

Computer Science Discoveries

Intended Implementation Options



CS Discoveries is designed to be taught as a single semester or full-year course. The following pacing guide gives a rough recommendation for unit length, assuming the class meets five days a week for at least 45 minutes per session.

If teaching the course as a semester or full year, we recommend teaching the units in the order they appear in the curriculum, which is also presented below. Some schools may choose to split the course over multiple years, in which case students should complete the first semester before the second.

Semester 1	Problem Solving & Computing 3 weeks		Web Development 6 weeks		Interactive Animations & Games 7 weeks	
	Chapter 1 1 week	Chapter 2 2 weeks	Chapter 1 3 weeks	Chapter 2 3 weeks	Chapter 1 4 weeks	Chapter 2 3 weeks
Semester 2	The Design Process 5 weeks		Data & Society 4 weeks		Physical Computing 6 weeks	
	Chapter 1 2 weeks	Chapter 2 3 weeks	Chapter 1 2 weeks	Chapter 2 2 weeks	Chapter 1 3 weeks	Chapter 2 3 weeks

Relationships Between Units

Some units in CS Discoveries rely on concepts that are taught in previous units. Every unit relies on the Problem Solving Process, which is introduced in Chapter 1 of the first unit. The descriptions below help explain when additional activities from a unit depend on concepts learned in an earlier unit:

The Design Process

- Chapter 2 of this unit emphasizes teamwork and a collaborative project. Consider supplementing these lessons with resources from Lesson 15 - Team Problem Solving in the Web Development Unit.

Physical Computing

- This unit assumes students are familiar with App Lab, specifically using design mode and using events, which are taught in The Design Process. If you skipped this unit, consider supplementing these lessons with resources for App Lab or revisiting the lesson on App Lab from The Design Process unit.
- This unit assumes students are familiar with variables and if-statements, which are introduced in Chapter 1 of the Interactive Animations & Games unit. If you skipped this unit, consider supplementing with resources from the lessons in this unit.

Optional AI and Machine Learning Unit

Our AI and Machine Learning can be used as a replacement for one of the other units in CS Discoveries. This unit assumes students are already familiar with App Lab, specifically using design mode and using events. Therefore, we recommend teaching this unit after The Design Process in either of the sequences below:

AI and Machine Learning (Option 1)	The Design Process 5 weeks		AI and Machine Learning 4 weeks		Physical Computing 6 weeks	
	Chapter 1 2 weeks	Chapter 2 3 weeks	AI and Machine Learning 4 weeks		Chapter 1 3 weeks	Chapter 2 3 weeks
AI and Machine Learning (Option 2)	The Design Process 5 weeks		Data & Society 4 weeks		AI and Machine Learning 4 weeks	
	Chapter 1 2 weeks	Chapter 2 3 weeks	Chapter 1 2 weeks	Chapter 2 2 weeks	AI and Machine Learning 4 weeks	

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Guidelines for Further Adjustments

- Always start with Chapter 1 of the Problem Solving and Computing unit, which introduces core frameworks and classroom norms.
- Afterward, the class can move to Web Development or Interactive Animations and Games.
- The second chapter can be skipped if pressed for time.

A few sample pacing guides that follow these guidelines are provided below, but you may choose to create your own.

5-Weeks: Web Development

Problem Solving & Computing	Web Development
Chapter 1 <i>1 week</i>	Chapter 1 <i>4 weeks</i>

8-Weeks: Interactive Animations and Games

Problem Solving & Computing	Interactive Animations and Games	
Chapter 1 <i>1 week</i>	Chapter 2 <i>2 weeks</i>	Chapter 1 <i>5 weeks</i>

10-Weeks: Web Development

Problem Solving & Computing	Web Development		
Chapter 1 <i>1 week</i>	Chapter 2 <i>2 weeks</i>	Chapter 1 <i>4 weeks</i>	Chapter 2 <i>3 weeks</i>

12-Weeks: Condensed Semester

Problem Solving & Computing		Web Development	Interactive Animations & Games
Chapter 1 <i>1 week</i>	Chapter 2 <i>2 weeks</i>	Chapter 1 <i>4 weeks</i>	Chapter 1 <i>5 weeks</i>