A.4 School Calendar and Weekly Schedule

SySTEM Phoenix exists to prepare students to become the innovative leaders of tomorrow by providing integrated learning environments focused on science, technology, engineering, and math (STEM). As such, our school calendar and weekly schedule prioritize time for integrated STEM instruction and embedded opportunities for students to apply their knowledge in relevant contexts. This includes integrated Science/Math and Social Studies/English Problem-Based Learning instructional blocks, as well as a daily STEM in Action block to expose students to arts, gardening, and physical activity through the lens of STEM. Additionally, to ensure teachers have the time necessary to analyze student data and plan best practices in STEM instruction, our weekly schedule provides significantly more planning time than most traditional schools.

A. Compliance with Required Number of School Days per Year

SySTEM Phoenix has 182 instructional days, exceeding the required 180 days required per ARS §15-341.01. Additionally, a key element of SySTEM Phoenix's philosophy is that teacher professional development through regular reflection and growth is critical to improving student learning. In order to ensure teachers are provided with the time to do this, 10 professional development days are embedded within the school calendar and an additional 5 days for new teachers. These days include 2 weeks of intense summer curriculum training, as well as additional hours of professional development scheduled throughout the school year after each set of diagnostic, benchmark, interim, and summative assessments to provide teachers with sufficient time for data analysis and training. Additionally, recognizes the importance of teacher planning time within the school day to ensure that teachers have the opportunity to collaborate with each other in order to deliver high quality integrated instruction. For this reason, teachers have duty free lunch, two prep hours a week, weekly school-wide professional development and two hours of uninterrupted collaborative work team time every other week. This schedule is meant to foster collaboration and ensure adequate time to analyze student data to accelerate learning.

B. Compliance with Required Hours/Minutes of Instruction

The required hours of instruction at SySTEM Phoenix exceed the requirement in Arizona per ARS §15-901 by more than 7,098 minutes each year for 6th grade, 546 minutes each year for 7th through 8th grade, and 17,472 minutes each year for 9th through 12th grade. Given that students within the target population will most likely come in below grade level, additional instructional time is allocated to ensure students have adequate time to achieve mastery on the Essential Learning Goals during the regular school day. The Acceleration period is also built into the schedule to provide targeted, small group instruction to students to fill any gaps of incoming students.

Table A.4.1: Required Instructional Hours by Grade

	Arizona[1]	SySTEM Phoenix	% Increase
6th	890	1008	13.3%

7th-8th	1000	1008	.8%
9th-12th	720	1008	39.5%

C. Daily Instructional Minutes

SySTEM Phoenix offers a set Monday through Thursday schedule with a modified Friday schedule to allow staff to analyze data, plan collaboratively, and design action steps. On average, SySTEM Phoenix requires 1.3 times more instructional minutes in grades 6 through 12 than required by the state of Arizona.

Table A.4.2: Comparison Daily Instructional Minutes

	Arizona Requirement[2]	SySTEM Phoenix	% Increase
6th	297	360	21.2%
7th-8th	333	360	8.1%
9th-12th	240	360	50%

In addition to requiring more instructional minutes in all subjects, SySTEM Phoenix offers 1.4 times more instruction in science and math than currently required by the state of Arizona in order to ensure students are provided with the math and science skills necessary to excel in STEM careers.

Table A.4.3: Daily Instructional Minutes in STEM Compared

	Arizona	SySTEM Phoenix	% Increase
6th	100	180	80%
7th-8th	100	180	80%
9th-12th	105[3]	180	71.4%

D. Rationale for Weekly Schedule

SySTEM Phoenix offers a rigorous, integrated instructional program based on a comprehensive compilation of Arizona's Common Core State Standards, the Next Generation Science Standards, and The Partnership for 21st Century Skills (P21) Framework for 21st Century Readiness, resulting in a set of Essential Learning Goals (ELGs), upon which all student mastery is based. To ensure students have

multiple opportunities to master the Essential Learning Goals, the instructional program includes integrated core instructional blocks and elective Problem-Based courses based on ELGs. Additionally, a comprehensive Response to Intervention program ensures time within the school day to provide enrichment and remediation on the ELGs during the Acceleration block each day.

SySTEM Phoenix operates with an extended school day from 8:00 am to 4:00 pm, ensuring students have adequate time to master the rigorous content of the instructional program. The schedule includes 2-hour integrated instruction blocks of Reading/History and Science/Math, as well as daily 2-hour STEM in Action course, designed to engage students in active learning at the beginning of each day, setting the tone for continued engagement throughout the remainder of the school day, as well as a 1-hour Acceleration block to provide remediation and enrichment to students. The schedule is modified each Wednesday(½ day of Science/Math or ELA/Social Studies instruction and ½ day of STEM in Action) to provide teachers with quality time to analyze assessment data and plan integrated units of instruction.

Extended Instructional Day & Year

SySTEM Phoenix operates an extended school day (8 hours daily: 8:00 am-4:00 pm), including 7 hours of instruction and 1 hour of Lunch/Recess/Advisory, and an extended school year (182 instructional days) to ensure students have adequate time to master the rigorous content of the instructional program. Additional tutoring (4:00-5:00 pm) will be available for all students after school and required for those who are not mastering all Essential Learning Goals.

