

Dear 5th and 6th Grade Parents

Tuesday night, August 14th 8:00 pm - 9:15ish is star viewing night (and planets)!

The invitation is for 5th and 6th graders, their parents, and their families. If the sky is clear, you have an opportunity to view Jupiter and Saturn and their moons and a waxing crescent moon. **If it is cloudy, then the planet and star viewing night will be canceled.**

We are fortunate to have a representative from the San Diego Astronomy Association to join us for our viewing night bringing a telescope and a wealth of knowledge. There will be at least three telescopes set up to view the planets, stars, and the moon. Please walk through the main gate of the school. The telescopes will be set up outside the door of **classroom 801** (out on the playground blacktop near the wall ball courts) from 8:00 pm until about 9:15 pm. I know it's late, but it doesn't get dark until then.

If your child wishes to come and see the planets, your child **must be accompanied by a parent or guardian**. You are welcome to bring your own telescope or binoculars with you if you would like.

There are some free computer programs to help you learn about the solar system. These programs are available on the internet.

Celestia - used to view the planets and their orbits <https://celestia.space/>

Stellarium - used to view the stars and planets in the night sky www.stellarium.org/

To find out when visible satellites pass overhead, check out <http://heavens-above.com>

Satellite predictions and other astronomical data are customized for your location.

Here is a list of visible satellite passes on August 14th.

Month August 2018 Day 14 Morning Evening

Thank you,
Mr. Musolf

Minimum brightness: 3.0 3.5 4.0 4.5 5.0

Satellite	Brightness (mag)	Start			Highest point			End		
		Time	Altitude	Azimuth	Time	Altitude	Azimuth	Time	Altitude	Azimuth
Cosmos 389 Rocket	2.8	19:51:29	10°	SSW	19:54:55	71°	W	19:58:20	10°	N
CZ-2D R/B	3.4	19:53:45	10°	SSE	19:57:28	53°	ENE	20:01:11	10°	N
HJ-1C	3.4	19:56:48	10°	SSE	20:00:08	68°	ENE	20:03:30	10°	N
SJ 16-02	1.8	19:59:19	10°	S	20:03:25	40°	E	20:07:32	10°	NNE
Cosmos 1939 Rocket	3.0	20:15:03	10°	SSE	20:18:49	51°	ENE	20:22:40	10°	N
USA 186	1.6	20:19:35	11°	SSE	20:21:58	46°	ENE	20:24:42	10°	N
ERBS	3.1	20:19:18	10°	NNW	20:22:26	35°	NE	20:24:35	17°	ESE
YAOGAN 6	2.6	20:22:56	10°	S	20:26:35	86°	WSW	20:30:18	10°	NNW
COSMOS 2428	3.1	20:25:21	10°	SSW	20:30:58	68°	WNW	20:36:39	10°	NNE
RESURS DK-1	2.8	20:29:14	10°	N	20:33:12	45°	ENE	20:35:46	20°	SE
ATLAS 5 CENTAUR R/B	2.7	20:32:33	10°	S	20:35:45	51°	ESE	20:44:48	10°	NE
Cosmos 2333 Rocket	2.2	20:31:42	10°	SSW	20:37:25	88°	ESE	20:43:12	10°	NNE
Cosmos 1733 Rocket	3.0	20:38:51	10°	S	20:43:17	80°	E	20:47:43	10°	N
H-2A R/B	3.3	20:48:39	20°	E	20:50:01	23°	ENE	20:53:56	10°	NNE
Resurs 01 Rocket	1.5	20:55:39	20°	SSE	20:58:41	84°	E	21:03:08	10°	N
ATLAS CENTAUR R/B	3.3	20:58:37	10°	N	21:02:14	21°	NE	21:03:12	19°	ENE
Cosmos 2237 Rocket	2.1	20:59:28	10°	SSW	21:05:09	78°	ESE	21:10:51	10°	NNE
Okean 3	3.4	21:03:30	10°	N	21:07:47	68°	E	21:09:07	41°	SSE
Cosmos 1674 Rocket	3.5	21:06:54	10°	N	21:11:22	74°	E	21:12:53	40°	SSE
OA0 3 Rocket	3.5	21:07:06	10°	W	21:11:56	66°	N	21:14:14	31°	ENE
Cosmos 1340 Rocket	2.8	21:22:44	10°	N	21:26:49	84°	W	21:27:14	70°	S
SL-16 R/B	2.2	21:40:47	56°	E	21:40:47	56°	E	21:45:56	10°	NNE
ERS-1 Rocket	3.4	21:48:38	47°	NE	21:48:38	47°	NE	21:52:48	10°	N
ERS-2	3.3	21:51:14	42°	NW	21:51:14	42°	NW	21:53:53	10°	NNW
Cosmos 2278 Rocket	2.0	21:47:52	10°	NNW	21:53:33	86°	WSW	21:53:59	77°	S
Lacrosse 4 Rocket	3.3	21:58:59	10°	N	22:01:03	24°	NNE	22:01:03	24°	NNE
H-2A R/B	3.3	22:29:17	34°	W	22:29:17	34°	W	22:33:48	10°	NNW