

Digitally Enhanced Exhibit Program

Style Guide for New User Interface Design

MDP 2023 Cohort Team - December 2023



**MULTIDISCIPLINARY
DESIGN PROGRAM**



About This Style Guide

This Style Guide was created in December 2023 by the UX sub-team of Multidisciplinary Design Program 2023 AAHOM Cohort Team. The purpose of this guide is to document and standardize all the elements created/designed for the DEEP interface which were demonstrated in the prototypes, within the project duration (January - December 2023). Figma's [Developer Mode](#) can also be used to view CSS properties of style elements used in DEEP.

All example materials are created on 1440*960 px frames (size of Surface Pro 8 tablet).

Along with this guide, the team also created a content guide which provides recommendations regarding user flow and content creation for DEEP exhibits. Please refer to both documents together for the future development of DEEP.

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Section I

Typography

Typefaces: Overview

Playpen Sans SemiBold

Playpen Sans Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

1234567890

!@#\$%^&*()_+;:'",./<>?[]{}\\

Mulish ExtraBold

Mulish Bold

Mulish Medium

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

1234567890

!@#\$%^&*()_+;:'",./<>?[]{}\\

Playpen Sans is the typeface to be associated with **Instructions (including Hints), Questions, and Top-Level Feedback** on all screens. It is used under two fonts (SemiBold, Regular). The type family is free and open source, licensed under SIL Open Font License 1.1. It can be found on Google Fonts (<https://fonts.google.com/specimen/Shantell+Sans>).

Mulish is the typeface to be associated with **Player Names, Action Buttons, Captions, Answer Choices, and Explanations** on all screens. It is used under three fonts (ExtraBold, Bold, Regular). The type family is free and open source, licensed under SIL Open Font License 1.1. It can be found on Google Fonts (<https://fonts.google.com/specimen/Mulish>).

***For both typefaces, please refer to Section III for more information on usage regarding fonts, sizes, alignment, etc.

Typefaces for Landing Screen Titles



To form better connections between DEEP tablets and the physical exhibits, **typeface use for titles on landing screens** should be consistent with the **typefaces used on physical exhibition signages**:

- Use the original typefaces for both title and subtitle whenever possible.
- If the original typefaces are not found, substitute them with typefaces with similar characteristics (similar strokes, x-height, etc.).

***Please refer to page 15 for more information on typeface usage (fonts, sizes, alignment, etc.) and other stylistic choices on landing screens.



Top Left

Landing screen for the redesigned DEEP *Rocket Fuel* Exhibit.

Bottom Left

Exhibition Signage at the physical *Rocket Fuel* Exhibit. The title types on this signage were not found, so the UX team substituted them with **Eurostile Extd Black** (Title) and **Mulish ExtraBold Italic** (Subtitle).

Section II

Images

Graphic Characters: Overview

The AAHOM-DEEP characters were created with the purpose of providing a more engaging experience for the visitors, especially children at younger ages.

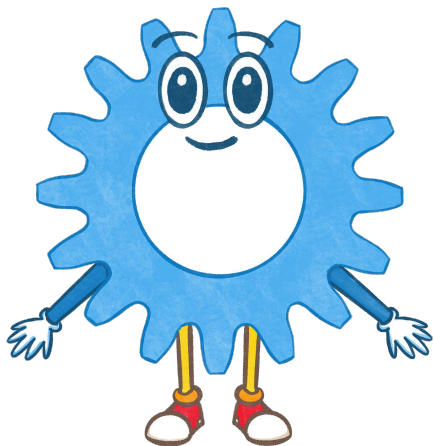
The current character set consists of **one primary character (Gear)**, which is based on AAHOM's logo, and **three secondary characters (Triangle, Rectangle, Circle)**.

All characters were created with Procreate using the default Tinderbox brush.

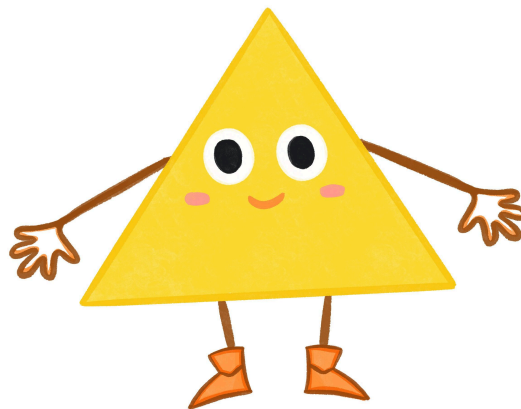
When applying the characters:

- Do NOT change the ratio of the character.
- For regular screens (Screen x1 - x2 in Section III): all characters should be at 500 pixels MIN.
- For pop-up screens (Screen x3 in Section III), all characters should be at 400 pixels MIN.

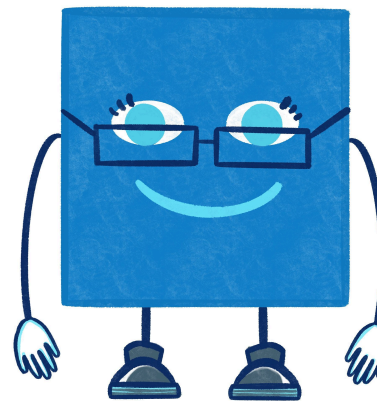
***Please refer to Content Guide page 11 for more information on character usage.



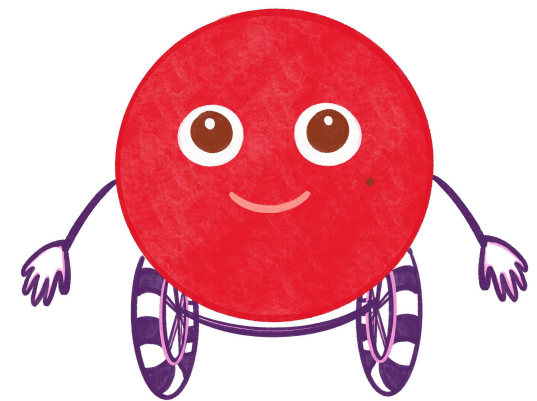
Gear



Triangle

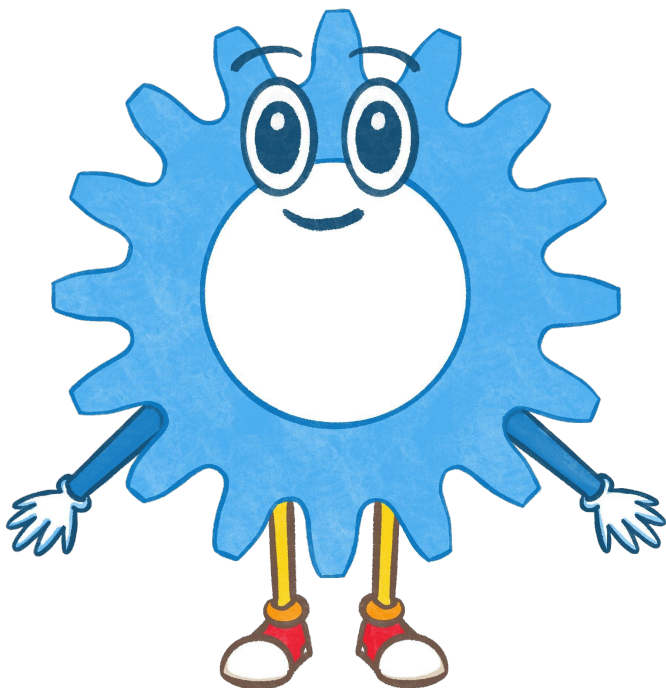


Rectangle



Circle

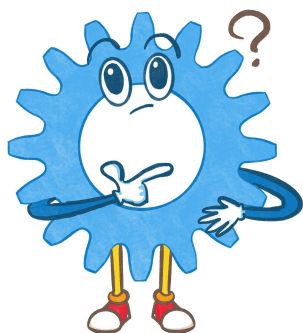
Primary Character Design



Name: Gear

Gender: Neutral

Color	HEX Code	Usage
 Cerulean	4EB0F0	Body Fill, Hands Highlight
 Denim	137DC2	Body Outline, Arm Fill
 Allports	185276	Face, Arm Outline
 Turbo	FBD621	Leg Fill
 Late Afternoon	FAA835	Socks Fill
 Alizarin	EB2033	Shoes Fill
 Domino	72594B	Leg & Shoes Outline



