A.3 PROGRAM OF INSTRUCTION

This section will provide an overview of FES' Program of Instruction including curricula, methods of instruction, and methods of assessment that support FES' educational philosophy and improve pupil achievement in FES' target population. It will describe the curriculum of the core academic content areas and demonstrate alignment to FES' educational philosophy and Arizona State Standards. It will also outline formative and summative assessment strategies that are consistent with FES' educational philosophy (A.1) and academic systems plan (A.5).

Focus Education Service's Program of Instruction is designed to meet the needs of students in its target population by preparing them to succeed in college and 21st century careers. Research shows that, as a whole, 9-12 grade students in our target community of Maricopa County are underserved when it comes to preparing for careers in STEM fields. In addition to core curriculum that meets or exceeds state standards, and specialized elective courses that promote technology-specific and life-relevant skills, Focus Education Services will employ targeted intervention that focuses on reading, writing, math, and computer arts. The Program of Instruction is designed to increase students' academic achievement, college acceptance and graduation rates, life opportunities, and civic and economic contributions through a rigorous education in grades 9-12

The program of instruction includes:

- Assessment and intervention to remediate students below grade level or identified as ELL
- A rigorous curriculum based on the College and Career Readiness Standards (+ 2010 Arizona Additions), other Arizona state standards, Advanced Placement, leading prep schools, and colleges and universities
- A rigorous high school curriculum, where many core courses are available at the Honors or AP level
- An emphasis on college readiness throughout the curriculum and available CLEP test preparation
- Real-world application that prepares students to apply their education by using 21st century skills, such as thinking critically and solving real-world problems
- Research-based, content-specific, best practices implemented by teachers who are experts in content and instruction
- Frequent assessments to inform data-driven decisions that provide differentiated support to maximize academic achievement

CURRICULUM FRAMEWORK FOR ACADEMIC CORE CONTENT AREAS

Focus Education Service integrates teacher supervision and instruction with Acellus Courseware. Acellus was created by The International Academy of Science and each course provides video instruction and utilizes Deficiency Diagnostics and Customized Personal Instruction to offer a comprehensive feedback system that responds to users' interactions by modifying the curriculum to fit individual needs.

Based on each student's performance, Acellus creates an individualized experience, ensuring that each student has a chance to succeed at learning.[1]

MATHEMATICS

Focus Education Service's program of instruction includes a required math course each year. Additionally, students in grades 9-12 assessed in the bottom quartile in math achievement in the previous year will take an additional math course: FUNMath. This is an intervention course designed to remediate math deficiencies. All of the school's math courses were designed by the National Academy of Science and are based on common core standards and aligned to the National Council of Teachers of Mathematics (NCTM) and the Arizona's College and Career Readiness Standards (CCRS).[2]

In grades 9-12, Focus Education Service's math curriculum covers four major conceptual categories: algebra, geometry, number and quantity, and functions. Students must pass four credits of math. Students will be grouped by skill based on assessment. In 9th grade, students will complete Algebra I. In 10th grade students will take Geometry. In 11th grade, students will complete Algebra II. In 12th grade, students will take one of the following math courses: PreCalculus, AP Calculus, or Trigonometry.

ENGLISH LANGUAGE ARTS

FES' English Language Arts courses use age-appropriate literature, graphics, and video instruction to engage students at every stage of the learning process.

Focus Education Services requires one English Language Arts course each year. Basic Reading II is an intervention course designed to help students who take a little longer to learn reading to become successful readers, including ELL students.

ENGLISH LANGUAGE ARTS: READING AND WRITING

In 9th grade, all students take **High School English I**. This course provides a detailed investigation of literary techniques and devices, using classics from American and English literature as examples. Students learn to recognize these techniques and to incorporate them into writing.

In 10th grade, students take **High School English II**. This course uses examples from classics of literature to help students to achieve college-readiness in the areas of literary techniques, vocabulary, and grammar.

In 11th grade, students take **Survey of American Literature**. This course uses the works of the masters to give the student a well-rounded look at American Literature and enhance their ability to enjoy and produce literature.

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[1] *Acellus Learning System* (n.d.). Retrieved from International Academy of Science website, http://www.science.edu/Acellus/acellus5/how-acellus-works.php

[2] *Common Core State Standards Initiative* (n.d.). Retrieved from Arizona Department of Education website, www.azed.gov/standards-practices/core-state-standards

In 12th grade, students take **College Prep English**. In this course, students are taught practical strategies for effective writing in college or on the job, including how to write scholarly essays, concise technical reports, compelling resumes, and professional business emails. The focus of this course is to empower college and employment-bound students for success in their post-high school endeavors.

