

PDCA Agents: Mission Sustainability



Lesson Plan

Designed by Piri Reis school, Turkey

Title of Activity: PDCA Agents: Mission Sustainability	Subject area: Citizenship Education, Social Studies, Sustainability
Grade Level(s): 6th–8th Grade	Duration: 1 Week (conducted as short daily sessions and data tracking)

Learning objectives:

By the end of the lesson, students are expected to:

- Grasping the logic of the **PDCA (Plan-Do-Check-Act)** cycle.
- Monitoring the results of an in-school sustainability policy and making data-driven improvements.
- Gaining discipline in managing change and strategic thinking.

Teaching Method:

Experiential Learning, Problem-Solving Based Learning.

Teaching Techniques:

Brainstorming, data analysis, visualization, practical applications.

Materials / Resources / Technology use:

- PDCA cycle diagram (wall poster).
- Recycling bins.
- Data tracking charts and colored markers.

Activity Description

Introduction:

The teacher draws the PDCA cycle as a wheel on the board. They explain that this is the "secret formula for successful management" and emphasize that simply announcing a policy is not enough; it must be monitored and continuously improved.



Step 1 (Plan):

The class chooses a measurable goal (e.g., "Reduce paper waste by 50%"). Students identify problems and plan solution strategies (e.g., changing the bin's location, using both sides of the paper).

Step 2 (Do):

The identified solution strategies are implemented in a disciplined manner by the entire class for 2 days.

Step 3 (Check):

Selected students serve as "Data Analysts." At the end of the third day, the waste bins are inspected, and data is collected. Was the goal achieved? Which applications worked?

Conclusion (Act):

The strategy is updated based on the data obtained. If the waste continues, a new preventive measure is developed, such as: "The bin isn't visible enough; let's put a bright sticker on it." The wheel begins to turn again for the next cycle.

Assessment:

Alternative Assessment: Evaluation is based on the progress recorded in the weekly data tracking chart and the students' "strategy revision" reports.

Self-Assessment: A reflection paper on how the student improved a process based on data.