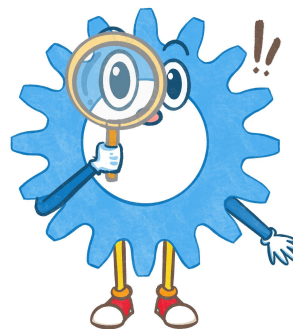
Thinking



Jumping



Reading



Investigating

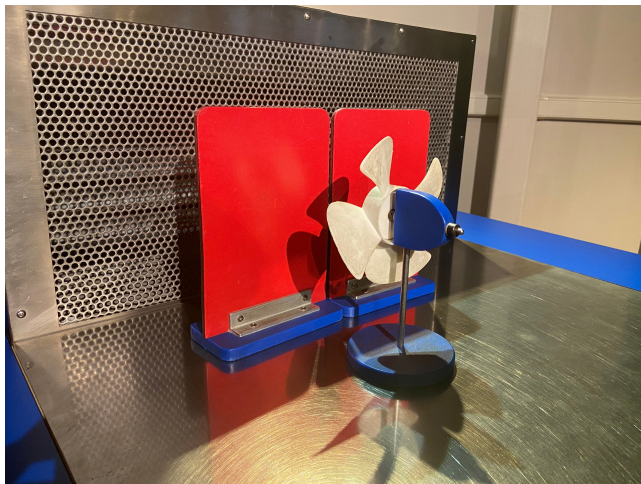


Thumb Up

Exhibition Pictures

Exhibition Pictures refer to images directly taken from the physical exhibit at the museum. They are mainly used as visual assistance for instructional screens.

***Please refer to Content Guide page 12 for more information on usage.



- Crop the image into a frame that can show sufficient information clearly.
- The main subject should occupy at least 50% of the image.
- Make sure that the image has adequate lighting.

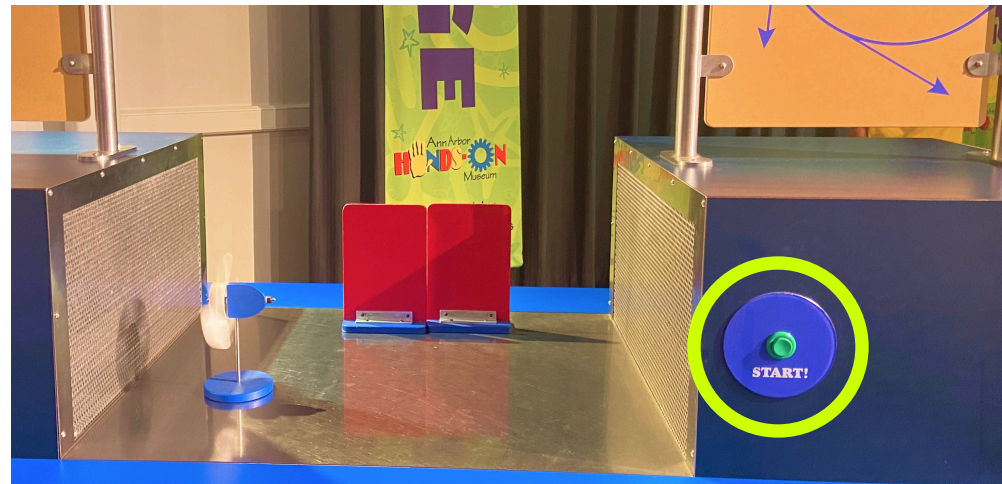
***Please refer to Section III for more information about image size and style.

Below Left

Exhibition picture used in the new DEEP *Wind* Exhibit. Here the players were prompted to “Place both the red blocks in front of the wind turbine.”

Below Right

A full view of the *Wind* Exhibit used to guide the players to the “START!” button.



- If there is a need to show a broader view of the exhibit, make sure to highlight the main subject with visual cues in conspicuous colors (example above).
 - Potential visual cues includes circles, arrows, etc.
 - Highlight colors should be distinctive from the background.

Section III

Screens

Screen Size, Background & Colors

Screen size and proportion for the new DEEP interface is dynamic based on the tablets the museum will use.

- The prototypes developed by the 2023 MDP Cohort are using 1440 x 960 pixel frame size.



The base background for all DEEP screens consists of an ivory color overlayed by a light watercolor-wash texture. The source image is provided in the Final Deliverable package.

The color palette used in the current prototypes is specified below. Other color choices can also be explored in future development of DEEP.

***Please refer to later pages in Section III and Section IV for specifications on color usage.

Color	HEX Code
 Orient Blue	185276
 Arctic Paradise	C0E3F9
 Mikan Orange	F08100
 Texas Rose	FFB45C
 Sandy Beach	FFDEB8
 Charming Green	D1E191
 Floral White	FCF8EE
 Lead	222222
 Matterhorn	555555

Landing Screen: Layout & Imagery

Landing Screen is the first and the standby screen of every DEEP exhibit. This page specifies the basic layout (margins, gutters, etc.) and imagery usage on the landing screens.

