

## SUPPLEMENTAL MATERIAL B - DESCRIPTIVE STATISTICS OF THE MEASURED VARIABLES

In Table S1 we report the descriptive statistics of interest, perceived utility, and identity items. Table S2 shows the breakdown of knowledge and confidence responses for seasonal changes, Moon phases, and eclipses. In both cases, mean values for the whole sample, for each school level and, separately, for girls and boys, as well as the corresponding analysis of the variance tests are reported.

TABLE S1. Descriptive statistics for interest, utility, and identity items.

Items	Variable	<i>M</i>	<i>SD</i>	<i>Sk.</i>	<i>Kur.</i>	<i>M</i> <sub>Girls</sub>	<i>M</i> <sub>Boys</sub>	<i>t</i> ( <i>df</i> )
<i>I like to observe the night sky</i>	Overall	3.80	1.11	-0.577	-0.579	4.03	3.55	6.158(762) <sup>***</sup>
	5th grade	3.97	1.08	-0.834	-0.109	4.13	3.78	2.800(276) <sup>**</sup>
	6th grade	3.58	1.14	-0.335	-0.799	3.76	3.39	2.649(262) <sup>**</sup>
	8th grade	3.87	1.06	-0.609	-0.61	4.21	3.48	4.954(162) <sup>**</sup>
	9th grade	3.73	1.06	-0.322	-0.625	4.03	3.30	2.523(47) <sup>*</sup>
		F (3) = 6.208 <sup>***</sup>						
<i>I would like to do astronomy as a hobby</i>	Overall	2.95	1.14	0.067	-0.741	3.01	2.87	1.745(803) <sup>ns</sup>
	5th grade	3.22	1.09	-0.163	-0.515	3.36	3.06	2.446(301) <sup>*</sup>
	6th grade	2.89	1.14	0.069	-0.711	2.91	2.86	0.349(262) <sup>ns</sup>
	8th grade	2.62	1.15	0.408	-0.619	2.57	2.67	-0.570(187) <sup>ns</sup>
	9th grade	2.88	1.07	0.569	-0.51	3.10	2.55	1.817(47) <sup>ns</sup>
		F (3)=11.636 <sup>***</sup>						
<i>I would like to use a telescope</i>	Overall	3.89	1.12	-0.763	-0.21	3.99	3.77	2.750(773) <sup>**</sup>
	5th grade	4.14	1.04	-1.10	0.571	4.23	4.04	1.631(301) <sup>ns</sup>
	6th grade	3.80	1.19	-0.666	-0.502	3.93	3.68	1.704(262) <sup>ns</sup>
	8th grade	3.67	1.10	-0.634	-0.228	3.74	3.59	0.941(187) <sup>ns</sup>
	9th grade	3.63	0.93	0.001	-0.858	3.83	3.35	1.811(47) <sup>ns</sup>
		F (3)=9.080 <sup>***</sup>						
<i>I find astronomy interesting</i>	Overall	3.56	1.04	-0.397	-0.295	3.64	3.47	2.260(765) <sup>*</sup>
	5th grade	3.76	1.00	-0.585	-0.031	3.83	3.68	1.244(301) <sup>ns</sup>
	6th grade	3.41	1.06	-0.328	-0.248	3.51	3.32	1.474(262) <sup>ns</sup>
	8th grade	3.50	1.05	-0.327	-0.432	3.53	3.45	0.522(187) <sup>ns</sup>
	9th grade	3.35	0.97	0.096	-0.395	3.55	3.05	1.823(47) <sup>ns</sup>
		F (3)=6.500 <sup>***</sup>						
<i>I have a strong interest in learning things about the universe</i>	Overall	3.57	1.1	-0.357	-0.591	3.56	3.57	-0.206(803) <sup>ns</sup>
	5th grade	3.86	1.07	-0.783	0.012	3.89	3.84	0.408(301) <sup>ns</sup>
	6th grade	3.43	1.14	-0.256	-0.665	3.45	3.42	0.230(262) <sup>ns</sup>
	8th grade	3.33	1.03	-0.088	-0.48	3.23	3.45	-1.513(187) <sup>ns</sup>
	9th grade	3.33	0.94	0.372	-0.662	3.38	3.25	0.467(47) <sup>ns</sup>
		F (3)=12.883 <sup>***</sup>						
<i>I would like to be an astronomer</i>	Overall	2.48	1.17	0.373	-0.714	2.51	2.46	0.611(803) <sup>ns</sup>
	5th grade	2.70	1.24	0.212	-0.964	2.87	2.51	2.580(300) <sup>*</sup>
	6th grade	2.44	1.11	0.314	-0.671	2.45	2.42	0.180(262) <sup>ns</sup>
	8th grade	2.24	1.10	0.623	-0.305	2.06	2.45	2.501(187) <sup>*</sup>
	9th grade	2.35	0.99	0.311	-0.281	2.34	2.35	-0.018(47) <sup>ns</sup>
		F (3)=6.653 <sup>***</sup>						
<i>I think that learning astronomy is useful for my future</i>	Overall	2.99	1.31	-0.047	-1.03	2.92	3.06	-1.577(802) <sup>ns</sup>
	5th grade	3.28	1.43	-0.372	-1.136	3.32	3.24	0.507(301) <sup>ns</sup>
	6th grade	2.85	1.29	0.064	-0.942	2.75	2.96	-1.358(262) <sup>ns</sup>
	8th grade	2.72	1.14	0.164	-0.604	2.50	2.99	-3.037(187) <sup>**</sup>
	9th grade	2.88	0.97	-0.315	-0.346	2.93	2.80	0.460(47) <sup>ns</sup>
		F (3)=8.953 <sup>***</sup>						

