



## Central Charter School

### 12 Pillars of a College Achieve Education

1. GRACE: Grit, Resiliency, Agency, Character, and Excellence
2. Rigorous instructional program backward mapped from college standards
3. Elementary: Core Knowledge, Reading Wonders, & Intense Science Curriculum
4. AP Programs for all in High School
5. Toulmin Writing Model
6. Shared Inquiry: Socratic Seminars
7. Data Driven Assessment & Instruction
8. More Time on Learning (and double the science instruction in K-5)
9. Pacing for Rigor
10. Integrated Co-Teaching Model – Apprentice Teachers & High Dosage Tutoring
11. Global Languages
12. MAADDness: Music, Art, Athletics, Drama, & Dance

#### Pillar 1: GRACE: Grit, Resiliency, Agency, Character, and Excellence

What are the qualities that we want to develop in our children so that they will be successful in life? How do we develop these qualities in our students? Angela Duckworth, a professor at the University of Pennsylvania who was recently awarded a MacArthur Genius Grant, claims that grit outweighs talent and IQ in determining success in life. We start the discussion of this Pillar with questions and we are not going to stop asking them at College Achieve Central. We hope to imbue our students with a deeper moral understanding of themselves, to educate their character with the aim of making our students good and successful citizens. We want to empower our students to exhibit “grace under pressure” and for that they need to go beyond reading, writing, and math skills, and develop and educate their moral strength, to enquire and learn what is grit, resiliency, agency, character, and excellence. We want them to embody all this and have a good sense of humor. We believe GRACE and laughter are two wonderful things to have in the hearts of College Achievers.

**Grit:** the tendency to sustain interest in and effort toward very long-term goals. Trying your hardest even when you know you are going to struggle and fail again and again. Never giving up.

**Resiliency:** the ability to overcome failure, disappointment, setbacks, and loss.

**Agency:** owning your life and the decisions you make that determine your path.

Character: doing the right thing even when no one else is watching. Doing the right thing even when you know you will suffer for it. Becoming a person of integrity, compassion, and purpose.

Excellence: the urge to find a way to do a thing perhaps better than it has ever been done before, or doing it the best way it can possibly be done.

## **Pillar 2: A rigorous, standards based instructional program that is backwards mapped from college standards**

At CAC, we will implement a rigorous, standards based instructional program that is backwards mapped from college standards and the Common Core State Standards. Teachers and administrators will build a school curriculum that backwards maps from Advanced Placement (AP) Courses in the sciences, history and social sciences, English literature, mathematics, Spanish & other global languages and includes the Common Core State Standards. Studies show that an intense curriculum and instructional model is the single most reliable predictor of a student graduating from a 4-year college or university.<sup>12</sup> Additionally, teachers and administrators will deconstruct and prioritize content standards. We believe the Common Core State Standards align consistently with the expectations and standards of knowledge and skill required to pass Advanced Placement exams.

## **Pillar 3: Elementary: Phonics, Core Knowledge Sequence, and Intense Science Curriculum**

Data indicates that the students we anticipate serving, low income and minority students in Plainfield and North Plainfield enter kindergarten nearly a year behind their white and middle class peers.<sup>13</sup> This puts them at a distinct disadvantage for future success, as research demonstrates that students who have not learned to read by the end of third grade have high dropout rates from high school, low college matriculation rates, and low college graduation rates.<sup>14</sup> Further, individuals who do not graduate from high school have lower lifetime incomes, higher unemployment rates, and dramatically higher rates of incarceration than their peers who graduate from high school.<sup>15</sup>

For over 30 years, the reading scores in Plainfield's traditional public schools have created a negative cycle of unacceptably high rates of high school dropouts and low college matriculation and graduation rates. Six of Plainfield's fifteen public schools are ranked in the bottom 5% of all schools in the state of New Jersey.