1. Title Section

Title Section Overlay Background

Corner Radius: 50°

Drop Shadow

- X: 0, Y: 4
- Blur: 40, Spread: 20
- Color: #0D0A0A @ 40%

1a. Title & Subtitle

Margin: 96 px - 120 px

Gutter between Title and Subtitle text boxes:
0 px - 4 px

***Based on the chosen typefaces.

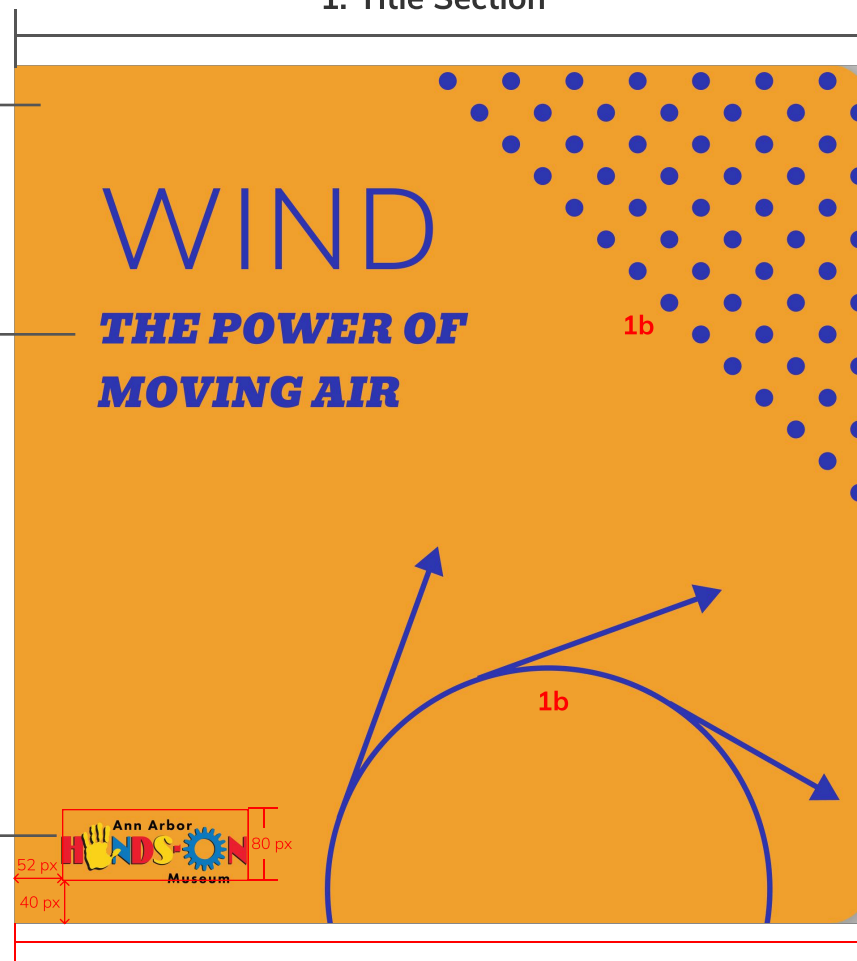
1b. Imagery

Use the images on the physical exhibition signages.

- Do NOT spread the image to the Interaction Section

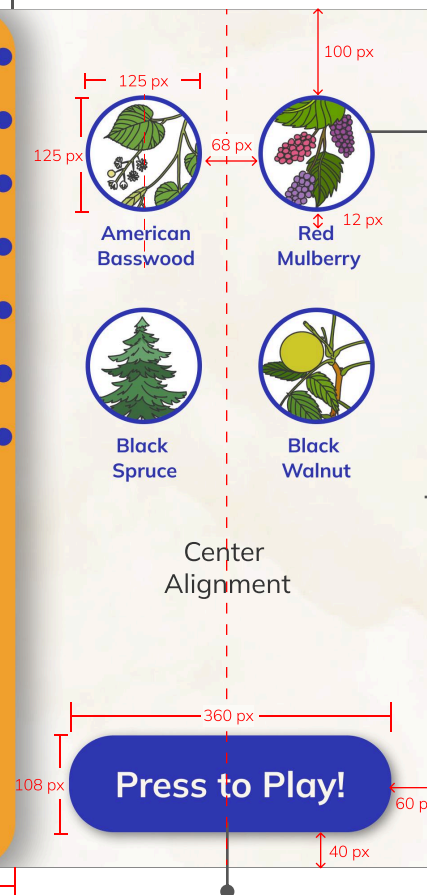
1c. AAHOM Logo

Height: 80 px



Section 1 Width = Screen Height

2. Interaction Area



2b. Players

***Appear at beacon detection.

Player Picture Outline

- Dimension: 125*125 px
- Margin: 100 px from top
- Image: use the images on the DEEP lanyards.
- Image Stroke: Center @ 5 pt

Player Name

- Center aligned with Player Picture.

Base Background

Base image

***refer to page 14

2a Button Effect

Drop Shadow

- X: 4, Y: 4
- Blur: 15
- Color: #000000 @ 50%

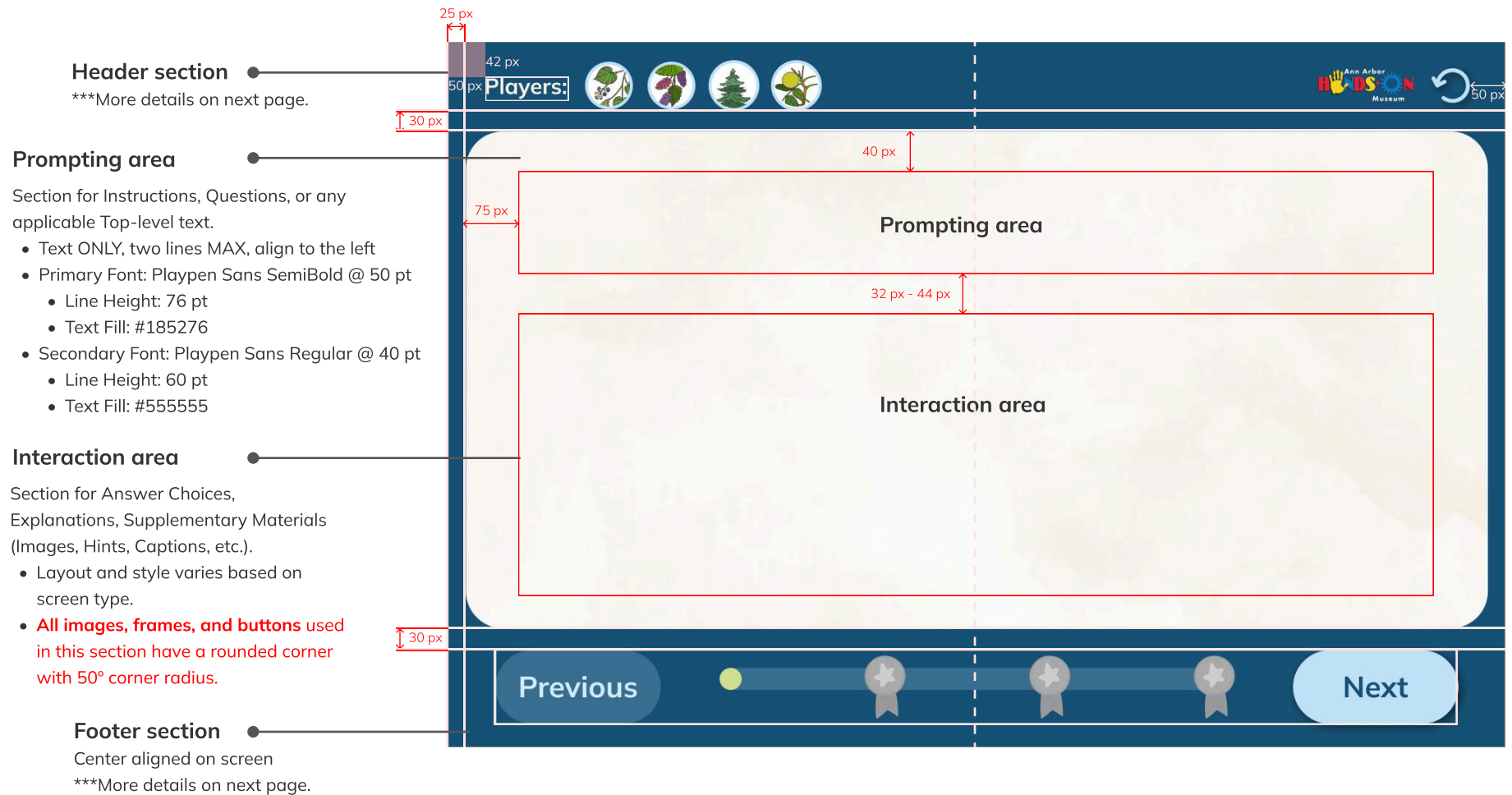
***Please refer to page 37 for details on transitions effects.

