

Biomanufacturing Module One: New Hire Onboarding: Training/Regulations/Career Exploration

Please Note: These assignments are designed to be flexible. They may be taught in the classroom or assigned as homework – or half and half. All documents are provided as ‘.doc’ or ‘.ppt’ so that teachers can download them and modify them to suit their curriculum, classroom, student population etc

- Team size can be somewhat flexible to suit teacher/class organization needs. Possible choices include:
 - Teams of 5
 - Teams of 4 – The teacher takes on the Quality Assurance Technician role for all teams.

(Please note: Teams must be at least 4 students in size. Smaller team size will result in a greater number of teams/class, which then results in a need for more reagents and consumables. The SBE budget is limited, which limits the amount of reagents and consumables we can supply per teacher.)

- Team job/role assignment methods can be flexible. Students are sometimes absent for various reasons, so teachers have suggested flexibility with selection/assignment of team roles. Possible choices include:
 - Each student is assigned one role and keeps that role throughout the kit curriculum.
 - Student roles are assigned daily and change from day to day.
 - Each student is assigned a primary role and different back-up role.

	Topic / Activity	Summary
Day 1	Introduction to biomanufacturing - <ul style="list-style-type: none"> • Insulin or Vaccine Storyline • Question board • Overview of biomanufacturing 	On day one, students explore a storyline related to either insulin or vaccine production. They generate questions about the process, brainstorm the needs and requirements of such a process, and are introduced to the process of biomanufacturing.
Day 2	New Hire Welcome <ul style="list-style-type: none"> • Creation of Teams • Team Names • Team Logos 	On day two, student teams are created and welcomed as new hires to a biomanufacturing company. Teams create team names and begin designing team logos.

Day 3	<p>New Hire Training Stations</p> <ul style="list-style-type: none"> • Lab Safety • Intro to GMP • Intro to FDA 	Teams participate in new hire training on lab safety, good manufacturing practice, and the FDA by visiting a series of stations with their team.
Day 4	<p>Job Assignments! Career Exploration</p>	<p>Students receive their job assignments! After reading job descriptions, they share a synopsis of their role with the team, and work together to determine how it fits in the biomanufacturing process.</p> <p>Students then learn about the importance of standard operating procedure through a final new hire training.</p>
Day 5	<p>New Hire Training - SOP SOP for Micropipetting</p>	<p>Student teams learn about SOPs. Teams develop SOPs for micropipetting. These are exchanged with another team, which tests the SOP by following it exactly as instructed.</p> <p>Student teams provide one another feedback and make improvements to their own SOP based on feedback.</p>
Day 6	<p>SOP for Micropipetting cont Finish Team Logo design</p>	<p>Student teams provide one another feedback and make improvements to their own SOP based on feedback.</p> <p>Student teams finalize their team logo design.</p>