NEW IN MILABEX · RESEARCH SUB-APP

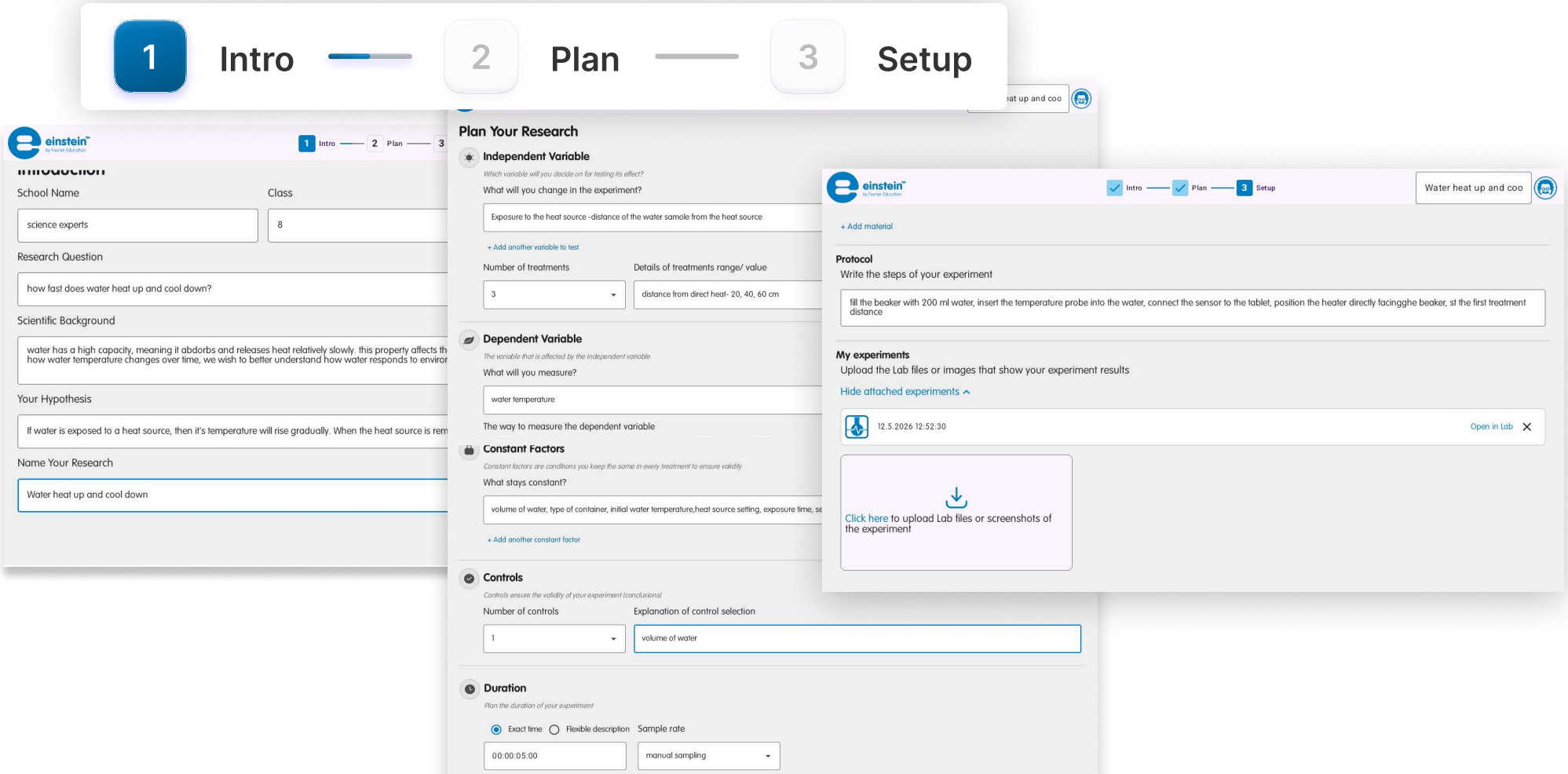
Guide Students Through the Complete Scientific Process

