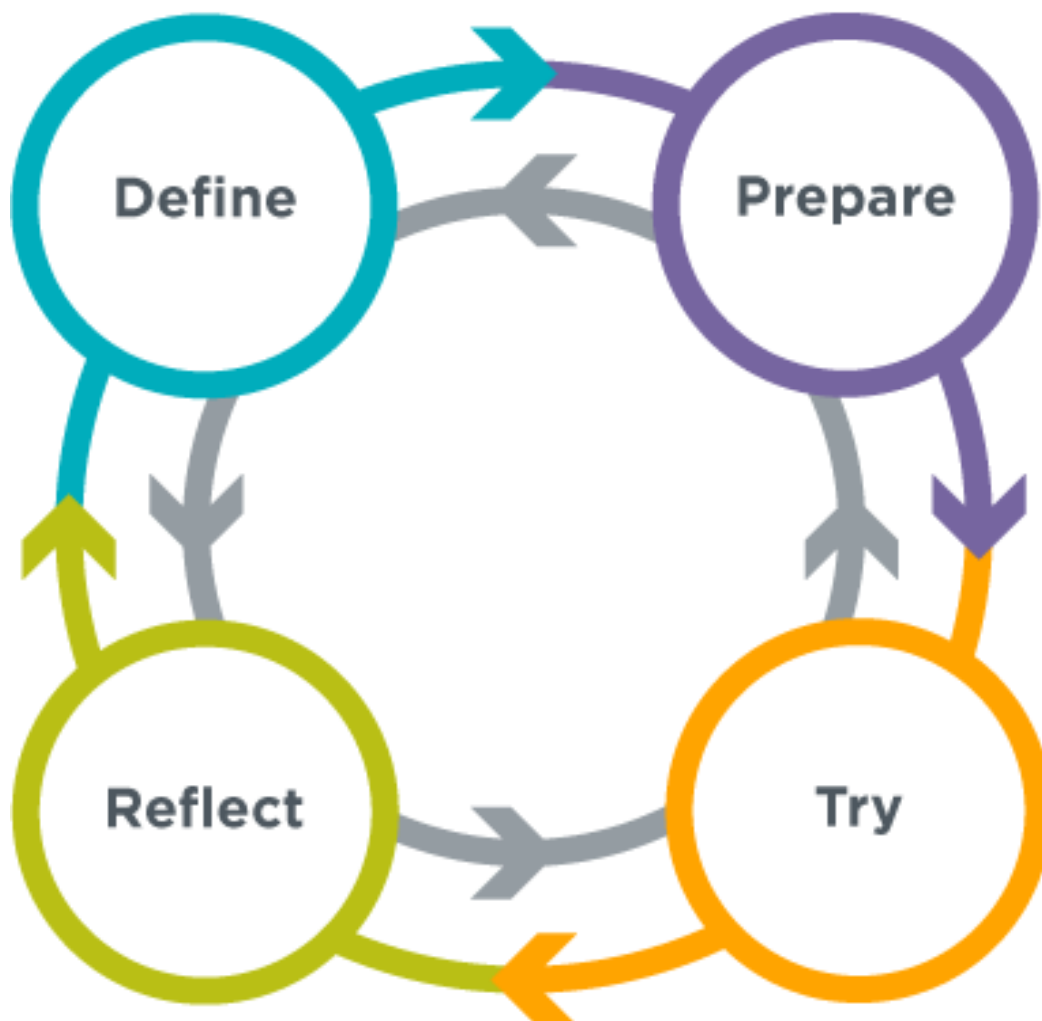


CS Discoveries Activity Packet



Includes:
Lesson Planning Materials & Lesson Activity
Guides

This packet contains many of the resources you will need during the week at your five-day workshop, including an overview of the TLO process, guidelines for planning your lesson, and lesson materials.

Identity Reflection	
Social Identity Grid	Page 3
Lesson Planning Guide and Resources	
Teacher-Learner-Observer (TLO) Overview	Page 5
Lesson Planning Guidelines and Advice	Page 6
Lesson Assignments	Page 7 - 10
Lesson Planning Guide	Page 11 - 14
Activity Guides	
Model Lesson 1: Unit 1, Lesson 3	Page 16 - 20
Model Lesson 2: Unit 1, Lesson 7	Page 21 - 22
TLO 1: Unit 2, Lesson 5	Page 23 - 24
TLO 5: Unit 2, Lesson 16	Page 25
TLO 6: Unit 3, Lesson 2	Page 26 - 29

Identity Reflection

Race

Socially or politically-constructed categories used to classify groups of people, often based on physical characteristics.

Examples: Asian Pacific Islander, Native American, Latinx, Black, White, Bi/Multiracial

Ethnicity

A social group that shares a common and distinctive culture, religion, language, or the like.

Examples: Irish, Chinese, Puerto Rican, Italian, Mohawk, Jewish, Guatemalan, Lebanese, European-American

Socio-Economic Status

A place within the social hierarchy based on factors, like education, income and occupation.

Examples: Poor, Working Class, Lower-Middle Class, Upper-Middle Class, Owning Class, Ruling Class

Gender

The internal sense of being a woman, man, neither, both or another gender.

Examples: Woman, Man, Cisgender, Transgender, Post-Gender, Nonbinary, Genderqueer

Sex

Classification of people, often assigned at birth, based on external anatomy.

Examples: Intersex, Female, Male

Sexual Orientation

The direction of one's attraction.

Examples: Lesbian, Gay, Bisexual, Pan-Attractional, Heterosexual, Asexual, Queer Attractionality, Questioning

National Origin

The country where one was born. Sometimes refers to the country in which one has citizenship.

Examples: United States, Nigeria, Korea, Turkey, Argentina and/ or Citizenship

First Language

The language one has been exposed to from birth.

Examples: English, Spanish, Mandarin, Navajo, Swahili, American Sign Language

Religion / Spirituality

A system of guiding principles, practices, and behaviors, often involving worship.

Examples: Hindu, Muslim, Buddhist, Jewish, Christian, Pagan, Agnostic, Atheist, Secular Humanist

Age

The length of time a person has lived.

