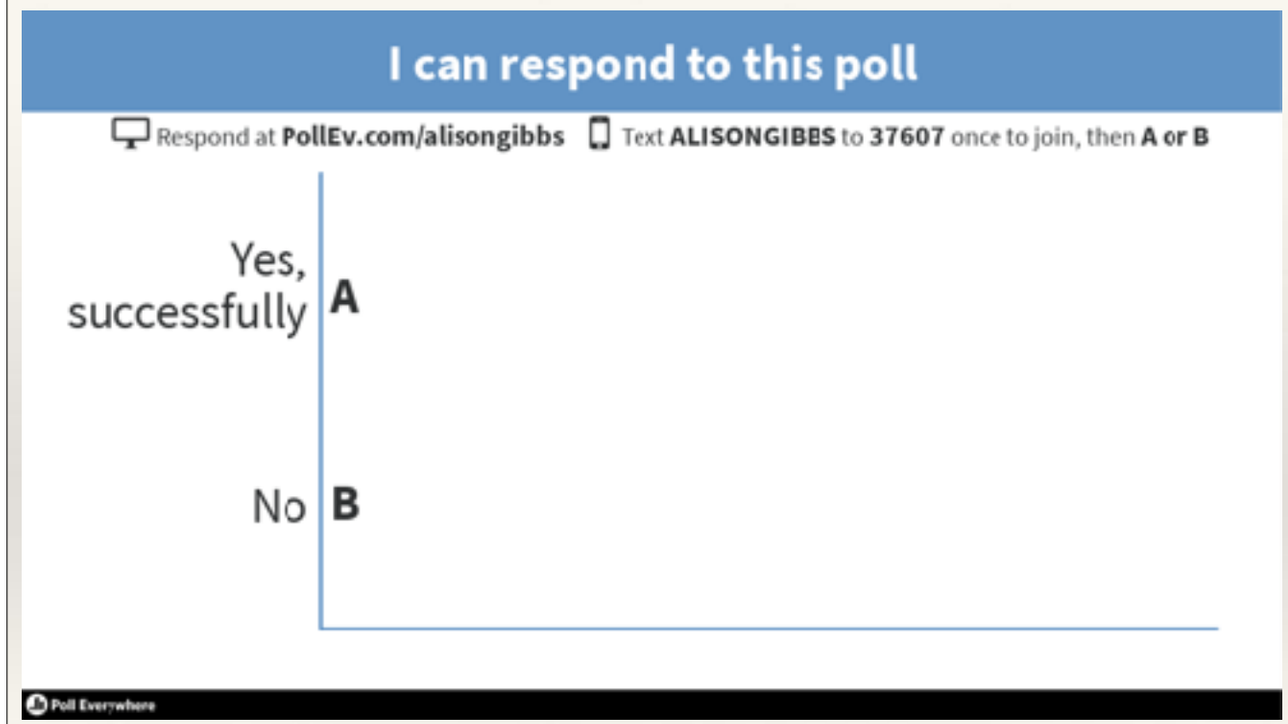
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Text ALISONGIBBS to 37607 once to join, then A or B
Yes, successfully
A
No
B
Poll Everywhere

SSC 2019

International Data Science in Schools Project

Alison Gibbs, University of Toronto
Wesley Burr, Trent University
Rob Gould, UCLA

Today

- IDSSP: International Data Science in Schools project
  - What? Who? What? What's Next?
- Materials for IDSSP (Wesley)
- Reaching school teachers and students (Rob)
- Feedback (you)

Goal of this session:
Awareness of the project / Invite you into it
Solicit feedback
Help?

ME: some of the decisions we grappled with
Want to have a conversation. Interruptions welcome!!

What? Goals

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1 For all school children:

Understand and appreciate the use of data to

- make informed judgments in their daily lives
- make decisions in their professional activities

What? Goals

1 For all school children:

Understand and appreciate the use of data to

- make informed judgments in their daily lives
- make decisions in their professional activities

2 For some school children:

Instil interest and enthusiasm to

- pursue post-secondary studies in Data Science
- make a career in Data Science

Facility a major lead forward in society's ability to gain value from data

"The material should be fun to teach and fun to learn, and leave all concerned wanting more."