2a. 'Press to Play!' Start Button

Dimension: 360*108 px w/ 50° corner radius

Basic Screen Layout

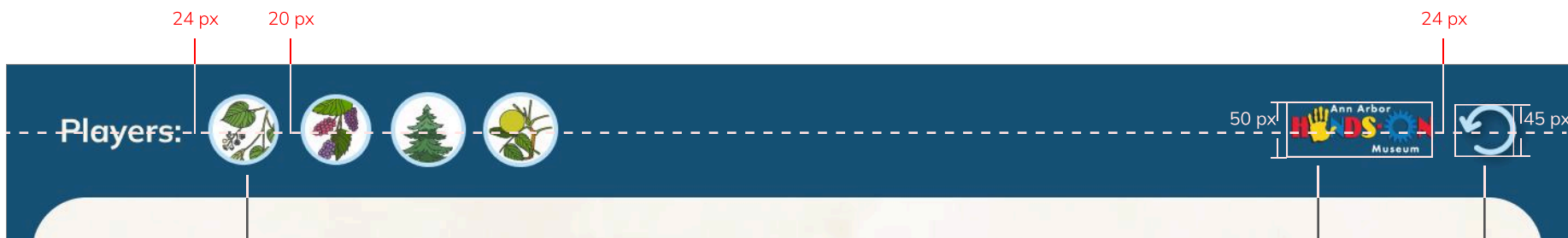
Apart from the Landing Screen, most of the other screens (except Overlays and Ending Screens) in the new DEEP design follow the information architecture and layout specified on this page, with variations in the prompting and interaction areas based on the screen type (specified on page 21-35).



Header and Footer

This page specifies details on header/footer components introduced on page 17.

***Please refer to page 40-43 for more information on transitions effects.



Players

*** Appears at beacon detection.

'Player:'

Font: Mulish Bold @ 30 pt #FCF8EE

- Center aligned with Player Pictures.

Player Pictures

Dimension: 65*65 px

Stroke (Inside): #C0E3F9 @ 4 px

*Same image from the landing screen (page 15)

AAHOM Logo

Height: 50 px

Restart Button

Bring player back to the landing screen.

Progress Bar

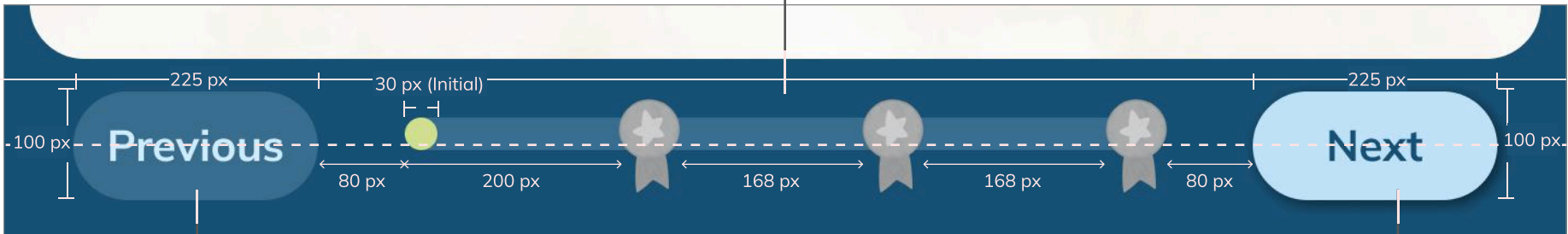
***Refer to Content Guide page 18 for more information on DEEP gamification.

- Center aligned with Previous/Next Buttons.

Height: 45 px

Stroke Fill: #C0E3F9

Stroke Weight: 2 pt (Center)



Previous Button

Bring player back to the most recent screen.

Next Button

Bring player to the next screen.

- Wording on the button here varies based on context.

Previous/Next Button Properties

Base

Dimension: 225*100 px

Shape Fill: #C0E4F9

Active 100%, Inactive 20%

Corner Radius: 50°

Text on Button

Font: Mulish Bold @ 40 pt

Text Fill: Active #185276,

Inactive #D2EFFF

- Center aligned on Base

Drop Shadow (Active)

- X: 4, Y: 4

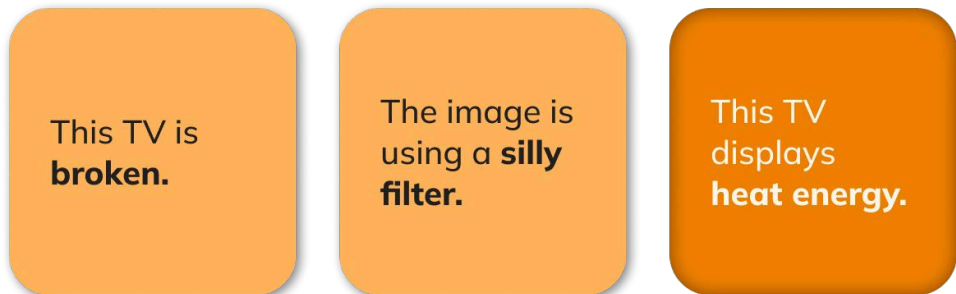
- Blur: 15

- Color: #000000 @ 50%

Effects & Button Styles

This page specifies details on shadow effects applied on media and buttons across all screens.

***Please refer to page 21-35 for more information regarding different screen types.



All Active Buttons

Answer Choices, Previous/Next/Restart (icon) buttons, Drag and drop, Number keyboard

Corner Radius: 50°

***Text style and dimension varies based on screen type

Regular

- | Color | Drop Shadow |
|-----------------|------------------------|
| • Base: #FFB45C | • X: 4, Y: 4 |
| • Text: #222222 | • Blur: 15 |
| | • Color: #000000 @ 50% |

Selected

- | Color | Inner Shadow |
|-----------------|------------------------|
| • Base: #F08100 | • X: 0, Y: 0 |
| • Text: #FCF8EE | • Blur: 25 |
| | • Color: #0D0A0A @ 50% |



Media

All images, GIFs

Corner Radius: 50°

- Inner Shadow
- X: 0, Y: 0
 - Blur: 30
 - Spread: 10
 - Color: #0D0A0A @ 50%

Screen Type Catalog

This page listed all screen types (excluding the landing screen) currently included in the new DEEP design. All of these screens (except Overlays and Ending Screens) follow the basic layout specified on page 17 and 18, with variations in the prompting and interaction areas (specified on page 21-35).