Examples: Child, Young Adult, Middle-Age Adult, Elderly

(Dis)Ability

A condition that impacts a person's ability to engage in or perform activities.

Examples: People with disabilities (cognitive, physical, emotional, etc.), Temporarily able-bodied, Temporarily disabled

Body Size / Type

Characterization of a person's physical stature.

Examples: Overweight, Person of Size, Thin, Tall, Short, Muscular

Lesson Planning Resources

Teacher-Learner-Observer (TLO) Overview

Why do we use it?	What are the roles?	
A Teacher Learner Observer (TLO) is a role playing activity that you'll use to explore the curriculum. TLOs aim to help teachers: 1. Become familiar with lessons and important CS content from the curriculum, 2. Actively explore and experiment with effective pedagogical techniques 3. Learn from other participants.	Teacher	This group teaches the lesson. Groups are typically 3 - 4 people, but could be as small as 2, or as large as 5.
	Learner	This group acts as learners during the lesson, actively engaging in the lesson material presented by the teaching group. The learner group is composed of all participants who aren't teaching the lesson.
	Observer	The facilitators observe the lesson and leads a debrief discussion afterwards the demoed lesson.

A Note on Role Playing

Often in the workshop we'll refer to each of the roles above by saying that we're putting on a particular "hat". For example, while a group is delivering a lesson, the members of that group are wearing their "teacher hats" and the learners are wearing their "learner hats". During the lesson it is important to "keep your hats on", acting and speaking to one another using the roles you've been assigned. Once the lesson is over, everyone can take off their proverbial "hats" to signal the end of the role playing.

The TLO Process

Over the course of the week we will look at 12 lessons from the curriculum through TLO or Model lesson activities. The first 4 of these activities will be in the form of model lessons taught by facilitators, and the remaining 8 will be planned and delivered by you, the participants.

Part 1: Lesson Planning

On Monday and Tuesday you will work in a group of 2-5 teachers to plan one 40-minute lesson together. During this prep time, you will decide how to run the lesson among the members of the group. You will have a total of 2 hours to plan.

Part 2: TLO Delivery and Debrief

Throughout the week, we will move through the curriculum, with groups teaching their lessons in the order they appear in the curriculum. Each lesson will be given 40 minutes for delivery, followed by a 20-minute debrief where we talk through the activities, and strategies for how to approach the lesson with students.

Lesson Planning Guidelines and Advice

This planning guide has all the resources you'll need to present your TLO to your peers. We know that this may be a new experience for many of you, so here's some general purpose advice that might serve you well.

Explore All the Resources First

Before you start planning or dividing up the lesson make sure to read the lesson plan and investigate all the resources that come with it. You might need to experiment with a tool, watch some videos, etc.

Don't Cram Things In

You only have 40 minutes to deliver a portion of a lesson that probably takes longer than 40 minutes in a classroom. Do not attempt to compress the lesson into 40 minutes. Instead give a 40-minute slice of the lesson that will give everyone a good sense of the lesson's primary activity. The Lesson Assignments on page 4 and 5 are meant to help guide you on what to focus on in your slice of the lesson.

Keep Warm Ups Short

Do everything you can to get participants' hands on the materials and engaged in the activity as soon as possible and for as long as possible. Keep the intro light and fast. It should serve to set the stage and motivate the activity. Shoot for about 5 minutes.

Avoid Front-loading

Resist the urge (if you have it) to explain the CS concepts or content before the activity. The lessons are designed to allow learners (and you) to discover CS concepts through the activities. Explanation of CS concepts should come afterward, as part of the wrap-up, and highlight what emerged during the activity.

Aim for Engagement

Strategize with your group mostly about how to keep participants' engagement high as they progress through the activity, especially if the lesson involves a transition from unplugged to being on the computer.

Try Something New

Be willing to take risks and step outside your comfort zone. Your TLO room is a safe place in which you can explore new pedagogy and get ideas for your own classroom. Use this opportunity to try something new!

You Get to Reflect First

The structure of the debrief means that your group gets the first word on how the lesson went. You'll have a chance to share the ideas you were trying out and your advice or lessons learned with other groups.

Debriefs are Forward-Thinking

The goal of debriefs is to come to a shared understanding of how to bring these lessons into your classrooms. They are fundamentally forward-thinking discussions and chances to share ideas with your colleagues. Debriefs are not about nit-picking the decisions you made during your TLO. With that in mind, also remember to be kind to the other teachers in the room who are probably also a little nervous about presenting a lesson they've never seen to their peers.

Lesson Assignments (Page 1 of 4)

The following recommendations from the curriculum team are designed to provide guidance while you plan your lesson:

Lesson	Assignment and Tips
Unit 2 Lesson 5 Digital Footprint	Prior to your lesson: - Unit 1: Students are familiar with student practices and problem solving in particular. - Unit 2 Lessons 1 - 4: - Students know what websites are - Brief introduction to Web Lab, HTML, headings, and using online lesson resources Essential practice to model: Learners make connections between the learning objectives and classroom activities. Assignment: Start by reading the lesson objectives. Read the lesson plan and consider places where these objectives are addressed in the lesson. Plan for how you will help learners make connections between the activities they are doing and what they are intended to learn in the lesson. Tips - Consider how you are going to use the question of the day to focus participant learning. - Consider how the lesson warm up and wrap up can be used as a time for sense making and reinforcing the important content of the lesson.
Unit 2 Lesson 6 Styling Text with CSS	Prior to your lesson: - Unit 1: Students are familiar with student practices and problem solving in particular. - Unit 2: Students... - Have had a brief introduction to Web Lab, HTML, headings, and using online lesson resources - Have considered the implications of posting personal information online Essential practice to model: Teachers incorporate opportunities for student collaboration into the lesson Assignment: Start with the warm up and try to work your way through as much of the activity as you without eliminating opportunities for discussion and sense making. Conclude the lesson with a wrap up. If time is short consider shortening the wrap up. Tips - Consider watching the Intro to Web Lab Videos in Lesson 2 to get familiar with Web Lab and HTML - Try out the levels to see how Web Lab works and try out some HTML - Consider how you are going to transition people onto the computer. - Consider how you are going to incorporate opportunities for student collaboration throughout the lesson.

