Research-based teaching tip
Immediate feedback

Ask students to explain their logic, and give immediate corrections and feedback to student answers and comments in-class.

Rationale:
Giving immediate feedback to student responses, correcting and clearing up inconsistencies in student logic, and asking for explanations to answers increases student performance.

Evidence:
- Repetition alone doesn’t necessarily lead to increased performance, and feedback can increase the accuracy of performance.\(^1\)\(^2\)
- Effective learning requires instructors to note and correct errors in knowledge and logic.\(^2\)
- Instructional explanations increase learning outcomes compared to those who don’t receive them.\(^3\)
- Immediate feedback increases information acquisition and retention of material.\(^4\)\(^5\)
- Immediate feedback increases the probability of correctly answering question in the future, especially if answered incorrectly and corrected in the first iteration.\(^5\)

Implementation:
In a lecture or small group situation, immediate feedback can be accomplished by responding to and asking for students’ logic and explanations in front of their peers or class\(^6\).

Sources:
\(^6\) Eddy SL, Converse M, Wenderoth MP. 2015. PORTAAL: a classroom observation tool assessing evidence-based teaching practices for active learning in large science, technology, engineering, and mathematics classes. CBE Life Sciences Education 14:1-16.