A.3 Program of Instruction

PMG's educational philosophy to specifically acknowledge and address the ethnicity and socioeconomic achievement gap among students entering the program is an integral component of Fifth Arrow's Program of Instruction. Fifth Arrow students will receive rigorous, focused and sequential curriculum, uniquely packaged to facilitate students' access to content in meaningful ways, aligned with the Arizona College and Career Ready Standards (ACCRS). Our students will also be provided with experiences, strategies, skills, and support needed to successfully complete high school and enter post-secondary education and/or work.

Fifth Arrow intends to apply for an Arizona Online Instruction (AOI) designation to allow for diverse methods of facilitating learning. Online curriculum content is divided into standards based units for classroom based learning that supports independent study allowing for a more supplemental student learning style. Through this style immediate feedback and assessments for measuring content mastery is provided thereby lending itself to enhanced relevant and meaningful learning opportunities for students.

A. Curriculum and Alignment

Aligning PMG's curriculum, as briefly presented below, to ACCRS will ensure endurance, readiness, and leverage (Reeves) by unwrapping (Ainsworth)[1] the concepts and skills that students must know to master a particular standard and develop optimism, grit, gratitude and resilience, which together will lead to post-secondary success.

I. English Language Arts

PMG's English Language Arts program, delivered by Fifth Arrow, provided both onsite and through online instruction will be aligned to ACCRS. This literature-based curriculum is designed to help students develop critical thinking, reading comprehension, writing, listening and speaking, as well as advanced language skills needed for future success. These skills, embedded throughout the curriculum in all courses, allows students to increase their literacy skills while using language effectively. Fifth Arrow will offer sequential English courses (English I, II, III & IV) and optional Advanced Placement English through an online learning platform aligned to the CCSS. Students are encouraged to take the AP exam at the end of the course, but not the exam is not a requirement. AP exam financial assistance will be provided to students as the budget allows.

Achieve 3000, an English Language Arts curriculum supplement, provides reading comprehension support to struggling students, including English Language Learners and students with special needs. Achieve 3000 is an online intervention program proven to improve students' writing and literacy skills. This intervention component assesses a student's reading ability and provides individualized reading materials used for building levels of literacy and fluency as the student moves toward achieving grade level reading competency. Small group instruction courses will complement this intervention program.

II. Social Studies

Social studies content, provided both onsite and through online instruction, will be aligned to ACCRS. These standards will be taught in coordination with the English Language Arts standards to focus student learning in an authentic manner and when feasible, reading selections will be of a historic nature, including primary source historical documents; writing, research and oral assignments will feature social studies content. PMG's social studies courses include: World History, US History, and US Government. Additionally, economics will be offered through an online course provider. Remedial assistance will be offered through Small Group Instruction, or additional tutorial practice sessions provided by teachers onsite and prescribed if a student should demonstrate particular difficulty in any social studies course.

III. Mathematics

[1] Ainsworth, L. (2004). *Power Standards: Identifying the Standards that Matter the Most*, Advanced Learning Press.

PMG's mathematics courses, provided both onsite and through online instruction, aligned to ACCRS, will incorporate Pearson's Common Core Addition Textbook series to facilitate learning. Math standards addressed in a linear fashion, as required by the sequential, skill-building nature of the subject will be practiced throughout the year for learning maintenance and reinforcement. PMG's classroom-based math curriculum consists of Algebra 1, Algebra 2, and Geometry. A fourth year of math, Pre-calculus, will be offered through an online platform. Remedial assistance, Small Group Instruction, or additional tutorial practice sessions provided by the teachers onsite will be prescribed if a student should demonstrate particular difficulty in any mathematics course.

IV. SCIENCE

PMG will align its science curriculum to the Next Generation Science Standards (NGSS). The vertically aligned research-based NGSS is based on the Framework for K-12 Science Education, which lays out a vision for student proficiency in science in the 21st century. The NGSS are aligned to Arizona's math and ELA standards, allowing students to make deeper connections across disciplines. This curricula draws on, ensuring that through professional development, teachers understand and are able to convey to students the connection of standards in preparation for post-secondary opportunities. Investigation and Experimentation skills will be embedded in each year of science through a STEM-based live learning lab. Moreover, PMG's science program will re-engage its at-risk population and harness their natural curiosity, wonderment, and exploration through wet labs and experiential learning opportunities. Fifth Arrow will offer a four year curriculum sequence in Science: Biology, Chemistry, Earth Science, and Physics. Remedial assistance, Small Group Instruction, or additional tutorial practice sessions provided by the teachers onsite will be prescribed if a student should demonstrate difficulty in any science course.