Who? Audience

Students

- Last 2 years of secondary school
- No requirements for previous study in
  - calculus
  - computer science
  - statistics

Who? Audience

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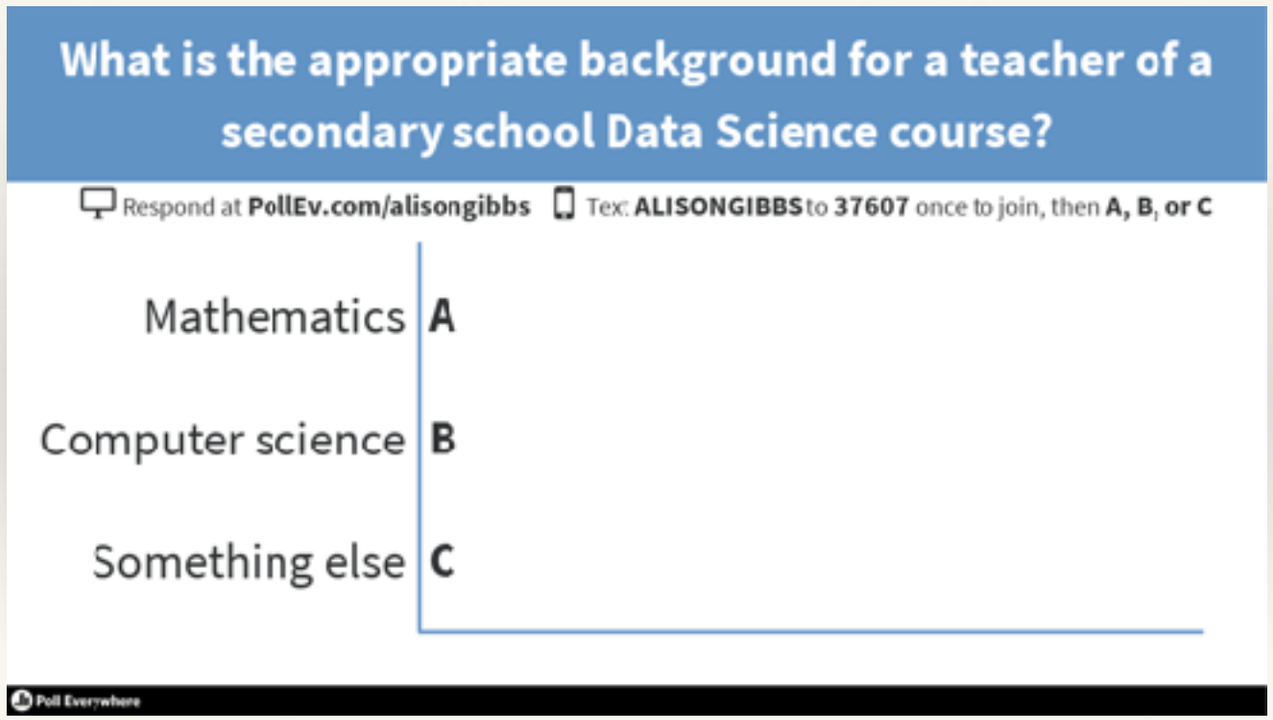
Teachers

- Who?

Who? Audience



Who? Audience

Students

- Last 2 years of secondary school
- No requirements for previous study in
  - calculus
  - computer science
  - statistics

Teachers

- Who?
- Anyone from a discipline that uses data

Who? Leaders

Nick Fisher, Australia

Chris Wild, New Zealand

Leaders, CT, advisory group

Who else? Project development

Curriculum Team

- Statisticians
- Computer Scientists

Leaders, CT, advisory group

Who else?

