

## WHAT TO EXPECT FROM YOUR CADET'S MATH EXPERIENCE



### What is ALEKS?

ALEKS is an acronym for Assessment and LEarning in Knowledge Spaces is a Web-based, artificially intelligent assessment and learning system. The program uses “adaptive questioning to quickly and accurately determine exactly what a student knows and doesn't know in a course” (ALEKS 2018). ALEKS then develops a learning space based on topics a student is specifically ready to learn. ALEKS periodically reassesses and adjusts a student’s topics to optimize progress and topics retained. According to ALEKS, the possible learning spaces for a student numbers in the trillions.

**OUR MATH PROGRAM IS NOW PROFICIENCY BASED. STUDENTS MOVE AHEAD ONLY AFTER THEY SHOW SUBSTANTIAL PROGRESS IN ANY ONE COURSE PRODUCT.**

## HOW MIGHT A TYPICAL MATH CLASS NOW BE STRUCTURED?



### EXPECT:

- INDIVIDUALIZED INSTRUCTION
- INCREASED RIGOR AND PRACTICE
- FULL-TIME ENGAGEMENT
- IMMEDIATE FEEDBACK

Transition: First couple minutes	Students immediately log onto computers while teacher engages, takes roll, and makes announcements.
0 – 20 minutes	Teacher gives mini-lessons to specific groups or develops a challenging problem while other students continue to work in ALEKS. The teacher acts as coach and facilitator.
20 – 50 minutes	Students may work individually or in small groups based on their course product in ALEKS. Teacher coaches and provides individualized attention.
50 – 55 minutes	Reflection of today's progress and or teacher driven assignments, which may include reading, links to view, worksheets, projects, Google Classroom resources and much more.

# COMMON MISCONCEPTIONS

## The Computer replaces instruction from a teacher:

Response: The computer does not replace the teacher, it replaces or supplements the textbook and learning resources. In ALEKS, students and teachers are provided with continuous and immediate feedback about a student's math progress. Qualified math teachers are needed to answer questions, provide lessons, and coach students on progress and math skills continuously on an individual or whole-class basis. Teaching roles change from being the **sage-on-the-stage to a math coach and facilitator.**

## Students don't have homework:

Response: Students in ALEKS are expected to complete specific numbers of topics and hours each week. Topic numbers required will be adjusted lower as the course content becomes more challenging but only after certain milestones are met. For precalculus students, for example, this occurs during the second half of chapter-3. Most topics and time can be completed in class, but students are encouraged to complete time and topics during mandated study periods of at least 20 minutes per day. Moreover, students can work in their learning spaces anywhere they have Internet access and a device.

## 55 Minutes is not enough time to complete required topics and time.

Response: This is typically true of traditional classrooms where instruction is blanketed to the majority. Students at FMS are coached to develop a note-taking system, use resources outside class, and develop a study routine where students complete time and topics anywhere including as homework.

## Cadets sometimes lose Internet access outside of the classroom.

Response: For various reasons, Internet access on campus may not be accessible. Additionally, cadets may not have access at home. However, teachers here use google classroom for lessons and materials, may provide worksheets and assignments from our textbooks, are available during help class and MASH periods, and may provide instruction after school or in the library. At home, students may access the public library or access other hot-spots for access. They can work on ALEKS anywhere.

## Cadets work at their own pace.

Response: Cadets must provide the required number of hours and topics to compete a course and now have control over their own rates of learning and discovery. However, teachers will constantly monitor progress to coach cadets and encourage them through their current course product to meet course proficiency during the current school year. Each student will be approached with problems at

their current level of math development but must keep pace in hours and topics in addition to other teacher-driven learning devices. Teachers may also have ALEKS reports sent weekly to parents or caregivers so that they may partner with teachers to encourage substantial progress. A student progresses to the next level after meeting specific proficiencies in their current course product.

## ALEKS IS A PROFICIENCY BASED LEARNING PROGRAM

ALEKS	
Advantages	Disadvantages
Personalized instruction	Demands rigorous and timely activity
Instantaneous feedback on assessments and homework	Some students are not comfortable being graded on proficiency
Engages students at their current level of understanding	Students may insist on course products above their current level of competency
Rigorous and comprehensive content	May be overwhelming for some
Maps progress continuously. Weekly report may be sent to parents from ALEKS	Students may not have Internet access at times
Available anywhere, anytime, 24/7	Students must develop note-taking skills

**FOR MORE INFORMATION: GO TO ALEKS.COM FOR A TOUR.**