College Achieve Central will reverse this trend by ensuring that all students learn to read at grade level or above by the end of second grade. To do so, CAC will use a Direct Instruction program called Reading Wonders, a successor to Open Court that heavily emphasizes a systematic approach to the teaching of phonics and reading comprehension. We will couple this program with two and a half hours of daily reading instruction, ensuring that our students have the greatest possible chance of reading on grade level by the time they leave third grade, and ultimately, the greatest chance of future academic success. We plan to augment the Reading Wonders curriculum with the Core Knowledge Program, which we will use for the study of history, science, and art in grades K-5.

For science in K-5, we must invent our own curriculum because elementary students will receive over 4 hours of science instruction a week. Can you imagine Kindergarteners doing 50-75 lab experiments a year? Hypothesizing, test their hypothesis?

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<sup>10</sup><http://www.cde.ca.gov/ta/sr/cs/disting2011.asp>

<sup>11</sup> <http://www.cde.ca.gov/ta/sr/cs/yr14distschools.asp>

<sup>12</sup> Adelman, Clifford: Answers in a Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment, US Department of Education 1999.

<sup>13</sup> Early Childhood Longitudinal Study, 2011. <http://nces.ed.gov/ecls/myeclsk2011/>

<sup>14</sup> Hernandez, Donald J. (2011). Double jeopardy: How third-grade reading skills and poverty influence high school graduation. The Annie E. Casey Foundation. Retrieved from: <http://files.eric.ed.gov/fulltext/ED518818.pdf>

<sup>15</sup> National Dropout Prevention Center. (2014). Economic impacts of dropouts. <http://www.dropoutprevention.org/statistics/quick-facts/economic-impacts-dropouts>

#### **Pillar 4: Advanced Placement Program for High School Students**

We believe (and a massive body of research supports this belief) that participation and success in the Advanced Placement (AP) Program leads to higher college matriculation rates, higher GPAs in college, and higher college graduation rates. For over half a century, the AP Program has exposed students to rigorous, college-level course material while in high school, offering the opportunity to gain both high school and college credit. To this end, CAC will require students to participate in Advanced Placement courses and will offer a wide range of AP courses.

#### **Pillar 5: Data-driven assessment & instruction**

CAC will administer a comprehensive assessment system in order to ensure that students are learning and achieving at high levels. We will be part of the Achievement Network's Assessment program, as well as use Fountas & Pinnell's Benchmark Assessment Series (BAS), our own teacher-created interim assessments, Advanced Placement exams (AP), the SAT, and other assessments, including state-mandated assessments to measure students' learning. We will also utilize online learning programs such as iStation,<sup>18</sup> a program which offers students individualized reading instruction at their level, and DreamBox<sup>19</sup> which personalizes math instruction for students. In grades 6-12, teachers will have the support of Read 180, ALEKS math, and Achieve3000, as well as Khan Academy. These programs contain robust data reporting to ensure teachers understand student progress. In addition to formal assessments and programs, all teachers will regularly employ other informal assessments, such as daily exit tickets and ongoing student classwork, to inform instructional practices and student differentiation. Data gleaned from these various assessments will enable teachers to have frequent and regular checkpoints to determine how well their students are progressing. Data from these assessments will also be used to group students and to plan future lessons, including re-teaching and/or accelerating content as needed.

For data to be useful, it is critical that teachers understand how to use it to inform and improve their instruction. As a result, we will deliberately use our scheduled professional development days both to ensure that teachers understand how to use data and to support teachers in using that data to address the needs of their students.

#### **Pillar 6: Shared Inquiry: Socratic Seminars**

CAC will employ the Socratic method of teaching, a method that engages students in dialogue, encouraging them to think critically about content and ideas instead of simply looking for the "right" answer. Teachers respond to students' comments and queries with a series of probing questions designed to facilitate broader and deeper understanding. The Great Books Foundation calls this "shared inquiry."

