Weather phenomena

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Introduction

The eBook is about weather phenomenon known as Land Breeze and Sea Breeze. The background includes the elements of beach like sea, land, tree, clouds, folding bed, etc. This concept has been learnt in standard 6 of my primary school in India, which inspired me to use the same for my eBook. The purpose of the storybook is to explain this science concept to children using animations, media, and sound. The target audience would be science students, or any other student interested in weather phenomena. So basically, this eBook can be used for learning purposes.

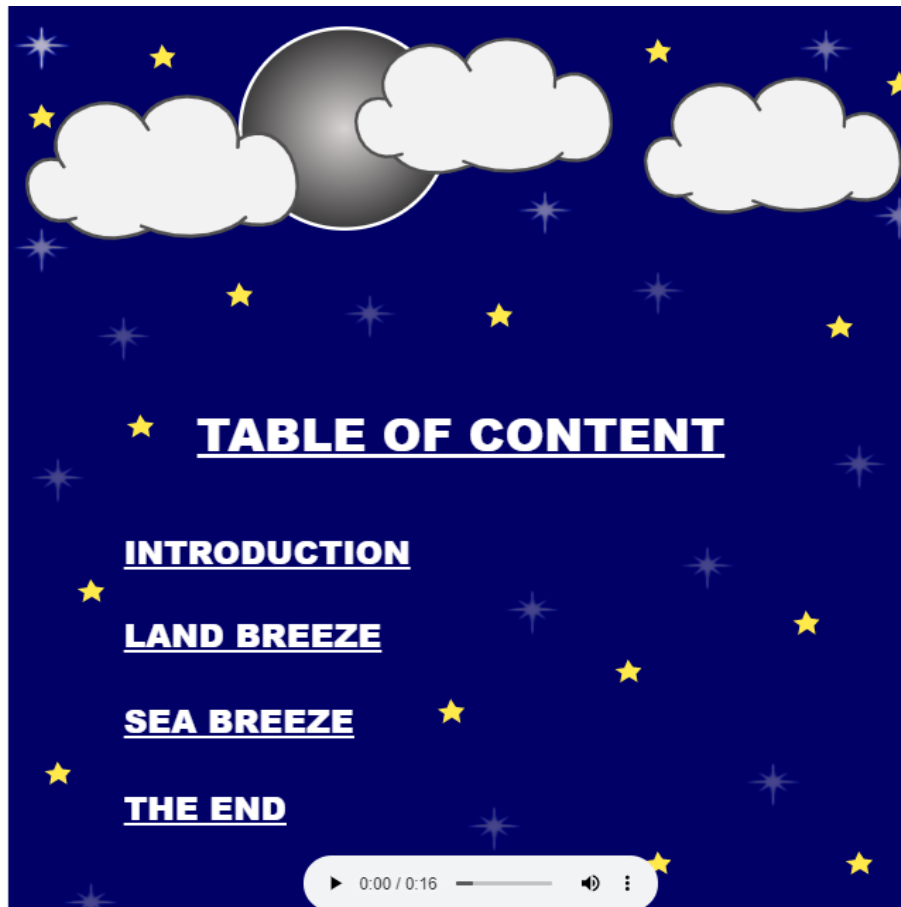Target Audience: Children (Age: 10 to 16 approx.)

Theme

This eBook has basically used beach scene at background. Day scene of beach has been used to explain the concept of Land Breeze. Night scene of beach has been used to explain the concept of Sea Breeze. Most of the things has been drawn with the help of google web designer by using different tools and colors. For example: night scene on page 1 and page 2, day scene on page 3, night scene on page 4 has been drawn as stated above. Some elements like sun, moon, palm tree has been downloaded from free websites, link for those is given in references. Here I want to mention that same scene has been used for day and night on page 3 and page 4 only by changing the colors, using light colors for day scene and dark colors for night scene. For instance: using light brown for day land and dark brown for night land, using light blue for day sea and dark blue for day sea. The reason for which is: to make the transition from day to night more realistic. Furthermore, the images used are such that they fit to the background of beach, let's say: sun, moon, little insects, trees, etc. The sounds used are gentle and low-pitched sound so that it may not distract the basic focus from explanation and understanding. As the target audience are the learners, therefore, normal font name like Aerial Black and Times New Roman in regular text style has been used to make it more decent and less distracting.

The theories of difference in heat capacity of land and water is included to make the concept more clear. The research has been done using different websites links for which is given in references.

Storyboards

Page 1:

1.1 Dimensions: 768 x 800

1.2 Media Used: <u>SOUNDS</u>: Acoustic guitar melody as a background music

Plastic click sound when user click on different options given in table of contents: INTRODUCTION, LAND BREEZE, SEA BREEZE, THE END.