***Please refer to the reference page in the Style Guide Figma Document for actual prototype screens.

A. Instructions (page 21-22)

1. Instructions with Follow-up Questions
2. Instructions with Special Guiding Elements

B. Informational Screens (page 24)

C. Multiple-Choice Questions (page 25-26)

1. MCQ with Sketch and Text

D. Select All that Apply (page 27)

E. Drag and Drop (page 28-29)

1. Drag and Drop with Multiple Blanks

F. Questions with Number Input (page 30)

G. Feedback Screens (page 31-32)

1. Answer Screens
2. Overlays

H. Ending Screens (page 33-35)

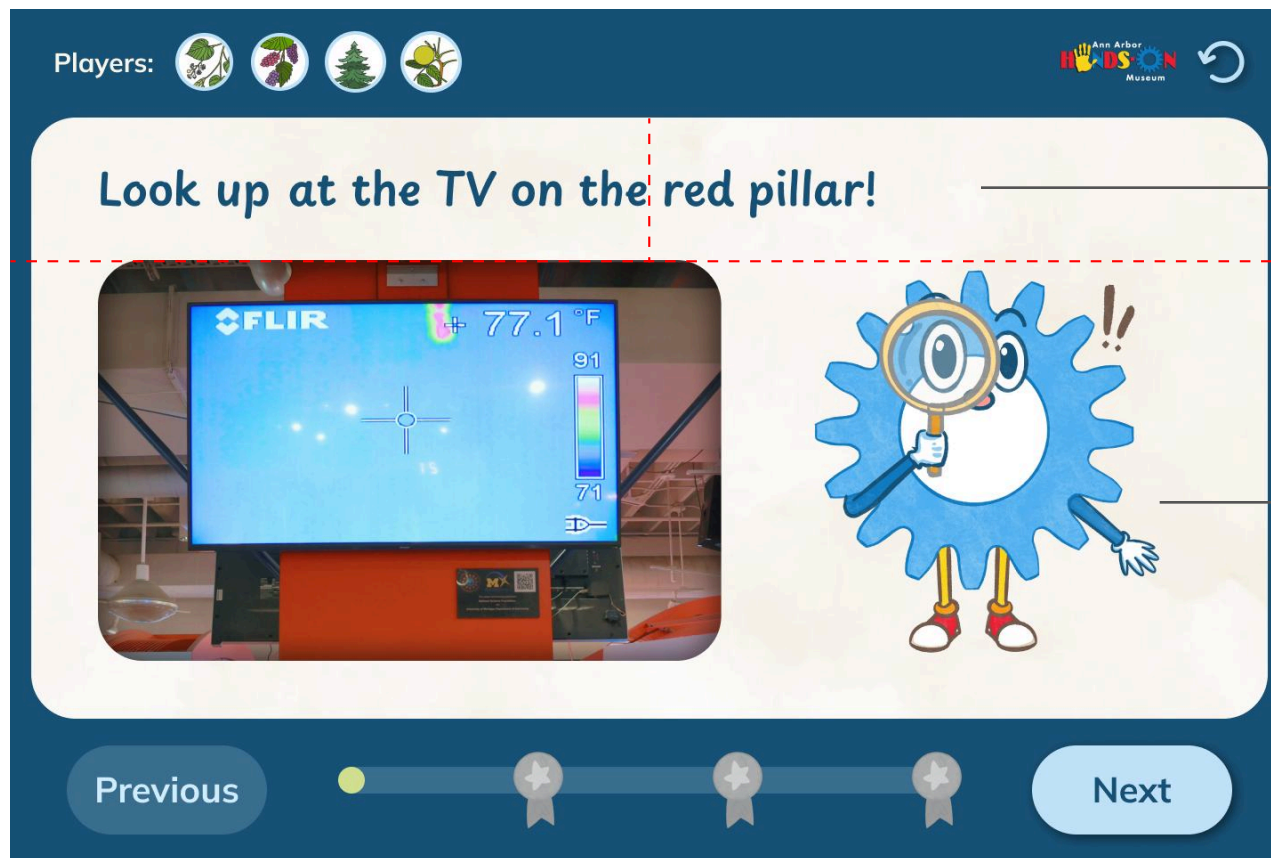
3A. Instructions

Instructions are screens prompting players to interact with the physical exhibits. There are three types of them: regular instructions, instructions with follow-up questions, and instructions with special guiding elements.

***Please refer to Content Guide page 8 for more information on content creation.

On This Page

A regular instruction screen used in the redesigned DEEP IR Camera Exhibit.



State all necessary instructions in the prompting area. Two lines MAX.

Images should be as large as possible while NOT exceeding the margins of the interaction area.

- If there are multiple images, leave 48 px -100 px gutter in between.
- Align all images as one group vertically to the center and horizontally to the top of the interaction area.

3C.1. MCQ with Sketch and Text

MCQ with Sketch and Text is a MCQ screen with answer choices consist of both Sketch and Text.

***Please refer to Content Guide page 9 for more information on content creation.

On This Page

An MCQ screen used in the new *DEEP Wind* Exhibit, on which the answer choices are structured with both sketch and text.

Sketch Area

The Sketch area is a rectangle shape overlayed on the button.

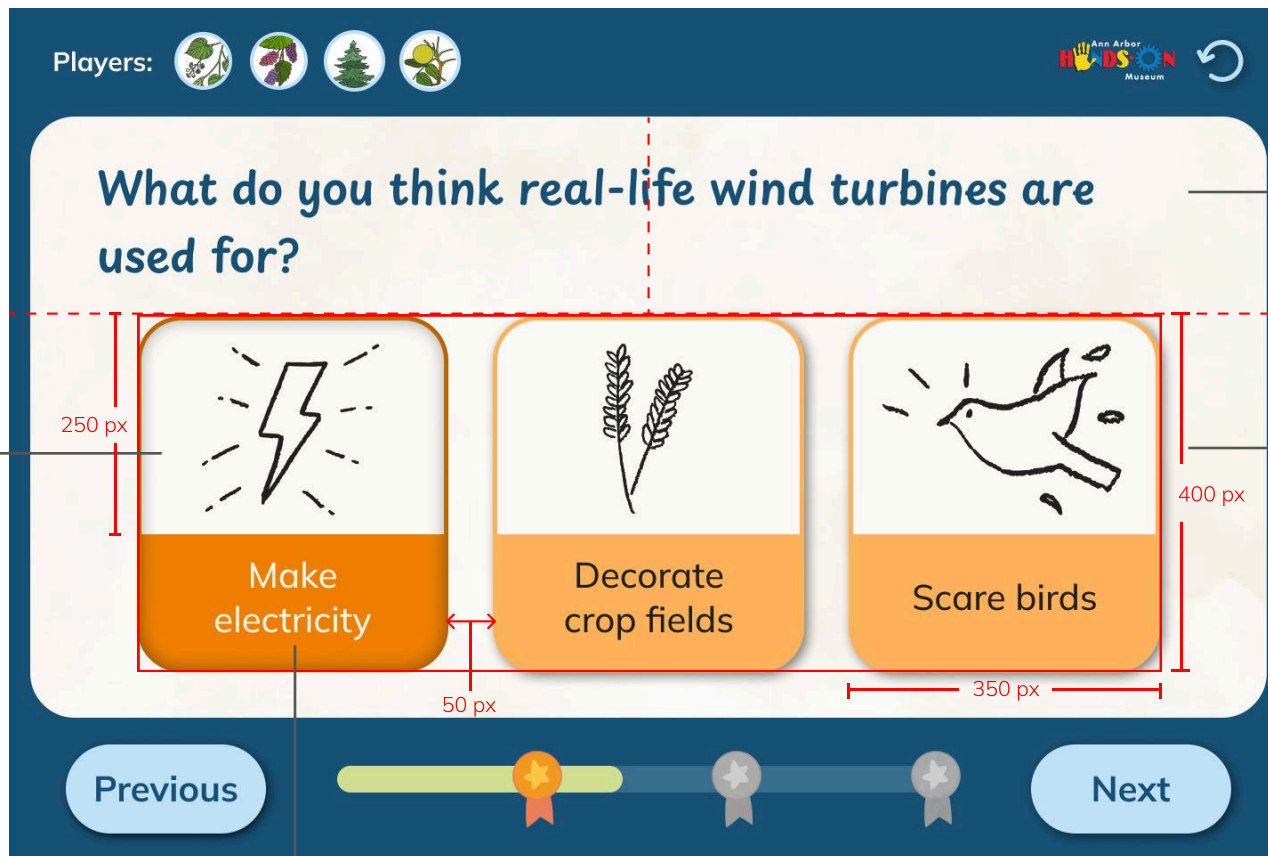
Base

Dimensions: 350*250 px
Fill: #FBFAF6
Stroke: @ 5 pt
Corner Radius: 50° for Top corners