V. FOREIGN LANGUAGE

As part of its foreign language curriculum, Fifth Arrow will offer Spanish, French and other foreign languages available through a blended learning format through Edmentum, our online curriculum provider that includes both onsite and online instruction. Scope and sequence for these courses will be adapted using the online curricula. The standards for these courses are aligned to CCSS for literacy. Remedial assistance, Small Group Instruction, or additional tutorial practice sessions provided by the teachers onsite will be prescribed if a student should demonstrate difficulty in any foreign language course.

VI. ELECTIVES

Fifth Arrow will offer a variety of electives online, including fine arts and, where appropriate, course electives will be enhanced through experiential learning.

VII. ADVANCED PLACEMENT COURSEWORK

A variety of Advanced Placement courses, including English, math, and history, as well as elective courses will be available for students desiring to progress beyond "core" subject areas. Teachers will encourage students to enroll in advanced courses so that students may recognize their potential in high school and college. PMG's Advanced Placement course menu is currently expanding. Students will be asked to consider participating based upon their test scores, successful and timely completion of course work with a grade of C (70%) or better, and teacher recommendation.

VIII. ENGLISH LANGUAGE LEARNERS

Fifth Arrow intends to serve a diverse population, including a high number of English Language Learners. To identify and meet the needs of this student population, upon enrollment, teachers will administer the Home Language Survey to all students. Students whose home language has been identified as being other than English will be administered the Arizona English Language Learner Assessment (AZELLA). Results of the AZELLA, performance on assignments and tests, teacher analysis of work samples, and teacher observations will result in identifying a student's specific needs.

Services and supports will be provided to English Language Learners (ELL) according to their Individualized Language Learner Plan (ILLP) with the guidance of an English Language Support Team Member. Through one-on-on support from their teacher, ELL students struggling with a subject will be recognized earlier and recommendations for how best to support them will be provided by their teacher. The student and teacher will collaborate around the best method for addressing the student's needs and the teacher will ensure the student is on track to succeed and is receiving all the resources and support to gain full understanding of not only the academic content, but also the English language.

SPECIAL EDUCATION STUDENTS

Fifth Arrow will provide students full access to a continuum of educational opportunities, including those students with special education needs in conformity with their Individualized Education Plan (IEP) and in compliance with the Individuals with Disabilities Education Act (IDEA) (20 U.S.C. § 1400 et seq.), as well as all applicable state laws. Students with an IEP will possibly be identified through Child Find, which involves identifying, locating, and evaluating eligible students who are either currently enrolled in the charter school, or who are potential students.

For enrolled students, a Student Study Team (SST) comprised of individuals who know the student (i.e. a parent, student, teacher, special education staff, and outside experts) will convene as a referral process. The SST addresses enrolled students' needs, suspected areas of disability, interventions, and if recommended by the team, initiates an assessment that may result in the development of an IEP or 504 plans. Once identified, teachers implement appropriate interventions, which in most cases places a student in the general education setting with the support of a special education teacher to provide a continuum of increasing intensity of support, to meet individual student needs.

B. Methods of Instruction

PMG's instructional structure and teaching methodologies have been developed to meet the needs of an at-risk population. Fifth Arrow will implement a system and process for students to demonstrate continuous academic improvement performance without the boundaries imposed by a traditional classroom or school year. At Fifth Arrow, PMG's instructional model will be facilitated through guided independent study, small group instruction (SGI), online learning, and where appropriate, experiential learning formats. Resources used to support these methods of instruction include Student Activity Workbooks (SAWs), supplemental units/lessons, manipulatives (including experiential learning activities, many of which align to STEM), teacher curriculum maps and unit plans, lesson support, novels, smart boards and online programs. Student schedules and classes are based on what each student needs to satisfy graduation requirements and their individual needs. Students choosing to work alone may choose to complete the majority of their work through Independent Study. On the other hand, students needing guided teacher instruction and direct lesson plans may choose to engage in Small Group Instruction. Likewise, students who prefer online learning or need a more flexible schedule may choose primarily online classes. These three options are available to all students based on their personal schedules and specific needs.

I. GUIDED INDEPENDENT STUDY

Based on the belief that through personal responsibility students can enjoy success and achieve their dreams, guided independent study (GIS) is a student-driven personalized learning format that extends student opportunities far beyond what is offered in the traditional classroom. GIS allows students to work at their own pace in the classroom and at home. GIS instructional units often contain internet activities, essay writing with various built-in methods of assessing student learning. In addition, students receive one-on-one support by participating in regular meetings with teachers and Student Advisors to discuss college and post-secondary options. Students with an IEP also meet with special education staff to discuss post-secondary options. This provides instructional staff access to work collaboratively to support and coach students toward meeting their individual goals.

