



## ELEMENTARY COMPUTER SCIENCE

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# Administrator Implementation Guide





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DEPARTMENT OF  
EDUCATION

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## OVERVIEW

### Mississippi Computer Science and Cyber Education Equality Act (2021)

The Miss. Code Ann. § 37-13-207 requires that:

1. Beginning in the 2022-2023 school year, 50% of elementary schools in each district provide 1 hour of computer science instruction each week. ALL charter schools provide one hour of computer science instruction per week.
2. Beginning in the 2023-2024 school year, ALL elementary schools in each district provide 1 hour of computer science instruction per week.

Additionally, all middle schools in each district are required to provide instruction in foundations of computer science in the 2022-2023 school year, with 50% of high schools in each district offering a course in computer science by the 2023-2024 school year. By the 2024-2025 school year, ALL SCHOOLS in each district shall provide computer science instruction.

According to Miss. Code Ann. § 37-13-205, elementary computer science instruction:

- can be provided in stand-alone implementations.
- can be embedded in other subjects.
- is offered by a **licensed teacher or paraprofessional who is under the guidance or supervision of a licensed teacher**, and who has received training for computer science instruction approved by the State Department of Education.

NOTE: For elementary, teachers are not required to have a Computer Science endorsement.

Ideally, instruction should be delivered by a licensed teacher; however, as with other activity-based instruction in elementary classrooms, trained assistant teachers may provide instruction under the direction of a licensed teacher.

For more information on these requirements, please review the [Overview of the Mississippi Computer Science and Cyber Education Equality Act](#).

### Standards

The [Mississippi College-and Career-Readiness Standards \(MCCRS\) for Computer Science](#), adopted in 2018, provides expectations for what students should know and be able to do to be college and career ready. Mississippi has adapted these standards from the nationally developed Computer Science Teachers Association K-12 Computer Science Standards, Revised 2017.

Computer science is defined as the study of computers, algorithmic processes, coding, and logical thinking - including computer principles, their hardware and software designs, their implementation, and their impact on society. It is important to note that computer science is

more than just coding. It is applying the fields of technology and computer science to students’ lives both inside and outside the classroom.

The MSCCRS for Computer Science is divided into the following core concepts:

1. Computing Systems
2. Networks and the Internet
3. Data and Analysis
4. Algorithms and Programming
5. Impacts of Computing

Each core concept consists of sub-concepts, or specific ideas within the concept. The following table illustrates the sub-concepts for each core concept:

CORE CONCEPT	SUB-CONCEPT
<b>Computing Systems</b>	<ul style="list-style-type: none"> <li>• Devices</li> <li>• Hardware and software</li> <li>• Troubleshooting</li> </ul>
<b>Networks and the Internet</b>	<ul style="list-style-type: none"> <li>• Network communication and organization</li> <li>• Cybersecurity</li> </ul>
<b>Data and Analysis</b>	<ul style="list-style-type: none"> <li>• Collection</li> <li>• Storage</li> <li>• Visualization and transformation</li> <li>• Inference and models</li> </ul>
<b>Algorithms and Programming</b>	<ul style="list-style-type: none"> <li>• Algorithms</li> <li>• Variables</li> <li>• Control</li> <li>• Modularity</li> <li>• Program development</li> </ul>
<b>Impacts of Computing</b>	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Social interactions</li> <li>• Safety, law, and ethics</li> </ul>

## IMPLEMENTATION

Elementary schools will be afforded flexibility to implement the Mississippi Computer Science and Cyber Education Act (2021) in a way that best meets the needs of their students while accounting for their schools' grade level configurations, staffing availability, and scheduling options. Below are a few implementation options districts and schools can consider:

### Stand-alone Instruction

Computer science could be offered as a pull-out “specials” or enrichment rotation alongside physical education, the Arts, counseling, and additional rotations provided at the elementary level. It can also be provided as stand-alone instruction within the classroom, with dedicated time allotted on the master schedule.

