

Take a Peek Under the Hood of *VUMIE Online*...

VUMIE Online is centered on our award-winning microbiology lab simulation for using aseptic technique to work in a microbiology lab to test and identify bacteria. Sounds good? But there's so much more!

Our 50+ Learning activities go behind the scenes with a well-structured approach to explaining a method, methodical in teaching, demonstrating, and assessing mastery of the skills and knowledge expected in a microbiology lab. This is accomplished through (1) a video explaining the science behind the work, (2) a video showing the skills and procedures needed to do the work in an actual microbiology laboratory, and (3) a video demonstrating how the work is done using the ***VUMIE Online*** lab simulation. These are followed by appropriate reviews, worksheets, and practical and objective quizzes automatically graded and posted to the instructor's grade book.

The simulation can be used without instructor control (autopilot), but an Instructor Administration ("Admin") package allows hands-on control in assigning specific bacteria and configuration of the simulation as desired for teaching purposes. Admin also provides automatic posting of quiz grades to a gradebook and quick access to students' lab reports.

Here are some previews of what you can expect from ***VUMIE Online*** on most of the 50+ activities provided.

Section 1 is Basic Microbiology Lab Skills. We'll use the **Aseptic Tube-Tube Transfer** as our example.

- **What is the scientific basis for this procedure?** Here is [the video Classroom lesson](#) explaining the science behind the use of aseptic tube-tube transfers for working with bacteria.
- **How is this done in the microbiology wet lab?** [Here's the video](#) showing how the test is performed in the face-to-face microbiology laboratory.
- **How is this done in *VUMIE Online*?** [Here's the video](#) showing how the test is performed in the ***VUMIE Online*** lab simulation.
- **How is this assessed?** The Activity includes a **Practical Quiz** where students demonstrate their mastery of the technique as performed in *VUMIE* and quality of the work done (mistakes and all) in the Lab Report, followed by an **Objective Quiz** which tests understanding of the foundational knowledge behind the technique. The Admin package automatically posts grades to the Instructor's Gradebook for these assessments for all 50+ activities.
- **Want additional information?** Need help with details of the process, like selecting a medium or removing caps from tubes, etc.? Visit our "[Show Me How To...](#)" [videos](#). For more information about the tests, media, reagents, stains, antibiotics, and microbes found in *VUMIE Online*, check out our [online reference books](#).

Section 2 is Metabolic Testing and Bacterial Identification. We'll use the tests performed using **Triple Sugar Iron Agar (TSIA) medium** as our example.

- **What is the scientific basis for this procedure?** Here is [the video classroom lesson](#) explaining the science behind the results obtained for TSIA.
- **How is this done in the microbiology wet lab?** [Here's the video](#) showing how the test is performed in the face-to-face microbiology laboratory.
- **How is this done in *VUMIE Online*?** [Here's the video](#) showing how the test is performed in the ***VUMIE Online lab*** simulation.
- **Want additional information?** Need help with details of the process, like selecting a medium or removing caps from tubes, etc.? Visit our "[Show Me How To...](#)" [videos](#). For more information about the tests, media, reagents, stains, antibiotics, and microbes found in *VUMIE Online*, check out our [online reference books](#).

Section 3 is Health Microbiology Activities. We'll use the **Digestive System Infections** activity as our example.

- **What is the scientific basis for this topic?** Here is [the video Classroom lesson](#) explaining the science behind digestive system infections.
- **There is no video showing how identifying enteric bacteria is accomplished. Why? That is something you learned how to do in Section 2!** Instead, we reinforce your understanding of the material specific to digestive system infections through a **review**. Then, there is an **automatically graded Practical Quiz** where you ID a bacterium responsible for digestive infections, and we end the activity with an **automatically graded Objective Quiz**. Grades for both the practical and objective quizzes are posted to your instructor's lab gradebook. In this way we test your understanding of the topic and your ability to find the identity of the microbe responsible.
- **Want additional information?** Need help with understanding the work involved in bacterial ID? Visit Section 2 activities focused on the ID process, or our ["Show Me How To..." videos](#) and our [online reference books](#) for more information.

Section 4 is Additional Activities. We'll use the **Kirby-Bauer Antibiotic Susceptibility Test** as our example.

- **What is the scientific basis for this test?** Here is [the video classroom lesson](#) explaining the science behind the Kirby-Bauer test and how results obtained for determining antibiotic susceptibility by the Kirby-Bauer disk diffusion method.
- **How is this done in the microbiology wet lab?** [Here's the video](#) showing how the test is performed in the face-to-face microbiology laboratory.
- **How is this done in VUMIE Online?** [Here's the video](#) showing how the test is performed in the **VUMIE Online** lab simulation.
- **Anything else of importance to know?** Yes! There is a **review** and an **ungraded worksheet** to help ensure you understand how to do the test and interpret results before you take your **practical** and **objective quizzes**.
- **Want additional information?** Need help with details of the process, like information on Mueller Hinton agar or how the antibiotics on the disks control bacterial growth? Visit our ["Show Me How To..." videos](#) and our [online reference books](#) for more information.

Want to try out the microbiology simulation? [Click here](#) to create your free demo account to access the simulation and the learning activities that bring it to life.