TEALS Program

Computer science in every high school

TEALS Classroom Plan 2019-2020:

Remote Lab Support Model

School Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Course: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Why the Classroom Plan is Important and How Your Team Should Use It

The Classroom Plan serves as a guide to organize your team to teach a year of computer science through the TEALS program. Your classroom teacher completes the School & Class Information sections and your team will work collaboratively to complete the remaining summer planning. **All collaboration should take place in the same, single document.** Be sure that everyone on your team has access with editing privileges.

The [Rural and Distance Classroom Planning Companion](http://www.tealsk12.org/classroomplan) is a reference document designed to assist your team with summer planning. It contains additional context and examples for the topics covered in this Classroom Plan.

Things to remember about this classroom plan:

* While you will make decisions about how the teaching team will operate, **the classroom teacher is the final arbiter and leader of what happens in the classroom** – after all, they are legally responsible for the wellbeing of the students.
* We’ve provided some recommended approaches throughout the document (in gray text). Discuss these approaches as a team and adjust as needed based on the school specific background information provided by your teacher.
* This is a living document—if something isn’t working in your class once school has started, revisit this plan and try modifying some of the decisions you made over the summer.
* This document is a great way to quickly onboard volunteers who may join your team later on.

# The Lab Support Model

The TEALS Lab Support Model is designed to help teachers who are mostly ready to lead a computer science course, but seek additional support before they do so independently. As a rule of thumb, the classroom teacher should lead class at least 85% of the time, with volunteers providing occasional support during instruction and helping students with their assignments. The [TEALS Implementation Guide](https://www.tealsk12.org/wp-content/uploads/2014/02/TEALS-Implementation-Guide-2018-19.pdf) contains an appendix that outlines a learning model for classroom teachers in this roles. As you work through the classroom plan, always keep an eye towards the goal of deepening the teacher’s CS knowledge and comfort level with the course.

School & Class Overview

School Information and Class Information sections should be completed by the teacher before Summer Training.

## School Information

* School Name and Address:
* School Website: <http://www.examplehighschool.us/>
* School’s Online Calendar: <http://www.examplehighschool.us/calendar>
* How can volunteers sign up to receive notifications about school closings/delays?
* Principal Name:
* Assistant Principal Name(s):
* Front Office Staff Name(s):
* Daily Check-In Procedure for Volunteers:
  + Parking: Where should volunteers park?
  + Entry: What door should they enter through? Do they need to check in at the office every day? Do they need to bring their ID every day?
  + Time: What time are you usually in your classroom? What time should volunteers plan to arrive at the school?

## Class Information

* Class Meeting Time: Example: Monday, Wednesday, Friday: 8:02 – 8:52, Tuesday, Thursday: 8:02 – 8:42
* Technology Setup: Things to include here would be: What type (laptop, desktop, chromebook, etc) of devices will students use and how many are there? Will students retrieve them or are they already set up in the mornings? Is there a projector and/or smartboard? How do you connect a device to the projector? Do you have classroom speakers connected? Can volunteers connect to wifi? If so, include network name and password here. How is the internet connection in the classroom when used simultaneously by all machines and connected to a video conferencing tool? What devices will students have for conferencing during lab (headsets, webcams, etc.)?
* Classroom Layout: Briefly describe your classroom’s planned layout (number of rows, groups, tables, etc, how they are arranged, what type of seating)
* Classroom Technology: Describe the camera and the speaker/microphones that will be used to capture the whole classroom?
* Video Conference Tool: Name of the tool, URL for the live classroom
* Back Channel Communication: Choose a communication method that will allow the teaching team to communicate privately while class is happening. This should be a method that the classroom teacher can monitor while managing the classroom and that will not be seen by the students.
* Learning Management System (LMS) Utilized by Teacher: Google Classroom, Schoology, Canvas, Edmodo, etc
* Instructions for Volunteers to Join LMS Course: URL for the LMS, how to create an account, access code to join the course, how volunteers get admin privileges to post assignments and give feedback
* Expected Number of Students in Course:

## Grading Policy

Please share with your team your established district/school/classroom policies for the following items related to grading. If school policy allows, you may opt to adjust portions of your grading policy based on what your team learned in summer training.