Curriculum Team

- Statisticians
- Computer Scientists

Advisory Group

- Statisticians
- Computer Scientists
- Educators
- Curriculum experts
- Leaders of professional societies

Leaders, CT, advisory group

Countries with participants on the Curriculum Team

Advisory group also includes representation from the Netherlands

Image: https://commons.wikimedia.org/wiki/File:Blank_world_map_pusta_mapa_świata.png

Supporting Organizations

- American Statistical Association
- Association for Computing Machinery
- Australian Council of Deans of Information and Communications Technology
- ACEMS (Australian Research Council Centre of Excellence for Mathematical and Statistical Frontiers)
- BCS, The Chartered Institute for IT
- Cambridge Mathematics
- The Dutch Society for Statistics and Operations Research
- Google
- International Statistical Institute
- The Leiden Centre of Data Science, Mathematical Institute, Leiden University
- National Institute for Statistical Sciences (NISS; United States)
- New Zealand Statistical Association
- Royal Statistical Society
- Statistical Society of Australia
- Statistical Society of Canada
- Teaching Statistics Trust (UK)

What? Outcomes of Phase 1

- Curriculum framework for two courses for senior secondary school students

1. First course:
   - Awareness of data in students' daily lives
   - How to make arguments with data
   - How to critically assess arguments made with data
2. Second course:
   - Modules to choose from covering a wide variety of data types and reasoning with data


What would you include in the first course?
Respond at PollEv.com/alisongibbs
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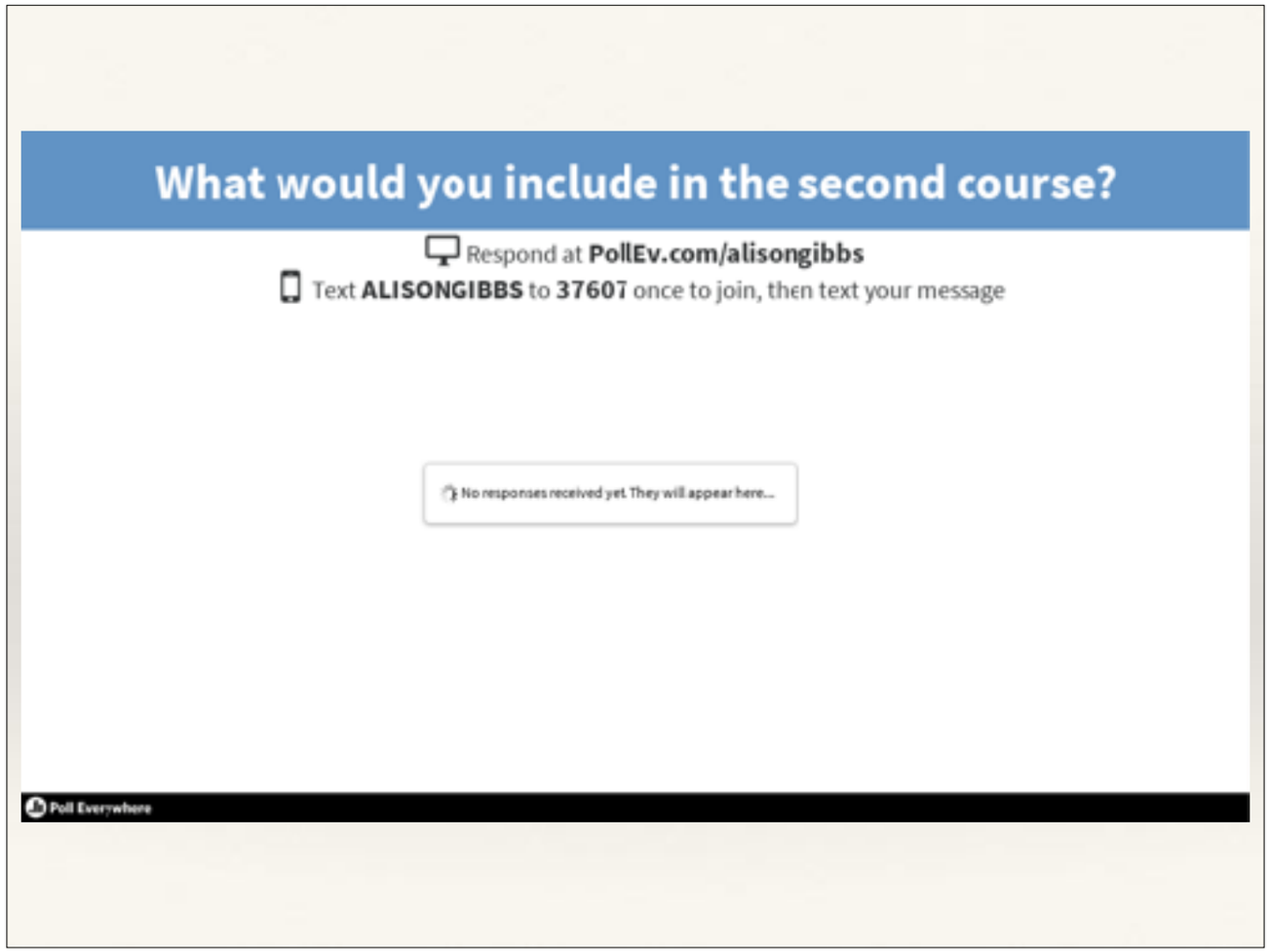
What would you include in the second course?
Respond at PollEv.com/alisongibbs
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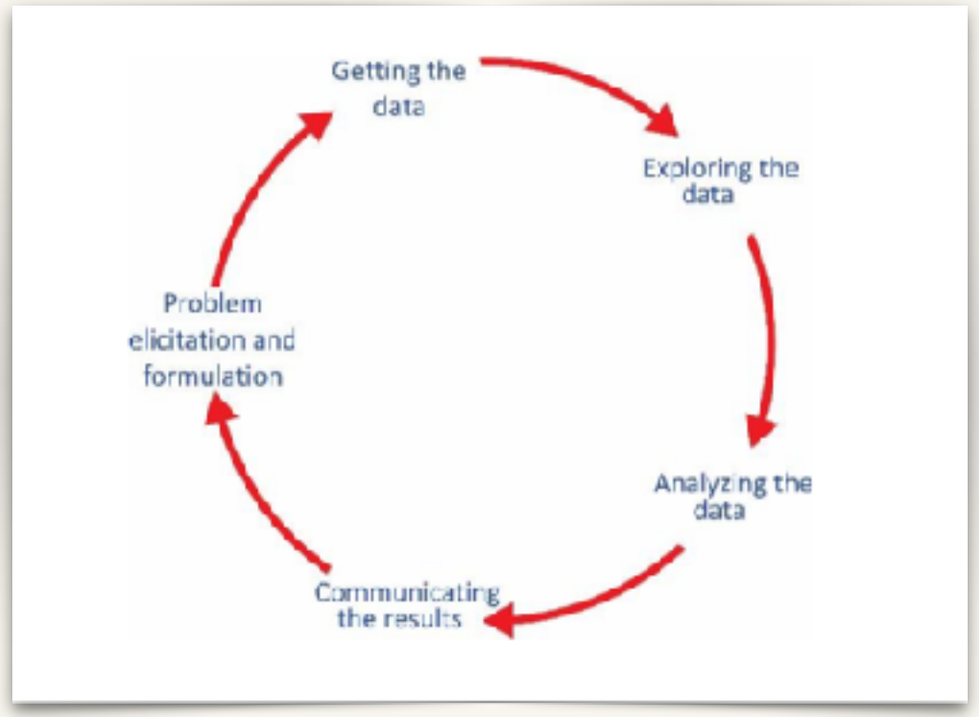
What? The cycle of learning from data