Sketch

Sketches were created using the pencil tool in Apple's Note App and then converted to SVG format

- Should be in a consistent style
- Stroke Fill: #222222
- Height: 190 px
- Center aligned on base



State all necessary questions in the prompting area. Two lines MAX.

Answer Choice Buttons

Dimensions: 350*400 px

Leave 50 px gutter in between each answer choice.

Align all answer choices as one group vertically to the center and horizontally to the top of the interaction area.

***Please refer to page 19 for more information on button color and shadow effects.

Text on Buttons

Font: Mulish Regular @ 40 pt

Text Fill: #FBFAF6 Line Height: 50 pt

- Center aligned in the text area.

3D. Select All that Apply

Select All that Apply is a variation of the multiple-choice question which asks players to select more than one answer choice.

***Please refer to Content Guide page 10 for more information on content creation.

On This Page

A select all that apply screen with hint used in the redesigned DEEP IR Camera Exhibit.

Hint (Optional) is a guiding element used to assist players in interacting with the exhibit or answering a question.

- Title Font: Playpen Sans SemiBold @ 30 pt
- Body Font: Playpen Sans Regular @ 30 pt
- Line Height: 45 pt
- Left align all text to 30 px from the left edge and 45 px from the top edge of the base shape

***For more details on alignment and styles, please refer to page 22.



State all necessary questions and instructions in the prompting area. Two lines MAX.

Answer Choice Buttons

Dimensions: 275*185 px

Top selection bar Fill: #FFDEB8

Leave 40 px by 40 px gutter in between each answer choice.

Align all answer choices as one group vertically to the center (when there is not guiding element) and horizontally to the top of the interaction area.

***Please refer to page 19 for more information on button color and shadow effects.

Text on Buttons

Font: Mulish Medium @ 36 pt

Text Fill: #222222 Line Height: 45 pt

- Center aligned in the text area.

3E. Drag and Drop

Drag and Drop is a question type that asks players to fill in the blank* with answer choices.

***Please refer to Content Guide page 10 for more information on content creation.

On This Page

A drag and drop screen used in the redesigned DEEP *Rocket Fuel* Exhibit. Here it asks players to fill in the shape for a rocket-shaped object.

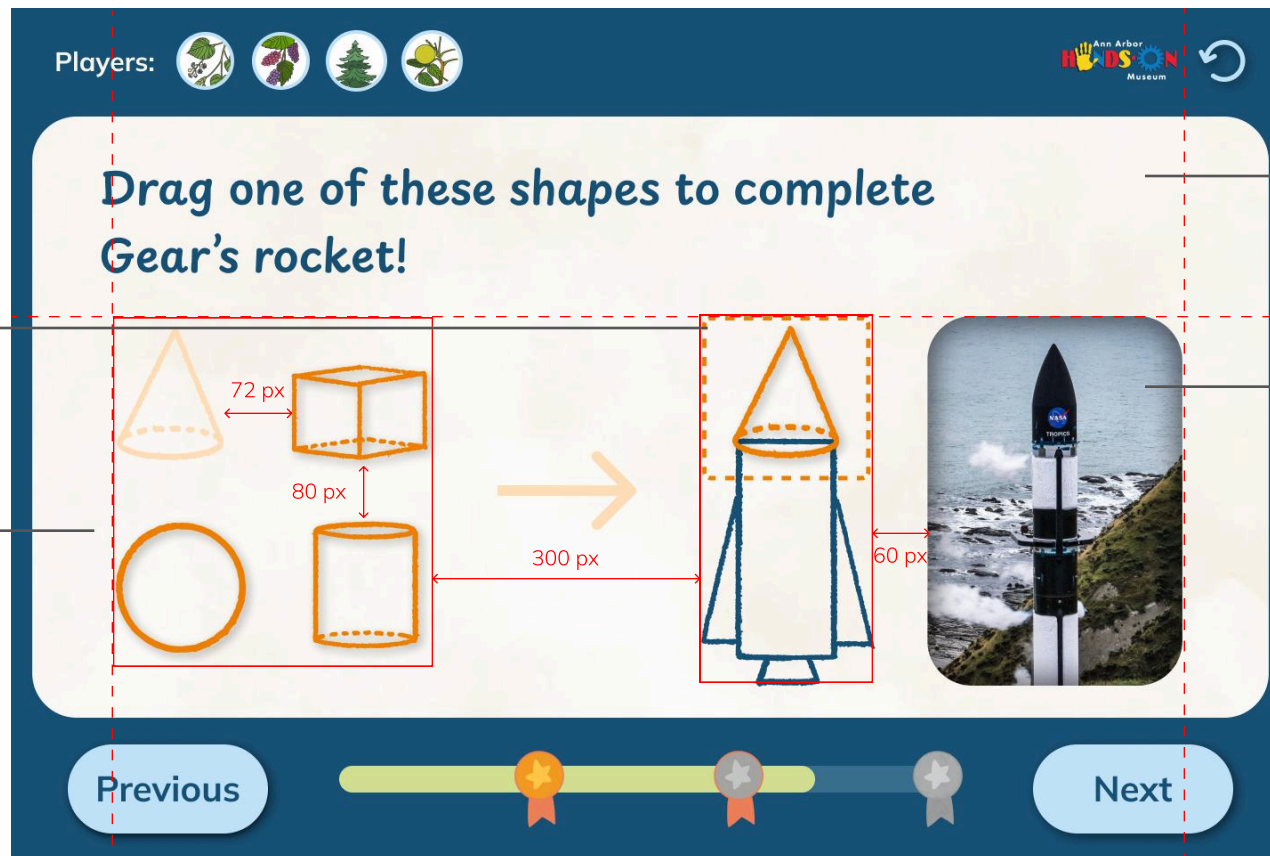
***Blank** refers to the **input area** where students will drag an answer choice in.

- Set dimension as needed.
- Gutter between input area and answer choices should be at 200 px MIN.
- Align input area to the top of the interaction area.

Answer choices are dynamic based on each question.

- Gutter each answer choice should be at 50 px MIN.
- Use Drop Shadow Effect.
- Align answer choices as one group to the top and left margin of the interaction area.

***Please refer to page 44 for more information on transition effects on buttons.



State all necessary questions and instructions in the prompting area. Two lines MAX.

Images should be as large as possible while NOT exceeding the margins of the interaction area.

- Gutter between images and input area should be at 50 px MIN.
- Align all images as one group to the top and right margin of the interaction area.

