Let's take part in a global initiative that looks at light pollution: "Globe at Night".

Globe at Night

Globe at Night is an international citizen-science campaign to raise public awareness of the impact of light pollution by inviting citizen-scientists to measure & submit their night sky brightness observations.

Light pollution

Light pollution is excessive, misdirected, or obtrusive artificial (usually outdoor) light. Too much light pollution has consequences: it washes out starlight in the night sky, interferes with astronomical research, disrupts ecosystems, has adverse health effects and wastes energy.

Effects of Light Pollution

Read more about the effects of light pollution on the Globe@Night website at http://www.globeatnight.org/light-pollution.php

Step 1 – Find the longitude and latitude
of the site of your observation. Use www.streetmaps.co.za to find your address or exact location or Google Earth or www.itouchmap.com/latlong.html or your GPS if you happen to have one.

Step 2 – Find Orion (a prominent constellation) in the western sky
Go outside an hour after sunset, about 20:30 – 22:00 local time, on any day between 19 to 28 January or 18 and 27 February 2017. Orion looks very much like a person. You should be able to spot Orion's Belt, which is made of three bright stars in a straight line. One of Orion's legs is represented by the bright star Rigel, one of the brightest stars in the night sky and his two shoulders are made of the stars Bellatrix and Betelgeuse. You can see Betelgeuse's reddish colour without a telescope. Allow your eyes to get used to the dark for about 20 minutes before you make your observation. Compare what (how many stars of Orion and his surrounds) you see to the different charts given on the reverse side of this page. To preserve your night vision use a red light while writing down your observation. (You can make a cheap red light by covering a flashlight with a brown paper bag or red cellophane; secure the bag with a rubber band.)

Step 3 – Record you observation
Decide which of the magnitude charts on the pack of this page is closest to your observation. Mark it clearly and complete all the other information asked for.

Step 4 – Report your observation
at http://www.globeatnight.org/webapp/ Or bring this sheet with you on 25 February so that you can do it at Sci-Enza.

Date: _____ January /February 2017

Observation Time: ____:____ PM local time (HH:MM)

Name:

_____

Comments on location: (e.g. There is a street light within 50 m that is shielded from my view.)

_____

_____

Latitude (in deg/min/sec or decimal degrees):	Longitude (in deg/min/sec or decimal degrees):
_____ deg ____min_____sec or _____ _____ decimal degrees (South)	_____deg ____min_____sec or _____ decimal degrees (East)

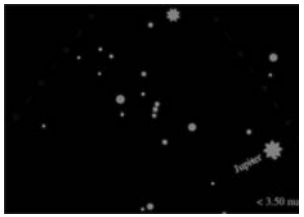
Country: South Africa

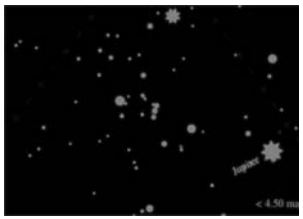
Weather conditions: _____

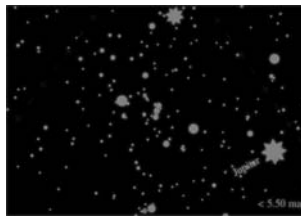
Find Orion by going outside an hour after sunset (about 7-10pm local time). Match your night time sky to one of our magnitude charts:

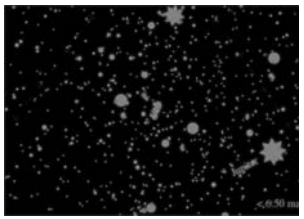

Magnitude 1


Magnitude 2


Magnitude 3


Magnitude 4


Magnitude 5


Magnitude 6

Group R - Homework for 25 February 2017

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Globe at Night

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Step 4 – Report your observation
at http://www.globeatnight.org/webapp/ Or bring this sheet with you on 25 February so that you can do it at Sci-Enza.

Date: _____ January /February 2017

Observation Time: ____:____ PM local time (HH:MM)

Name:

_____

Comments on location: (e.g. There is a street light within 50 m that is shielded from my view.)

_____

_____

Latitude (in deg/min/sec or decimal degrees):	Longitude (in deg/min/sec or decimal degrees):
_____ deg ____min_____sec or _____ _____ decimal degrees (South)	_____deg ____min_____sec or _____ decimal degrees (East)

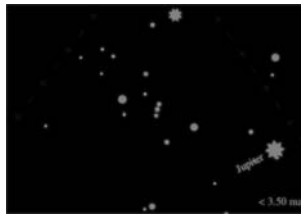
Country: South Africa

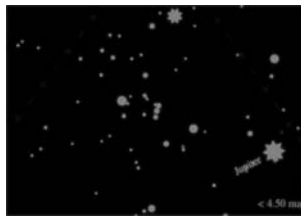
Weather conditions: _____

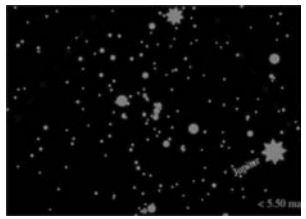
Find Orion by going outside an hour after sunset (about 7-10pm local time). Match your night time sky to one of our magnitude charts:

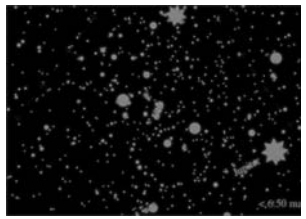

Magnitude 1


Magnitude 2


Magnitude 3


Magnitude 4


Magnitude 5


Magnitude 6

Group R - Homework for 25 February 2017