Hour of Data

A self-guided Desmos activity for exploring a real dataset, and using it to make sense of a real-world problem.

Lesson Goals	Students will be able to… • interpret of various data visualizationms • use data to make inferences and form opinions
Student-facing Lesson Goals	• Let's interpret pie charts, scatter plots, and other data displays ot help us understand vehicle-animal collisions in Vermont.
Materials	• Desmos Hour-of-Code activity
Preparation	• Computer for each student (or pair), with access to the internet • All students should log into the Desmos activity

About this lesson

Happy Hour of Code Week! Let's dig into some data and get your students programming! (Don't worry - even if you and your students have no prior experience with code, this lesson is entirely accessible. All of the relevant code is provided for you in our Pyret programming environment. And most parts of the lesson come with a ★ **Coding Challenge** for students ready to dig in.)

There are ten parts of the lesson in total - but feel free to pick and choose the pieces that feel most relevant for you and your students…or start at the beginning and stop when you run out of class time! Each part of the activity should take under ten minutes, unless your students get *very* excited talking about this data. (How could you blame them?)

We are confident that students of all ages will enjoy dissecting this intriguing dataset as they dip their toes into a new programming language. Please note, however, that students in middle school will likely need guidance and support in working through the activity, whereas students in high school will likely be able complete the slides relatively independently.

- **Part 1** Wildlife Crossings Save Lives!
- **Part 2** Introducing the dataset: Animal-Vehicle Collisions in Vermont - Notice and Wonder
- **Part 3** Introducing the Pyret Programming Environment - Bar Chart / Pie Chart
- **Part 4** Scatter Plots, Outliers & Human Error
- **Part 5** More Pie Charts & Bar Charts
- **Part 6** Comparing Subsets / Making Predictions Using Proportional Reasoning
- **Part 7** Patterns in the Code - More Subsets & Pie Charts via filtering
- **Part 8** Analyzing Scatter Plots using Rate of Change
- **Part 9** Data-Informed Decision Making
- **Part 10** Beyond the dataset - Making Connections - What else might we want to know?

A note from Bootstrap

It seems like every week there's another Data Science curriculum announced. Some are coding classes that sprinkle in a little math, and others are math classes that tack on a little coding. At Bootstrap, we create balanced curricula that blend these ingredients seamlessly so they support and reinforce one another!