

# SCIENCE FAIR, 2023 - 2024

## PLANNING PACKET

*ARCHIMEDEAN MIDDLE CONSERVATORY*



**Your Name:** \_\_\_\_\_

**Class Section:** \_\_\_\_\_

THIS PAGE IS DUE ON: 08/31/23

**PROBLEM STATEMENT: THE QUESTION BEING EXPLORED IN THE EXPERIMENT**

Directions: Write out your problem statement for this year's Science Fair Project on the lines below.

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**Problem Statement Self-Grading Checklist: Check the box if your problem statement meets the criteria being described.**

- The problem statement shows what different groups will be compared
- The problem statement shows what measurements will be made

PROJECTS/ TOPICS THAT ARE NOT ALLOWED:

- No bacteria, live cultures, humans, or animals
- No explosive projects/ launching rockets (alka-seltzer, soda, etc)
- No dangerous or harmful substances (fire, strong acids)
- Projects must have a reasonable application

Students, please check with your parents to make sure they are OK with the project you are choosing!

FOR TEACHER USE: IS THIS PROJECT APPROVED?

YES / NO

**You may use any of the ideas below for your science fair project, or you may choose your own.**

**TOPIC: CHEMISTRY**

- How does temperature affect the ability of salt to dissolve?
- Do all red flowers have the same pigments/ chemicals that produce color?
- What brewing technique makes the strongest tea?
- Which fruits can ruin your gelatin dessert?
- Does lemon juice or sugar water preserve apple slices better?
- Are different brands of black markers made with the same color pigments?

**TOPIC: EARTH AND ENVIRONMENTAL SCIENCES**

- Which filtering method for water is best?
- Can pH affect the erosion of concrete buildings?
- Does salt water cause more soil erosion than freshwater?
- How does water quality compare at different Miami beaches?
- How do plants influence soil erosion?
- How does pH affect the erosion of rocks?
- What conditions are best to grow Florida native plants?

**TOPIC: ENGINEERING**

- Does the shape of a boat change how much weight it can carry?
- What is the best material to put in a sandbag to prevent flooding?
- How does the shape of a parachute affect flight?

**TOPIC: PLANT SCIENCES**

- What organic farming method is best to keep pests away?
- What ratio of ingredients is the best for compost?
- How often should one add compost when growing vegetables?
- Can plants tolerate greywater?
- What are the effects of hydrogen peroxide on the roots of plant cuttings (or seed germinations?)
- What is the best length of stem cuttings for propagating Florida native plants?
- What is the best method to germinate Florida native seeds?