

Step 2: Inquiry-Based Lesson Design

In Step 2 students who want to explore teaching careers become familiar with the middle school environment by observing and discussing middle school culture and by teaching several lessons to a middle school class. They build on and practice lesson design skills developed in Step 1 and also become familiar with excellent science or mathematics curricula for the middle school setting. A significant number of FSU-Teach students enjoy their teaching experiences in middle schools to the extent that they decide to pursue teaching in the middle grades. As a result of the Step 2 experiences, students generally are able to make a decision about whether they want to pursue a pathway to teacher certification through the FSU-Teach program.

The Step 2 course emphasizes writing good 5E lesson plans, with a focus on the importance of using appropriate questioning strategies throughout the lesson. Students develop pre- and post-assessments for performance objectives. For their final product, students analyze and modify one of the lessons they taught, taking into account the results of the assessments, their reflection on how successful the lesson was, and feedback from their mentor teachers and the course instructor who observed the lesson.

Course Procedures: Step 2

A Step 2 class meets once a week on campus for 1.5 hours. During this time, students learn about the middle school environment and work on inquiry-based lesson analysis, design, and assessment. Aspiring mathematics and science teachers meet in separate sections; computer science majors, who generally seek computer science/mathematics certification, usually join the mathematics group. FSU-Teach students are assigned to either mathematics or a science mentor teacher in a local middle school to observe once and then teach three inquiry-based lessons. They generally teach with a partner, although occasionally students have such limited time available for the field assignments that they teach alone. Field assignments are based on the schedules and transportation needs of the students. Middle school mentors often take more than one team of Step 2 students.

In a typical Step 2 class session, the master teacher delivers a demonstration 5E lesson, and students discuss what the lesson illustrates. Students share the structure and the content of their field experiences. Both rewarding and troublesome occurrences are scrutinized. Most weeks, a specific pedagogical strategy is emphasized, such as the importance of using students' names throughout the lesson; writing and assessing performance objectives; using probes; or using good questioning strategies. Students examine nationally recognized middle school science and mathematics curricula.

A large segment of the classes consists of students working with their partners to plan and practice their lessons. Each lesson must be submitted and approved by the master teacher and mentor teacher at least one week before the teaching date. As part of their preparation, teams are required to practice any laboratory or technology procedures so that they are familiar with all procedures and have identified and addressed potential problems. Teams are asked to split the teaching evenly during each field lesson delivery.

Both partners should be well enough prepared to teach a lesson alone if necessary.

An important component of the class involves peer coaching. Teams present their lessons to their classmates to receive helpful feedback before they teach the lessons. Everyone benefits from these open discussions.

Step 2 requires a more sustained relationship between the students and their mentor teachers than does Step 1. Mentor teachers review and approve lesson plans in advance of the lesson and provide oral and formal written feedback to their Step 2 team at the end of each lesson. Step 2 students are responsible for submitting the feedback form to the master teacher at the next class session. The Step 2 master teachers observe each team at least once during the semester and provide written feedback. If a particular student or team is having difficulties, more than one visit is made.

Students submit reflections to their Step 2 master teacher within one week after teaching a lesson. These reflections enable master teachers to more effectively coach each student individually.

Students complete an online mid-semester evaluation of the course. The master teacher shares the results of this evaluation with the class and attempts to modify instruction in response to students' comments. Students complete a university-organized and -analyzed survey at the end of the semester. They also evaluate their middle school mentor teachers.

Course Objectives: Step 2

Students Will Be Able To:

Use content knowledge to plan and teach three middle school lessons

Use exemplary sources of inquiry-based science and mathematics lessons

Experience teaching adolescents to understand their unique attributes and implement teaching strategies that are effective in the middle school environment

Evidence (Student Products)

One paragraph in each lesson plan that provides background information on the concepts presented
Content accuracy throughout the lesson plan
Observations by the mentor teachers and the master teacher

Participation in model lessons presented in class
Sources of lessons cited in each lesson plan

One paragraph in each lesson plan that indicates why the instructional strategies are effective for adolescents
Participation in a class session that addresses attributes of adolescents

Observations by the mentor teachers and master teacher who observe lessons

Design and teach three inquiry-based lesson plans using safe practices and the 5E model

Three inquiry-based lesson plans with the 5E template that includes safety recommendations
Written feedback by the mentor teacher for three inquiry-based lessons taught in a middle school
Written feedback by the master teacher for at least one inquiry-based lesson taught in a middle school

Design and teach a lesson that incorporates the use of technology

Participation in technology activities during class
A minimum of one lesson plan that incorporates the use of technology
Written feedback from the mentor teacher indicating that a minimum of one lesson incorporated the use of technology

Use probing questions to elicit feedback on students' acquisition of knowledge

Participation in class discussions on questioning strategies
Extensive examples of possible questions and expected responses listed in each lesson plan
Written feedback for every lesson from the mentor teacher, indicating the effective use of questioning strategies

Use pre- and post-assessments to evaluate student learning, to provide instructive feedback to middle school students, and as a basis for revising a lesson plan

Analysis of the use of pre- and post-assessments to evaluate student learning
Pre- and post-assessments with written comments for instructive feedback for lesson plans
Use of pre- and post-assessments to revise one lesson plan

Provide instructive feedback to peers

Written feedback provided to peers who present their lessons during class

Reflect on teaching experiences
to revise lesson plans

Student essays produced after
observation and teaching
experiences
One revised lesson plan submitted as
a final project
Essay providing rationale for
revisions to the lesson plan

Evaluate commitment to pursue
teaching as a career path

Survey indicating intention to pursue
teaching as a career path