

Unit 5 - Data and Society ('21-'22)

Resources

Lesson 1: Representation Matters

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [Representation Matters](#) - Activity Guide

Prep

- Print copies of the Meals Data resource so that each group can get one of the four pages
- Print one copy of the activity guide for each group

Lesson 2: Patterns and Representation

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [Animal Shapes](#)
- [Representing Information](#) - Activity Guide

Prep

- Print one copy of the activity guide for each group of 2-3
- Print and cut up one copy of the manipulative resource for each group of 2-3
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Lesson 3: ASCII and Binary Representation

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [ASCII Challenges](#) - Activity Guide
- [ASCII Text](#) - Resource

Prep

- Print copies of the activity guide - 1 per student
- Print copies of the ASCII text resource - 1 for each pair of students

Lesson 4: Representing Images

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

Prep

- Practice using the Pixelation Widget for ~10 mins to prepare to respond to questions

Lesson 5: Representing Numbers

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides
- [Number Cards](#) - Digital Manipulative

For the students

- [Binary and Data](#) - Video ([Download](#))
- [Number Cards](#) - Manipulative
- [Representing Numbers 2021](#) - Activity Guide

Prep

There is no prep for this lesson.

Lesson 6: Combining Representations

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [Activity Guide - Pet Records](#) - Activity Guide
- [ASCII to Binary Table](#) - Reference

Prep

- Have the 8-Bit Binary Widget and Binary to ASCII Table ready to model with the class

Lesson 7: Keeping Data Secret

Resources

For the teachers

- [Unit 5 Data & Society](#) - Slides

For the students

- [Medical Records](#) - Activity Guide
- [Secret Messages 2021](#) - Activity Guide

Prep

There is no prep for this lesson.

Lesson 8: Create a Representation

Resources

For the teachers

- [Unit 5 Data & Society](#) - Slides

For the students

- [Computer Science Practices](#) - Reflection
- [Create a Representation](#)
- [Create a Representation](#) - Rubric
- [Create a Representation - Student Checklist](#)

Prep

There is no prep for this lesson.

Lesson 9: Problem Solving and Data

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [Problem Solving with Data](#) - Activity Guide

Prep

There is no prep for this lesson.

Lesson 10: Structuring Data

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [Structuring Data 2021](#) - Activity Guide

Prep

There is no prep for this lesson.

Lesson 11: Interpreting Data

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [Interpreting Data](#) - Activity Guide
- [Interpreting Data](#) - Resource

Prep

There is no prep for this lesson.

Lesson 12: Making Decisions with Data

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [Making Decisions with Data](#) - Activity Guide
- [Problem Solving Process with Data](#) - Resource

Prep

- Print copies of the activity guide
- Print copies of the Problem Solving Process with Data - one per group

Lesson 13: Automating Data Decisions

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [Automating Data Decisions](#) - Resource
- [Automating Data Decisions](#) - Activity Guide

Prep

There is no prep for this lesson.

Lesson 14: Problem Solving with Big Data

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [Amazon and Data](#) - Video ([Download](#))
- [Data in the Real World](#) - Activity Guide
- [Netflix and Data](#) - Video ([Download](#))
- [Waze and Data](#) - Video ([Download](#))

Prep

- Print copies of the activity guide
- Prepare projector if you will show videos to the whole class

Lesson 15: Data and Machine Learning

Resources

For the teachers

- [CSD Unit 5 - Data & Society](#) - Slides

For the students

- [Video: Impact on Society](#) - Video ([Download](#))
- [Video: Machine Learning](#) - Video ([Download](#))
- [Video: Training Data and Bias](#) - Video ([Download](#))

Prep

- Review and complete the online tutorial yourself. If you are not going to use AI for Oceans, explore the other options listed below.

Lesson 16: Project - Make a Recommendation

Resources

For the teachers

- [Unit 5 Data & Society](#) - Slides

For the students

- [Computer Science Practices](#) - Reflection
- [Make a Recommendation](#) - Peer Review
- [Make a Recommendation](#) - Rubric
- [Make a Recommendation](#) - Project Guide
- [Make a Recommendation - Student Checklist](#)

Prep

- Print copies of the project guide

- Print copies of the rubric
- Print copies of the peer review guide

Lesson 17: CS Discoveries Post-Course Survey

Resources

There are no resources for this lesson.

Prep

There is no prep for this lesson.