021. All About Jupiter | NASA Space Place – NASA Science for Kids. [online] Available at: <<https://spaceplace.nasa.gov/all-about-jupiter/en/>> [Accessed 20 February 2021]

Website template:

<https://bootstrapmade.com/techie-free-skin-bootstrap-3/>

All of us have been already involved with most aspects of the project and our main contributions are detailed in the paragraphs below.

Sofia:

My inspirations are mentioned at a previous page.

First, I discussed my project ideas with my teammates so we could all agree on a brief. Then I presented Moodboards and Bootstrap template options. I continued by researching topics such as UI/UX, microinteractions, gamification and innovative learning. After considering methods for sparking interest and promoting engagement, I got closer to defining clear goals and considerations. I then discussed with my team and revised our plans and flowchart to include those aspects.

I created the colour themes and illustrations in Illustrator, inspired by real photos of space and planets. I also used Dreamweaver to edit CSS and HTML for assisting with tasks like changing fonts/colours/assets.

Lastly, I gathered the related factual information and created questions for our activity.

To avoid misinformation we're only sourcing content from NASA and linking only reliable resource organisations to our page.

Julia:

For this submission, I spend most of my time working on the back-end of the website. I started by implementing the reading comprehension page and the quiz. For that, I started by defining the structure of the database. I decided to split the information

into 3 tables: one table which contains the information for each module as well as the text for the reading comprehension, another table for the questions and options for the quiz, and a third table with the correct answer for each question. I then used PHP for the reading comprehension page, where it pulls the text from the database and displays it.

The quiz page took me longer to figure out, but I managed to do it by using PHP to pull the questions, options, and correct options for the database, and AJAX and JavaScript to check if the given answers are correct.

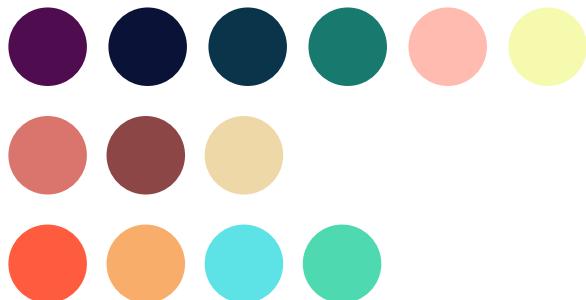
Meg:

I offered a potential concept option, but we decided as a group to move forward with our current Space Odyssey project. Once this theme was chosen, I researched and compiled similar websites and presented a business strategy for a weekly module delivery site. I created a mid-fi wireframe and worked with Julia to create a web tree.

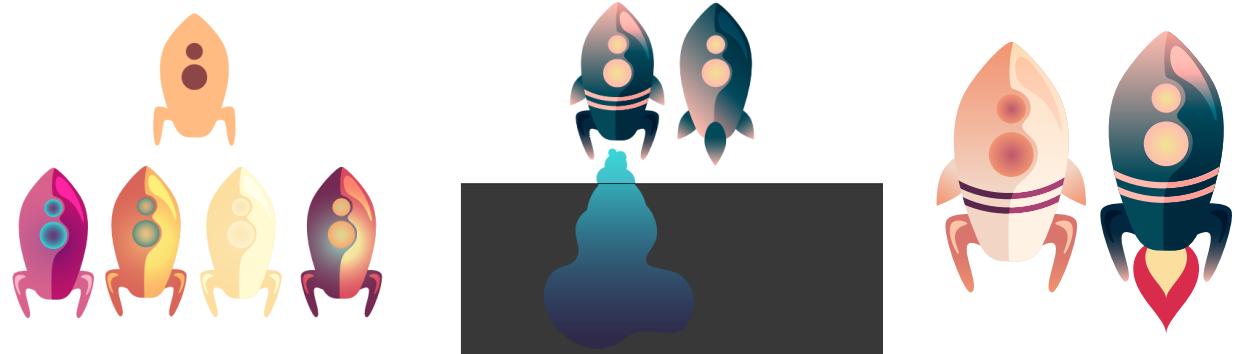
Once a Bootstrap template was chosen, I did the first and last pass on the HTML and CSS editing to suit our project.

The majority of struggles I've felt are related to the set-up structure. The relationship between folders/programs/links is still difficult for me to understand and it's hard to concentrate on content when the building blocks feels tenuous.

