

# Engineering Design Challenge

## Arts Integration Options & Extensions



### What is home to me? (Arts-Enhanced SEL Integration)

#### SABES Lessons 19 & 20

#### 1. Listening and Reflection Exercise

Play a calming song, such as "Weightless" by Marconi Union. Encourage students to close their eyes and reflect on what home means to them. Students can also "stop and jot" their ideas, or draw them as they listen to the song.

- Encourage students to share their ideas after the reflection with either an elbow partner or the class.
- Journaling is another option for sharing ideas if your students do not wish to share aloud.

#### 2. Tiny Dream Home Visualization

Ask students to imagine an ideal tiny home, focusing on both the feeling and aesthetics they hope to achieve. Provide them with art supplies to create visual representations of their dream tiny homes, incorporating elements that are meaningful to them. This activity can lead to deeper discussions about personal values and preferences, as well as inspire creative design solutions for the EDC.

- Suggested background music:
  - "Dancing In The Dark" by Rihanna (From The "Home" Soundtrack)
  - "Home" by Diana Ross (From "The Wiz" Soundtrack)

### Tiny Homes Planning (Integrating Visual Arts)

#### SABES Lesson 21

#### 1. Visual Brainstorming with Paper and Crayons/Colored Pencils

In the Tiny Homes Planning lesson, students will engage in research to generate ideas for designing tiny homes. To facilitate this process, teachers can provide large pieces of paper and crayons/colored pencils, allowing students to visually brainstorm and explore their ideas. This visual exploration serves as a crucial part of their research, enabling them to visualize and conceptualize their designs more effectively.

## 2. Paired Feedback on Visual Brainstorming

Once students have completed their drawings, they can present them to their peers and teachers. This presentation serves as an opportunity for discussion regarding the feasibility of their designs. Students can receive feedback on their concepts, discussing aspects such as functionality, practicality, and creativity. This collaborative discussion enhances their critical thinking skills and helps them refine their ideas to create more viable and innovative designs.

## Artful Methods to Support All Learners SABES Lessons 21–23

### 1. Visual Examples

- When exploring tiny homes, it's beneficial to show students as many examples as possible of different designs to inspire their creativity and understanding of the concept. You can showcase various styles, layouts, and innovative features that make tiny homes unique and efficient living spaces. Increase engagement by showing students some of your personal favorite designs!

### 2. Becoming an Architect

For the design aspect, consider using graph paper to create floor plans to help students more accurately scale their drawings and visualize the dimensions of each room and area within the home. This can also introduce them to architectural drafting techniques and spatial planning.

### 3. Using a Picture Bank & Visual Symbols

Provide students with a picture bank containing various elements that they can choose from to include in their tiny house designs. These elements can range from specific features like windows, doors, and furniture to more specialized items such as solar panels or water-saving fixtures.

- The use of a picture bank is beneficial for **Universal Design for Learning (UDL)** as it holistically meets diverse learning needs. For neurodiverse students, having visual aids can support comprehension and decision-making. For English Language Learners (ELL) or Multilingual Learners (ML), the visual representation helps bridge language barriers and allows for a better understanding of the task.
- Furthermore, the picture bank supports creativity studies by providing a structured approach to the design process. It offers students a range of options to choose from, allowing them to express their creativity within a framework. This balance of flexibility and structure encourages students to think critically about their choices while also fostering a sense of autonomy and creativity.

## ARTS INTEGRATION MATERIALS