<u>IMAGES</u>:

 Downloaded: Clouds, Stars

SVG made using google web designer: Moon, Background night scene

1.3 Buttons: <u>AUDIO BUTTON:</u> Visible at the bottom of the screen

1.4 Background: <u>NIGHT SCENE</u>: With clouds, moon, and twinkling Stars

1.5 Content: Page 1 is the home page and a page with table of contents so that user can navigate to each page of the eBook

1.6 Description (purpose / objectives): Act as a starting page to welcome the audience, provides table of content.

1.7 Animations: Twinkling Stars

1.8 User Interactions Required:
Mouseover clouds results in movement of clouds, Mouse over different options of table of content changes color of the text and cursor changes to 'grab'
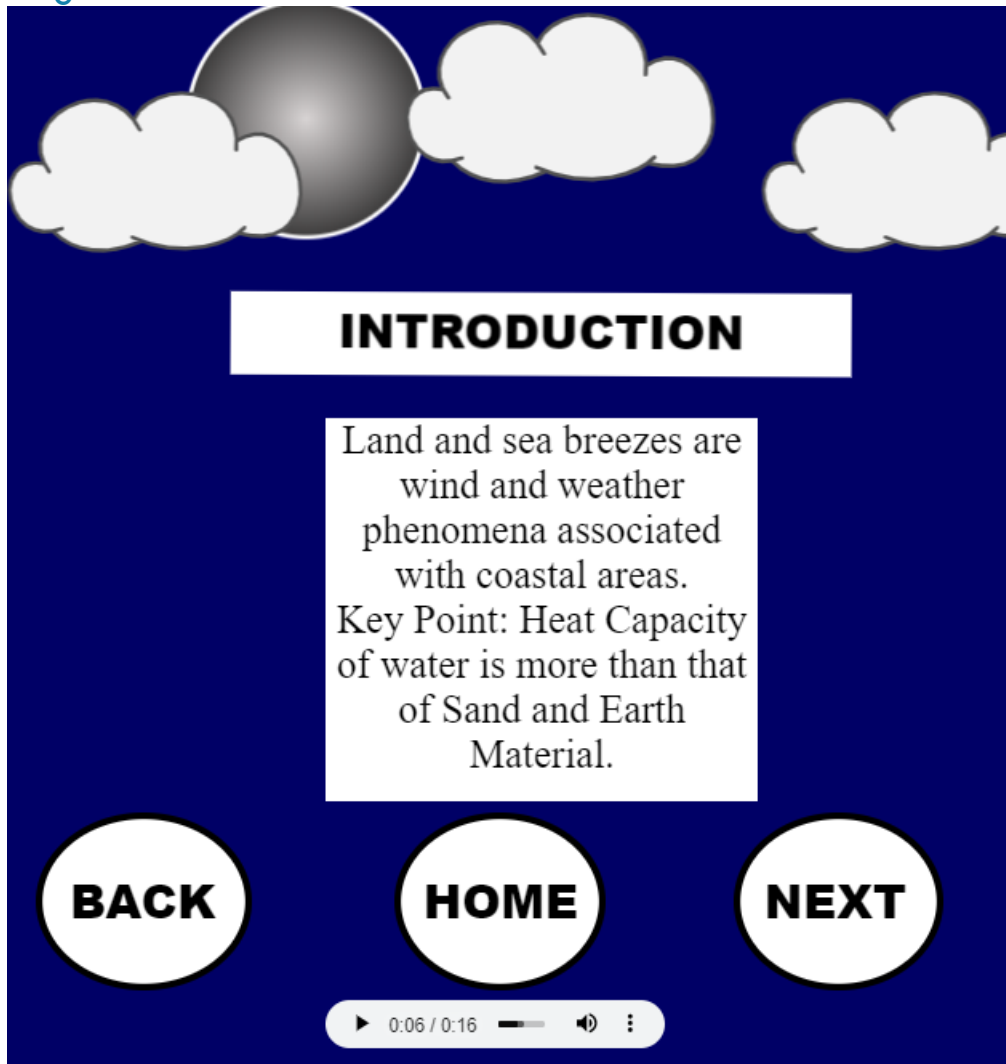
1.9 User Feedback:
Mouseover: Text changes color, Curson changes from arrow to a 'Grab
Onclick: Gives plastic click sound

1.10 Navigation / Links:
Links in Table of content: Navigate to any of the upcoming page of eBook

Play button on audio to play the sound

2.1 Dimensions: 768 x 800

2.2 Media Used: <u>SOUNDS</u>: Acoustic guitar melody as a background music

Self-recorded Introduction of the topic being read out aloud

Plastic click sound when user click the play button

<u>IMAGES</u>:

Downloaded: Clouds, Stars

SVG made using google web designer: Moon, Background night scene, white circles for buttons

2.3 Buttons:

2.3.1 <u>AUDIO BUTTON:</u> Visible at the bottom of the screen

2.3.2 Back button, home button and Next button

2.4 Background: Night scene with moving clouds, moon

2.5 Content: Introduction Page

2.6 Description (purpose / objectives): Provides introduction to the basic phenomenon of Land breeze ans Sea breeaze

2.7 Animations: Moving clouds with appearing moon, Introduction text appears gently sliding up, Next button gently moves up and down giving an indication to users to move to next page
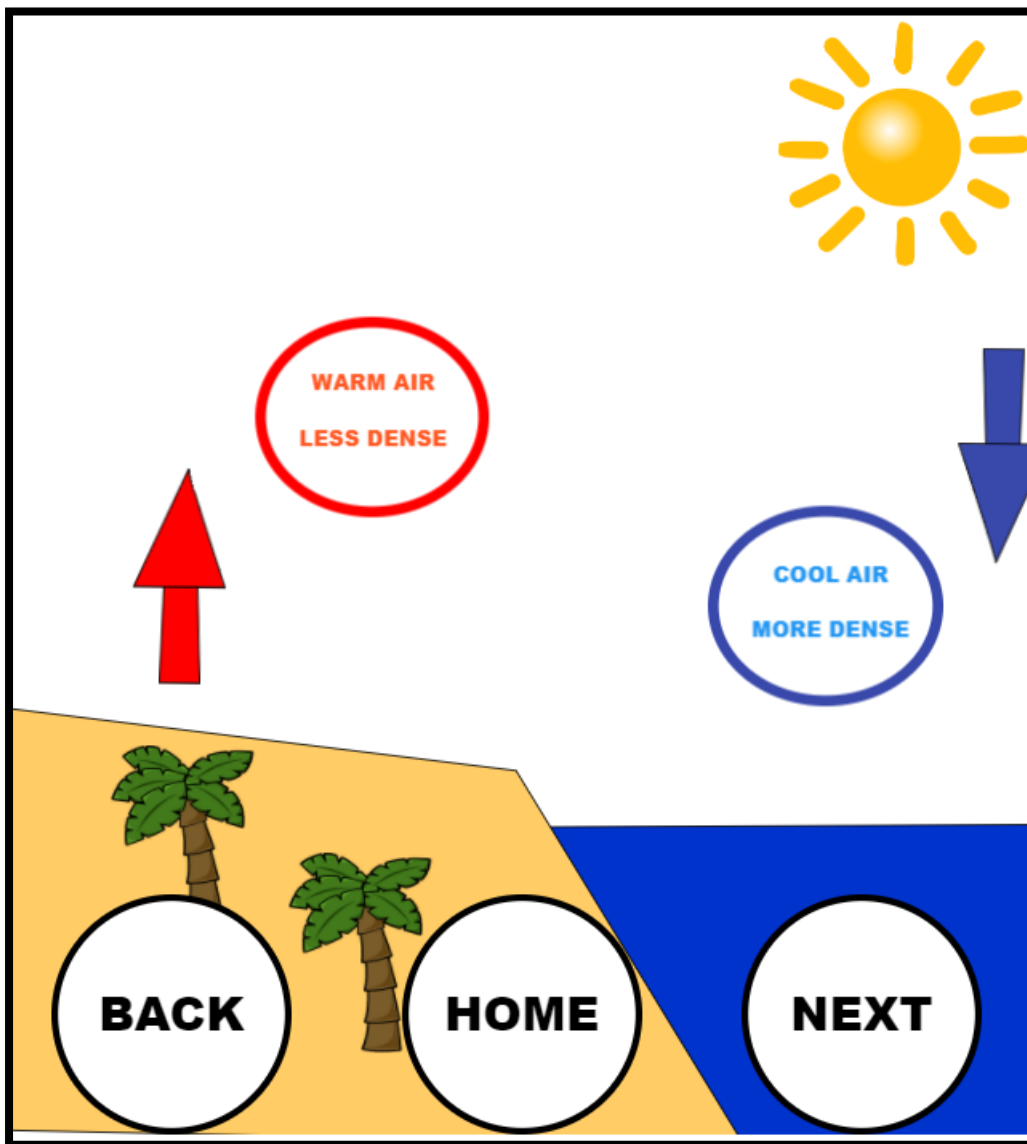
2.8 User Interactions Required: User can use respective button to move to either next or back or home page, Touch stars and they start twinkling

2.9 User Feedback: Back, Home and Next Button moves up on mouseover

2.10 Navigation / Links: Back, Home, Next, Mouseover the stars: they start twinkling

Pre-recorder voice Description:
"Land breeze and Sea Breeze are weather phenomenon which occurs due to the difference in the heat capacities of water and land/sand. Water takes more time to heats up and cools down as comparatively to that of land/sand."