* Weighted percentages that make up total grade for the course: For example: 40% Projects, 40% Class Participation/Labs/Notebooks, 20% Quizzes and Tests
* Late work policy:
* Will students be allowed to submit corrections to tests and/or revisions to projects?
* What is your policy on academic dishonesty (i.e. cheating)? What constitutes cheating, and what are the consequences? How is it shared with students and enforced?

Classroom Procedures

Please describe to your team your established classroom procedures for the following classroom actions. If you do not already have a procedure for any of these (some are CS specific), you will work with your teaching team to develop them.

* Students entering the physical classroom:
* Students entering the virtual classroom: When to connect, Expectations upon entering
* Headset and webcam procedures: When to connect them, Usage expectations
* Getting students’ attention:
* Transitioning to different activities:
* If a student needs to leave the room for something:
* If a student needs help from instructors:
* Submitting assignments:
* Saving unfinished work:
* End of class period:
* When students are off-task:
* Student cell phone use:
* You may add any other established procedures to this list

Teacher Learning PlanThe main objective in the Co-Teaching Model is to handoff primary instruction of the class to the classroom teacher within one to three years. Set goals for yourself and consider what support you think you will need to reach them.

Example:

**Goal:** I will complete each lab and project solution by the end of the summer.

**Support:** To do this, I will attend the curriculum training provided by TEALS and reach out to volunteers for specific questions I have.

**Goal:** From the start of the school year, I will lead at least one lesson per unit.

**Support:** To do this, I will need volunteer feedback on my understanding of the concept being taught and on my Do Now/lab solution prior to the date it is scheduled to be taught.

**Goal:**

**Support:**

# Teaching Team Overview

The remaining sections of the Classroom Plan will be completed collaboratively with all members of the teaching team.

Classroom Roles

**It is extremely important that all teaching team members understand the expectations associated with each role and use this division of responsibilities as a framework for collaboration.**

* Review the responsibilities for each role, adjust them as needed, and add any additional ones your team generates.

|  |  |
| --- | --- |
| Classroom Teacher | Volunteer TEaching Assistants |
| Lead and initiate team communication and logistics | Actively engage and contribute to team communication |
| Review the curriculum over the summer | Assist the classroom teacher with curriculum questions |
| Create a course syllabus | Help create the syllabus |
| Prepare and teach at least 85% of the lessons    Give feedback to volunteers on their teaching and student interactions | Monitor students for understanding, support the lesson. Step in as needed for difficult topics, and with relevant personal anecdotes.  Give feedback to classroom teacher on student understanding level |
| Assist students with their work and track their understanding – shadow the volunteers as necessary | Assist students with their work and track their understanding |
| Grade student work, make final decisions about grades, enter grades into school records | Help grade student work |
| Regularly meet with the team to discuss student progress, pacing, and adjustments | Regularly meet with the team to discuss student progress, pacing, and adjustments |

## Teaching Team Contact Information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Role | Name | Preferred Email | Preferred Phone | Quickest Way to Reach Me\* |
| Classroom Teacher |  |  |  |  |
| Volunteer Teacher/TA |  |  |  |  |
| Volunteer Teacher/TA |  |  |  |  |

\*Please indicate how the rest of the teaching team can contact you with time-sensitive information, i.e.- last minute class/school cancellation, car accident on the way to class, teacher doesn’t have a sub, etc.

## Team Links

**File Sharing:**

**Group Communication:**

**Shared Calendar**:

## Teaching Team File Sharing

* Create a place to share files with each other (like this classroom plan!). It could be a DropBox, Google Team Drive, OneDrive folder, Microsoft Teams, or something else.
* **Add a link to your team’s file sharing location to the Team Links section above**

## Group Communication

* Select **ONE** mode of communication that is comfortable for **everyone** on the team, **including the classroom teacher.** **Teaching teams must have consistent, frequent communication between all members to be successful.** Some ideas previous teams have implemented are: Group Email account, Microsoft Teams, Slack Channel, and GroupMe Group. If you find your team isn’t communicating well after the school year starts, consider adjusting which tool you are using for communication.
* **Add the link to your teaching team’s group communication channel to the Team Links section above**