Integrated Blocks

SySTEM Phoenix operates a daily schedule that integrates Science and Math courses within a 2-hour instructional block and ELA and Social Studies in a separate 2-hour instructional block. Classes are departmentalized in all grade levels (6th-12th) into ELA/Social Studies and Math/Science blocks to ensure students receive instruction from teachers who have deep content knowledge of their subjects and are Highly Qualified in their respective content areas. Students learn content through the Problem-Based Learning model, using standards to solve relevant community problems and apply their learning at a high level of rigor.

Comprehensive Assessment Cycle

SySTEM Phoenix uses assessment to drive instruction. All incoming students participate in diagnostic testing (Galileo Common-Core aligned Reading and Math assessments) to determine areas of strength and weakness in core content areas. Teachers collaborate on creating, analyzing, and making data-driven instructional decisions. Teachers collect daily formative data on student learning to modify and adjust instruction to ensure student mastery of all Essential Learning Goals. Time is scheduled within the instructional day (1.5 hours per teacher per day) and every Wednesday to collaboratively plan integrated instructional units and analyze student learning in order to make adjustments to upcoming units to include Essential Learning Goals not yet mastered. Additionally, common course assessments are administered every 6 weeks to measure retention of Essential Learning Goals and teachers use Wednesday planning time to analyze data and modify upcoming instruction.

Data-driven Professional Development & Integrated Planning

SySTEM Phoenix begins each school year with an intensive 2-week professional development series focused on implementation of the Problem-Based Learning model, integrated instruction, creation of Essential Learning Goals and Success Criteria, and Marzano's 4-point mastery-based grading system. In order to ensure teachers have the time necessary to implement each of these methods essential to the instructional program, additional time for professional development is scheduled throughout the school year. Teachers have both daily and weekly time allotted to plan instruction, track student mastery of Essential Learning Goals, analyze student data, participate in instructional coaching, and modify and adjust unit plans.

Student Exhibitions & Conferences

SySTEM Phoenix places significant emphasis on students being able to present their learning in public forums to authentic audiences. East semester, students will present integrated projects showcasing a solution they have developed to solve a specific community problem. Days are allocated within the calendar for these exhibitions, although they will also be scheduled after business hours to ensure working families are available to attend. Additionally, teachers will coordinate with parents to schedule student-led conference appointments each semester to ensure families are aware of student progress toward mastery of Essential Learning Goals. These will be scheduled during evenings when parents are more likely to be available to attend to ensure 100% parent attendance. Students will lead the conferences, presenting their progress toward mastery of the Essential Learning Goals, their specific areas of strength and weakness, and their goals for the upcoming semester. Each quarter, teachers will also hold an Academic Parent Teacher Team meeting in the evening with families of students in their homeroom courses to present student specific academic achievement data and provide families with ways to support their child's learning at home.

E. Professional Development

SySTEM Phoenix understands the importance of teacher planning in developing high quality instruction and analyzing student data in order to improve student achievement. Teachers are taught and expected to collaborate through job-embedded professional development in order to increase their own content and pedagogical knowledge, with the ultimate outcome of improving student achievement. As such, 20 days of professional development are allocated for intensive summer training focused on problem-based learning, integrated instruction, Essential Learning Goals and Success Criteria, and Marzano's 4-point mastery grading scale. New teachers participate in an additional 5 days of training in July focused on the instructional program and new staff orientation. SySTEM Phoenix also allocates 2 hours every Wednesday and 7 hours every other Wednesday for targeted professional development, including Cognitive Coaching, data analysis, and planning integrated instruction.

Table A.4.4: Daily Schedule Grades 6th through 12th

	Monday, Tuesday, Thursday, Friday	Wednesday
7:30 am	Student Arrival/Breakfast	Student Arrival/Breakfast
8:00 am	STEM in Action	
:30		STEM in Action

9:00 am		
:30		
10:00 am	Advisory	School-wide Community Meeting
:30	English/Social Studies	English/Social Studies OR Math/Science (Switch every other week)
11:00 am		
:30		
12:00 pm		
:30	Lunch	Lunch
1:00 pm	Acceleration / Elective	All Staff Professional Development / Early Release for Students
:30		
2:00 pm	Math/Science	
:30		
3:00 pm		
:30		
4:00 pm	Dismissal/ After-School Tutoring	
:30		
5:00 pm	Late Dismissal	
:30		
	Average Weekly Minutes Totals	
English/ History	500	
Math/ Science	500	
STEM In Action	600	

Figure A.4.5: 2014-2015 Academic Calendar

SySTEM Phoenix

2014-2015 School Calendar

July 2014						
Su	M	Tu	W	Th	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

August 2014						
Su	M	Tu	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

September 2014						
Su	M	Tu	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

October 2014						
Su	M	Tu	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

November 2014						
Su	M	Tu	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

December 2014						
Su	M	Tu	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

January 2015						
Su	M	Tu	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

February 2015						
Su	M	Tu	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

March 2015						
Su	M	Tu	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April 2015						
Su	M	Tu	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May 2015						
Su	M	Tu	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June 2015						
Su	M	Tu	W	Th	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

- Parent/Student Orientation
- First and Last Day of School
- Student Exhibitions
- Holiday / Break (no school for staff & students)
- Teacher Training (no school for students)
- 6 week Assessments