Lesson Assignments (Page 2 of 4)

Lesson	Assignment and Tips
Unit 2 Lesson 9 Using Images	Prior to your lesson: - Unit 1: Students are familiar with student practices and problem solving in particular. - Unit 2: - Students have been learning the basics of HTML and know a growing list of tags - Have considered the implications of posting personal information online or using someone else's intellectual property Essential practice to model: Students use pair programming switching driver and navigator roles at regular intervals Assignment: Start with the warm up and then have participants transition to Code Studio using the pair programming feature. Make sure to include a wrap up even if participants are not able to complete all of the levels in Code Studio. Tips - Consider watching the Intro to Web Lab Videos in Lesson 2 to get familiar with Web Lab and HTML - Try out the levels to see how Web Lab works and try out some HTML - Consider watching the pair programming video in Lesson 3 to get familiar with the pair programming strategy - Consider how you are going to transition people onto the computer using the pair programming feature
Unit 2 Lesson 11 Styling Text with CSS	Prior to your lesson: - Unit 1: Students are familiar with student practices and problem solving in particular. - Unit 2: Students... - Have learned a collection of HTML tags - Have developed a personal website - Have considered the implications of posting personal information online or using someone else's intellectual property Essential practice to model: Students utilize strategies for debugging. Assignment: Start with the warm up and try to work your way through as much of the activity as you can. Don't worry if you don't make it through all the levels. End the lesson with a wrap up. Tips - Consider watching the Intro to Web Lab Videos in Lesson 2 to get familiar with Web Lab and HTML - Try out the levels to see how Web Lab works and try out some HTML - Consider watching the debugging video in Lesson 3 - Review the debugging resources in Appendix C of the CS Discoveries Curriculum Guide - Consider how you will support the practice of debugging within the lesson

Lesson Assignments (Page 3 of 4)

Lesson	Assignment and Tips
Unit 2 Lesson 16 Sources and Research	Prior to your lesson: - Unit 1: Students are familiar with student practices and problem solving in particular. - Unit 2: Students... - Have learned a collection of HTML tags - Have developed a personal website - Have considered the implications of posting personal information online or using someone else's intellectual property Essential practice to model: Teachers make intentional choices about how students are grouped for activities. Assignment: Skip the Internet Scavenger Hunt warm up activity. Try to make it through the entire Activity section. End with the wrap up to debrief. Tips - Consider how you are going to group participants to complete the lesson activities.
Unit 3 Lesson 2 Plotting Shapes	Prior to your lesson: - Unit 1: Students learn to problem solve. Development of positive and collaborative classroom culture. - Unit 2: Students learn to build web pages using HTML / CSS. Focus on personal expression, best practices when programming (debugging, commenting code, clean structure, attention to details, etc.), and how to be careful and considerate when consuming, reusing, or sharing media online - Unit 3 Lesson 1: Frames this unit around programming for entertainment and self expression. Essential practice to model: Discussion is an opportunity to hear multiple voices and bring different perspectives and experiences into the conversation. Assignment: Run the warm-up and main activity. Decide based on your classroom if you will have time to run the "Draw Your Own" section of the activity. Regardless of how far learners get, be prepared to end the lesson with a debrief discussion. Tips - Consider logistics involved in the warm up activity - Consider how you are going to transition pairs onto the computer - Consider how you will include multiple voices in class discussions

Lesson Assignments (Page 4 of 4)

Lesson	Assignment and Tips
Unit 3 Lesson 3 Drawing in Game Lab	Prior to your lesson: - Unit 1: Students learn to problem solve. Develop positive and collaborative classroom culture. - Unit 2: Students learn to build web pages using HTML / CSS. Focus on personal expression, best practices when programming (debugging, commenting code, clean structure, attention to details, etc.), and how to be careful and considerate when consuming, reusing, or sharing media online - Unit 3 Lesson 1: Explore how programming used for entertainment and self expression - Unit 3 Lesson 2: Use a tool built in Game Lab to explore its x-y coordinate system and how shapes layer on each other. The tool is interactive and does not require students to actually write code. Essential practice to model: Teachers formatively assess student understanding throughout the lesson Assignment: Start with the warm up. From there work through as much of the lesson activity as you can. End the lesson with a wrap up. Tips - Consider how you are going to transition people onto the computer - Consider how you will incorporate formative assessment throughout the lesson
Unit 3 Lesson 4 Shapes and Parameters	Prior to your lesson: - Unit 1: Students learn to problem solve. Development of positive and collaborative classroom culture. - Unit 2: Students learn to build web pages using HTML / CSS. Focus on personal expression, best practices when programming (debugging, commenting code, clean structure, attention to details, etc.), and how to be careful and considerate when consuming, reusing, or sharing media online - Unit 3 Lessons 1-3: Introduces programming for entertainment and very simple shape drawing in Game Lab. Essential practice to model: Students use resources to answer their questions and learn about new code. Assignment: Start with the warm up. From there work through as much of the lesson activity as you can. End the lesson with a wrap up. Tips - Consider watching videos from Lesson 3 to get an understanding of Game Lab - Consider reviewing the Guide to Resources in Appendix C of the CS Discoveries Curriculum Guide - Consider how you will support the skill of using resources as a support to solve problems and answer questions throughout the lesson

TLO Lesson Planning Guide (page 1 of 4)

Step 1: Get familiar with the lesson

Goal

Your whole group is on the same page about what happens in the lesson and has identified the key elements or learnings.

What to Do

- Review the TLO Lesson Assignments on pages 15 - 19 to learn about the lesson your group is responsible for teaching.
- Investigate *all* the resources that come with the lesson. This includes the lesson plan as well as any activity guides, programming tools, online resources, and slides.
- Experiment with the tool, watch videos, practice activities.
- Connect the lesson plan to the slides (and, if relevant, the content in Code Studio)
- **Identify and resolve points of confusion about the lesson and resources. Don't worry about planning yet.**

Task: Once all members of your group are on the same page about the lesson, write the key elements of the lesson and their learning goals in the space below. Pay special attention to the “Essential Practice” you are modeling in this lesson as listed in the TLO Lesson Assignments.