In the classroom, students will be given opportunities to "examine" a common piece of text, whether it is in the form of a novel, poem, art print, piece of music, historical debate, mathematical problem, or scientific formula. After review of a common text or problem, the teacher will pose open-ended questions. Open-ended questions will allow students to think critically, analyze multiple meanings in text, and express ideas with clarity and confidence. The dialogue created through this process will encourage students to think deeply. This is in contrast to more traditional discussions or debates where information is transferred with the goal of "winning" the argument. Once teachers and students learn to dialogue, they find tremendous value in the ability to ask meaningful questions that stimulate thoughtful interchanges of ideas. It also encourages students to become deeper and more critical readers of text. The focus on drawing their insight or response from specific passages in the text and using the text as evidence to make their point dovetails perfectly with the Toulmin writing model (described below). All teachers will receive training in teaching the Socratic Method from programs offered by the National Paideia Center<sup>20</sup> and the Great Books Foundation<sup>21</sup>. Every teacher must be trained in this methodology for at least 16 hours before they start teaching at CAC.

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<sup>16</sup> <https://reportcards.nysed.gov/files/2010-11/AOR-2011-331700010000.pdf>

<sup>17</sup> <https://reportcards.nysed.gov/statewide/2011statewideAOR.pdf>

<sup>18</sup> [www.istation.com](http://www.istation.com)

<sup>19</sup> [www.dreambox.com](http://www.dreambox.com)

<sup>20</sup> <http://www.paideia.org/>

<sup>21</sup> <http://www.greatbooks.org/programs-for-all-ages/junior/research-effectiveness/state-and-common-core-state-standards-for-english-language-arts/#>

### **Pillar 7: ICEF Toulmin College Writing Model (Grades 6-12)**

Writing is a tool for thinking, and writing well is a skill that our students must master in order to be successful in high school, college, and the professional workplace. Unfortunately, too few educators focus on explicitly teaching students to write. At CAC, however, teaching students to write well will be an area of focus in all content areas. To do this, we will rely on the Toulmin writing model. The Toulmin writing model teaches students to make a claim, define the issue in the claim, support the claim with evidence, explain how the evidence supports that claim, and finally consider and engage with a possible counter-claims. This is a high level of thinking and writing that requires students to have read, understood, and engaged deeply with a text prior to making an argument and writing a persuasive essay. As a result, coupling this writing model with Socratic seminars (discussed above) is imperative.

The academic journal *Educational Leadership* highlighted the success of the ICEF's Toulmin writing model at its first school, View Park Preparatory Charter School:

"Ninety-eight percent of View Park's 375 students are black; half receive free or reduced-price lunch. View Park uses a curricular approach similar to Tempe Prep's, with a focus on developing students' analytical and argumentative skills. From 9th through 12th grade, English instruction focuses almost exclusively on reading, argument, and persuasive writing... View Park students not only outperformed their white peers in the district on the 2005 California English Language Arts Exam, but they also have the highest test scores among black high school students in California."<sup>22</sup>

We at CAC believe so strongly in the high caliber of learning that results from combining Socratic seminars and the Toulmin writing model that we will require teachers to use both methods in every class and in every discipline from grades 6-12. From experience, we have learned that if only the English department is responsible for teaching students to think and speak critically (the intended purpose of shared inquiry in the Socratic Seminars) and to think and write critically (the intended outcome of the Toulmin writing model) then only a third to half of the students will actually master the skills of thinking and writing critically and only in the discipline of English literature. However, by using these methods frequently in the instruction of not only English, but also in science, history, and mathematics (and even to a degree in art, music, and physical education) all students acquire critical thinking and writing skills. Further, students are challenged in every discipline to define in their own words what they believe to be the answers to essential life questions about life, art, justice, freedom, and equality. The process of grappling with these essential questions both verbally (through Socratic seminars) and in written format (through Toulmin) helps students define what they believe to be true and question issues of which they are uncertain.

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<sup>22</sup> *Educational Leadership*, Hernandez, Kaplan, & Schwartz, 2006. Note: View Park Prep was the first K-12 charter school founded by CAC Lead Founder Mike Piscal.