- The instructor must be a licensed teacher (or a trained assistant teacher under the direction of a licensed teacher) and provide instruction in alignment with the MCCRS for Computer Science.
- When taught in a pull-out rotation, collaboration with classroom teachers and librarians, counselors, art or music teachers, and other enrichment teachers is strongly encouraged to create cross-curricular connections.
- Computer science is not intended to take the place of other required activity-based instruction such as Library, the Arts, Health, or physical education.

### Integrated Instruction

Computer science can be integrated into other content area or enrichment rotation instruction. This will allow all teachers in the building, including the librarian, to share in the responsibility for instruction.

- The instructor must be a licensed teacher (or a trained assistant teacher under the direction of a licensed teacher) and provide instruction in alignment with the MCCRS for Computer Science.
- Classroom teachers and enrichment teachers should work collaboratively to plan who will be responsible for providing instruction for each standard, identifying cross-curricular connections that can be made, and ensuring the required instructional minutes are met (e.g., the counselor will teach about working collaboratively online [Core Concept: Impacts of Computing], and the ELA teacher and/or librarian will have students work collaboratively online to create a multimedia presentation to retell the events of a story or write a review of the story and provide feedback to their peers).
- MCCRS for Computer Science should be notated on the integrated lesson plans, with the amount of time spent on computer science instruction.

### Sixth Grade Instruction

The law does not identify which grade levels are considered elementary, middle, and high school. To meet the needs of sixth grade students, districts have the flexibility to define whether sixth grade is considered elementary or middle school, based on the school's configuration. Districts can implement computer science instruction based on their schools' grade level configurations, staffing availability, and scheduling considerations.

- If a school chooses to implement sixth grade under the elementary requirement, use the guidance provided above.
- If a school chooses to implement sixth grade under the middle school requirement, one computer science course must be offered at the middle school level. These courses may include Cyber Foundations I, Cyber Foundations II, and Computer Science and Engineering. These courses must be provided by a certified teacher with the appropriate computer science endorsement. Many districts are offering Cyber Foundations I in the sixth grade with no Carnegie unit awarded and offering Cyber Foundations II in the seventh grade with a Carnegie unit awarded wherein this meets the technology requirement needed to graduate.

Regardless of the implementation strategy, it is important to identify key stakeholders to assist in determining which implementation strategy works best for each district and review as needed. When identifying stakeholders, consider including educators with strong pedagogical knowledge as well as educators who are passionate about bringing computer science to life for all students.



## SCHEDULING SUGGESTIONS

When creating the school’s master schedule, computer science instruction should be made available to all elementary students. This integration may look different at each grade level, but universal exposure across each grade level is important.

The hour of required instruction each week can be broken into smaller chunks of time throughout the week or easily integrated into other lessons, center activities, or content areas, allowing all teachers in the building, including the librarian, to share the responsibility for instruction.

Conversely, schools have the flexibility to create a schedule of instruction that chunks the time into longer increments that are spread out throughout the school year, but still meet the yearlong requirement of 36 total hours of instruction (i.e., equivalent to one hour per week over the course of the school year). An example would be having students attend computer science class for 6 hours per week every sixth week for a total of 36 hours over the course of the year.

### **Embedded in the Classroom Curricula**

Computer science can be integrated into existing curriculum at the elementary school level with no change in the instructional schedule through the use of whole group instruction, centers, and additional learning activities. For example, students can collect and analyze data in Science, program interactive stories in English Language Arts, create visualizations in Math, or learn about digital citizenship with the Counselor.

The [Standards Deconstruction with Content Area Connections](#) and [Integration Guides](#) provide support in cross-curricular planning as teachers identify core concepts and standards that align with their content areas.

Instead of writing a stand-alone lesson plan, teachers can notate computer science standards integration and activities in content area lesson plans.

### **Stand-alone Instruction**

Administrators may designate a specific time within classroom schedules to offer computer science instruction, whether as an enrichment rotation or other scheduled time throughout the school day.

A grade-by-grade breakdown of sample schedules for computer science integration in the general classroom setting can be found in the [Instructional Minutes Recommendations and Examples Guidance Document](#). Sample schedules for kindergarten through fifth grade can be found in this document in Appendix A.