Colour themes, inspired by space and solar system photos



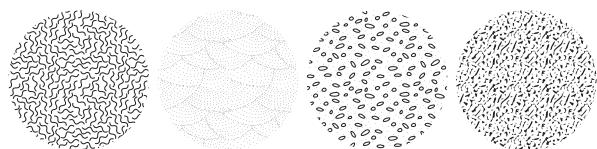
Drafts/Colour variations



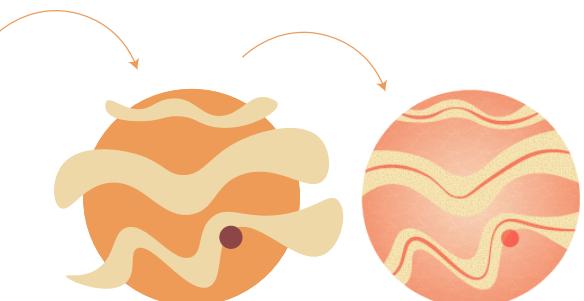
Gradients



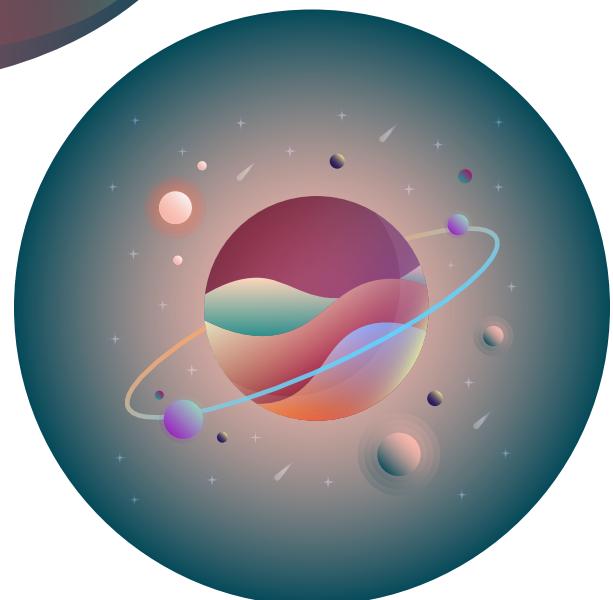
Textures



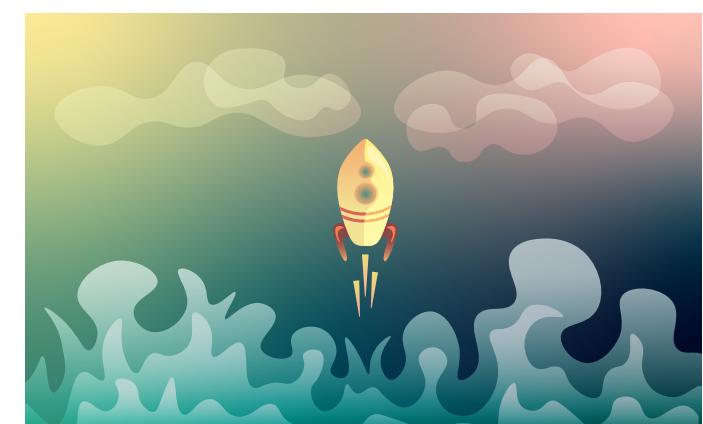
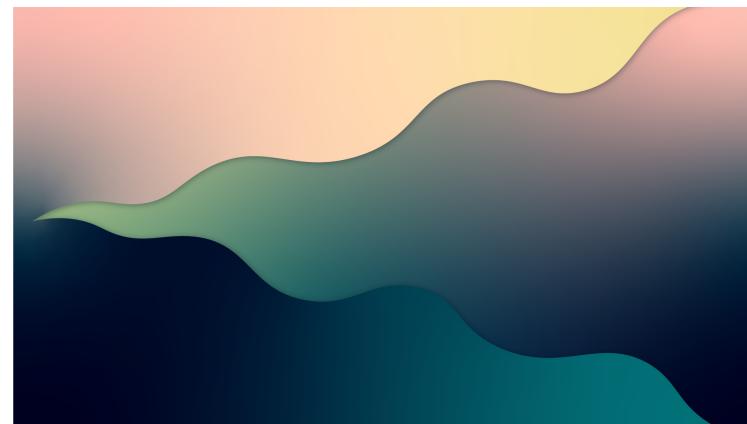
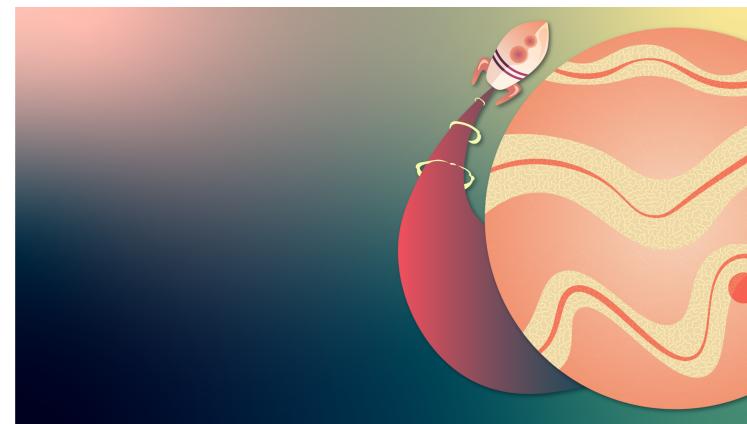
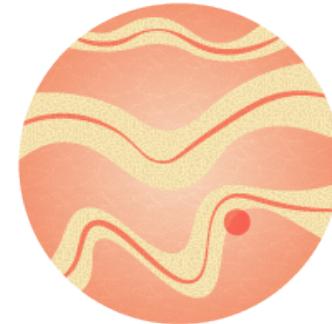
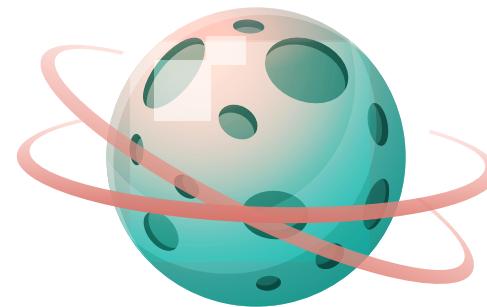
Drafts and Process:



<https://en.wikipedia.org/wiki/Jupiter>



Drafts/Colour variations



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Ibm.com. 2021. Guidance to hone your design thinking skills [online] Available at: <<https://www.ibm.com/design/thinking/page/toolkit>> [Accessed 20 February 2021].

Micro interaction inspirations:

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UXPlanet. 2016. Animated Interactions. Motion on Purpose. [online] Available at: <<https://uxplanet.org/animated-interactions-motion-on-purpose-943bebcaf438>> [Accessed 20 February 2021].

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<https://digitalsynopsis.com/design/ui-ux-animation-inspiration/>