3G.1. Feedback Screens: Answer Screens

Feedback Screens refer to screens that respond to players' input by providing answers and explanations. There are two types of feedback screens in the current DEEP design: Answer Screens and Overlays.

***Please refer to Content Guide page 13 & 14 for more information on content creation.

On This Page

An answer screen used in the new DEEP *Wind* Exhibit, which gives answers and explanations to the question displayed on page 25 of this document.

Stay the same as the previous question screen.

Selected Answer Choice

Displaying the player's selection. A scaled-down frame following the same format of the buttons specified on page 25.

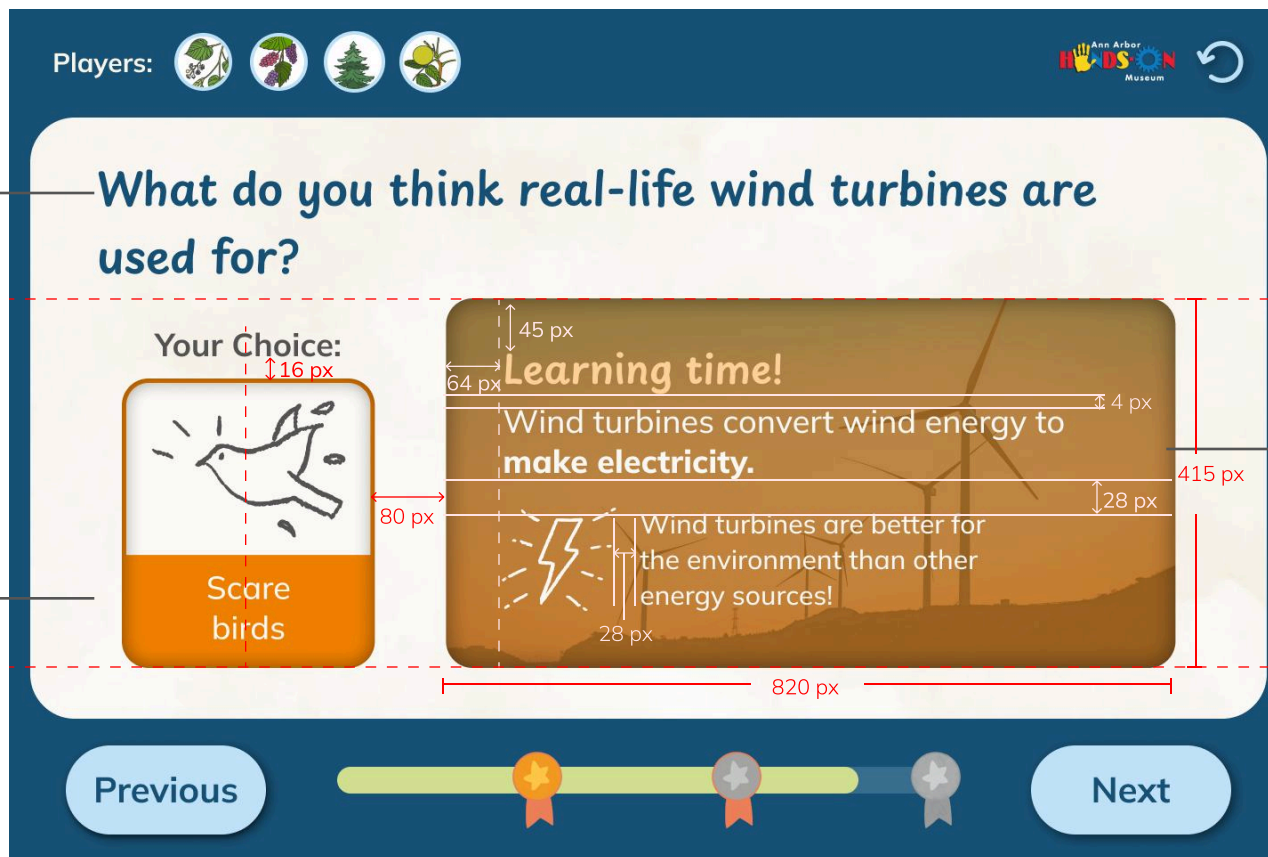
- Height: 325 px

'Your Choice:'

Font: Mulish Bold @ 36 pt
Fill: #555555

Answer Choice Text:

Font: Mulish Medium @ 36 pt
Fill: #FBFAF6
Line Height: 45 pt



Explanation Frame

Dimensions: 820*415 px

The base for this frame is an transparent color background (#BD7726 @ 80%) overlaying an concept-related image.

*Use same inner shadow as images.

Title: Playpen Sans SemiBold @ 44 pt in #FFD19B. 1 line MAX.

Body: Mulish Medium @ 36 pt in #FBFAF6 with 45 pt line height. 2 lines MAX

Caption: Mulish medium @ 30 pt in #FBFAF6 with 40 pt line height. 3 lines MAX.

- All text are left aligned as specified on the left.

Image

Height: 115 px

- Use the sketch from the correct answer choice from the corresponding question. Left aligned with title and body. Push the caption text right with a 28 px gutter.

3G.2. Feedback Screens: Overlays

Feedback Screens refer to screens that respond to players' input by providing answers and explanations. There are two types of feedback screens in the current DEEP design: Answer Screens and Overlays.

***Please refer to Content Guide page 13 & 14 for more information on content creation.

On This Page

An answer screen used in the new DEEP *Wind* Exhibit, which gives answers and explanations to the question displayed on page 25 of this document.

Overlay Frame

Dimension: 1200*720 px

Fill: #FCF8EE

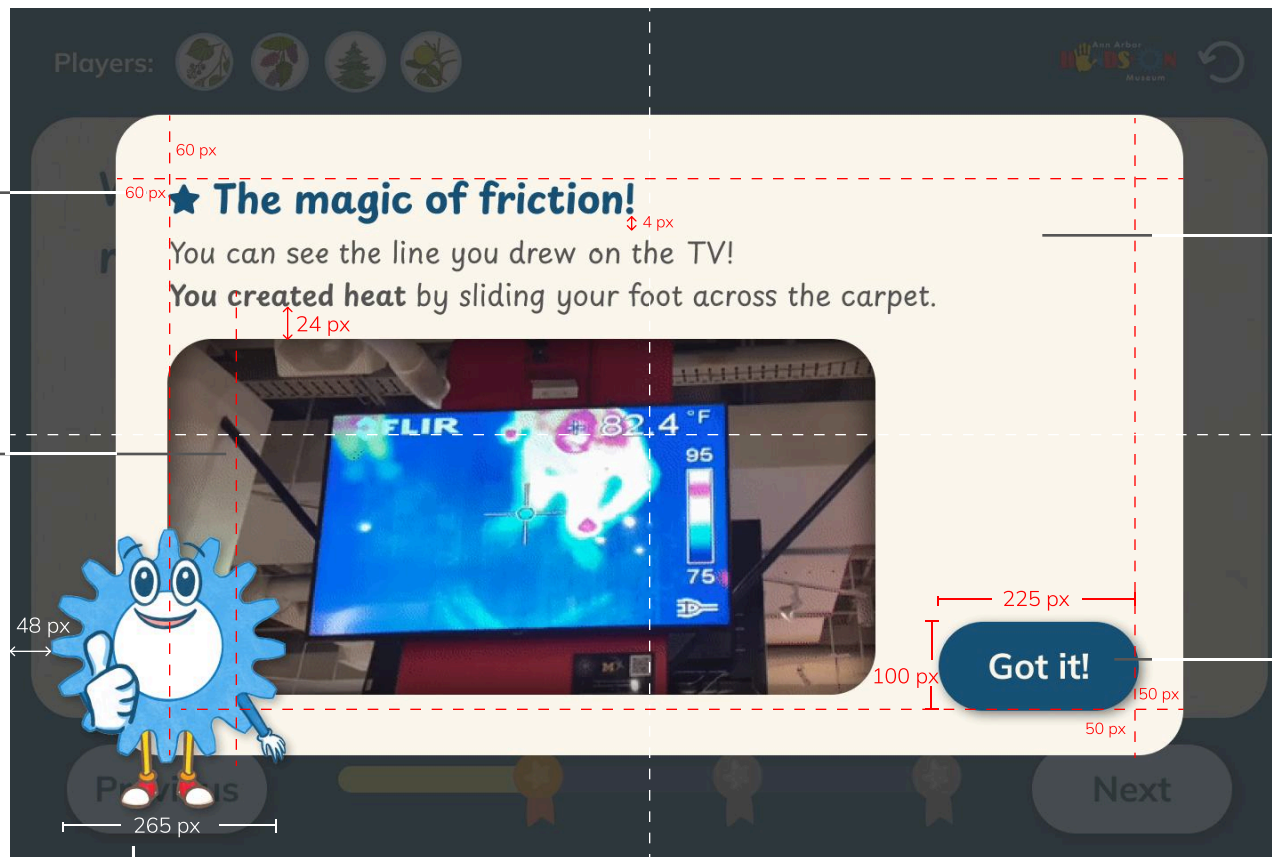
- Overlaid on the previous screen with a transparent background (#333333 @ 85%)
- Center aligned on the screen