## EQUIPMENT AND INFRASTRUCTURE NEEDS

Device and software programs will depend on your current district budget and needs. The following will need to be considered to successfully implement computer science instruction:

- **Devices:** Students and teachers should have access to devices such as tablets, Google Chromebooks, Macs, or PCs, with a minimum of 4G of RAM to complete computer science activities.
  - Tablets or touch screen devices might be offered to younger students with certain disabilities that may affect dexterity.
  - Some computer science lessons that promote problem-solving can be utilized without a device, often referred to as “unplugged” activities.
- **Internet:** Many computer science resources are browser-based, so sufficient broadband to support computer science instruction at the school level is key.
- **Multimedia and Presentation Tools:** Access to multimedia and presentation tools or programs is necessary for successful computer science implementation.
- **Coding Software:** Teachers and students need access to a grade-appropriate coding software as the MCCRS for Computer Science requires programming skills that can only be acquired by the act of programming.
  - The Mississippi State University Center for Cyber Education (MSU CCE) and CS4MS offers access to fundamentals courses for elementary computer science through [Code.org](https://code.org) as well as additional [free resources and tools](#).
- **Robots (optional):** Robots can be purchased to use with coding software; however, they are not required to successfully master programming skills.
  - Many free web-based coding software, such as Scratch Jr., CS First, or Code.org, do not require robots for students to complete the programming activities.
  - Some robots do not require a device or coding software to program the code necessary to control the robot. Examples of these robots are Ozobot Evo, Bee-Bot, Code & Go Robot Mouse, and Botley.
- **Seating arrangements:** Computer science instruction promotes collaboration and group work; therefore, classroom seating arrangements with large table spaces are ideal.
- **Tech support:** School or district level tech support is recommended to assist teachers in troubleshooting technology issues as they arise.
  - Whether planning to use simple, web-based coding programs or robots, district technology staff should review the technical specifications prior to use. Check with your district’s technology specialist prior to purchasing or implementing programs, robots, or other digital tools.

For more information on considerations to make when supporting the implementation of additional computer programs, see [Digital Promise’s Digital Learning Playbook](#).

## INSTRUCTIONAL RESOURCES

The following instructional resources are currently available for elementary computer science:

### **Standards Deconstruction with Content Area Connections: Level 1A: Grades K-2, Level 1B: Grades 3-5, and Level 2: Grade 6**

Breakdown of the MCCRS for Computer Science so that educators have a better understanding of the skills that need to be taught. Additionally, they provide a progression of grade-appropriate skills within the grade band covered by the standards and make connections to other content area standards so that educators can easily integrate computer science instruction. (<https://www.mdek12.org/CSElem>)

### **Integration Guides**

Provides plans for a minimum of forty, sixty-minute lessons covering six computer science topics: coding, robotics, digital literacy, digital citizenship, keyboarding, and unplugged activities. Each guide contains a breakdown of content by integrated subjects, content by computer science topics, and a calendar/pacing guide.

(<https://cs4ms.org/elementary-integration/>)

### **Lesson Plans**

Administrators choosing the stand-alone implementation method may use existing lesson planning formats to plan computer science instruction. Teachers are encouraged to curate their plans using the resources above, as well as other grade-appropriate resources and the MCCRS for Computer Science to meet the needs of the students in their classroom.

If schools employ the integrated and embedded scheduling options, MCCRS for Computer Science and related skills need to be notated on lesson plans.

### **Curriculum**

There is currently no state-approved curriculum to use for elementary computer science instruction. During the 2023-2024 school year, the Mississippi Department of Education (MDE) will initiate the process to create an approved list of supplementary computer science curriculum to be released for the 2024-2025 school year.

## PROFESSIONAL DEVELOPMENT

Professional development opportunities can assist educators with the implementation of computer science. Initial professional development should be focused on understanding the MCCRS for Computer Science and the associated skills students will need for mastery. Professional development surrounding the use of coding software, robots, or other digital tools will also be necessary. Further professional development needs can be determined by data from teacher surveys or a needs assessment and may be unique to each individual school or group of teachers. While some digital learning professional development is relevant for computer science, teachers will need specific professional learning opportunities to support the unique strategies and tools in computer science.