The GIS option is a self-paced learning method that places teachers in the role of facilitator. Teachers meet with students at least twice weekly during a one hour instructional block. In addition to

developing Individualized Learning Plans with students, teachers track student progress, administer assessments, maintain student portfolios, analyze data, and support the students' socio-emotional needs. These teachers also hold daily office hours for students to cover material they are struggling with, or to be a resource when needed. While students rarely come to office hours, in many educational institutions, Pathways schools students are taught through an established school culture to accept responsibility for their own educational outcomes and they enjoy participating in office hours.

Teachers will hold office hours during the week to support struggling students in both face-to-face and online formats. Students who need targeted assistance in a specific online course can participate in a real time tutoring session with the assistance of Adobe connect software.

II. SMALL GROUP INSTRUCTION

A Small Group Instruction (SGI) teacher's work is a content-specific classroom-based instruction in 2-4 hour blocks with a group of no more than 10-15 students. This design is ideal for students requiring a combination of direct instruction and individualized support. During SBI, students participate in hands-on experiences, such as live learning labs in science that will also be available to all students. When supporting the academic needs of at risk students, teachers in the traditional classroom often struggle to address the variation in achievement levels among students. Therefore, students gain more individualized support, but still work with their peers who are at similar achievement levels.

Small group instruction is selected for different reasons which include: a group of students studying the same core topic and/or performing at the same academic level, a student needing direct instruction in a specific core topic, a core topic needing additional instruction recognized by a teacher or other school leader based on assessment data and topics such as mathematics, English Language Arts and science that are all taught in small groups on an as-needed basis. The SGI teacher works closely with general education teachers to identify students who need targeted assistance. This method of instruction is designed to allow instructional staff to address variation in achievement levels, support individual student needs, and build close relationships within the classroom, leading to the development of optimism, grit, resilience and gratitude.

ONLINE LEARNING

Online learning is a powerful method of differentiated instruction when it is personalized, rigorous, and utilizes a variety of instructional strategies. In the classroom setting, online modules are effective supplements to remediation activities. The combination of face-to-face methods with the online delivery of instructional content forms an integrated instructional approach resulting in increased student outcomes. This "flipped classroom" approach inverts traditional teaching methods and delivers direct instruction outside the classroom. Time at home is used for initial direct-instruction and time in class with a teacher is spent applying learning and clarifying concepts through meaningful activities. Student understanding deepens as they think critically, collaborate with peers and solve problems. Online instruction is selected, as with all methods of instruction, when it is the best fit based on the student's developmental level, academic and personal needs. Online courses can either be used to supplement other courses offered through guided independent study or small group instruction or can take the place of such courses and count towards credits for graduation.

Fifth Arrow plans to contract with Edmentum to provide online curricula. As a comprehensive online learning solution, Edmentum provides multiple avenues and levels for students to access and learn content, and also accommodates students at various stages of approaching mastery by utilizing strategies such as spoken text, transcripts of videos, interactive dictionaries. Edmentum's courses will also be available through an online engagement with a general education teacher using real-time data to monitor student progress and performance to determine the best way to help each student achieve.

To receive credit for an online course, students must meet the same requirements as for any other course. The student will complete all coursework required for each unit of study, demonstrate mastery of the learning standards for the subject as measured by a grade of at least 70%. Online instruction will be

chosen as a method of instruction when it is the best fit for the student personally and academically. For many courses, the online classroom can take the place of independent study and small group instruction. This type of flexibility allows students to learn at their own pace, on their own schedule and in a meaningful, personal way.

III. Research-Based Instructional Strategies

To ensure that all students have the greatest chance of academic success, Fifth Arrow will implement the following research-based instructional strategies in the learning environment. Teachers will receive professional development from PMG to support students in facilitating content.

