

Bray Speth *et al.* (2010). 1, 2, 3, 4: Infusing quantitative literacy in introductory biology.

Supplemental Materials

Comparison of students' data representation skills across three sections of a large-enrollment introductory biology course. We named the three sections A, B, and C. Section A is the one described in detail in the article, and is highlighted by grey shading in the Tables. Sections C and D had different instructors, but same learning objectives, syllabus, instruction style and assessments.

Table S1. Student distribution by year in college, across the three sections. Freshmen represented nearly half of our student population and, collectively, 80% of students were either in their first or second year in college.

Year in College	Course sections			Total	% of the total
	A	B	C		
1	82	81	91	254	48.4
2	60	45	61	166	31.6
3	28	18	27	73	13.9
4	10	7	15	32	6.1
Total number of students enrolled	180	151	194	525	

Table S2. Breakdown of the student population by majors, across the three sections.

Majors	Course sections			Total	% of the total
	A	B	C		
Life Sciences	63	47	55	165	31.43
Science, other	23	11	17	51	9.71
Mathematics	7	4	6	17	3.24
Engineering	9	8	11	28	5.33
Pre-health track	26	39	44	109	20.76
Pre-vet	19	9	16	44	8.38
Social sciences	20	21	25	66	12.57
Humanities	9	5	4	18	3.43
Undecided	4	7	16	27	5.14
Total number of students enrolled	180	151	194	525	

Table S3. Pre-post instruction change in the in the percentage of students who demonstrated specific data representation skills. For this study, we analyzed and report only data for students who completed both the Frog problem at the beginning of the semester and the Wolf problem on the final exam (Section A, n=175; Section B, n=138; Section C, n=177).

% of students	Frog problem					Wolf problem				
	Sections					Sections				
	A	B	C	Avg	St. Error	A	B	C	Avg	St. Error
Plotted calculated values	57	48	50	52	2.7285	95	93	92	93	0.882
Correctly labeled y-axis	10	12	16	13	1.7638	92	93	84	90	2.848
Correctly labeled x-axis	70	86	75	77	4.7258	84	88	90	87	1.764
Used a bar graph	99	100	99	99	0.3333	87	84	81	84	1.732