



The Pen Audit

Objective: Students will demonstrate their understanding of what a preventative mechanic does by performing maintenance on a pen to prevent failure.

Materials:

- One multi-part pen per student (or pairs)
- A piece of paper
- A timer

Activity Instructions:

1. Give each student a pen. Tell them this pen represents a multimillion-dollar piece of factory machinery. If it breaks, the factory stops. Their job is to perform a scheduled PM cycle to prevent failure.
2. Instruct students to analyze the machine (the pen) and write a 5-point Inspection Checklist.
Examples of what they should write:
 - a. Check external casing for cracks or structural fatigue.
 - b. Test the spring tension
3. Students are to disassemble the pen into its core components. They must clean the components and inspect it for wear and tear. Then, reassemble the pen
4. Students write a formal Maintenance Log including date, time, and condition (pass/fail).

Post Activity Discussion Questions:

What did you like most about this activity?

What did you like the least about this activity?

If this pen were a critical machine on a factory floor, what is one hidden issue you couldn't see just by looking at it, and how would a PM Mechanic detect it before the machine completely broke down?

Extension Activities:

Students may arrange the disassembled parts of their pen onto a blank sheet of paper and draw a blueprint of the pen.

Students will research the history of a major technological innovation (e.g., the steam engine, the printing press, or the assembly line). They must create a timeline detailing how a breakdown of that technology would impact society during that specific time period.