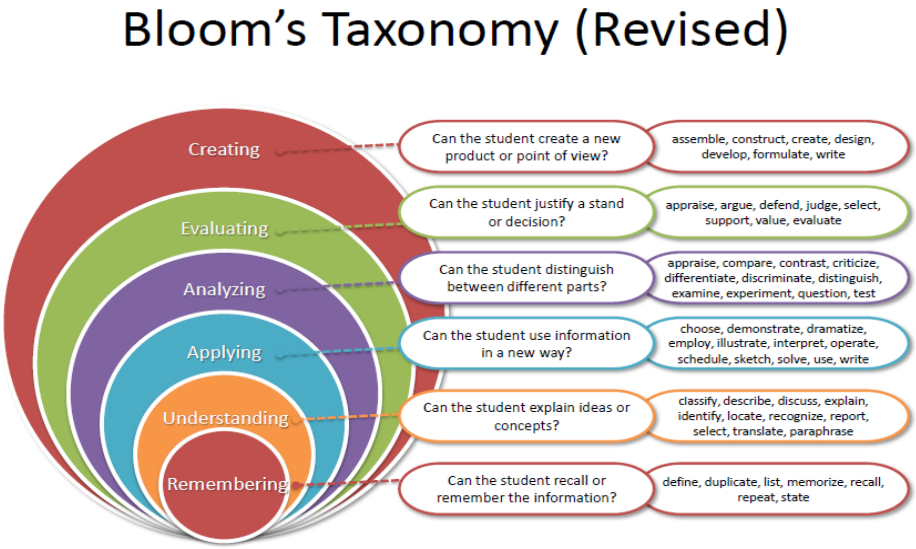
a. Understanding by Design

Fifth Arrow's education program has been developed using the Understanding by Design (UbD) framework. Based on the research of Wiggins and McTighe, UbD is a process that frames standards-driven curriculum development, instructional design, assessment and professional development. This approach begins with the desired learning goal or outcome and ends with the learning plan for the student. For curriculum development, UbD guides developers through a process of internalization and prioritization of content standards, differentiated assessment methods aligned to identify learning targets, and innovative research-based instructional strategies clearly articulating student learning objectives. Multiple studies on the efficacy of this framework show that both low and high achieving students benefit from the authentic pedagogy embodied by UbD.[2]

b. Academic Mastery through Differentiated Instruction

Academic mastery is based on Bloom's Taxonomy of Learning, where students progress through learning stages toward higher order thinking skills. The graphic below outlines key questions teachers will use to determine the extent to which students have achieved a depth of learning and higher order thinking skills.

FIGURE A.3.1: BLOOM'S TAXONOMY



To move students outward from the concentric circles, teachers will apply differentiation to

[2] Newmann, F., Bryk, A., & Nagaoka, J. (2001). Authentic intellectual work and standardized tests: Conflict or coexistence? Chicago: Consortium on Chicago School Research.
Bransford, J., Brown, A., & Cocking, R. (Eds.). (2001). How people learn: Brain, mind, experience, and school. Washington, DC: National Research Council.
Senk, S., & Thompson, D. (2003). Standards-based school mathematics curricula: What are they? What do students learn? Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

teaching and learning so that students have multiple options for taking in information and making sense of ideas. Questions posed during lessons will be at the higher levels of Bloom's Taxonomy, ensuring that students are thinking, discussing, and understanding concepts at a level that requires synthesis, analysis, and evaluation of a concept versus memorization or remembering skills. Activities that allow students the opportunity to practice and digest new information will be provided versus worksheets wherein students only have a limited ability to interact with materials. Allowing students the opportunity through SGI to read, write, and speak with peers about the content also encourages higher-level thinking.

At Fifth Arrow instruction will be highly differentiated in both delivery and method. The model of differentiated instruction requires teachers to be flexible in their approach to teaching and adjusting the curriculum and presentation of information to learners rather than expecting students to modify themselves for the curriculum. Our intent of differentiating instruction is to maximize each student's growth and individual success by meeting each student where he or she is, and assisting in the learning process.[3]

c. Specially Designed Academic Instruction in English

PMG and Fifth Arrow subscribe to the Specially Designed Academic Instruction in English (SDAIE) approach for ELL students, and modifies these strategies across the learning spectrum. Based on language acquisition theories of Dr. Steven Krashen, SDAIE supports English learners by allowing them to move forward with academic courses while at the same time learning English through comprehensible second language input and a supportive learning environment.

Within the context of SDAIE, Fifth Arrow teachers will implement Quantum Learning Strategies, a multisensory approach to teaching which builds on students' individual learning styles. Quantum Learning Strategies have trademarked teaching and classroom management strategies like "Narrative Chains", use of music, use of color, use of kinesthetic activities, etc. In and outside of the classroom, students will be engaged in ways that go beyond the textbook and lessons. They will become active participants in their own learning.