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 10^{-4}$

TABLE S2. Descriptive statistics for knowledge and confidence items.

Items	Variable	$M$	$SD$	$Sk.$	$Kur.$	$M_{Girls}$	$M_{Boys}$	$t (df)$
<i>Seasonal change knowledge</i>	Overall	0.37	0.33	0.415	-0.751	0.40	0.35	1.883(803) <sup>ns</sup>
	5th grade	0.39	0.35	0.321	-0.909	0.40	0.38	0.508(301) <sup>ns</sup>
	6th grade	0.41	0.37	0.323	-1.146	0.47	0.34	2.734(262) <sup>**</sup>
	8th grade	0.32	0.25	0.270	-0.587	0.32	0.33	-0.256(187) <sup>ns</sup>
	9th grade	0.30	0.22	0.103	-0.573	0.30	0.30	-0.018(47) <sup>ns</sup>
	F(3) = 3.317*							
<i>Seasonal change confidence</i>	Overall	3.43	0.98	-0.246	-0.485	3.36	3.51	-2.198(803) <sup>*</sup>
	5th grade	3.51	0.90	-0.296	-0.273	3.47	3.54	-0.710(301) <sup>ns</sup>
	6th grade	3.57	1.08	-0.460	-0.505	3.44	3.70	-1.967(262) <sup>ns</sup>
	8th grade	3.15	0.94	0.041	-0.545	3.07	3.25	-1.319(187) <sup>ns</sup>
	9th grade	3.33	0.75	-0.121	-0.076	3.40	3.22	0.846(47) <sup>ns</sup>
	F(3)=8.048***							
<i>Moon phases knowledge</i>	Overall	0.40	0.33	0.320	-0.821	0.41	0.39	0.917(803) <sup>ns</sup>
	5th grade	0.43	0.35	0.215	-0.993	0.43	0.42	0.386(301) <sup>ns</sup>
	6th grade	0.48	0.34	0.064	-0.873	0.49	0.46	0.823(262) <sup>ns</sup>
	8th grade	0.26	0.26	0.605	-0.477	0.28	0.24	0.919(187) <sup>ns</sup>
	9th grade	0.35	0.25	-0.070	-1.246	0.34	0.35	-0.069(47) <sup>ns</sup>
	F(3)=17.371***							
<i>Moon phases confidence</i>	Overall	3.09	0.94	0.006	-0.14	3.06	3.12	-0.880(803) <sup>ns</sup>
	5th grade	3.17	0.87	0.068	-0.192	3.21	3.13	0.766(275) <sup>ns</sup>
	6th grade	3.18	1.01	-0.129	-0.522	3.14	3.22	-0.684(262) <sup>ns</sup>
	8th grade	2.85	0.92	0.088	-0.277	2.75	2.95	-1.479(187) <sup>ns</sup>
	9th grade	3.00	0.91	0.245	-0.675	2.94	3.08	-0.530(47) <sup>ns</sup>
	F(3)=6.167***							
<i>Eclipses knowledge</i>	Overall	0.45	0.36	0.167	-1.092	0.44	0.46	-0.838(803) <sup>ns</sup>
	5th grade	0.46	0.39	0.151	-1.34	0.45	0.46	-0.322(301) <sup>ns</sup>
	6th grade	0.52	0.38	-0.058	-1.293	0.50	0.53	-0.733(262) <sup>ns</sup>
	8th grade	0.38	0.25	-0.015	-0.798	0.38	0.37	0.212(187) <sup>ns</sup>
	9th grade	0.39	0.24	-0.254	-0.982	0.37	0.42	-0.699(47) <sup>ns</sup>
	F(3)=6.245***							
<i>Eclipses confidence</i>	Overall	3.36	0.98	-0.014	-0.557	3.34	3.39	-0.812(803) <sup>ns</sup>
	5th grade	3.40	0.95	0.123	-0.567	3.39	3.41	-0.192(301) <sup>ns</sup>
	6th grade	3.47	1.05	-0.221	-0.618	3.46	3.49	-0.287(262) <sup>ns</sup>
	8th grade	3.15	0.94	0.041	-0.545	3.07	3.25	-1.319(187) <sup>ns</sup>
	9th grade	3.33	0.75	-0.121	-0.076	3.40	3.22	0.846(47) <sup>ns</sup>
	F(3)=4.381**							

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 10^{-4}$