Step 2: Make a Plan

Goal

You have a detailed plan for how your TLO will run.

What to Do

Make a detailed plan for delivering your activity that includes all of the following:

- How will you provide opportunities for learners to discover things on their own?
- What kind of grouping is necessary for learners? Does that change over the course of the activity?
- How much time will you spend on each element of the activity?
- Is there anything that comes later in the lesson that you want to allude to or foreshadow?

Task: Use the space on the next page to write a detailed overview of your 40 minute demo of the lesson.

TLO Lesson Planning Guide (Page 3 of 4)

Step 3: Assign Roles

Goal

Each member of your group has a clear responsibility during each phase of the lesson.

What to Do

Look at the plan you've made above and decide who is going to take on which roles during different sections of the lesson. Members of your groups should switch roles. It's important that everyone knows what they are supposed to do at all times. Sample roles include:

- **Active teacher:** person giving instruction to learners
- **Classroom floater(s):** person or people who are moving around the room fielding questions from the learners
- **Timekeeper:** person with a timer who is noting the time allotments you indicated above and is keeping the active teacher on track for time

Note: The lessons are designed to have students hands on working on an activity that means that there may be less time spent in the "active teacher" role than you are used to. Do not force more time to spend in that role just so everyone has a chance to give instructions. Share the time you need even if it's small.

Task: Return to your plan and next to each portion of your lesson write what role each group member will have. You may have roles besides the examples above. Write any other implementation notes below.

TLO Lesson Planning Guide (Page 4 of 4)

Step 4: Prepare for Reflection

Goal: Begin reflecting on preparing this lesson.

What to Do

You will have 2 minutes as a group to present your most important reflections on the process of preparing and delivering your TLO during the debrief of your lesson.

- Begin the reflection you will do after the lesson by writing down any notes about preparing the lesson now.
- ***The questions below are meant to be helpful guides in preparing to share with your room. You do not need to answer every question.***

Task: Write down any thoughts that you might want to share with your TLO room after teaching.

Teaching Group Debrief Questions

Choices

What choices did you make about how to use the resources and lesson plan? Be sure, in particular, to mention anything you cut or added.

Advice

What advice would you give to another teacher about (preparing or giving) this lesson?

Takeaways

Looking ahead to teaching the course, what are your personal “lessons learned” from delivering this lesson that you will apply to all lessons of a similar style?

Notes:

Activity Guides

1.3 Activity Guide - Using the Problem Solving Process

Word Search

Overview

Working with a team, find the following words in the grid. They may be horizontal, vertical, or diagonal in any direction.
DEFINE, PREPARE, TRY, REFLECT, PROBLEM, SOLVE, COMPUTER, SCIENCE

Objective

Find and circle all 8 words as quickly as you can!

E	S	Q	H	J	H	R	C	F	A	X	M	G	M	U	E	B	L	N	I
S	R	K	E	R	E	T	U	P	M	O	C	E	C	M	Z	T	Y	J	C
D	X	A	P	N	X	Q	L	Y	V	K	L	S	X	X	N	C	E	H	N
J	M	X	P	K	W	W	O	J	Q	B	B	O	Q	M	H	E	A	H	T
B	I	U	O	E	Y	H	K	M	O	A	R	L	F	R	D	L	P	H	A
N	J	H	T	Y	R	A	E	R	C	F	L	V	M	S	C	F	A	J	M
T	I	R	Y	Q	W	P	P	H	D	X	Q	E	Q	U	N	E	R	G	S
H	Y	R	I	M	I	X	D	Z	K	B	M	N	G	O	J	R	B	K	U
P	U	B	U	E	U	J	E	G	D	T	F	B	D	T	I	M	V	V	P
H	V	W	S	K	F	D	G	K	V	D	M	S	O	X	Y	O	R	S	F
S	C	I	E	N	C	E	W	P	Q	T	E	O	R	I	A	S	Q	M	U
H	R	G	D	Y	V	N	H	I	J	D	C	F	G	V	H	E	M	Z	M
U	O	H	H	N	A	G	X	O	Q	K	K	B	I	G	M	T	W	O	L
O	P	E	I	O	Q	G	B	A	R	V	H	P	N	N	A	Z	E	X	V
Y	I	S	W	N	R	N	U	U	W	G	H	X	H	A	E	B	O	P	N
L	X	D	J	X	R	P	V	Y	J	H	U	H	X	D	Y	F	O	I	D
F	U	D	J	X	V	U	K	F	C	V	D	Q	B	P	D	Z	I	B	D
F	B	R	D	S	I	W	P	K	F	K	V	T	R	D	R	G	Y	C	R
Y	E	T	Y	O	D	M	X	H	L	L	V	P	T	J	V	I	J	C	D
H	E	X	K	R	O	I	P	B	W	E	T	O	Y	X	I	B	W	V	O

Once You're Done

Head to the last page of the activity guide and fill in the row there for the "Word Search" in the table.

Birthday Guests

Overview

A big group of 15 guests is getting together at a restaurant for a birthday. The restaurant has 3 tables that can each seat only 5 people. Below you can find some information about the people who are attending the party.