Plan, conduct, analyze, and document full scientific investigations within MiLABEx with the Research sub-app

02 BUILD

Plan and Structure Your Scientific Investigation

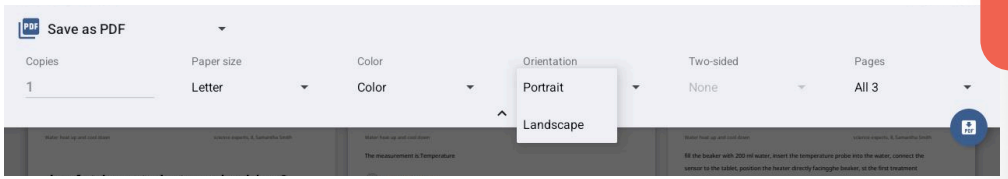
Guide students through the essential setup: from framing the Research Question and Hypothesis, to defining Variables and outlining the experimental Protocol.



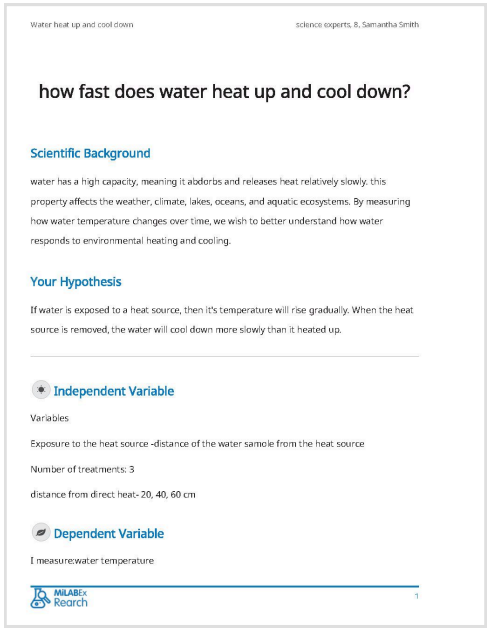
04 REPORT

Generate a Professional PDF Report

With a single click, MiLABEx compiles the entire investigation into a structured PDF report, ready for submission, printing, or sharing.



PDF


Water heat up and cool down science experts, 8, Samantha Smith

how fast does water heat up and cool down?

Scientific Background

water has a high capacity, meaning it abdorbs and releases heat relatively slowly. this property affects the weather, climate, lakes, oceans, and aquatic ecosystems. By measuring how water temperature changes over time, we wish to better understand how water responds to environmental heating and cooling.

Your Hypothesis

If water is exposed to a heat source, then it's temperature will rise gradually. When the heat source is removed, the water will cool down more slowly than it heated up.

Independent Variable

Variables

Exposure to the heat source -distance of the water samole from the heat source

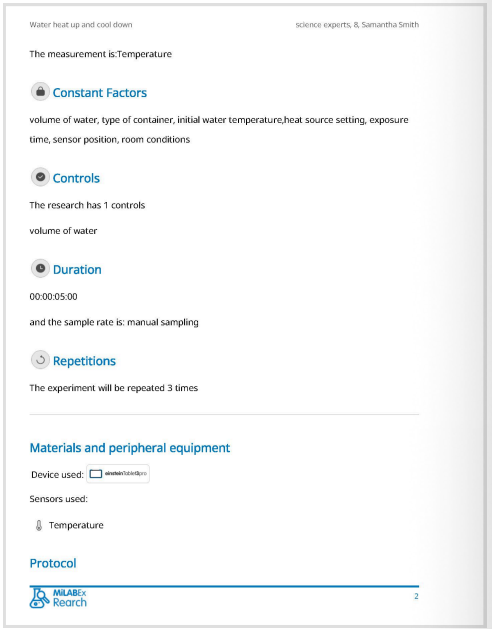
Number of treatments: 3

distance from direct heat- 20, 40, 60 cm

Dependent Variable

I measure:water temperature

MiLABEx Rearch 1


Water heat up and cool down science experts, 8, Samantha Smith

The measurement is:Temperature

Constant Factors

volume of water, type of container, initial water temperature,heat source setting, exposure time, sensor position, room conditions

