speculative futures

LEARNING OBJECTIVE: To challenge students to imagine collaborative responses to future environmental and social challenges, and to consider how to enact these responses in the present.

Within the realms of literature, film, and gaming, science and speculative fiction have been used to imagine potential future societies and technologies—and to make us think about the present by representing it in unexpected ways. Afrofuturist, Indigenous, feminist, and environmental writers in particular have used the imaginative and political potential of speculative fiction to raise people's consciousness about social justice and environmental issues, and push for political change.

With rising water levels disproportionately affecting certain populations over others, some artists, scientists, and activists are creating scientific and creative ways to speculate about potential effects of climate change on future shorelines and societies. These future-orientated practices don't only offer tools to conjecture about the world as it might become. They also encourage us to imagine different ways of responding to environmental change in the present.

VIDEOS:

Glacier Nation (Chile) Matías Asun, Greenpeace director and activist, acts as a diplomat for the new Glacier Republic. Glacier Nation imagines a separate country to defend Chile's glaciers from mining companies when the Chilean state will not.
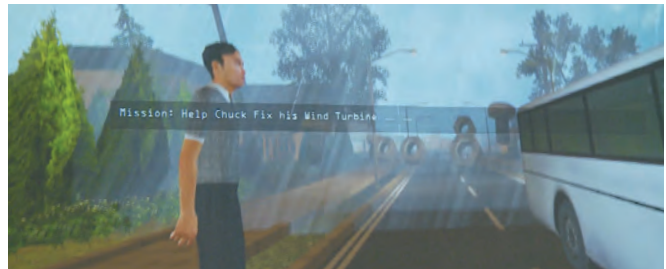
Game Changer (Vancouver) Dave Flanders, a landscape architect and computer modeler, has developed a video game with urban planners, engineers, and students to envision future scenarios for one of the lowest lying regions in British Columbia.


A Floating Future (Bangladesh) Mohammed Rezwan is a sustainability architect whose floating schools and gardens offer a practical solution to seasonal flooding in Bangladesh—and potential solutions to other regions faced with rising water levels.

An Acidifying Ocean (Vancouver) Robert Saunders, scientist and CEO of Island Scallops in British Columbia, explores genetic testing and other scientific solutions to adapt the shellfish industry to a future shaped by ocean acidification and climate change.

KEYWORDS:

speculative fiction, science fiction, storytelling, future imaginaries, environmental futures, social justice, art and data visualization.
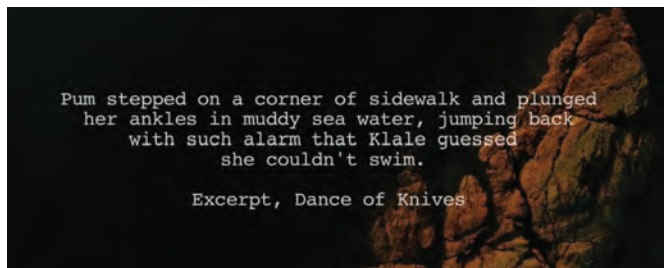
Science Fiction Futures (Vancouver) Science fiction writer Donna McMahon, depicts a future where intrepid characters must negotiate a flooded Vancouver.

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QUESTIONS:

Each video offers a different way of thinking about future environmental challenges, and the ways in which we can plan for, visualize, and organize around them.
• What are the tools and strategies that the protagonists use to imagine sustainable futures? Are they technological? Community based? Collective or individual?
• What approach might be appropriate for your community? Why?
• How do the videos represent local or community-based knowledge? How can this knowledge serve as a tool in planning for the future?

Speculation about the world (and worlds other than our own) has helped to drive scientific discovery and creative practice.
• How can we use creative practices like storytelling, film, and illustration to visualize scientific data and hypotheses about sea level rise?
• How can we use future-oriented inquiry across the arts and sciences to imagine what climate change means for coastal populations, politics, and environments in the future?

The fields of science and the arts have suffered from entrenched, historical biases—including the race or gender of those who participate, the subjects of study, and the types of research that receive funding and support.
• Who is included or excluded within future-oriented stories, research, and art? Who gets to imagine speculative futures? How might that shape the ways in which we develop responses to climate change and sea-level rise?
• How do social and environmental challenges overlap and accentuate each other? How might we develop collaborative responses to address both?

ACTIVITIES:

• Read the first chapter of Rachel Carson's Silent Spring ("A Fable for Tomorrow") and watch the Shoreline videos "Science Fiction Futures" and "Game Changer." Comparing the three works, how does each represent, narrate, or visualize environmental challenges (media, genre, etc.)? What similarities and differences can you identify between these three approaches to speculative futures?

• Watch "Dark Oceans: Surveying Saturn's Moons" (referenced on p.3).
How does this documentary engage with environments and worlds beyond the Earth? How is speculation used within the journalists' narrative, and scientific research?
After viewing this video and "An Acidifying Ocean" or "A Floating Future," imagine you're a scientist or engineer trying to develop a solution to changing environmental conditions. Brainstorm potential benefits or challenges of using the approaches shown here.

• Locate a scientific institution which collects data about water, climate, and environments and makes it available online (i.e. NASA, Woods Hole Oceanographic Institution, or Shoreline's interactive mapping of coastal density, sea level rise, or flood views). Select and review one of the maps or data sets.
How is the data visualized? What does the data tell us in this form, and what assumptions are in play? Who collects the data, and what frameworks or methods were used? Brainstorm another way to visualize or represent this data set. Potential approaches might include a short story, three-dimensional model, or performance piece.
In a group, discuss or demonstrate the approach you've selected. Comparing these two ways of presenting the data, are there differences between the ways the data is communicated, its target audiences, or the assumptions at play? How do different methods of communicating environmental data engage different types of futures?

• Select an excerpt or episode from the following dystopian and science fiction texts: TimeTraveller™, Okkupert, Parable of the Sower, Walking the Clouds, "Covehithe", or Octavia's Brood.
Analyze how this creative work uses the idea of time (past, present, and future). What kinds of environmental challenges are depicted, and across what time spans? How do the depicted communities respond to a changing future? What kinds of knowledge are depicted, and how are they mobilized?

• After discussing the videos or one of the other speculative texts in a group, imagine how a community in which you live might respond to the same environmental challenge. How could you mobilize the community's strengths? What might be its weakness? Brainstorm a few social, economic, or political solutions you could use to collectively address them. Is what you imagine dystopic or hopeful? What are the most common tropes that these films and books rely on?

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RESOURCES:

Media
• Jason Drakeford, Dennis Overbye, and Jonathan Corum, "Dark Oceans: Surveying Saturn's Moons," 2015, https://www.nytimes.com/video/science/space/100000004003105/saturn-cassini-enceladus-moons.html

• TimeTraveller™
timetravellertm.com/episodes/

• Okkupert (Occupied), 2015
netflix.com/ca/title/80092654

Readings
• Octavia E. Butler, Parable of the Sower. Grand Central Publishing, 1993.

• Rachel Carson, Silent Spring. Houghton Mifflin, 2002.

• Grace L. Dillon (ed.), Walking the Clouds: An Anthology of Indigenous Science Fiction. University of Arizona Press, 2012.

• Walidah Imarisha and adrienne maree brown (eds.), Octavia's Brood: Science Fiction Stories from Social Justice Movements. AK Press, 2015.

• Donna J. Haraway, Staying with the Trouble: Making Kin in the Chthulucene. Duke University Press, 2016.

• China Miéville, "Covehithe," 2011.
https://www.theguardian.com/books/2011/apr/22/china-mieville-covehithe-short-story