The MDE recommends professional development for the entire staff, to include administrators, licensed teachers, teacher assistants, librarians, and counselors.

The MDE and the MSU CCE will provide various opportunities for virtual, in-person, synchronous, and asynchronous elementary computer science professional development. These opportunities will be advertised on the MDE [Trumba Professional Development Calendar](#), the MDE and MSU CCE list serves, and the [MDE Computer Science: Elementary Resources webpage](#).

### Professional Learning Communities (PLCs)

In addition to initial professional development, ongoing learning should be provided through PLCs. PLCs provide space and time for teachers to collaborate across subject and grade levels. Effective PLCs meet regularly, are collaborative in nature-allowing teachers to learn from one another and provide practical strategies teachers can apply to their instruction. These PLCs are a great way to promote integrated computer science lesson planning.

Online PLCs can be beneficial to teachers who want to further their learning and build a Professional Learning Network (PLN). The following are online opportunities for teachers:

- [The Computer Science Teachers Association](#)
- [CS for All Teachers](#)
- [ScratchEd](#)
- [Computer Science Fundamentals- Code.org](#)

### Paraprofessional Support

Paraprofessionals should be included when providing training and ongoing support for computer science instruction while ensuring success in the classroom.

Allow opportunities for paraprofessionals to collaborate with licensed teachers prior to implementation so they:

- Understand the tasks students should be completing during computer science instruction
- Become familiar with any tools or platforms utilized in computer science instruction
- Understand topics of conversation to encourage students to collaborate during discussion

## ACCOUNTABILITY

### Mississippi Public School Accountability Standards

Effective July 2023, Rule 27 of the [Mississippi Public School Accountability Standards](#) has been updated to include the required instructional minutes for elementary computer science. An excerpt of Rule 27 is provided below:

27. The curriculum of each elementary or middle school (any configuration of grades K-8) at a minimum consists of reading/language arts, mathematics, science, social studies, the arts, health education, elementary computer science and physical education (which may be taught by the classroom teacher.) Miss. Code Ann.§§ 37-1-3(2), 37-13-134, and 37-13-201.
  - 27.1 In any configuration of grades K-8, the curriculum must include 150 minutes of activity-based instruction per week and 45 minutes of instruction in health education per week.
  - 27.2 Implementation of the activity-based instruction must meet or exceed the standards as approved by the State Board of Education.
  - 27.3 A general education classroom teacher may provide instruction in the arts, health education, and physical education in a self-contained classroom setting.
  - 27.4 In any elementary configuration of grades K-6, the curriculum must include 60 minutes of computer science instruction per week. Miss. Code Ann. §37-13-201.

Administrators should document the chosen method of implementation of computer science instruction as follows:

- Stand-alone instruction
  - Indicate on the master schedule
  - Assign an [MSIS course code](#):
    - PK-3 Computer Science (Course Code 110103)
    - 4-6 Computer Science (Course Code 110104)

- Assign a teacher who submits stand-alone computer science lesson plans or a teacher assistant who works under the guidance of a licensed teacher to submit stand-alone computer science lesson plans
- Integrated into other content areas
  - Notate the staff that will be responsible for the instruction
  - Reflect instruction in integrated lesson plans, including the number of **instructional minutes and resources dedicated to computer science**

### Assigning Grades

Districts should consider making computer science a graded course if the following are applicable:

1. Computer science is taught as a stand-alone course
2. The school gives grades for other activity-based instruction such as physical education or library
3. School report cards can accommodate the addition

If computer science is integrated within other subjects, a separate grade is not necessary.

### Implementation Checklist

Administrators can observe teachers providing computer science instruction by using the sample Implementation Checklist below, which has been aligned to the [Mississippi Professional Growth System: Teacher Growth Rubric](#). (NOTE: This is not an exhaustive list.)