READING AND WRITING ACROSS THE CURRICULUM

Students must be able to confidently navigate and produce text in a variety of subjects in order to be successful in the real world. Focus Education Services prepares students for college and the workforce by incorporating reading and writing across the curriculum. For example, in science, students must analyze relevant research and summarize their findings. This requires the ability to understand complex informational text and express that understanding.

SOCIAL STUDIES

Focus Education Services' social-studies program is aligned with Arizona standards. The program is designed to equip students with a solid foundation in U.S. and world history and geography and a strong understanding of U.S. government, including the responsibilities and impact of its citizens. In addition, FES provides a mandatory personal finance course designed to prepare students with the skills and knowledge needed to shape their financial future. The course will provide a tool-kit of knowledge resources that serve to empower students to make informed financial decisions through real-world topics. Throughout the social studies curriculum, students will build academic vocabulary and critical thinking skills. Students will also progress in writing skill as they learn to construct strong arguments and support their ideas.

In high school, students must take a minimum of three credits of social studies.

In 9th grade, students take U.S. History.

In 10th grade, students take World History or Geography.

In 11th grade, students take U.S. Government.

In 12th grade, students take Personal Finance, which has been aligned to Common Core State Standards.

SCIENCE

Focus Education Services' science program is aligned with state standards. The science courses present theory as well as labs and experiments, giving students a full and interactive science learning experience. The science program is designed to help students learn scientific content and skills through inquiry-based learning, developing background knowledge and skills, and a deep understanding of physical science.

FES requires students to take a minimum of three years of science.

In 9th grade, students take Physical Science, which is a prerequisite for the more advanced sciences as it provides them with a solid foundation of the basic principles and skills of science.

In 10th grade, students take General or Honors Biology.

In 11th grade, students take General or Honors Chemistry.

In 12th grade, students may take General or Honors Chemistry.

METHODS OF INSTRUCTION[3]

Great teaching that engages students and fosters their desire to learn is an integral part of Focus Education Service's vision and mission. At Focus High, teaching is an integrated effort of in-class qualified and caring professionals and web based video instruction by award-winning teachers. Focus Education Services blends the personal approachability of its teachers and support staff with the research-based, online educational courseware, Acellus. The two components work as a team to reach students at all levels, allowing them to build confidence as they progress at their own pace.[4]

Hybrid Learning

Hybrid Learning is the combination of online and traditional classroom learning that leverages technology to control some element of the time, place, path, and pace of learning. Carpe Diem, a school in Yuma, Arizona, utilizes Hybrid Learning and has risen to the top 10% of Arizona charter schools.[5] The primary Hybrid Learning process that will be implemented include the following:

The Self-Blend Model

Under the supervision of in-class teachers, students will take full online courses on their own while attending a campus, allowing students control over pace of learning. Courses are accessed through the Canvas® and Acellus® Online Learning Platforms. Instruction begins with written and/or video lessons taught by some of our nation's greatest teachers. Daily learning activities are assigned as well as virtual activities, simulations, and topic-relevant discussion questions to promote participation and analysis of topics learned. Practice problems are then given to assess understanding of concepts taught. If a student enters a common wrong answer, Acellus courseware brings up a video created for that answer on that problem, and the teacher explains exactly what the student didn't understand -- thus providing Customized Personal Instruction (CPI). In addition, using Deficiency Diagnostics (DD), Acellus courseware assesses areas of student weakness and gives more help and practice in these areas – further customizing the learning process and filling in holes in students' understanding for a strong learning foundation. Students thus move through the lessons at their own pace. Throughout this process, a teacher is available to direct and oversee instruction and curriculum and facilitate online communication as needed. Classroom aides are also available to provide support and assistance.

Flipped classrooms

Flipped classrooms are a relatively new model of instruction in which students watch an instructional video introducing new material for homework. Teachers (or teaching assistants) then use class time to coach and correct students as they work through practice problems related to the

[3] Methods and strategies derived from and influenced by Western School of Science and Technology, Inc.
[4] *Acellus Learning System* (n.d.). Retrieved from International Academy of Science website, http://www.science.edu/Acellus/acellus5/how-acellus-works.php
[5] National Charter School Resource Center. (2012, September 12). Blended learning in charter schools. Retrieved from http://www.charterschoolcenter.org/webinars.

instructional content. Teachers can thus maximize in-class time with students and immediately respond to different students' learning styles. The Khan Academy and Veritasium provide effective and engaging online videos for free.[6]

Socratic seminars[7]

Socratic seminars are designed to allow participants to deeply understand a text or a concept. Socratic seminars involve advanced reading of a text followed by prepared questions and discussion starters. Then, students will participate in discussion groups related to their topic of study with the teacher modeling and facilitating dialogue. FES' teachers will facilitate Socratic dialogue by providing discussion questions, overseeing, and interacting with group commentary as students interact with and provide feedback to their peers in the form of threaded discussion forums, video logs, and in-person commentary.

