Case Study 5
for February 25

Lead is a nasty poison. It never degrades, and if children eat it, it can cause brain damage. In the past, lead was used as a gasoline additive. As cars drove down the road, they sent a steady stream of lead out through their exhausts. Lead was also used in house paint, and as paint chipped away from the walls, the lead would fall to the ground and mix with the soil there. Both uses tailed off starting in the 1970s and had ended by the late 1980s.

We worry now about children playing in soil contaminated by lead and possibly eating it. Attorneys would like to sue the companies whose products caused this contamination, but they don't know whether to sue gasoline or paint manufacturers. They plan to measure lead in soil in various places to try to decide whether it is coming from auto exhausts or paint chips.

Sketch a plan of a neighborhood with roads, houses with yards, a park, a school, a freeway, and shops. Set up a scheme for sampling in this neighborhood to estimate how much lead is in the soil, and to decide whether it came from house paint or from car exhausts. Also figure out what other information you would want to record about the community. What sort of statistical analysis would you apply to the data you got from your investigation?

Today is the open house for prospective graduate students, so be prepared to have visitors in class.

Group 1:

Name	Email
Sen Yuan	yuan0066
Ann Pang	pangx044
Xiaopei Wang	wang1164
Songxuan Shen	shenx176
Brad Price	price412
Qian Chen	chen2291

Group 2:

Name	Email
Christina Knudson	knud0158
Mark Albrecht	albre116
Martin Bezener	beze0028
Ben Sherwood	sher0422
Pat Zimmerman	zimme450
Andy Johnson	joh03017

Group 3:

Name	Email
Steve Nydick	nydic001
Jeff Clobes	clobe017
Yiping Yuan	yuan0076
Andrea Olson	olso1925
Bo Ra Lee	leex4919

Group 4:

Name	Email
Stacy Orlett	moel0046
Christine Oehlert	oehl0010
Yunzhang Zhu	zhuxx351
Feng Yi	yixxx064
Jeff Jones	jone1087
Ying Zheng	zheng110

The chair for this week is Andrea Olson.