TGR Domain	Standard/Expectation	Evidence
Lesson Design	<b>Standard 1:</b> <b>Lessons are aligned to standards and represent a coherent sequence of learning</b>	<input type="checkbox"/> Teacher aligns lesson objectives and/or instructional activities to MCRRS for Computer Science <input type="checkbox"/> Teacher integrates all five core concepts of MCRRS for Computer Science into instruction and assessment throughout the school year <input type="checkbox"/> Lesson objectives and/or standards are highlighted on lesson plans or indicated on board <input type="checkbox"/> Time allocated for computer science instruction indicated on lesson plans
	<b>Standard 2:</b> <b>Lessons have high levels of learning for all students</b>	<input type="checkbox"/> Teacher differentiates lessons by allowing students to choose challenging tasks and instructional materials (e.g., choosing a computer program or application) while maintaining comparable content and level of rigor

		<ul style="list-style-type: none"> <li><input type="checkbox"/> Teacher design lessons with appropriate scaffolding to support student learning goals (e.g., step-by-step troubleshooting guides with visuals)</li> </ul>
<b>Student Understanding</b>	<b>Standard 3:</b> <b>The teacher assists students in taking responsibility for learning and monitors student learning</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Students complete coursework based on objectives, lesson(s) content, instructional activities (e.g., completing project-based tasks aligned to MCRRS for Computer Science such as coding, digital citizenship, and understanding the parts of a computer)</li> <li><input type="checkbox"/> Teacher adjusts instruction using ongoing formative assessment</li> <li><input type="checkbox"/> Teacher allows students to self-correct and make other corrections and provide students with individualized feedback as needed (e.g., teacher redirects students who incorrectly label a computer function)</li> <li><input type="checkbox"/> Teacher supports students in making meaningful connections between computer science concepts and their personal experiences and interests</li> </ul>
	<b>Standard 4:</b> <b>The teacher provides multiple ways for students to make meaning of content</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Teacher provides differentiated lessons with various options for students to understand content related to computer science while maintaining comparable content and level of rigor</li> <li><input type="checkbox"/> Teacher instructs and reinforces use of appropriate computer science vocabulary</li> <li><input type="checkbox"/> Teacher facilitates class discussions with probing questions and justifications for computer science</li> <li><input type="checkbox"/> Teacher supports students in making meaningful connections between computer science concepts and subject area content</li> </ul>
<b>Culture/ Learning Environment</b>	<b>Standard 5:</b> <b>The teacher manages a learning-focused classroom community</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Teacher creates effective routines and expectations for students to safely voice opinions and ask and answer questions when using devices, coding software, or other digital tools (e.g., presentation software, robots, etc.)</li> <li><input type="checkbox"/> Teacher monitors student engagement and participation</li> </ul>

	<p><b>Standard 6:</b> The teacher manages classroom space, time, and resources (including technology when appropriate) effectively for student learning</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Teacher monitors student use of various computing hardware for class projects (i.e., building robots, constructing computing devices)</li> <li><input type="checkbox"/> Teacher models appropriate routines and procedures for using hardware, equipment, and technology</li> <li><input type="checkbox"/> Teacher monitors student engagement and participation</li> </ul>
	<p><b>Standard 7:</b> The teacher creates and maintains a classroom of respect for all students</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Teacher promotes concepts of digital citizenship (i.e., anchor charts on password protection and online privacy)</li> <li><input type="checkbox"/> Teacher fosters mutual respect among students by explicitly referencing routines and procedures for online interaction and collaboration (i.e., networking with peers or the community)</li> <li><input type="checkbox"/> Teacher uses language that reinforces all students are capable of succeeding in computer science</li> </ul>
<b>Professional Responsibilities</b>	<p><b>Standard 8:</b> The teacher engages in professional learning</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Teacher proactively seeks out opportunities to continue professional learning regarding computer science (e.g., webinars, professional development sessions)</li> <li><input type="checkbox"/> Teacher integrates knowledge gained in professional learning communities, collaborate with peers and leadership, and attend professional development regarding computer science</li> </ul>
	<p><b>Standard 9:</b> The teacher establishes and maintains effective communication with families/guardians</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Teacher uses applications to communicate teacher expectations of assignments and academic progress with families (e.g., Remind, learning management systems, class websites, etc.)</li> <li><input type="checkbox"/> Teacher promotes parental inclusivity by suggesting online applications for use at home (e.g., ScratchEd)</li> </ul>

In addition to using the checklist, administrators can observe implementation in classroom instruction. Observations can focus on, but are not limited to, identifying if MCCRS for Computer Science is posted on whiteboards, listening for teachers using terminology (e.g., hardware, input,



output, algorithm, data, etc.), and observing teachers and students using coding software and equipment, such as robots.