Page 3:

Dimensions: 768 x 800

Media Used:

<u>SOUNDS</u>: Acoustic guitar melody as a background music

Self-recorded description of Land breeze

Plastic click sound when user click the play button

<u>IMAGES</u>:

Downloaded: Palm trees, hot air balloon

SVG made using google web designer: Sun, Sea, Land, red and blue borders circles, red and blue arrows, and white circles for buttons

Buttons: Refer 2.3

Background: Day scene with rising sun, moving waves of sea, palm trees on the ground

Content: Land Breeze

Description (purpose / objectives): Explaning the phenomenon of land breeze with animations

Animations: Changing size of rising sun, moving waves of sea, moving circles and arrows as a part of description, changing color of circles showing a transition from warm air to cool air.

User Interactions Required: Mouseover hot air ballon: It starts flying in air

User Feedback: Mouseover balloon, back, home and next button: they start moving

Navigation / Links: Buttons to navigate from one page to another

Pre-recorder voice Description:
"When the sun rises, air upon the land heats up which creates an area of low pressure. Air upon water cools down which creates an area of high pressure. Due to temperature differences, movement of air takes place from one side to another. This process is know as LAND BREEZE"

Page 4:

Note: All the features of this page are almost same as that of Page 3. Only difference is day scene has changed to night scene. The description is changed to Sea breeze

User Interactions Required: Touch the stars, it will start twinkling

Pre-recorder voice Description:
"During the night time, air upon the land cools down which creates an area of high pressure. Air upon water heats up which creates an area of low pressure. Due to temperature differences, movement of air takes place from one side to another. This process is know as SEA BREEZE"

Page 5:

:

Dimensions: 768 x 800

Media Used: SOUNDS: Acoustic guitar melody as a background music

Plastic click sound when user click the replay button

IMAGES: *Downloaded*: Clouds, replay button image

SVG made using google web designer: Moon, Background night scene

Buttons: <u>AUDIO BUTTON:</u> Refer 2.3.1

Replay Button

Background: Refer 2.4

Content: End Page

Description (purpose / objectives): To appreciate the audience for learning the concept, giving an option to audience to replay the Ebook

Animations: Moving clouds with appearing moon, text appears on screen by changing size from big to small, Replay button rotates giving an indication to users to use it to restart the Ebook from very brginning, when mouse-over to the well-done text the sparkles pops up on the screen

User Interactions Required: Use replay button to restart
Use audio button to play background music
Touch the replay button, it will move up
Touch the moon

User Feedback: On touching the replay button, it will move up
On touching hot air balloons, it will move up
Pressing Replay button take you to home page, producing click sound
Touching moon produces twinkling sound

Navigation / Links: Replay

Media List/References

Image name or description	Resource address/URL
Acoustic guitar melody (page 1 to page 5)	https://freesound.org/people/Garuda1982/sounds/338082/
Balloons (page 5)	https://freesvg.org/balloons-vector-graphics
Beach Image (page 2)	https://lh3.googleusercontent.com/proxy/7TUg7oV3kMikXV3bI6xG8CrsjSnF gn7rRZ7lamJsjnz6kr_TOSZcCCmDWRwGZcbE1C0hMI7TYHSiS06BCkLHQ5Zun wyY1j0r6LIjRw
Christmas star (page 1, 2 and 4)	https://freesvg.org/christmas-star-vector-image
Click Sound (page 1 to 5)	https://freesound.org/people/LudwigMueller/sounds/548506/
Cloud (page 1, 2 and 5)	https://freesvg.org/1330593065
Hot Air Balloon	https://freesvg.org/vertical-blue-and-gray-stripes-hot-air-balloon-vector-graphics
Land and Sea Breeze Description (page 2, 3 and 4)	https://eschooltoday.com/learn/land-and-sea-breeze/
Palm Trees (page 3 and 4)	https://freesvg.org/palm-tree-vector-image
Plastic click sound (page 1 to page 5)	https://freesound.org/people/florian_reinke/sounds/63532/
Replay Button (page 5)	https://www.iconfinder.com/search?q=replay%20button&price=free
Scorpio (page 2, 3 and 4)	https://freesvg.org/scorpion-stencil
Shiny star (page 1, 2and 4)	https://freesvg.org/shiny-star
Sun (page 1 and page 3)	https://freesvg.org/bright-sun-vector-drawing
Twinkling click sound (page 2, 4 and 5)	https://freesound.org/people/Chanhun/sounds/161322/