### **Pillar 8: More Time for Learning & Science**

Research shows the impact of more time to learn is tremendous.<sup>23</sup> CAC students will have a longer school day, the equivalent of more than 30 additional days of school. The longer school day means that teachers will have adequate time to plan high-quality lessons and collaborate with one another, which will in turn ensure students' academic and social needs are addressed. As a result, students will be afforded more rigorous learning experiences. The longer day will also allow time within the school day for teachers, apprentice teachers, and tutors to intervene with struggling students and tutor one-on-one or in small groups.

Additionally, CAC will double the average instructional minutes devoted to science instruction in grades K-5. According to the National Center on Education Statistics, students nationwide receive 2.3 hours of science instruction per week. At CAC, we will devote 4.3 hours per week to science instruction. This will amount to an additional 432 hours of instruction in science by the time a student reaches the 6th grade. Beginning in the 6th grade we plan to increase the amount of time spent on science to 5.25 hours per week. This will amount to 319 additional hours of science instruction over the three years grades 6-8. An additional 700 additional hours of science instruction will significantly contribute to our students' success on Advanced Placement exams in chemistry, biology, and physics in grades 10-12.

### **Pillar 9: Pacing for Rigorous Instruction**

It is not enough for our students to compete effectively with other low-income students; they must be prepared to excel at top-tier colleges and ultimately, in the professional workplace. Because of this, we employ the approach of "Pacing for the top quartile." This practice was pioneered by Henry Levin at Stanford University and endorsed by the US Department of Education as the "Accelerated Schools" model of education. In this method, teachers tailor their instruction to meet the needs of the top quartile of students, at a pace of 1.25 grade levels per year. This means that teachers will cover one-and-a-quarter years' worth of material during the year.

This pace ensures that top quartile students will make outstanding gains, and all other students will be stretched to their full potential. The belief is that the default mindset of teachers ought to be accelerating the learning of their students, rather than remediating their students' deficits,<sup>24</sup> and that students achieve at higher levels when they are in an environment with high expectations.<sup>25</sup> In order to support students at all levels, we plan to employ interventions by employing apprentice teachers in nearly every classroom and aides in the others. Apprentice teachers and aides will be responsible for small group and individualized instruction to ensure that the lowest quartile maintains pace with the class.

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<sup>23</sup> See Hansen (2008); Jacob and Lefgren (2004); Rivkin et al. (2005); and Krueger (1999). This research shows the estimated effect for third-grade students of adding 10 days of learning is nearly 0.16 standard deviations. This exceeds the estimated effects of grade retention for low-achieving students (approximately 0.13 standard deviations), of having a teacher who is one standard deviation above the mean for effectiveness (approximately 0.11 standard deviations), or of reducing class size by four students (approximately 0.10 standard deviations).<sup>34</sup>

<sup>24</sup> <http://schoolimprovement.com/resources/video-summaries/Accelerated-Schools-Transform-Education-with-Henry-M-Levin/>

<sup>25</sup> <http://www.schoolthatcan.org/index.php.schools/ca/the-accelerated-school/>

## **Pillar 10: Integrated or Inclusive Co-Teaching (ICT) Model for K, 1, 2, 3, 6, and 9<sup>th</sup> grades & High Dosage Tutoring**

The ICT Model will put two teachers in every core classroom in what CAC believes are the most critical years: learning how to read in K-3; and the transition years into middle school and high school. The ICT model will have several salutary effects: reduce the student teacher ratio from a high of 24:1 to 12:1; create an apprentice program where new teachers first shadow, observe, and teach (first lessons, then units) and nearly half of the apprentice teacher's time will be spent offering high dosages of tutoring to the students most in need of individualized attention: students with disabilities, ELL students, RTI students, and students at risk of academic failure (those in the bottom quartile of the classroom).

The Inclusive Co-Teaching (ICT) model provides for a master teacher and an apprentice teacher in every core classroom. One of the two teachers will be Highly Qualified Special Education. This will provide students with disabilities with 100% instruction from a qualified SPED provider in every core class for the entire class every day. It will be a massive commitment to our special needs students, and creates an apprentice path for new teachers into the classroom without ever having our most vulnerable students being taught by a rookie teacher straight out of college or another career – see Special education section for fuller discussion.