Controls

The research has 1 controls

volume of water

Duration

00:00:05:00

and the sample rate is: manual sampling

Repetitions

The experiment will be repeated 3 times

Materials and peripheral equipment

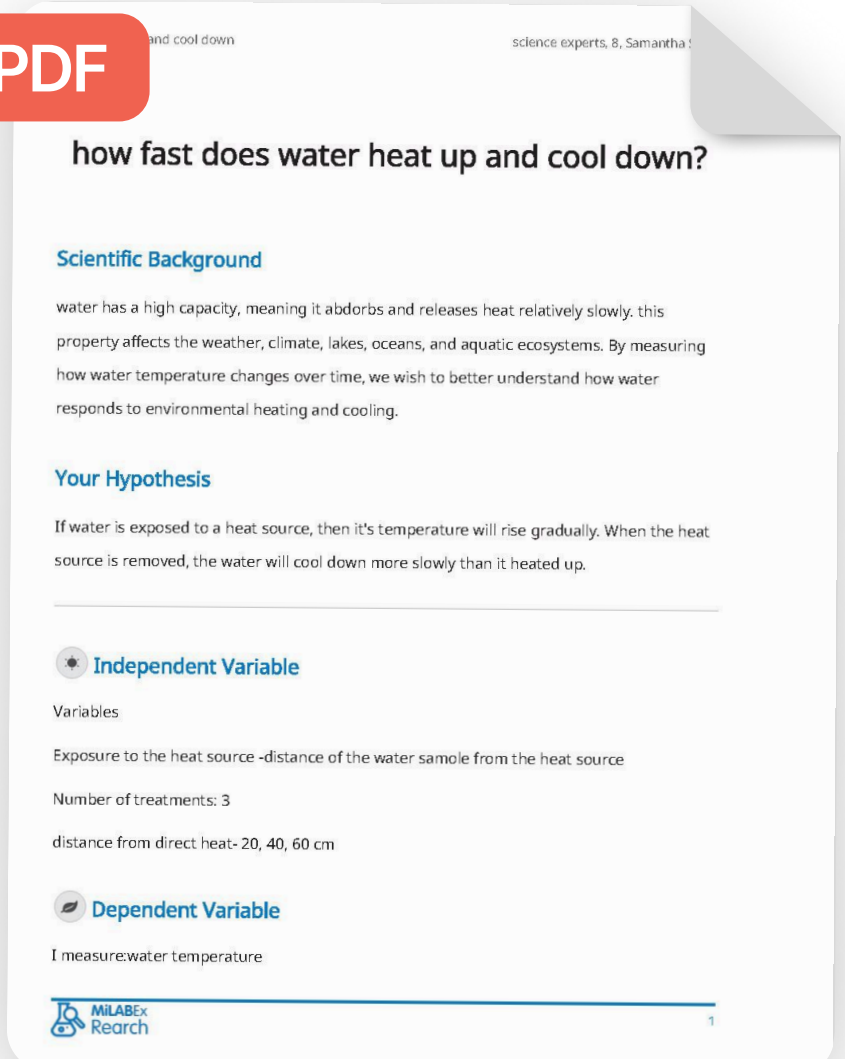
Device used:

Sensors used:

Temperature

Protocol

MiLABEx Rearch 2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MiLABEx Rearch 1

05 KEY BENEFITS

Supporting Inquiry-Based Science Education

The Research Sub-App helps students think and work like scientists while providing teachers with a structured framework for inquiry-based learning.

- Promotes authentic inquiry-based learning
- Develops critical thinking, creativity, and scientific reasoning
- Provides AI-powered guidance with Ask **AI**nstein™
- Connects research planning with real sensor-based data
- Strengthens data analysis and interpretation skills