MAJOR PRINCIPLES:

* Process focus: everything within the context of the Data Science cycle for a problem
* Real-world focus — real multivariate data, rich contexts, what's widely used in practice

What? Outcomes of Phase 1

- Curriculum framework for teachers

  "Teaching the teachers"

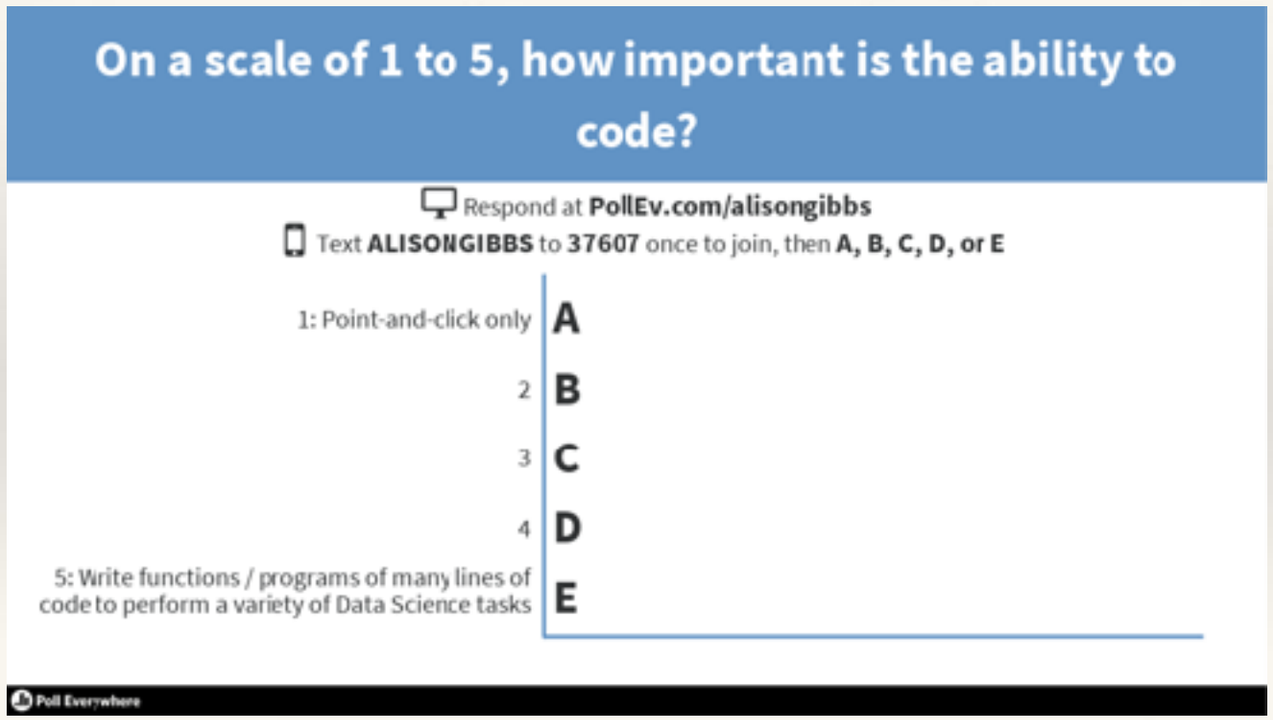
  Model the student curriculum

  + extensions

  + depth

  + pedagogical considerations

What? Computing



Stealth coding: point-and-click but reproducible, code snippets to copy / modify / build on / put together
Easy-to-use environment
High level libraries
Some basic programming language features such as loops
Could be R or Python or …

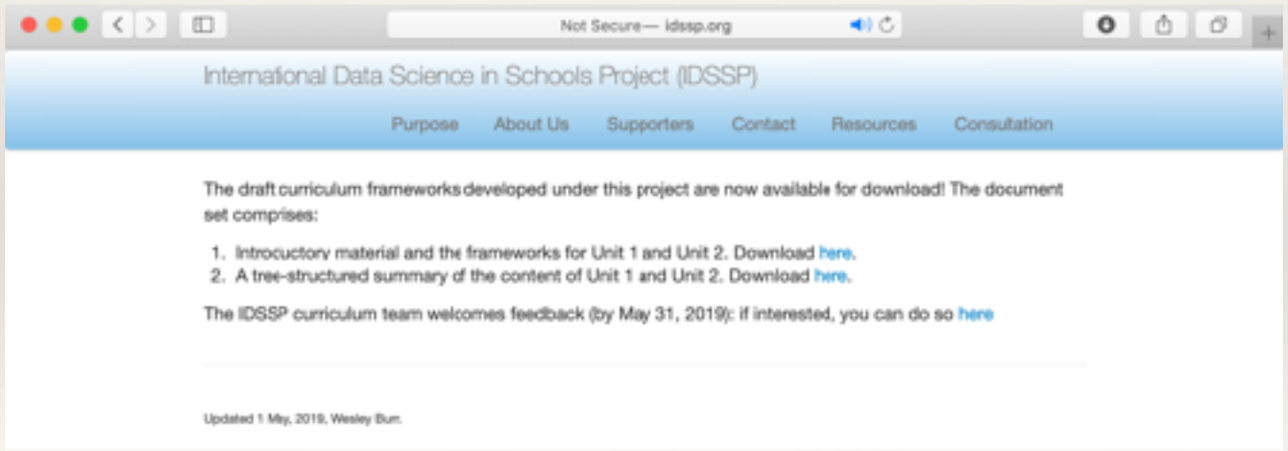
What? Computing

- Goal: Appreciate and experience the importance of automating Data Science tasks
- Stealth coding

