

Mr. Potato Head Activity

Plan Do Study Act (PDSA) Testing

LEARNING OBJECTIVES

- Teach rapid cycle Plan Do Study Act (PDSA) testing.
- Emphasize the importance of prediction and measurement for learning.
- Demonstrate the value of collaborative learning.
- Illustrate the value of networked learning.
- Demonstrate how a theory of improvement can guide testing.

DESCRIPTION

1. Set up.
 - a. Give each team a Mr.Potatohead doll, tracker, rubric, and key.
 - b. NOTE: When participants get Sam, all the pieces should be inside and his butt should be fastened.
2. Introduce “Sam” and the objectives of the activity.
3. Whole room baseline
 - a. Identify someone to come to the front.
 - b. Solicit two volunteers to be quality inspector and time-keeper.
 - c. As group for predictions on time and accuracy (if there are divergent predictions, ask for more opinions, then potentially find a number somewhere in the middle).
 - d. Use chart paper to record predictions (if there are divergent predictions, ask for more opinions, then potentially find a number somewhere in the middle)
 - e. Leave space to also record baseline results (use table on slide 15 as model)
 - f. Run the baseline test with everyone watching.
 - g. Explain that the “butt” piece of Mr. Potato Head doesn’t need to be attached to receive a 4 quality score.
 - h. Record the results, and ask each table to record baseline results on their tracker, too.
 - i. NOTE: Emphasize the importance of predictions for learning.

Time

20 minutes

Topics

Testing Cycles, PDSA basics

Prior Knowledge

This activity is designed for beginner audiences, and assumes no prior knowledge of iterative testing.

Materials & Equipment

- Session slide deck
- Mr. Potato Heads (one per team plus one for the baseline test)
- Rubric (one per team)
- Tracker (one per team)
- Key (one per team)
- Driver diagram handout (one per team)

4. Launch testing at tables
 - a. Tell tables to identify a timekeeper and quality inspector.
 - b. Remind them they must record the change they are trying and a prediction before the run a cycle. Remind them that they can only run one change per cycle.
 - c. Tell them they will have 15-20 minutes to test changes to building Sam.
 - d. Allow teams to start testing. As they work, circulate the room and listen for interesting comments/ anecdotes you could rely on in the debrief.

5. Pause testing
 - a. After ten minutes, pause activity.
 - b. Optional: you can facilitate a full group discussion at this point with the goal of checking in on the theory building of one more more groups. You can ask the following questions:
 - c. "Which group feels good about their time?"
 - d. [to that group] "What is your theory about how you got that time?"
 - e. [to that group] "How did you use testing to get confidence in that theory?"

6. Networked Learning
 - a. Ask teams to get up, find someone from another team and find out:
 - ♦ What did they test?
 - ♦ What did they learn?
 - ♦ What worked?
 - ♦ What didn't?
 - ♦ What adaptations did they make (if any)?

7. Final round of tests
 - a. After teams have consulted with each other, bring them back together for a final round of testing.
 - b. They can now use what they learned from each other to test changes on a different part of the driver diagram.

8. End testing
 - a. Once teams have run 2-3 more cycles, tell the room that the current cycle they are on will be their last.
 - b. It is often hard to get teams to stop, so be insistent.

9. Table debrief.
 - a. What did you learn?
 - b. What was helpful for your learning?

10. Whole group debrief
 - a. Allow a few folks to share insights from their tables focused on the last two questions (What did they learn about PDSAs? And what accelerated learning in the Mr potato Head example?)
 - b. Did anyone start to get close to your predictions?

- c. How many cycles did you run? Did anyone spend a lot of time debating what to do before running a test? (more cycles = more opportunities to learn.)
- d. Who experienced a “failure” where something they tried didn’t work as they predicted? (Hopefully everyone. If not, they aren’t pushing the realms of possibility and taking the opportunity to fail now, when the cost of failure is low. Failures produce the most learning.)
- e. NOTE: Key Debrief Points:
 - ♦ Predictions are a key part of theory-based learning
 - ♦ When conducting tests of change ideas, it is important to document them in systematic ways so that you can recognize whether they led to improvements
 - ♦ Tracking data over time helps you know if you improved

Data and Measures

TIME

Start:
When the
time
keeper
says "Go"

Stop:
When the
builder
*removes
hands and
says
"DONE!"*

SCORE

Criteria

Score

4
All depicted pieces are on Sam, in the correct place, and oriented correctly.

3
All depicted pieces are on Sam, but not all oriented correctly.

2
All depicted pieces are on Sam, but not all in the correct place.

1
One or more depicted pieces not on Sam.

Adapted from Mr. Potato Head Plan, Do, Study, Act (PDSA) Exercise by TrueSimple, LLC. Williams, DM.