## SERVING ALL STUDENTS

### Special Education

It is important to note that ALL students should have access to computer science instruction. Teaching computer science to students with learning disabilities may require some adjustments to instructional practices and the materials, software, devices, and other tools used in the learning activities but it can be done. Administrators are encouraged to work with the special education department and personnel within the district for additional supports, strategies, and ideas. The curriculum and instruction must be adapted to the different needs of students rather than requiring students to adapt to the curriculum (curricular adaptations). Instructional adaptations change how students learn, but not what they learn. Using Universal Design for Learning (UDL) improves teaching and learning for all students, with or without learning disabilities. The principles of UDL that can be beneficial to adapting computer science instruction are:

- Representation. Show the information in different ways (e.g., use images to introduce and explain vocabulary prior to reading printed materials).
- Action and expression. Allow students to approach learning tasks and demonstrate what they know in different ways (e.g., use a screen reader to listen to information and have a choice in how to complete an assignment).
- Engagement. Offer options that engage students and keep their interest (e.g., provide opportunities for students to collaborate and problem solve).

### Gifted

Intellectually gifted students are not the only students who should receive computer science instruction. Since many gifted programs incorporate skills, software, and tools found in computer science instruction, classroom teachers should collaborate with the gifted teacher. When teaching computer science to gifted students, it is important to make instruction and learning activities engaging, provide choices within instruction, and opportunities to collaborate. To challenge gifted students, consider introducing text-based coding instead of block-based coding employed in many of the resources discussed above. Text-based computer programming involves learning a programming language and using a text editor. Some online coding courses such as Code.org and [Khan Academy](#) offer several text-based options in which students type code into their closed platform learning management systems. For additional guidance in supporting gifted students, please see the [Gifted Guide](#) from Coda Kid.

## Accessibility

Designing for accessibility can benefit all students, not just students with disabilities. The use of coding software and equipment may need to be modified to ensure all students have access and are able to use it. For additional support in making computer science accessible for all students, please see the [Mississippi Department of Education Access for All Guide 2.0](#). Access to computer science learning can also be improved through activities that augment the classroom experience. The following is a sample list of things teachers can do to provide accessibility in computer science instruction:

1. Use screen readers.
2. Change the color (high-contrast settings) and font style of web-based content for students with visual impairments.
3. Use keyboard shortcuts for students with low dexterity.
4. Edit the settings to prevent pop-ups and to limit interruptions.
5. Enable closed-captioning or provide transcripts for videos.
6. Provide students with voice-to-speech devices.

NOTE: This is not an exhaustive list.

## RESOURCES

- Computer Science Fundamentals - Code.org: <https://code.org/educate/curriculum/csf>
- Computer Science Teachers Association: <https://csteachers.org/page/individual-membership>
- CS for All Teachers: <https://www.csforallteachers.org/>
- CS4MS free resources and tools: <https://cs4ms.wpengine.com/freeresources/>
- Digital Promise's Digital Learning Playbook: <https://digitalpromise.org/online-learning/digital-learning-playbook/>
- Gifted Guide by Coda Kid: <https://codakid.com/computer-programming-for-gifted-students-a-complete-guide/>
- Integration Guides: <https://cs4ms.org/elementary-integration/>
- Khan Academy Computing Courses: <https://www.khanacademy.org/computing>