The purpose of these methods of instruction is: (1) to promote a culture of teamwork--which is a foundational element for academic growth, (2) to encourage critical thinking, and (3) to develop essential written and verbal communication skills.[8]

Response to Intervention (RTI) Model[9]

Focus High will utilize the RTI model to structure classroom instruction.

> RTI has been broadly described as a process in which students are provided quality instruction, their progress is monitored, those who do not respond appropriately are provided additional instruction and their progress is monitored, and those who continue to not respond appropriately are considered for special education services [or individual remediation or enrichment].

RTI has been found to be a successful instructional model for all learners to receive individualized instruction to meet their needs – a key goal of Focus High. RTI is seen as a three-tiered model that assesses students' ability to perform based on three distinct instructional delivery methods.

Tier 1 consists of a universal instructional delivery system: This is delivered in the form of on-line and in-classroom instruction for all learners. It is delivered with curriculum and content consistent with grade-level expectations and at a uniform pace utilizing highly-effective, research-supported instructional strategies. 80-90% of students can be expected to master essential learning outcomes (ELOs) at this level, differentiation occurs when students are unable to meet ELOs.

If In-Class Formative assessment results suggest a student has not mastered particular ELOs to the level of mastery set by the Governing Board, students will move to Tier 2 intervention. Tier 2 is differentiated, need-based learning for learners needing remediation on specific skills. Remediation will occur using targeted remediation courses provided via Canvas and Acellus. Teachers will design online

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[6] Khan Academy. FAQ. Retrieved from http://khanacademy.desk.com/customer/portal/articles/414161-are-youessentially-%22flipping-the-classroom%22-with-these-pilot-implementations-.

[7] Readwritethink.org. (2012). Strategy guide: Socratic seminars. Retrieved from http://www.readwritethink.org/professional-development/strategy-guides/socratic-seminars-30600.html.

[8] Arizona Charter Schools Association (2008). *Success measured: Four foundational elements of student-level growth.* Phoenix, AZ: Arizona Charter Schools Association.

[9] Bradley, R., L. Danielson, and J. Doolittle, "Response to Intervention". Journal of Learning Disabilities 38.6, Nov./Dec. 2005. Pp. 485-6.

learning paths to address gaps in mastery. Students will be continuously progress monitored throughout Tier 2 interventions.

Tier 3 is reserved for learners still not responding to Tier 1 and Tier 2 instruction. Intensive Intervention in Tier 3 is individualized, need-based learning for students. Tier 3 will address specific skill needs in one-on-one and small-group online and in-person settings. Progress monitoring will be constant. Students still not responding through Tier 3 interventions will be referred to Special Education services.

Research-Based Instructional Best Practices

In the context of the RTI model, Focus High's teachers will utilize research-based instructional best practices to deliver content and curriculum to students. Teachers will receive training in the following instructional methodologies, which are identified as best practices through extensive bodies of research.

Objective-driven instruction

All lessons at Focus High, including hybrid learning lessons, will be driven by objectives that align to Focus High's curricular ELOs. Research suggests that lessons designed with the end in mind, or backwards-aligned from clearly defined objectives, are more effective than those which are not.[10]

Cooperative learning structures

Cooperative Learning is a teaching arrangement that refers to small, heterogeneous groups of students working together to achieve a common goal. Students work together to learn and are responsible for their teammates' learning as well as their own.[11] Cooperative learning structures are designed to "increase academic achievement, improve social skills and social relations, improve thinking skills, reduce discipline problems, and [facilitate the] acquisition of leadership and employability skills."[12] A minimum of one assignment that incorporates cooperative learning structures will be utilized in every class.

High-yield instructional strategies

High-yield instructional strategies are the strategies identified as most effective in the meta research of Robert Marzano. High-yield strategies will be utilized in all in-person classrooms. Such strategies include vocabulary building and instruction, feedback and praise, graphic organizers, identifying similarities and differences, goal-setting, generating and testing hypotheses, and summarization[13]

Socratic seminars

As described above, Socratic seminars are designed to help participants more deeply understand a text or a concept. Socratic seminars involve advanced reading of a text followed by preparation of questions and discussion starters.

Differentiation Strategies

[10] Marzano, R., D. Pickering, and J. Pollock. (2004). Classroom instruction that works. Pearson: New York.
[11] Kagan, S. (1994). Cooperative Learning. San Clemente, California: Kagan Publishing.
[12] Kagan, S. (1995). Group grades miss the mark. Educational Leadership, 52, 68-72.
[13] Marzano, R., D. Pickering, and J. Pollock. (2004). Classroom instruction that works. Pearson: New York.

