

GSA SUPPLEMENTAL DATA ITEM

Table S1. All predictor variables used for complete statistical analyses

Variable	Category	Experimental n	Control n
<i>Basic demographics</i>			
Gender	Male	329	116
	Female	349	88
	Other/no answer	179	87
Race	Hispanic	110	7
	Other	561	199
Ethnicity	American Indian or Alaskan Native	8	4
	Asian	23	6
	Black or African American	18	2
	Native Hawaiian or Pacific Islander	3	1
	White	515	176
	Two or more	41	10
	No answer	58	7
<i>Declared interest/experience</i>			
Major	STEM	10	12
	Geology	130	70
	Other	528	123
Site	Non-STEM	262	0
	Teaching focus (TF) sites	457	123
	Teaching/research (TR) sites	129	168
	Research focus (TR) site	669	205
Geoscience Interest Survey score		669	205
<i>AR field trip participation</i>			
3 modules (Geo. Time, Structures & Hydro)		391	291
2 modules (Geo. Time & Structures)		138	291
1 module (Geo. Time)		319	291

Table S2. Correlation table of all variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1 Site Classification	1.00																			
2 Age	-0.02 p=0.61	1.00																		
3 Gender	0.09 p=0.01	-0.12 p=0.00	1.00																	
4 Race	0.19 p=0.00	0.11 p=0.00	0.03 p=0.37	1.00																
5 Ethnicity	0.37 p=0.00	0.10 p=0.00	0.08 p=0.02	0.52 p=0.00	1.00															
6 Geo major	-0.11 p=0.00	0.09 p=0.01	-0.02 p=0.59	0.01 p=0.76	-0.04 p=0.20	1.00														
7 STEM major	-0.36 p=0.00	0.07 p=0.03	-0.14 p=0.00	-0.05 p=0.16	-0.12 p=0.00	0.28 p=0.00	1.00													
8 # modules complete	0.48 p=0.00	0.11 p=0.00	0.08 p=0.01	0.16 p=0.00	0.32 p=0.00	-0.09 p=0.01	0.03 p=0.37	1.00												
9 Structures module	0.37 p=0.00	0.09 p=0.01	0.06 p=0.07	0.18 p=0.00	0.30 p=0.00	-0.04 p=0.20	0.11 p=0.00	0.90 p=0.00	1.00											
10 Water module	0.37 p=0.00	0.17 p=0.00	0.09 p=0.01	0.18 p=0.00	0.33 p=0.00	-0.07 p=0.04	0.13 p=0.00	0.86 p=0.00	0.78 p=0.00	1.00										
11 Geo. Time module	0.46 p=0.00	0.01 p=0.78	0.07 p=0.05	0.05 p=0.12	0.16 p=0.00	-0.12 p=0.00	-0.19 p=0.00	0.79 p=0.00	0.55 p=0.00	0.42 p=0.00	1.00									
12 Motivation pre-score	0.09 p=0.01	0.14 p=0.00	-0.07 p=0.05	0.07 p=0.04	0.11 p=0.00	0.24 p=0.00	0.15 p=0.00	0.11 p=0.00	0.13 p=0.00	0.11 p=0.00	0.04 p=0.24	1.00								
13 Geo. Time pre-score	-0.14 p=0.00	0.02 p=0.54	0.05 p=0.15	-0.04 p=0.30	-0.07 p=0.05	0.03 p=0.34	0.16 p=0.00	0.08 p=0.03	0.07 p=0.03	0.05 p=0.13	0.07 p=0.05	0.12 p=0.00	1.00							
14 Water pre-score	-0.14 p=0.00	0.12 p=0.00	-0.13 p=0.00	-0.07 p=0.08	-0.10 p=0.01	0.06 p=0.12	0.22 p=0.00	0.04 p=0.25	0.09 p=0.02	0.05 p=0.15	-0.04 p=0.35	0.17 p=0.00	0.27 p=0.00	1.00						
15 Structure pre-score	-0.10 p=0.01	0.00 p=0.92	-0.04 p=0.25	-0.04 p=0.31	-0.10 p=0.01	0.05 p=0.15	0.10 p=0.01	0.08 p=0.04	0.14 p=0.00	0.00 p=0.90	0.06 p=0.13	0.10 p=0.00	0.23 p=0.00	0.28 p=0.00	1.00					
16 Motivation post-score	0.15 p=0.00	0.20 p=0.00	-0.02 p=0.60	0.09 p=0.03	0.14 p=0.00	0.23 p=0.00	0.20 p=0.00	0.31 p=0.00	0.30 p=0.00	0.27 p=0.00	0.19 p=0.00	0.60 p=0.00	0.14 p=0.00	0.25 p=0.00	0.11 p=0.01	1.00				
17 Geo. Time post-score	-0.19 p=0.00	0.02 p=0.55	0.01 p=0.72	0.05 p=0.19	-0.05 p=0.24	0.08 p=0.03	0.19 p=0.00	-0.02 p=0.56	-0.06 p=0.11	-0.02 p=0.64	0.03 p=0.35	0.06 p=0.12	0.32 p=0.00	0.25 p=0.00	0.17 p=0.00	0.14 p=0.00	1.00			
18 Structures post-score	-0.21 p=0.00	0.11 p=0.01	-0.03 p=0.44	0.02 p=0.58	-0.04 p=0.41	0.07 p=0.11	0.29 p=0.00	0.10 p=0.02	0.08 p=0.05	0.10 p=0.01	0.06 p=0.14	0.17 p=0.00	0.27 p=0.00	0.25 p=0.00	0.27 p=0.00	0.27 p=0.00	0.37 p=0.00	1.00		
19 Water post-score	-0.22 p=0.00	0.17 p=0.00	-0.07 p=0.14	-0.03 p=0.49	-0.06 p=0.18	0.08 p=0.10	0.26 p=0.00	0.11 p=0.01	0.15 p=0.00	0.08 p=0.06	0.05 p=0.21	0.16 p=0.00	0.28 p=0.00	0.39 p=0.00	0.20 p=0.00	0.26 p=0.00	0.32 p=0.00	0.36 p=0.00	1.00	

meets 0.3 threshold accounting for almost 10% variation

significantly correlated with other predictor variables

significantly correlated with outcome variable