Image on Overlay

Image should be as large as possible while keeping the paddings to the edge of the overlay frame:

- Left: 60 px
- Keep a 24 px gutter from body text, and a 72 px gutter from 'Got it!' button.

(If applicable) Push the caption text right with a 24 px gutter.



Primary Character

Width: 265 px

Text on Overlay

Title: Playpen Sans Bold @ 44 pt in #185276. 1 line MAX.

Body: Playpen Sans Regular @ 32 pt in #555555 with 48 pt line height. 2 lines MAX

- Use Playpen Sans SemiBold for keywords.

Caption: Mulish Medium @ 36 pt in #555555 with 45 pt line height. 3 lines MAX.

***Not included on this example.

- All text are left aligned as specified on the left.

'Got it!' Button

A variation of the 'Next' Button specified on page 18.

- Refer to page 18 for button properties.
- Align to the bottom right corner of the overlay frame with 50 px paddings.

3H. Ending Screens

Ending Screens are a sequence of three screens displaying at the result and class status at end of each DEEP exhibit.

***Please refer to page 45 for more information on transition effects.

***Please refer to Content Guide page 18 for more information on DEEP gamification.

On This Page

Second screen in the ending screen sequence of the redesigned DEEP *IR Camera* Exhibit.

Congratulation Message

Congratulates players of getting a Gold Badge on the title corresponds to the current exhibit.

Title Font: Playpen Sans SemiBold @ 64 pt

- Text Fill: #F08100

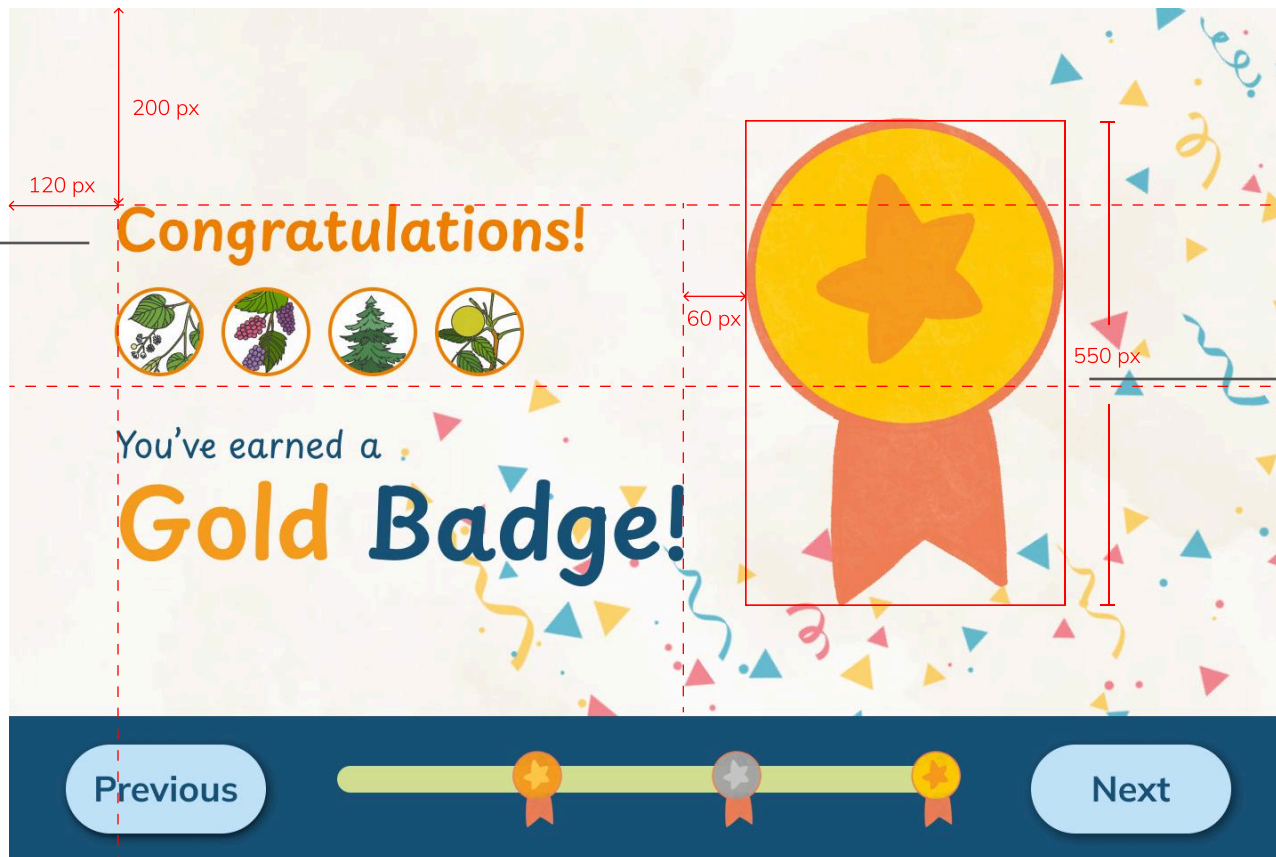
Secondary Font: Playpen Sans Regular @ 40 pt

- Text Fill: #185276

'Gold Badge': Playpen Sans SemiBold @ 108 pt

- 'Gold' Fill: #F69D1F

Left aligned to the left at 100 px and the top at 150 px.



Gold Badge

Height: 550 px

- Center aligned to the entire screen.
- Leave 60 px gutter from Congratulation Message

Section V

Finale

Contact

In the event of any questions or need for further clarification, reach out to the teams below.

MDP 2023 Cohort Team - UX Subteam



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