## Daily Handoff Plan

For continuity, it is important to create a plan for sharing what happened in class. Tools like Evernote, OneNote, shared Google Doc or Word Online document, daily teaching team emails, and the team communication channel established above can all be used for this purpose. **Whatever your strategy, it is most effective when used consistently, and when you write down what happened in class as soon as possible.** The update can be just a few sentences. Each report should capture:

* Assessment of student mastery of the material (calling out individual students as necessary)
* Suggestion of content that does or does not need reinforcement or re-teaching
* Note school goings-on (schedule changes, important events, etc.)
* Note student goings-on (notable student interactions that indicate trust or lack thereof, essential in creating an inclusive and supportive classroom)
* **Record your team’s handoff plan here:**

Example: After each class, Mr. Example Teacher will send an email update to the whole team and post the update in a running Word Online document. The TA who attended on that day will reply with any additional notes about student progress they observed in class.

## Weekly Team Sync

Communication is essential in any group endeavor, and you can only do so much through asynchronous communication like emails or chat messages. Each TEALS team should schedule a weekly sync where everyone is available at the same time. During the weekly sync, you should discuss:

* Feedback from the previous week
* Student progress and how to adjust pacing:
  + Do any lessons/topics need to be retaught?
  + Do individuals or groups of students need individual help or differentiation?
* Teaching schedule and lessons for the upcoming week
  + Are we creating inclusive and relevant lessons?
* High-level challenges or problems that have emerged
  + Are we creating a collaborative environment that supports and includes all our students, especially those from different cultures than our own?
* Questions or issues for your TEALS Regional Manager
* **Record the plan for your Weekly Sync here:**

Example: Mr. Sample has a free period after CS every day. We’ll hold a weekly sync on Fridays during the 2nd period class: 8:55 – 9:42 via conference call.

Example 2: The team will meet on Microsoft TEAMS each Sunday evening at 6:00pm

## Teaching Schedule

Each TEALS teaching team has the freedom to define their own teaching schedule. As a reminder, TEALS expects each volunteer to attend class approximately 50% of the time it meets (which usually means twice per week), so that on most days there are 2 volunteers in attendance. The classroom teacher must be in the classroom every day.

* **Create a shared calendar** using a tool that works for the whole team, ensuring that each team member has access.
* **Add the important dates** in your school’s calendar to the team calendar (linked on page 1). If your school uses a cycle, like A/B days, to determine when classes meet, put that in too. Additionally, the teacher should add testing dates, field trips, and anything else that will impact the class schedule as soon as they know of it.
* **Determine a regular teaching pattern** that suits all members of the team. Continuity in the classroom day to day is very important. We do not recommend having a completely different set of instructors every class day.

Example:

M Tu W Th F  
TA1 TA2 TA2 None TA1

This schedule optimizes for continuity since each TA attends class on two consecutive class days. In this example, the teacher leads a shortened lab period on Thursdays.

It’s recommended that you use a schedule where each volunteer visits the classroom each week. Try to avoid a schedule where any individual has more than a week between classroom visits. It becomes hard to build and sustain relationships with the students.

* **Enter your teaching schedule** into the shared calendar. We recommend adding each person as a recurring calendar event, so that you can make individual adjustments as necessary. If you know about upcoming work travel or vacation, enter that as well. You can also enter topics, lesson plans, or course materials as events in the calendar to aid in your planning, or in capturing what actually was taught after the fact.
* **Add the link to your team’s shared calendar in the Team Links section**

Grading Policy & Classroom Procedures

* **Discuss the established grading policy and classroom procedures provided by your classroom teacher in the School & Class Overview section** to make sure everyone on the team understands them.
* If school policy allows for flexibility, discuss how your team could apply some of the strategies you learned in summer training to the Grading Policy that your team will follow.
* For each classroom action on that list where the teacher has not yet documented a procedure, use what you’ve learned in summer training to collaboratively develop one. *Remember that classroom procedures need to be taught and rehearsed by your students for them to actually save time and increase focus.*

# Additional Team Planning

## Notebooks

Taking notes on paper results in better learning outcomes for students. In computer science, notebooks can be used to record definitions, syntax, programming patterns and idioms, examples, and diagrams. Students can also reflect on the work they are doing and use the notebook as a scratch space to plan out their approach to problems before implementation. Notebooks help make learning more explicit and help students to organize and process new information. You may need to model good note-taking strategies for students.