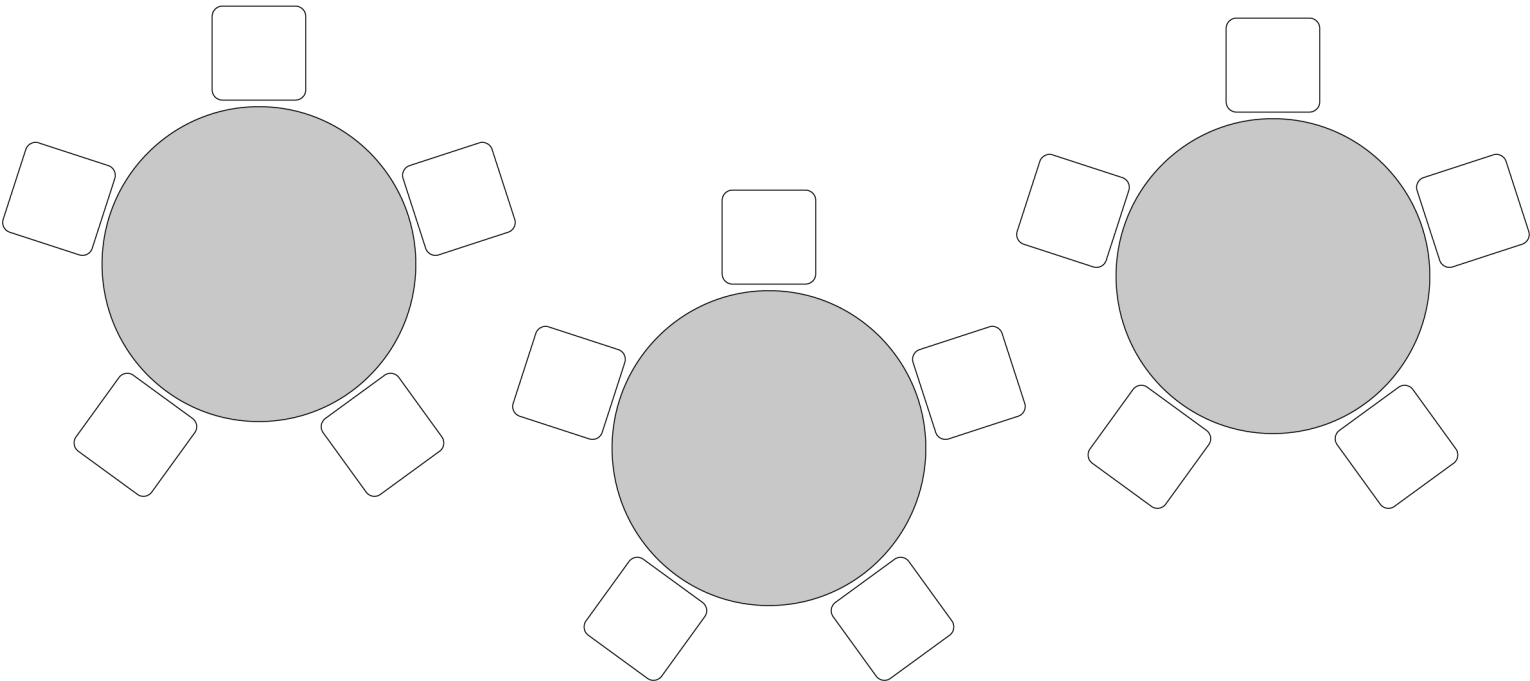
Aysha, Ben, Carla, Damien, Eric, Fan, Genaro, Hannah, Isaias, Jessica, Kyla, Laila, Max, Nazek, Owen

Close Friends (Try to put them together) Aysha and Damien Max and Isaias Nazek and Laila Owen and Genaro Ben and Jessica Genaro and Eric	In a Fight (Try to keep them apart) Aysha and Genaro Ben and Hannah Fan and Max Damien and Laila Isaias and Owen Kyla and Jessica
---	--

Objective

Find the best possible arrangement of guests at the party. Draw your solution in the space below. To help you can cross out the letters of the names you've assigned in the row below.

A B C D E F G H I J K L M N O



Once You're Done

Head to the last page of the activity guide and fill in the row there for the "Birthday Guests" in the table.

Redesign Your Classroom

Overview

You and your friends will be redesigning your classroom. You've only one school day to make it happen, but otherwise how you plan is up to you. Plan the best looking classroom that you can!

Develop Goals

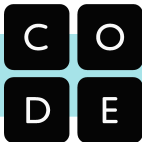
Talk with your group for a few minutes. What are the most important things about the classroom? Can everyone see the teacher? How will you move everything? Write down the goals you'll use to decide what makes a good plan.

Goals	How My Plan Helps Reach this Goal
Everyone can still see the teacher	
Everyone should be able to _____.	

Make a Layout

Every member of your group should separately start designing a layout. You should select what should go where and make sure it all fits in the room. For each goal your group chose, list how your layout helps to reach that goal in the right column. In the space below, draw or describe your redesigned classroom.

New classroom design:



Share Your Layout and Get Feedback

Share the layout you developed with your teammates and explain why you think it is the best possible layout given the goals you chose. Afterwards, record their feedback and reactions to your design in the space below. Is there anything that needs to change? How could your layout improve?

Improve and Finalize

Using the feedback from your teammates, update your layout. In the space below, write down the new design that you and your group agreed on.

Redesign

Once You're Done

Head to the last page of the activity guide and fill in the row labeled "Redesign Your Classroom" in the table.

Problem Solving Process Notes

Reflecting on Using the Process

How did you use each step of the problem solving process to solve this problem? Give examples of what each step looked like as you were solving that problem.

	Define	Prepare	Try	Reflect
Word Search				
Birthday Guests				
Redesign Your Classroom				

The Purpose of Each Step

For each step in the problem solving process, write one sentence explaining its purpose. Why is it included in the problem solving process?

Define: _____

Prepare: _____

Try: _____

Reflect: _____

Defining Problems with Questions

Before starting to solve a problem it's important that you have defined it well. What questions or strategies can you use to better define or understand a problem? Record them in the space below.

1.7 Activity Guide - Apps with Storage

Apps with Storage

Key Vocabulary:

Storage - Information that is saved for the computer to use in the future

Sample Apps

Outfit Picker

What information should be **stored**?

Information	Should it be stored ?	Why? Or why not?
Favorite color		
Season		
Weather		

Friend Finder

Information	Should it be stored ?	Why? Or why not?
List of friends		
Friend locations		
Friend requests		

Choose a Kids Movie

What information should be **stored**?

Information	Should it be stored ?	Why? Or why not?
Favorite movie		
What are you in the mood for?		
Do you want an animated movie?		
Recommendation		

Guidelines

Now that we've seen some examples of input that should and should not be stored, brainstorm at least two guidelines about what types of information should and should not be stored. Your guidelines should follow this format:

"If the information _____, then that information (should / should not) be stored because _____ . For example, _____ (should / should not) be stored."

