

What is a Standard Operating Procedure?

Objective: read an SOP, or Standard Operating Procedure.

Instructions:

- I. Read through this example procedure: Found here
<http://www.webguru.neu.edu/undergraduate-research/structuring-ur-experience/standard-operating-protocols-sops/example-sop>
- II. Answers the questions below
 1. After reading this SOP, how would you define a Standard Operating Procedure?
 2. This particular SOP has 8 different components, what are the 8 different components or sections?
 3. Why do you think a reference section is often included in an SOP?
 4. Describe what kind of information is included in the cautions section.
 5. Why might it be important for an SOP to have personnel qualifications?
 6. Based on the description of the protocol, do you think that you would be able to recreate a coffee exactly like the person who wrote the SOP did? Why or why not?
 7. Do you think it is important for an SOP to be detailed enough for anyone to recreate the protocol exactly? Why or why not.
 8. What do you think could make this Standard Operating Procedure more helpful?
 9. What do you think was not necessary in the Standard Operating Procedure, if anything. Explain your answer.

How to Write an SOP

Information adapted from: [lucidchart](https://www.lucidchart.com/notes/00000000000000000000000000000000)

Instructions:

1. Read through each section.
2. Summarize each section with 1 or 2 sentences
3. Answer the questions (italicized) at the end of each section

Step 1: Begin with the end in mind

Define what the end result or the goal is for the SOP you are writing. For example, if you are writing a document that describes how to make a diluted solution, your end goal is the finish solution.

This step does not include details such as how to use a micropipette or what a beaker is. You simply want to identify what the procedure will accomplish.

QUESTION: Your boss asked you to put together an SOP for using a micropipette. What would be your goal here? What would you want other people to accomplish?

Step 2: Choose a format

SOP's can take many different formats. You will be using a simple steps format.

Simple steps format: Use this format for routine procedures that are short and easy to follow. In addition to safety guidelines and other mandatory documentation, this type of format is generally a simple numbered or bulleted list with short, simple sentences that are clear and easy for the reader to follow. Please refer to the Simple Steps format template document.

Step 3: Ask for input

Get the team together and ask them how they think the job should be performed. These are the people who you are going to ask to adhere to the SOP, so you want to be sure that it makes sense to them and that all the necessary tasks are included.

There will be multiple drafts and reviews—make sure you invite your team to review the drafts so they can make additional suggestions.

Step 4: Define the scope

It's possible that the SOP you are working on is dependent on other SOPs and teams in other departments in order to be completed successfully. Determine whether it is sufficient to reference those other procedures or if you need to add them to the current standard operating procedure document. Maybe you need a flowchart or a map to clearly define dependencies and responsible parties.

Step 5: Identify your audience

Knowing your audience helps you determine how you should write your SOP document. Consider these questions:

-What is their prior knowledge? Are they already familiar with the organization and the procedures? Do they already know the terminology? Have they become complacent and need a refresher? You need to write to your audience's knowledge level—dumb it down too much or make it too complicated, and you'll lose them.

-What are their language skills? Maybe your audience does not natively speak your language. If that is the case, you may want to use more pictures than words.

-Are they new employees? When bringing on new employees, your SOP documents need to be very detailed and training-oriented. You want to ensure consistent outcomes regardless of who is performing a task.

-What is the size of your audience? Will multiple people in different roles across multiple organizations be reading the document? If so, you may want to write the procedures in a way that clearly defines who, or what role, performs each task. This helps your audience understand where they each fit into the process and why their particular part is important.

QUESTION: How would an SOP you are writing for new employees differ than an SOP for experience employees? Explain.

Step 6: Write the SOP

Write a draft of your standard operating procedure. Please refer to the 'Student Example Simple Steps Format SOP'. Consider including some of the following elements:

This page can include:

The title of the procedure

An SOP identification number

A publication date or revision date

The name of the role, organization, division, or agency that the SOP applies to

Names and signatures of those who prepared and approved the procedures outlined in the SOP

Table of contents: You only need a table of contents if the document is very large with many pages.

The specific procedures

This is the bulk of the document and includes the specific step-by-step procedures that need to be followed in order to successfully comply with company standards and safety regulations. This section could also include:

- A description of the scope and purpose of the SOP, its limits, and how it's used. You can include standards, regulatory requirements, roles and responsibilities, and inputs and outputs.
- Necessary and additional details that are needed to complete each step.
- Clarification of terminology, including acronyms and phrases that may not be familiar to your audience.
- Health and safety warnings. These warnings should be listed in a separate section, and they should accompany applicable steps within the process.
- A complete list of all equipment and supplies that are needed, where to find them, and when each will be needed.
- A troubleshooting section to cover things that can go wrong, what types of things the reader should look for, and what may interfere with the final outcome.

QUESTION: You are writing an SOP for how to use a micropipette. What equipment would you need to list and what safety precautions would you need to describe?

Step 7: Review, test, edit, repeat

After you have written your standard operating procedure document:

1. Send a draft of the SOP to team members for review. Have them note grammatical and technical errors.
2. Test the document yourself to ensure that you achieve the desired outcome.
3. Have other team members test the procedures to ensure that the language is clear, can be easily followed, and can be completed successfully.
4. Incorporate relevant edits and suggestions to improve the document.
5. Repeat these steps until the document is approved and accepted by all stakeholders.
6. Implement the SOP. Make it easily accessible to those who need it to do their jobs.
7. You should review the SOP every six to twelve months or as necessary to identify areas where it can be improved and to reflect any changes that have been made to current procedures.

QUESTION: You have a particularly difficult step in your SOP to understand when read. What can you do to help make this clearer to your audience? List multiple options.

Review an SOP

Instructions:

Module 1, Lesson 5 : Creating an SOP

1. You will exchange SOPs with another team.
2. Each team will the SOP they have been given using the materials provided
3. Once complete, provide feedback to the other team on their SOP
 - a. You must provide useful feedback
 - i. Things like well done are encouraging but do not help your groupmate get better
 - ii. Make suggestions to your groupmate about what can be improved or what was tricky about their SOP
 - iii. Look for places in the SOP that could be understood differently by different people and suggest to your groupmate a way to make it more straightforward
4. Once reviewing is completed, each team will retrieve their SOP from the team that reviewed it and edit their SOP