# The big picture of the Unit 10 extended simulation

## Project high-level goals

Unit 10 contains an extended project that composes 7 of the 14 lessons in this unit.  It serves a number of important goals:

1.  It helps contextualize what students are learning by moving from abstract ideas of privacy or security to concrete potential innovations. Since the simulation is based around the question of modernizing schools, students are able to consider the consequences of computing innovations in a familiar setting.
2.  It helps empower students to more adeptly see and weigh the consequences of the technology around them. Many of the young people who take CS Principles may pursue studies or careers in which they are "creators" with technology, but all of them will need to be thoughtful "deciders" in a world that is profoundly shaped by computing.

## Connecting the lessons to one another and to the Project Guide

As you do this unit with your students, it is important to understand how each of the individual lessons involving the project connect to each other.  This guide provides a high level overview of the "beats" of the lesson, how the lesson is connected to the Project Guide that students will work on throughout the Unit and other important notes.   As always, you should read the complete lesson plan for each of these lessons as well, but this should help you make sense of the project overall.

| Lesson | Key Beats of the Lesson | Connection to the Project Guide | Other notes |
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| U10L1: Project - Innovation Simulation Part 1 | 1. The teacher introduces the simulation and hands out "roles" to students.<br>2. Students explore what a computing innovation is and watch a video.<br>3. Students brainstorm innovations that might be useful to Future School.<br>4. Students reflect on their character's role and what innovations their character might be most interested in. | Students finish Step 1 - Reflect of the Project Guide.<br><br>The teacher models how to do Step 2 - Research of the Project Guide. | Students <u>don't</u> do their own research on this day.  That comes in the next lesson. |
| U10L2: Project - Innovation Simulation Part 2 | 1. The teacher hands out badges and nameplates from the previous lesson to get students into "simulation mode"<br>2. Students research three different computing innovations and discuss these innovations with team | Students finish Step 2 - Research of the Project Guide. | None. |

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| **U10L3: Data Policies and Privacy** *(Students do not work on the project during this lesson)* | | | |
| **U10L4: The Value of Privacy** *(Students do not work on the project during this lesson)* | | | |
| U10L5: Project - Innovation Simulation Part 3 | 1. The teacher hands out badges and nameplates to get students into "simulation mode". <br> 2. The class watches a video about unintended consequences of computing innovations. <br> 3. Students meet with their groups to discuss pros and cons of the different proposed innovations they researched in Step 2. <br> 4. Students document the feedback they gave in Step 3 of the Activity Guide. <br> 5. Students select one innovation which will ultimately become part of their groups' vision for the Future School. <br> 6. Students start to work on their One-pagers. | Students finish Step 3 - Feedback of the Project Guide. <br><br> Students start Step 4 during this lesson. This step will be finished in U10L8. | This builds on previous lessons where students have considered ways that computing innovations may risk their privacy and have other unintended consequences. <br><br> In future parts of this project, students will present their "vision" for the school of the future which includes each of these innovations that their team selects. Together, all of the innovations should help form a complete vision of what their team is proposing. |
| **U10L6: Security Risks Part 1** *(Students do not work on the project during this lesson)* | | | |
| **U10L7: Security Risks Part 2** *(Students do not work on the project during this lesson)* | | | |
| U10L8: Project - Innovation Simulation Part 4 | 1. The teacher hands out badges and nameplates to get students into "simulation mode". <br> 2. Students work on Step 4 in their Project Guide. | Students work on Step 4 - One-pager of the Project Guide. They should have most of it finished by the end of the lesson with the exception of the "Addressing Concerns" section which will be addressed later. | Students may leverage what they learned in U10L6 and U10L7 about security risks to identify "concerns" about their innovation in Step 4 of their Project Guide. |
| **U10L9: Protecting Data Part 1** *(Students do not work on the project during this lesson)* | | | |

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| **U10L10: Protecting Data Part 2**<br>*(Students do not work on the project during this lesson)* | | | |
| U10L11: Project - Innovation Simulation Part 5 | 1. The teacher hands out badges and nameplates to get students into "simulation mode".<br>2. Students work on Step 5 in the Project Guide and put together a presentation focused on a theme for their vision for the Future School. | Students should mostly have Step 5 of the Project Guide done by the end of this lesson. They will get feedback on their presentation from Step 5 in the next lesson. | Students may leverage what they learned in U10L9 and U10L10 to finish the "Addressing Concerns" section of Step 4 of their Project Guide. |
| U10L12: Project - Innovation Simulation Part 6 | 1. The teacher hands out badges and nameplates to get students into "simulation mode".<br>2. Students break their group into smaller groups and present their ideas to a different small group.<br>3. Students give and get feedback from a different small group.<br>4. Students come back to their original groups and use the feedback they received to make changes to their presentations and one-pagers. | This is an opportunity for students to finish and revise any portions of Step 4 - One-pager and Step 5 - Preparing your Group Presentation in the Project Guide. | |
| U10L13: Project - Innovation Simulation Part 7 | 1. The teacher hands out badges and nameplates to get students into "simulation mode".<br>2. Students do short presentations of their proposals.<br>3. Students do a gallery walk to look at the proposals and the one-pagers other groups developed.<br>4. Students finish Step 7 in the Project Guide by voting for one "Overall Vision" and one "Innovation" that they felt was most compelling. | Students finish Step 6 and Step 7 of the Project Guide during this lesson. | Students should vote as their character. For example, if they were assigned a specific "Parent" role, they should vote as that parent.<br><br>This is the last day of the simulation. Students will turn in their work at the end of the hour and turn in their name badges for the last time! |
| **U10L14: Assessment Day**<br>*(Students do not work on the project during this lesson)* | | | |