- Mississippi College-and Career-Readiness Standards for Computer Science (2018): [https://www.mdek12.org/sites/default/files/Offices/MDE/OAE/SEC/2018\\_MCCRS\\_CS.pdf](https://www.mdek12.org/sites/default/files/Offices/MDE/OAE/SEC/2018_MCCRS_CS.pdf)
- Mississippi Department of Education Access for All Guide 2.0: [https://issuu.com/rcumedia/docs/afa\\_2.0](https://issuu.com/rcumedia/docs/afa_2.0)
- Mississippi Department of Education Computer Science: Elementary Resources: <https://www.mdek12.org/CSElem>
- Mississippi Department of Education Instructional Minutes Recommendations and Examples Guidance Document: [https://www.mdek12.org/sites/default/files/Offices/SecondaryEd/v4\\_masterinstructionalminguid\\_022222\\_ty\\_0.pdf](https://www.mdek12.org/sites/default/files/Offices/SecondaryEd/v4_masterinstructionalminguid_022222_ty_0.pdf)
- Mississippi Department of Education Trumba Professional Development Calendar: <http://www.trumba.com/calendars/MDE>
- Mississippi Professional Growth System: Teacher Growth Rubric: [https://www.mdek12.org/sites/default/files/documents/OEE/pgs\\_teacher\\_observation\\_guidebook\\_2019-2020.pdf](https://www.mdek12.org/sites/default/files/documents/OEE/pgs_teacher_observation_guidebook_2019-2020.pdf)
- Mississippi Public School Accountability Standards: <https://www.mdek12.org/Accred/AAS>
- Overview of the Mississippi Computer Science and Cyber Education Equality Act (2021): [https://www.mdek12.org/sites/default/files/Offices/MDE/OAE/OEER/ComputerScience/cs\\_fact\\_sheet\\_jun23.pdf](https://www.mdek12.org/sites/default/files/Offices/MDE/OAE/OEER/ComputerScience/cs_fact_sheet_jun23.pdf)
- ScratchEd: <https://scratched.gse.harvard.edu/>
- Standards Deconstruction with Content Area Connections: Level 1A: Grades K-2 and Level 1A: Grades 3-5, and Level 2: Grade 6: <https://www.mdek12.org/CSElem>

## APPENDIX A

### SAMPLE MASTER SCHEDULE FOR KINDERGARTEN – 5<sup>TH</sup> GRADE

	K	1	2	3	4	5
7:30a-7:45a	Morning Meeting, Social Emotional Learning, Intervention (30)	Morning Meeting, Social Emotional Learning, Intervention (30)	Morning Meeting, Social Emotional Learning, Intervention (30)	Morning Meeting, Social Emotional Learning, Intervention (30)	Bell Ringer, Remediation Activity, Review (15)	Bell Ringer, Remediation Activity, Review (15)
7:45a-7:50a					ELA/Literacy – SS integration, Whole/Small Group, Writing, etc. (90)	ELA/Literacy – Social Studies integration, Whole/Small Group, Writing, etc. (90)
7:50a-7:55a						
7:55a-8:00a						
8:00a-8:05a	Literacy Block – Whole Group 1 (25)  Small Groups – Learning Centers (65)	Literacy Block – Whole/Small Groups (90)	Literacy Block – Whole/Small Groups (90)	Literacy Block – Whole/Small Groups (90)		
8:05a-8:10a						
8:10a-8:15a						
8:15a-8:20a						
8:20a-8:25a						
8:25a-8:30a						
8:30a-8:35a						
8:35a-8:40a						
8:40a-8:45a						
8:45a-8:50a						
8:50a-8:55a						
8:55a-9:00a						
9:00a-9:05a						
9:05a-9:10a						
9:10a-9:15a						
9:15a-9:20a						
9:20a-9:25a	Social Studies Integration cont. (40)	Social Studies Integration cont. (40)				
9:25a-9:30a						
9:30a-9:35a	(Specials): P.E., Music, Library	Writing (30)	Writing (30)	Writing (30)		
9:35a-9:40a						