The benefits of high dosage tutoring are well documented. In 1997, the U.S. Department of Education published a research brief entitled "Evidence that Tutoring Works," which surveyed dozens of studies and finds that "when tutors work closely with teachers and are provided with intensive, ongoing training, they can make a difference." More recently, Harvard Economists Roland Fryer and Will Dobbie found tutoring to be a key characteristic of highly effective charter schools in New York.<sup>126</sup>

Tutoring is one of the most effective methods of individualized instruction and will ensure that struggling students have the support they need to meet our high academic standards. Tutoring one-on-one will be targeted at the students in the lowest two quartiles – especially focused on the lowest performing students. Every student in the 4<sup>th</sup> quartile will receive at least two hours of individualized or small group tutoring every day delivered by our full time Apprentice Teachers – see staffing model – or by a City Year Corp (CYC) member or equally qualified and trained tutors. City Year Corp member will provide one-on-one or small group tutoring before, during, and after school to help students work through their academic challenges.

Embedded in the schedule is time for tutoring. From the 5<sup>th</sup> grade on, every student who has been identified by our diagnostic assessments or referred by their teacher will have Math Lab and/or English Lab four days per week (see schedule). During this time, they will receive small group and/or one-on-one tutoring. Tutoring will also take place during whole class instruction (during group work, Socratic Seminars, and Blended learning blocks) through in class pull outs. Every class 3-9 will have at minimum one experienced teacher and a tutor and in grades K, 1, 2, 3, 6, and 9, there will be two teachers per classroom to provide this high level of support in our Integrated (or Inclusive) Co-Teaching Model.

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<sup>26</sup> In their research of the inner-workings of over 35 charter schools in New Jersey City, Dobbie and Fryer (2011) show that an index of five policies suggested by over forty years of qualitative research – frequent teacher feedback, the use of data to guide instruction, high-dosage tutoring, increased instructional time, and high expectations – explains approximately 50 percent of the variation in school effectiveness.

## **Pillar 11: Global Languages**

A human being's capacity to learn languages is at its peak from somewhere in infancy to age 8. After age 8, the ability to learn languages plunges and becomes extraordinarily difficult. This is an established medical fact. However, if a child learns two languages before the age of 9, they will retain the ability to learn other languages with the enhanced ability of a young child. To take advantage of this innate human ability, College Achieve students will study Spanish intensively in grades K-5. After grade 5, students will be able to choose other languages to study including Mandarin, Japanese, Korean, French, and German.

## **Pillar 12: MAADNESS: Music, Art, Athletics, Drama & Dance**

The founders of College Achieve Central are committed to MAADNESS! Students from previous schools we have founded have gone to graduate from the Berklee School of Music, have toured with Shakira, Jackson Browne, Robin Thicke, and Jamie Foxx, have travelled to perform in Barcelona, Havana, and Brazil. Our visual art students have toured DreamWorks Animation Studios, staged Gallery Openings, and self-published their own comic books. Our athletic teams have won state championships in football, basketball (boys and girls), and our international rugby teams (boys and girls) have played everywhere from China to South Africa. Two of our girls were named high school All Americans in rugby. We love to do at least one musical a year, and one traditional play (Shakespeare, Sophocles, Shaw, or August Wilson).

In a recent study published by the Institute of Education Sciences and the National Center for Education Statistics found that males who participated in high school sports had 58 percent higher odds of immediate enrollment in postsecondary education than those who did not participate.<sup>27</sup> Hispanic students who participated in high school sports had 73 percent higher odds of immediate enrollment in postsecondary education than those who did not participate in a sport. A 2007 study found that women who played a sport in high school were 73 percent more likely to earn a college degree within six years of graduating high school than those who did not play a sport. This held up even for students facing socioeconomic challenges to graduating from college.<sup>28</sup> Given the low rates of high school and college graduation for the students we anticipate serving, CAC intends to use sports as a key lever to increase the number of students prepared to attend and succeed in college and create a college going culture. At CAC we plan to have a traditional sports program offering team sports in high school football, basketball, soccer, track & field, and rugby.