Stealth coding: point-and-click but reproducible, code snippets to copy / modify / build on / put together
Easy-to-use environment
High level libraries
Some basic programming language features such as loops
Could be R or Python or …

What Now? Consultation

http://www.idssp.org/pages/consultation.html



What's Next?

Leave conversation for after Wesley and Rob's presentations

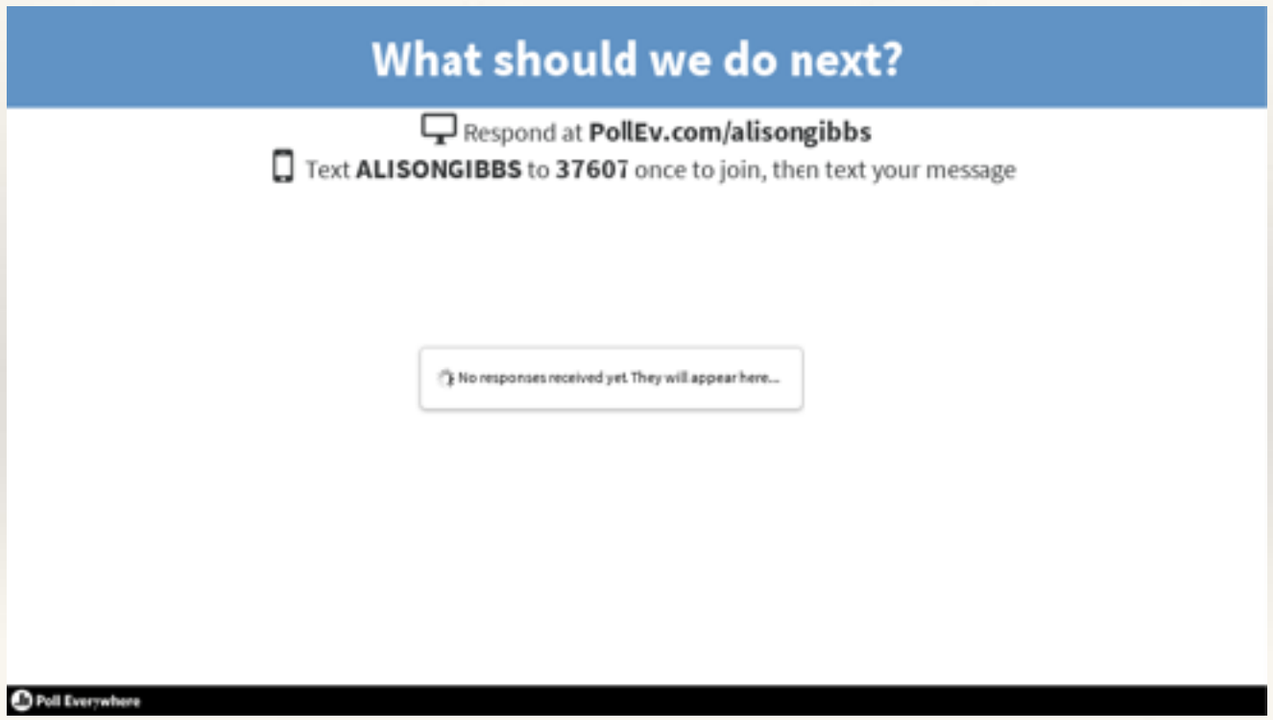
What's Next? How can the project have a greater impact?

Options:

1. We're finished
2. Volunteers work on teaching resources
3. Funded resource development project

Open questions? What to do?
Need to develop: pedagogies, learning materials (new and curation), T3

What's Next? How can the project have a greater impact?



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