9:40a-9:45a	(45)						
9:45a-9:50a							
9:50a-9:55a							
9:55a-10:00a							
10:00a-10:05a	Math – Whole Group (50)	Math – Whole Group (50)	Math – Whole Group (50)	Math – Whole Group (50)	Differentiated Instruction Block – Interventions & Enrichment (30)	Differentiated Instruction Block – Intervention & Enrichment (30)	
10:05a-10:10a							
10:10a-10:15a							
10:15a-10:20a							
10:20a-10:25a	Math – Whole Group 2 (25)	Lunch (30)	Lunch (30)	Lunch (30)	(Specials): Music, Visual Arts, Library, P.E., <b>Computer Science</b> , etc. (40)	(Specials): Music, Visual Arts, Library, P.E., <b>Computer Science</b> , etc. (40)	
10:25a-10:30a							
10:30a-10:35a							
10:35a-10:40a							
10:40a-10:45a	Lunch (25)	Lunch (30)	Lunch (30)	Lunch (30)	Transition	Transition	
10:45a-10:50a							
10:50a-10:55a							
10:55a-11:00a							
11:00a-11:05a	Small Groups – Learning Centers – Different. Instruction Block – Intervention & Enrichment (80)	Differentiated Instruction Block Intervention & Enrichment (30)	Differentiated Instruction Block Intervention & Enrichment (30)	Differentiated Instruction Block Intervention & Enrichment (30)	Bell Ringer, Remediation Activity, Review (15)	Bell Ringer, Remediation Activity, Review (15)	
11:05a-11:10a							
11:10a-11:15a							
11:15a-11:20a							
11:20a-11:25a		Activity-based instruction, flexible Scheduling (15-20)	Activity-based instruction, flexible scheduling (15-20)	Activity-based instruction, flexible scheduling (15-20)	Math Instruction, Whole/Small Groups (40)	Math Instruction, Whole/Small Groups (40)	
11:25a-11:30a							
11:30a-11:35a							
11:35a-11:40a							
11:40a-11:45a		Math –	Math –	Math –	Math –	Lunch (30)	Lunch (30)
11:45a-11:50a							
11:50a-11:55a							
11:55a-12:00p							
12:00p-12:05p	Math –	Math –	Math –	Math –	Lunch (30)	Lunch (30)	
12:05p-12:10p							
12:10p-12:15p							
12:15p-12:20p							

12:20p-12:25p	P.E./Recess (35)	Small Groups (40)	Small Groups (40)	Small Groups (40)	Math Instruction Whole/Small Groups (50)	Math Instruction Whole/Small Groups (50)
12:25p-12:30p						
12:30p-12:35p						
12:35p-12:40p						
12:40p-12:45p						
12:45p-12:50p						
12:50p-12:55p						
12:55p-1:00p	Science / Social Studies – Whole Group 3 (30)	(Specials): Music Visual Arts, P.E., Library, etc. (40)	(Specials): Music, Visual Arts, P.E., Library, and Computer etc. (40)	(Specials): Music, Visual Arts, P.E., Library, and Computer etc. (40)	Science (40)	Science (40)
1:00p-1:05p						
1:05p-1:10p						
1:10p-1:15p						
1:15p-1:20p						
1:20p-1:25p						
1:25p-1:30p						
1:30p-1:35p	Integrated Learning Centers – Math (30)	Social Studies/ Science (50)	Social Studies/ Science (50)	Social Studies/ Science (50)	Science – Differentiated Instruction Block (30)	Science – Differentiated Instruction Block (30)
1:35p-1:40p						
1:40p-1:45p						
1:45p-1:50p						
1:50p-1:55p						
1:55p-2:00p						
2:00p-2:05p						
2:05p-2:10p	Integrated Learning Centers – Health, Social Studies, Science (20)	Computer Science, Health, Review and Closure of the Day (30)	Computer Science, Health, Review and Closure of the Day (30)	Computer Science, Health, Review and Closure of the Day (30)	Activity-based instruction, Health	Activity-based instruction, Health
2:10p-2:15p						
2:15p-2:20p						
2:20p-2:25p						
2:25p-2:30p	Learning Centers, Read-Aloud, or Computer Science Closure for the Day (25)	Computer Science, Health, Review and Closure of the Day (30)	Computer Science, Health, Review and Closure of the Day (30)	Computer Science, Health, Review and Closure of the Day (30)	Activity-based instruction, Health	Activity-based instruction, Health
2:30p-2:35p						
2:35p-2:40p						
2:40p-2:45p						

2:45p-2:50p	Dismissal				(15)	(15)
2:50p-2:55p		Dismissal	Dismissal	Dismissal	Dismissal, Health, Social Emotional Learning (10)	Dismissal, Health, Social Emotional Learning (10)
<b>2:55p-3:00p</b>						