* **As a team, discuss each question and add your team’s plan for each one below:**

1. When should students use their notebooks in your class?
2. How often will you check the notebooks? Who checks them and when? Is there a grade associated with notebook completeness?
3. When can and should students refer to their notes (during lab? On quizzes? On tests?)
4. What should students do about notes when they miss class?

## Using the Raffle Kit

TEALS provides classes in the co-teaching model with a raffle kit containing tickets, a collection box, and a variety of small and medium prizes. Teaching teams determine how to use the raffle in your class, in accordance with any relevant school policies. Consider how raffle tickets can be used to increase student engagement.

* **As a team, discuss each question and add your team’s plan for each one below:**

1. When will you explain the rules of the raffles?
2. How can students earn tickets?
3. How will you select the winner(s) and when?

Example: We plan to do a weekly raffle with students only being able to win once within a month.

## CS Culture Days

TEALS encourages classes to implement CS Culture Days, taking a break from normal lessons and activities to connect the academic course content to real world applications. TEALS provides several lesson plans to illustrate how to run a culture day. They can include “show and tell” by the instructors, or topics researched and presented by students. Discuss culture day ideas with other teams on the [TEALS discussion forum](http://tealsk12.trydiscourse.com/c/intro-culture-day).

* **As a team, discuss each question and add your team’s plan for each one below:**

1. How often will your team hold culture days?
2. What are some topics you would like to share with your class? If you are unable to speak to any of the topics you want to share with your class, consider bringing in other colleagues who may be able to.
3. Based on what you collectively know about your students, what topics might they want to learn about?
4. How will you tie current events in computer science into your classroom?

# Lesson Planning

TEALS teaching teams have unique challenges and opportunities when planning lessons. You can (and should) take advantage of the individual strengths and experiences of all team members, but you must also make sure that roles and responsibilities are well-defined. In addition, you’ll need to be aware of all the standard factors when planning a lesson, including student needs (both academic and cultural), classroom setup, and scheduling, among others. During planning, volunteers should look for opportunities to tie in their real-world experiences into the context of the lesson.

Use the checklist below to remember factors to consider when planning how each lesson will be taught.

## Student Context

* Which students may not be prepared for this lesson? Look back over your student progress notes from the lessons you identified a required.
* What additional scaffolding will you provide for students who may not be prepared for this lesson?
* Which aspects of the lesson do you think students are most likely to struggle with? How will you help them be successful with these parts of the lesson?

## Pedagogy

* What is the hook for this lesson? How will you ensure that the hook is relevant and accessible to your students? (Modify the curriculum suggestions if necessary.)
* What instructional formats and techniques will be used in this lesson? How will you ensure that your students will be engaged throughout the lesson?
* What examples and lab problems are used in this lesson? How will you ensure the examples you use are accessible and relevant to your students? (Modify the curriculum suggestions if necessary.)

## Assessment

* When will you include formative assessment in this lesson? What assessment mechanisms or techniques will you use?
* How will you assess that students have met the learning objectives for this lesson?

## Division of Roles

* Who will be the primary instructor(s) for this lesson?
* What role will each other member of the teaching team play during this lesson?   
  (Think specifics. The co-teaching formats explained in TEALS training may be a helpful starting point: One Teach, One Support; Team Teaching; Parallel Teaching; Station Teaching; Alternative Teaching)

# Applying What You Learned in Summer Training

## Handling Challenges & Classroom Flow

Discuss each of the questions below (A-J) and briefly summarize your team’s consensus on each one. If your team chooses the provided example solutions, consider **why** that will work best for your team. Be sure to incorporate inclusive teaching strategies to increase the participation and achievement of students from underrepresented groups. When thinking about your classroom, think about how your team will incorporate the following strategies:

* + Build authentic relationships. They are the on-ramp to engagement and learning.
  + Use the brain’s memory systems for deeper learning. Connecting new content through music, movement, and visuals strengthens the neural pathways for comprehension.
  + Acknowledge diverse students’ stress response from everyday micro-aggressions and help calm the brain.
  + Use ritual, recitation, repetition, and rhythm as content processing power tools.
  + Create a community of learners by building on students’ values of collaboration and connection to create intellectual safety.

