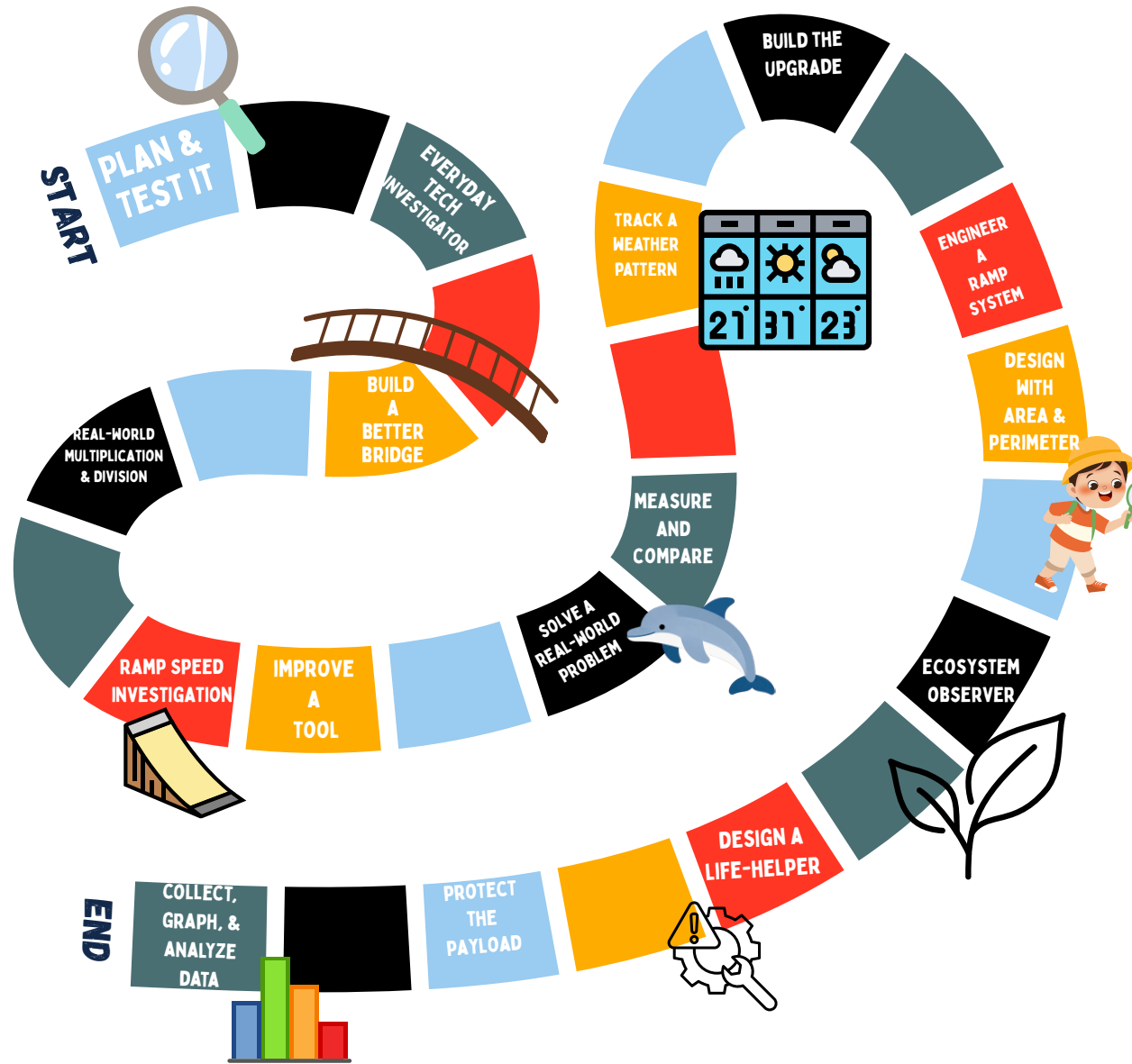


THIRD - FIFTH GRADE



OBE SUMMER STEM CHALLENGE

During summer break make your way around the game board by crossing off **X** each day you practice science, technology, engineering and math for at least 10 minutes. Some days have special challenges- be sure to complete the challenge before moving on to the next space. When your board is complete, turn it in to Ms. Gilman/PTO to claim your prize! Happy learning!

Due: September 4th

Science

“Plan & Test It!”

Ask a testable question (example: Which paper towel absorbs the most water?).

Make a prediction, test your idea, and record what happens using a simple chart or drawing.

Explain what you learned from your results

“Ramp Speed Investigation”

Build a ramp and roll the same object down it from different heights.

Measure how far it travels each time.

Record your results and explain how the height of the ramp affects motion.

“Track a Weather Pattern”

Record the daily weather (temperature, cloud type, precipitation) for 5–7 days.

Look for patterns – Did the temperature change? Did storms follow a pattern?

Write 2–3 sentences explaining what you noticed.

“Ecosystem Observer”

Choose an outdoor area (yard, park, etc.).

Identify at least 3 living and 3 nonliving things.

Explain how one living thing depends on another (food, shelter, or environment).

Technology

“Everyday Tech Investigator”

Look around your home and identify three examples of technology (not electronics only – think tools, systems, or objects).

For each one, explain:

- What problem does it solve?
- How does it make life easier?

“Improve a Tool”

Choose a common tool (backpack, water bottle, lunch container, pencil).

Identify one problem with it and design a change that would make it work better.

Draw and label your improved version.

“Build the Upgrade!”

Choose a task people do every day (carrying items, keeping food cold, staying dry, sending a message).

1. Think about how this task was done long ago (before modern tools).
2. Design and build a model or prototype that shows how technology today makes this task easier.
 - Use household or recycled materials (paper, cardboard, tape, foil, string, etc.).
3. Label or explain what problem your technology solves and how it helps people.

“Design a Life-Helper”

Identify a real-world problem students face (organizing materials, staying dry in rain, carrying items).

Design a new technology that would help solve that problem.

Explain how it works and why it would make life easier.

Engineering

“Build a Better Bridge”

Design and build a bridge using household or recycled materials that can span at least 10 inches.

Test how much weight it can hold, then redesign one part to make it stronger.

“Solve a Real-World Problem”

Identify a problem students face (messy desk, books falling over, carrying supplies).

Design and build a tool or structure that helps solve the problem.

Test it and explain how well it works.

“Engineer a Ramp System”

Build a ramp that moves an object from one place to another.

Change the height, surface, or length of the ramp and test how it affects motion.

Record what design worked best and why.

“Protect the Payload”

Design a container that protects a small object (coin, toy, marble) from being damaged when dropped or shaken.

Test your design, then improve it to make it safer.

Math

“Real-World Multiplication & Division”

Find a real-life situation that uses multiplication or division (snacks shared equally, rows of objects, groups of items).

Write a number sentence and explain what the numbers represent.

“Measure & Compare”

Measure three objects using appropriate tools (ruler, tape measure).

Record the measurements and compare them using greater than, less than, or equal to.

Explain how you know.

“Design with Area & Perimeter”

Design a garden, playground, or room using a grid or graph paper.

Calculate the area and perimeter of your design and label your work.

“Collect, Graph, & Analyze Data”

Collect data from your world (daily temperature, favorite snacks, steps walked).

Create a bar graph or line plot, then write two statements describing what the data shows.