TEALS Program

Computer science in every high school

TEALS Classroom Plan 2019-2020:

Classroom Enrichment 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 [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 Classroom Enrichment Model

The TEALS Classroom Enrichment Model is designed to support teachers who are already capable of independently running a CS class. The primary goals of this model are to enrich the class experience for students (through deeper content expertise and real-world connections), and to help the school grow their CS program. Keep these goals in mind as you work through the classroom plan.

**Note:** Some Classroom Enrichment partnerships include volunteer *Consultants*; some include volunteer *Teaching Assistants (TAs);* some include *both*. These roles are very different. If your team contains only volunteer Consultants, then complete only Part A of the classroom plan. If there are any Teaching Assistants, complete Part B as well.

# Part A

All Classroom Enrichment teams should complete all sections of Part A of the classroom plan. Only teams that include volunteers in the Teaching Assistant role should complete Part B.

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.
* Classroom Layout: Briefly describe your classroom’s planned layout (number of rows, groups, tables, etc, how they are arranged, what type of seating)
* 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:

# 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 | Volunteer CONSULTANTS |
| Ask volunteers content-related questions | Assist the classroom teacher with curriculum questions | Assist the classroom teacher with curriculum questions |
| Create a course syllabus | Help create the syllabus | N/A |
| Prepare and teach class lessons    Give feedback to volunteers on their teaching and student interactions | Monitor students for understanding and support the lesson. Step in as asked for difficult topics, and with relevant personal anecdotes.  Give feedback to classroom teacher on student understanding level | Occasionally visit class to talk about real-world and/or career connections   N/A |
| Assist students with their work and track their understanding | Assist students with their work and track their understanding as directed by the classroom teacher | N/A |
| Grade student work, make final decisions about grades, enter grades into school records | Help grade student work if requested | N/A |
| Regularly meet with the team to discuss student progress, pacing, adjustments, and opportunities for enrichment | Regularly meet with the team to discuss student progress, pacing, adjustments, and opportunities for enrichment | Regularly meet with the team to discuss the teacher’s content questions and opportunities for student enrichment |

**Classroom Teacher: What are you looking for from the volunteers in your classroom?**

Example 1: I’m looking for TAs who will come to class regularly to help students during lab time and to infuse our classroom with real world wisdom and examples.

Example 2: I’m looking for a thought partner to help me brainstorm activities and examples for class, and to come in as a guest speaker once a month.

## Teaching Team Contact Information

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

\*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**

## 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, the classroom teacher should lead a discussion, including:

* Upcoming opportunities for the volunteers to enrich the class
* Lessons for the upcoming week
* High-level challenges or problems that have emerged
* Questions or issues for your TEALS Regional Manager
* **Record the plan for your Weekly Sync here:**

Example 1: The team will meet on Microsoft TEAMS each Sunday evening at 6:00pm.

Curriculum

Teams in the Classroom Enrichment model may be supporting one of a wide range of class curricula, including:

* TEALS-authored curricula
  + Intro to Computer Science (SNAP! And Python)
  + AP Computer Science A (Java)
* Any version of AP Computer Science Principles
  + Code.org
  + Beauty and Joy of Computing
  + PLTW
  + Many others
* Other curricula
  + Exploring Computer Science
  + Other versions of AP Computer Science A
  + Post-AP Projects
  + Something developed by the local school, teacher, or school district

Classroom Teacher: what curriculum are your volunteers supporting?

Example 1: Our teaching team is supporting TEALS’ Intro to CS class taught in SNAP! and Python with a few modifications I’ve made over the past few years.

Example 2: Our teaching team is supporting a class we’ve developed at our school called Computer Math. It’s an introductory computer science class that uses a few different programming languages, but mostly Java.

Classroom Teacher: Where can volunteers find the curriculum materials for this class, including things like lesson plans, lab and project descriptions, and handouts?

Example 1: I’ve provided the volunteers with physical copies of our curriculum.

Example 2: Since we’re using a TEALS curriculum, the materials are available through the TEALS Dashboard

Example 3: Since we’re using code.org’s curriculum, the materials are available at [URL to materials] and I’ll help the volunteers create accounts so they have access.

## 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). **Culture Days are an ideal time for volunteers in the Consultant role to visit class.**

* **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?

## 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?**

# IF YOUR TEAM ONLY HAS CONSULTANTS, STOP HERE.

# Part B

**All Classroom Enrichment teams should complete all sections of Part A of the classroom plan. Only teams that include volunteers in the Teaching Assistant role should complete Part B.**

## Teaching Schedule

Each TEALS teaching team has the freedom to define their own teaching schedule.

* **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. For example, the team may decide that the volunteer TAs will help with class every other Friday, knowing that the day can be rescheduled as needed if circumstances require.
* **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**

## 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.

Grading Policy & Classroom Procedures

**Classroom Teacher:** Please share your established district/school/classroom policies for the following items related to grading. 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.

* 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 Teacher:** Please describe 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. *Remember that classroom procedures need to be taught and rehearsed by your students for them to actually save time and increase focus.*

* Students entering the room:
* 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:

# 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?

# 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.

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 areas of the room for each team member. 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: We plan to use think/group/share in groups of 4. 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 plan to use 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.