Differentiation can be defined as "a strategy that plans for and designs assignments, lessons, activities, tasks, and projects to match student needs…students [will] learn the same concepts or skills but may approach them through different activities."[14] Differentiation is a crucial aspect of effective instruction at all levels of the RTI model and integral to FES' educational philosophy. Teachers will differentiate content, process, or product according to students' readiness, interest, and learning profile, considering multiple intelligences, leading to "optimal learning experience for [all] students."[15]

Alignment and Implementation of Instruction

Collaborative teams will align research-based instructional methodologies with the particular needs of State Standards, a course, or a class of students. Adjustments will be made based upon the results of collaborative team co-observation cycles and student outcomes. In addition, the implementation of the effective instructional methodologies mentioned above will be supported by administration. Focus High will ensure staff is well-trained in the instructional methodologies outlined above through professional development sessions.

Sample Instructional Day with Instructional Methods Emphasized

Objective-driven instruction, cooperative learning structures, differentiation strategies, and high-yield instructional strategies will occur in every course. Other instructional methods will be incorporated into curriculum and content based on course relevance, need, feedback, preference, achievement, and data.

FORMATIVE AND SUMMATIVE ASSESSMENT PLAN

Focus Education Service will be focused on all of its students' academic growth, which requires effective assessment of that growth. FES' program of instruction and formative and summative assessment plan will align with the academic systems plan described in A.5. Feedback from standards-aligned assessments will help both teacher and student make necessary adjustments. Research shows positive correlations between student progress and the quality and amount of feedback, assessments, and student tracking of their own progress.[16] FES will focus on using the following methods frequently: constructive feedback, clear learning goals aligned to standards, assessments aligned to standards, and student tracking of their progress.

Focus Education Service assessment will begin with the Common Core Standards + Arizona 2010 additions (or other state-approved standards). Students will be assessed on each relevant standard. To demonstrate mastery of a standard, students must score 80% or higher on the assessment of that standard. To pass a course, students must demonstrate mastery of 60% of standards or higher.

At Focus Education, assessment will be divided into three stages: (1) diagnostic baseline assessment, (2) formative assessment, and (3) summative assessment. All of these assessments will be aligned to the Academic Systems Plan described in section A.5 and the Common Core Standards + Arizona 2010 additions (or other state approved standards) and aligned state standardized assessments (AIMS

[14] Laczko-Kerr, I. (2012). Creating systems to support student learning. Retrieved from http://www.anymeeting.com/WebConference-beta/RecordingDefault.aspx?c_psrid=EB58D789884A.
[15] Ibid.

[16] Marzano, R. J. (2009). *Formative assessment and standards based grading.* Bloomington, IN: Solution Tree.

currently but PARCC, AzMERIT, or other assessment may be used in the future). The diagnostic baseline assessment establishes the "starting point" of the student's knowledge and skill level. All students will take a baseline assessment at the start of each year in both math and reading to diagnose their current level of knowledge and skill. Students scoring in the bottom quartile in their grade in math or reading will be placed in an intervention course, FUNMath (Math Essential) or Reading II (Reading Essentials). In addition to academic assessment, Focus Education Services will comply with all laws and regulations to assess students to determine which ones need special-education or English Language Learners services.

The purpose of a formative assessment is to produce data that is then fed back into the system (of teaching and learning) to improve that system. Thus, formative assessment is assessment for learning during the learning process. Each concept taught in Acellus is presented in a separate video and followed by problems to test each student's understanding. This means that each step in the process of learning is intended to be a small, but manageable step. With one concept taught in each lesson, Acellus can hone in on and identify exactly what the student does not understand. This also drastically reduces the length of each lecture, and results in keeping students more engaged. Additionally, the online courseware uses Deficiency Diagnostics (DD) to assess areas of student weakness and give more help and practice in these areas.[17] Finally, Focus Education Services' teachers will monitor the students' progress both through the courseware curriculum, quizzes, assessments, and through discussion question participation to ensure they are prepared for the cumulative summative assessment at the end of the year.

Summative assessments inform both the student and the teacher about the level of conceptual understanding and performance capabilities that the student has achieved. At the end of each unit, the Acellus courseware gauges student progress by giving students a summative assessment on the material in that unit that is aligned to the cumulative summative assessment at the end of the year. Students failing to meet the goals will receive targeted remediation. At the end of each course, there is a final cumulative summative assessment to ensure the student meets all core standards.

[17] *Acellus Learning System* (n.d.). Retrieved from International Academy of Science website, http://www.science.edu/Acellus/acellus5/how-acellus-works.php