- ---

- ---

2.5 Activity Guide - Social Sleuth

Sleuthing Online:

To get a better understanding of how your digital footprint is created, you're going to read through several example social media pages and attempt to build a detailed picture of the users. Each user has profiles on multiple social media platforms, but they won't always use the same identifying information, so you'll need to look for clues to help figure out which accounts belong to which person. There are several users represented in the pages, but you'll only need to build a detailed picture of two of them.

Directions:

- Go to the Code Studio levels for this lesson to find the social media pages.
- Fill out a table **for two unique individuals** you identify in the pages.
 - List the FaceSpace, Chirpr, and instantframe names for the user.
 - Answer each question **to the best of your ability**. Some questions may not have answers for some users, or will have more or less detailed answers (for example, you may only find the user's state or city for the address, but you might be able to figure out their street number).
 - List the site, or sites, where you found the information.
 - Mark whether it was shared by the user directly, or by somebody else.

User #1: FaceSpace _____ **Chirpr** _____ **instantframe** _____

Footprint Detail	Answer	Found on	Shared by
Full name			
Address			
Age			
School			
Parent's name			
Phone number			
Email address			
Relationship status			
Hobbies			
Interesting detail			

User #2: FaceSpace _____ Chirpr _____ instantframe _____

Footprint Detail	Answer	Found on	Shared by
Full name			
Address			
Age			
School			
Parent's name			
Phone number			
Email address			
Relationship status			
Hobbies			
Interesting detail			

Questions

What was one piece of information about either of your users that they probably did **not** want to share? How was it accidentally shared?

Which of the two users do you think was more successful in protecting their privacy? What made them successful?

2.16 Activity Guide - Links and Research

Sources and Links

What is your team's topic? _____

Brainstorm three questions that you would like to research on the web.

1. _____
2. _____
3. _____

Use your search skills to find sites to use for information or links on your new website.

Link & Description	Trustworthiness		
URL: Description	Low Why?	Medium	High
URL: Description	Low Why?	Medium	High
URL: Description	Low Why?	Medium	High
URL: Description	Low Why?	Medium	High

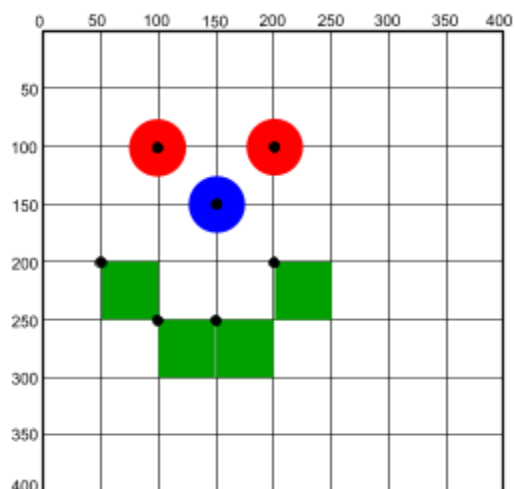
3.2 Activity Guide - Plotting Shapes A

IMPORTANT!! DON'T LET YOUR PARTNER SEE THIS PAPER!

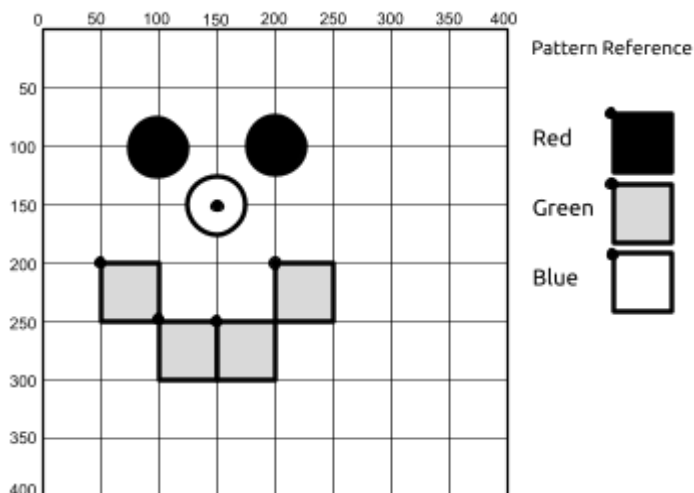
Overview

Your partner should have the Drawing Tool open on a computer where you cannot see it. Alternate turns trying explaining how to draw your image. Afterwards check their work but make sure to keep your drawings hidden.

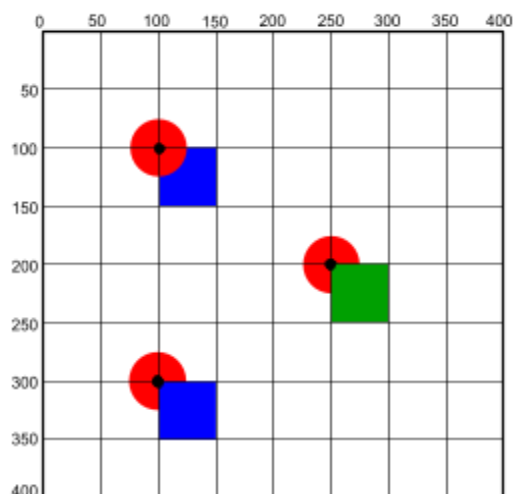
Drawing 1A (Color)



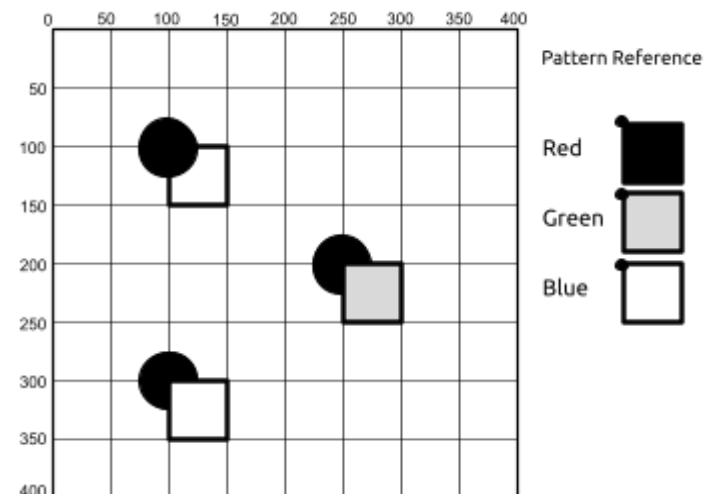
Drawing 1A (Black and White)