Building on the foundation of Specially Designed Academic Instruction in English (SDAIE), general education teachers, and SGI teachers will incorporate the following strategies into unit plans, Student Activity Workbooks, Small Group Instruction content, and online coursework:

1. *Modeling*- Lesson begins with a stimulus such as a word, phrase, picture, or object, student responses are recorded, then the concept is introduced and demonstrated through practical examples in the context of the learning objective.
2. *Providing Contextual Clues*- Students, in a large group, small groups, or individually, view a word or phrase and the teacher/online course provider shares related ideas, images, and feelings.
3. *Grouping and Cooperative Learning*- Students pair/share ideas about the concept and report back to the larger group (SGI and online only).
4. *Realia*- Lesson incorporates props or examples.
5. *Checking for Understanding/Formative Assessment* - Students read an excerpt or selection. Intermittently, the teacher or lesson requires comprehension checks, also incorporating performance tasks at the end of the lesson.
6. *Tools*- students use graphic organizers, such as word maps, story charts, Venn Diagrams, and KWL charts to further their understanding of the concept.

[3] Hall, T. (2002). *Differentiated instruction.* Wakefield, MA: National Center on Accessing the General Curriculum. Retrieved 10/23/08 from http://www.cast.org/publications/ncac/ncac_diffinstruc.html

C. Assessments

Student learning will be assessed through both formative and summative assessments in alignment with our educational philosophy, stating that students at Fifth Arrow will become prepared to carve a course in a direction all their own Formative assessments are embedded within online learning courses and used throughout independent study and small group instruction classes by providing continuous, focused support in mastering all learning goals throughout the entirety of each course. By communicating clear learning goals and teaching students how to recognize when they have reached their goals, teachers and students work in tandem to assess progress. Students learn to identify what they know and what they must learn to reach the learning goals. By including students in the formative assessment process, students become motivated to reach learning goals and become proactive in their own education. Within our independent study workbooks, formative assessments such as performance tasks, checks for understanding, quick writes, and self-evaluations allow teachers to identify opportunities to provide students with additional support or remediation of standards. Our small group instruction teachers utilize multiple in-class assessments that include but are not limited to: checking for understanding, group discussion observations, reflective journal responses, polls, and clarifying question submissions.

Fifth Arrow's assessment plan is guided by Assessment in Support of Learning[4] strategies. These strategies are used to improve student motivation, ownership of learning, and achievement. Teachers will be trained in the Seven Strategies of Assessment for Learning in order to be able to deliver effective and efficient feedback, prepare students to self-assess, and to help them set goals to lead to further learning.

Teachers will administer the STAR Renaissance assessment as a diagnostic tool to determine students' baseline knowledge in reading and math and again as a benchmark assessment to determine the extent to which students have mastered the standards. Other examples of formative assessments include: interim quiz results that students review with general education teachers, exit slips, performance tasks, and anecdotal notes taken based on teacher observation. These assessments will be administered to students whether they take online courses or receive onsite instruction. All of these assessments will reveal how students are learning and how they are working towards mastery of their goals.

Summative assessments that gauge what students have learned and their level of mastery will include end-of-course exams, STAR Renaissance benchmark assessments, online course tests, AZMerit, and unit projects. These assessments will be used to measure students' mastery of content. The analysis of data will occur once a year following testing to guide the remaining year's instruction and student support. Similar to formative assessments, school leaders will use summative assessments to gauge teacher effectiveness as well as student progress.

Fifth Arrow will implement an assessment plan that quickly identifies students who are performing below grade level or are at risk of falling behind. At the beginning of each semester Fifth Arrow will identify students who fall within the lowest quartile of reading and math achievement, as determined by STAR reading and math assessment results. These literacy and mathematics cohorts of students will be assigned to small classes – Small Group Instruction (SGI) classrooms for each subject focused on intensive instruction. The objective of the intervention will be to ensure that 70% of the cohort attains their projected growth for achievement as defined by the STAR reading and math assessments, in the first year and progressive growth in the following years.

Data from both the formative and summative assessments will be reviewed by school leaders to ensure that school-wide learning is on track to meet the school's goals and academic achievement expectations. Each teacher will be evaluated based upon the progress of their students using such things as end of course exams, number of units students earn through Guided Independent Study and the rate at which the units are earned. Subjects not captured in the form of assessments by AZ Merit Exams, which include art, music, social studies, health, language and science will be reviewed using end of course exams.

[4] Chappuis, J. (2009). *Seven Strategies of Assessment* for *Learning.*

D. Alignment of Instruction to Academic Systems Plan

The entirety of the Program of Instruction will align with the Academic Systems Plan for both mathematics and reading, which are included in section A.5.