

# Promoting Active Learning in Lab Settings



## FacDev in 5 KEY TAKEAWAYS



**Watch the FacDev in 5 Video** featuring Dr. Chelsea Lohman, Associate Professor, Cell and Developmental Biology.

## KEY TAKEAWAYS



Active learning activities to boost learning.

1

### Case-Based Scenarios

Use real or hypothetical problems to help learners practice critical thinking and problem-solving.

2

### Reverse Demonstrations

Have learners teach back procedures and answer open-ended questions to deepen understanding.

3

### Journal Club with Debate

Ask learners to critique and defend conflicting techniques or studies to explore diverse perspectives.

4

### Experimental Flowcharting

Ask learners to map processes to help them visualize steps, dependencies, and potential challenges.

5

### Failure Analysis & Troubleshooting

Share flawed procedures or unexpected results for learners diagnose and suggest improvements.



## DIVE DEEPER

Click articles to view

[Nguyen, W., et al. Development and implementation of video-recorded simulation scenarios to facilitate case-based learning discussions for medical students' virtual anesthesia clerkship \(MedEdPORTAL 2023\).](#)

[Taverna, M., et al. Perception of journal club seminars by medical doctoral students: results from five years of evaluation \(GMS J Med Educ 2022\).](#)

[Wiles, A.M., Simmons, S.L. Establishment of an engaged and active learning community in the biology classroom and lab with Discord \(J Microbiol Biol Educ 2022\).](#)