Drawing 2A (Color)

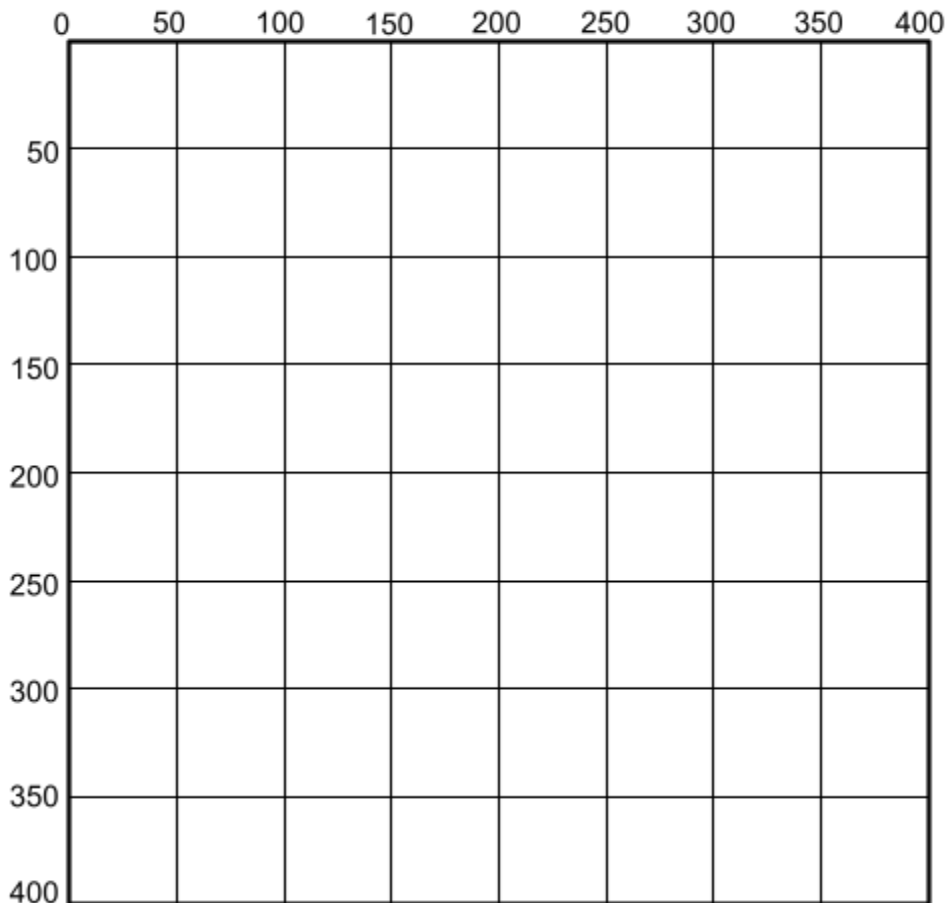


Drawing 2A (Black and White)



Draw Your Own

Use the space below to draw your own image with the shapes. Then see if you can communicate it to your partner to draw using the shape drawing tool in Game Lab. You can also give your drawing to another group to use as a challenge.



Shape Size

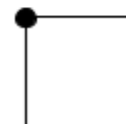
These shapes are the correct size



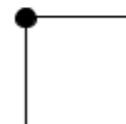
Pattern Reference

If you don't have red, green, or blue to draw with fill in the patterns or colors you'll use instead

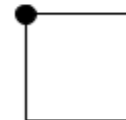
Red



Green



Blue



Reflect

What things were important in communicating about position, color, and order of the shapes in this activity?

What's another way you have seen similar problems solved in the past?

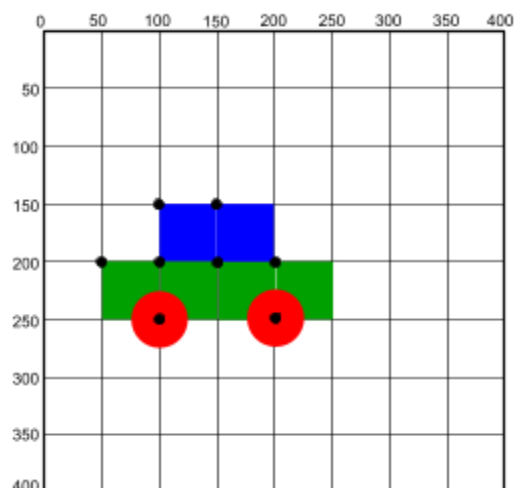
3.2 Activity Guide - Plotting Shapes B

IMPORTANT!! DON'T LET YOUR PARTNER SEE THIS PAPER!

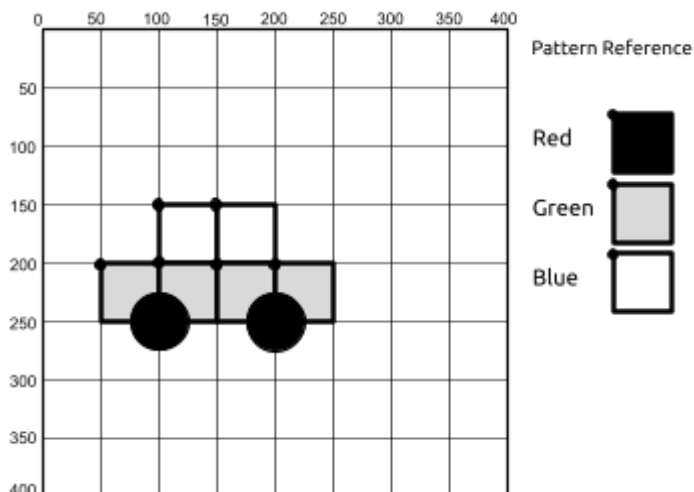
Overview

Your partner should have the Drawing Tool open on a computer where you cannot see it. Alternate turns trying explaining how to draw your image. Afterwards check their work but make sure to keep your drawings hidden.

