Holiday Lights

LEGO education™

Engineering Design Process

- Identify or Define the Problem
- Generate Ideas
- Identify Best Idea Based on Constraints
- Design and Build a Prototype
- Evaluate Tests
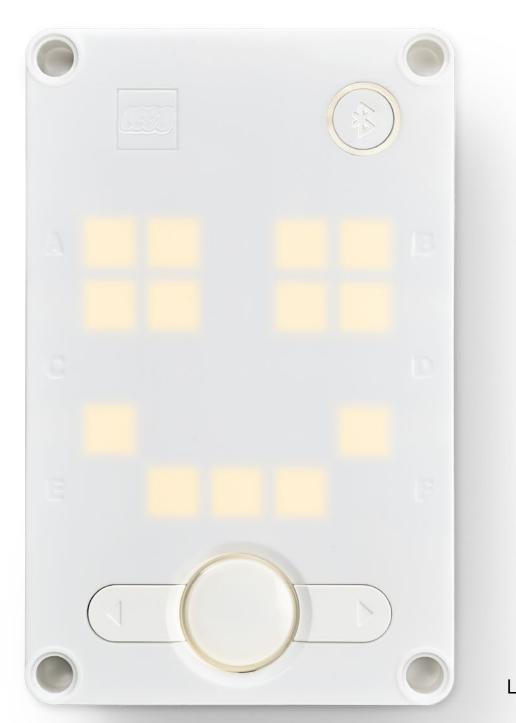- Iterate and Redesign
- Explain Results

Need inspiration?

Explore the LEGO® Education SPIKE™ Essential lesson **Treehouse Camp**. Use the model as inspiration for your own holiday house and light show.

Explore the LEGO® Education SPIKE™ Prime **Smart House: Go Green** lesson. Think about the engineering design process and how to invent your own smart home feature to minimize human impact on the environment.

Design your own holiday light show using LEGO® bricks or whatever materials you have available to you.

Connect

```
1  from hub import  LightMatrix
2  import runloop
3
4  async def main():
5      # write your code here
6      await light_matrix.write("Happy Holidays!")
7
8  runloop.run(main())
```

Challenge

Design a model that utilizes the Light Matrix and create a fun holiday celebration.

- **Many families, businesses, and community buildings decorate with holiday lights in the winter. Some lights blink, shimmer, change colors, or even spell out words!**

- **What features will you include in your holiday lights display? How will you make your light show unique?**

- **Consider how to program your light show using Icon blocks, Word blocks, or even Python.**

Use each step of the Engineering Design Process to complete this challenge.