Complex Systems PBL Unit Goals

- Students will learn the basic concepts from the field of system dynamics that lie at the heart of systems thinking, such as stocks and flows, feedback loops, unintended consequences, etc.

- Through three introductory lessons, they will learn how to view an infectious disease as a complex system, how to analyze its structure and behavior, and how to identify steps that can be taken to change that behavior.

Final Products

- Each team will submit a 700-word written essay that should explain your selected topics of Complex Systems to a general newspaper audience (as well as to your family and friends!).

- At the project's final event, each team will present a "Lightning Talk" accompanied by a slide presentation, which builds off of information included in their essay. A Lightning Talk is a 10-minute talk with 10 slides, allowing one minute for the discussion of each slide.

What products will students be turning in to assess their progress and understanding of the subject?

- 700-word essay addressed to general community/newspaper audience.
- 10 min. Lightning Talk/ Slide presentation (shared electronically).
- A bibliography of all sources used.

Complex Systems Project Rubric

If we view Covid-19 or flu as complex systems,
how can we analyze them and lessen their impact on our community?

Title of Presentation:
_____

Student Names:
_____

Things we can improve:	Base Criteria	Things that were excellent:
	Research: 1. Written clearly, with appropriate citations. 2. Some topics chosen because of Team interests, not teacher assignments. 3. Effective uses of data. 4. Effective uses of Internet search.	
	700-word essay: 1. Clearly, concisely written, with style. 2. Good opening paragraph and good lead sentences for each other paragraph. 3. Many key points with insights covered. 4. Goes deep in at least one topic.	
	Lightning Talk slide presentation: 1. Appealing content with often surprising insights. 2. Smooth transitions between presenting team members. 3. Passion and interest shown by all presenters. **4.** One or two minutes: Team's reflections on the entire 5-week exercise.	

	Effective use of visuals: 1. Multiple uses of images, diagrams, even cartoons to support aural presentation. 2. Minimization of bulleted lists of words. 3. Extent to which visuals complement rather than duplicate verbal presentation.	
	Team Collaboration: 1. Effective Team contract signed by members. 2. Disputes resolved amicably. 3. Extent of collaboration and cooperation demonstrated in Lightening Talk.	