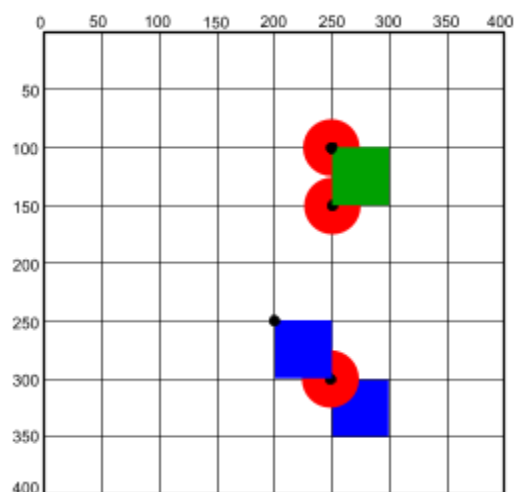
Drawing 1B (Color)



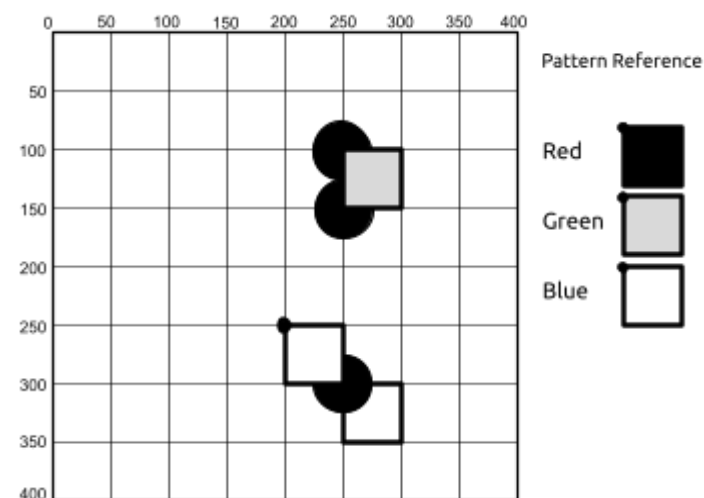
Drawing 1B (Black and White)



Drawing 2B (Color)

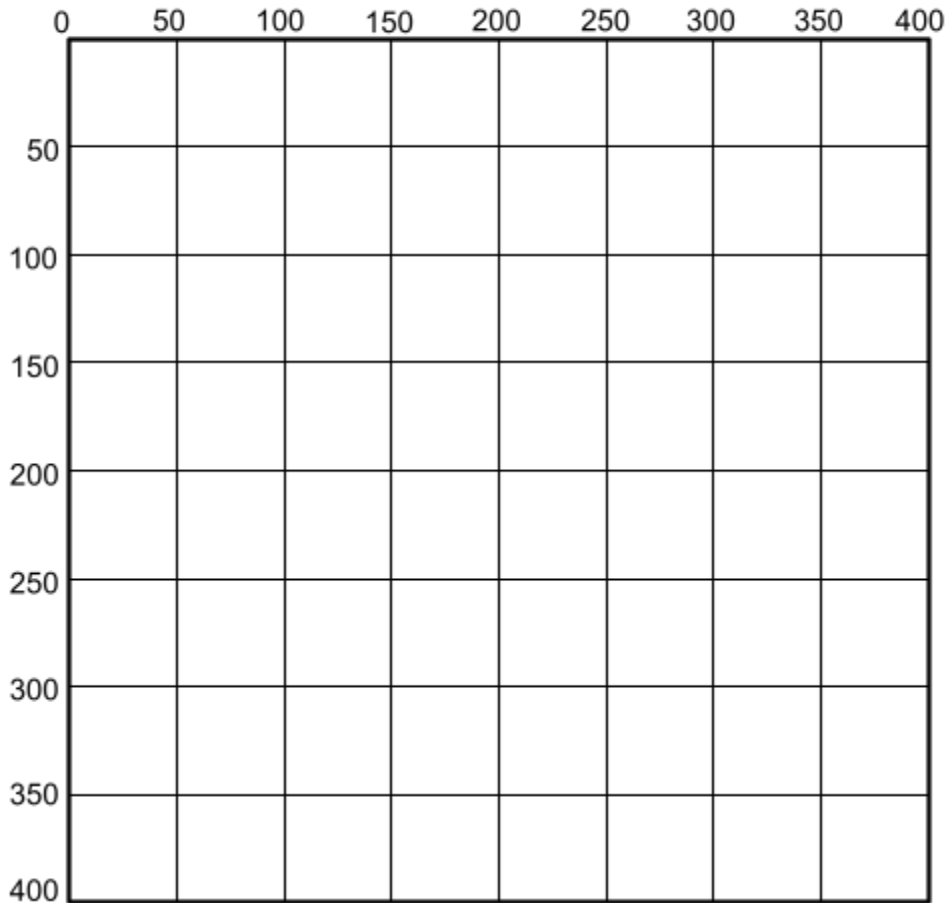


Drawing 2B (Black and White)



Draw Your Own

Use the space below to draw your own image with the shapes. Then see if you can communicate it to your partner to draw using the shape drawing tool in Game Lab. You can also give your drawing to another group to use as a challenge.



Shape Size

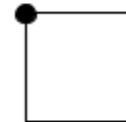
These shapes are the correct size



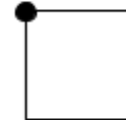
Pattern Reference

If you don't have red, green, or blue to draw with fill in the patterns or colors you'll use instead

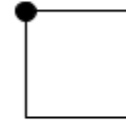
Red



Green



Blue



Reflect

What things were important in communicating about position, color, and order of the shapes in this activity?

What's another way you have seen similar problems solved in the past?