1. How will you provide an atmosphere in the classroom that encourages focus and collaboration?

Example: We will play music preselected by the team during lab and give the students the option to dim the lights.

Example 2: Students will be able to earn the privilege of selecting music that is class appropriate as one of our raffle prizes.

1. How will you ensure that each student receives attention from an instructor (ideally twice), and that the team knows how each student is progressing in their learning?

Example: We are going to designate a schedule of rotations through the Breakout Rooms during Lab time. When asking students questions if they respond that they have no questions we will spend at least 2 minutes having students share their work and asking them specific questions. Team members will track their visits on a printed class roster.

1. Which questioning techniques will you use to ensure that all students engage during full-class instruction?

Example: Each day, we’ll use a mix of calling on raised hands (with ample wait time), around the world questions, cold calls (with warning), and the “write, then answer” activity. We’ll try to call on every student at least once.

1. How will you provide structures for students to collaborate with each other during full-class instruction?

Example: Using BreakOut Rooms in the video conference tool, we will break students into groups for think/pair/share activities. This will give us the flexibility to match students up that are not necessarily sitting next to each other in class. We will use this strategy when discussing topics with students and during culture activities. When creating groups, we will select diverse groups and change them throughout the semester so that students gain exposure to many different peers’ experiences.

Example: We will allow space for rapport talk as a warm up to a lesson or unit by using discussion dyads giving each speaker equal time to talk and space to talk without being interrupted.

1. How will you provide structures for students to collaborate with each other during lab work?

Example: We will use breakout groups to allow for pair programming 2-3 times per unit when assignments are well suited to this format. We will change pairs of students per unit so that students experience and learn from each other’s approaches.

Example 2: We will use the “C2B4Me” policy. Students will be expected to ask two of their fellow classmates for content related questions before seeking the help of one of us.

1. How will we use brain science to help our students learn?

Example: We will use sorting and matching games to introduce and review new vocabulary and syntax – ideally within 24 hours – to help commit content to our students’ long-term memories.

Example: We will “storify” the introduction of new ideas, words, or concepts from a unit by asking students weave them together in a coherent, cogent narrative.

Example: We will assign rhythmic mnemonics in song by asking students to write their own songs, raps, or spoken word pieces in the style of the alphabet song to the Schoolhouse Rock! Episodes.

1. How will we build authentic relationships with students?

Example: We will ensure that we pronounce all students’ names correctly, asking students to say their names, restating it right then, and practicing after we’ve heard it correctly.

Example: We will take note of our students’ important events and life happenings (e.g., birthdays, playoffs, festivals, mother’s surgery, etc.) and ask about these happenings throughout the year.

1. How will your team identify students that may need differentiated instruction?

Example: Mr. Sample will be responsible for calling attention to students that need differentiated instruction during our weekly sync.

Example: We will track differentiation notes through end of class emails to our team email account.

1. What do you plan to do with students who are flying ahead? Be specific: **who** on the team will be responsible?

Examples: extra credit assignments (check if this is allowed), give opportunities for advanced students to assist other students, complete additional work on online course or extension, extra textbook, work quietly on other subjects.

Example: Jane Volunteer will work on advanced assignments and have 1-2 ready each week. Students consistently ahead of this schedule will meet with Mr. Sample to determine if a more advanced class is a better fit/available.

1. What do you do with students who are falling behind?

Examples: split the class, get help from another student, classroom teacher intervention, online resources.

Example: At the start of every lab, one team member will host a review session for students that feel they could use extra help. Students can opt-in to attend the review session, and we can gently suggest to individual students that they should consider attending.

Example: We will use “helping trios” where each student presents something they are working on and gets help/feedback from fellow classmates.

## Engaging Parents/Guardians

Involve​ ​parents​ ​and guardians by​ ​using​ ​take-home​ ​letters that open the door to parent participation. Parents can provide cultural context, and act as the main educators in many cultures. It’s also a great opportunity to share the personal background of each team member and help reinforce why computer science is important for students.

TEALS has a [sample take-home letter](http://www.tealsk12.org/SampleParentLetter). Modify this template as a group to apply to your class. We’ve highlighted passages that you need to customize for your class.

**When will you send the take-home letter to parents and guardians?**