

This Guide was prepared by the Southern Arizona Section of IDA or SA-IDA (an all volunteer non-profit group) to help students, families and businesses with ideas of things they can do to help preserve and protect the nighttime environment and our heritage of dark skies through quality outdoor lighting. Check out our new Web site at SA-IDA.ORG.

“Light Pollution”

The only Pollution that costs more to Perpetuate than to Eliminate!

Good Outdoor Lighting Will:

- { Save energy which also reduces air pollution from power generating plants. The US spends more than \$2 billion a year on wasted light radiating skyward from bad fixtures.
- { Make a Safer and more Secure night time environment. Glare and harsh lighting creates shadows and causes poor visibility.
- { Preserve dark skies necessary for our astronomers and allow the casual observer to enjoy starry skies from their backyard .
- { Minimize the harm to our plants, insects and wildlife by not disrupting their seasonal cycles and habitat with artificial light.
- { Enhance the natural beauty of our cities and neighborhoods.

Donations are Always Appreciated!

Tax deductible 501(c) (3)

Parent Organization:

International Dark-Sky Association (IDA)
3225 N. First Ave., Tucson, AZ 85719
(520) 293-3198 Web Site: www.darksky.org

Southern Arizona Section of IDA (SA-IDA):

Meetings are on the 2nd Wednesday of each month, 5:30 PM, 3225 N. First Ave., Tucson, AZ. All are welcome to attend and participate in our meetings.
E-Mail: ask@sa-ida.org Web Site: www.sa-ida.org
John Polacheck, V.Pres. of SA-IDA, (520) 622-4599

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You Can Help Restore and Protect the Nighttime Environment

*A Guide for
Students, Families &
Businesses*

Select Outdoor Lights So They:

Are Cost Effective - The cost of lighting is not only the initial cost of the fixture and installation but the annual operating cost. For example, a fixture and five year operating cost of a Quartz floodlight may be over \$400 while a comparable compact fluorescent floodlight is just over \$100. Turn on outdoor lights **only when needed** and consider using motion sensors properly aimed and adjusted to turn them on and off.

Minimize Glare & Excessive Brightness - Glare occurs when you can see light rays directly radiating towards you from the fixture or bulb. It can hamper vision of drivers, pedestrians, and cyclists which often creates a serious hazard. It can take the human eye over 10 minutes at night to adjust to normal conditions after being in an excessively bright area (like under a gas station canopy).

Eliminate Sky Glow - Light fixtures that allow light to travel outward and/or upward create Sky Glow. This is a waste of energy and very harmful to night sky viewing (amateur, professional, and casual observers of the stars and planets). It is also harmful to migrating birds and many other animals.

Eliminate Light Trespass - Light that travels outward (horizontal) leaves your property and shines somewhere else. This can be very annoying and offensive to a neighbor often many blocks away. All lighting should be directed downward by using fixtures with “full cut off” shields (the light source should not be visible from about 20 feet).

Conform to Local Lighting Ordinances - Many States, Counties, and Cities (including Arizona, Pima County, Tucson/Oro Valley and many other cities) have laws pertaining to outdoor lighting. A 100 watt incandescent light bulb or a 25 watt compact fluorescent put out about 1800 lumens of light. Many ordinances apply to 2000 lumens and above. Always use full cut-off/shielded fixtures.

Connect to the IDA web site (www.darksky.org) for tons of information (see the “Resources” page).

Things Students Can Do

- C Prepare a talk for classmates about light pollution or the importance of Dark Skies.
- C Design a class project that everyone can be a part of about Light Pollution or Dark Skies.
- C Choose Light Pollution or some topic related to Dark Skies as a subject for a Science Fair Project. SA-IDA is offering cash and other prizes for the best projects.
- C Make a “Light Pollution Catcher” game and play with a friend. The game can be downloaded from our www.sa-ida.org web site - click on the [Resources](#) page.
- C Talk to your teacher about having a person from Dark Skies come to your class to talk or put on a demonstration.
- C Initiate a project at your school to review and correct any poor or bad outdoor lighting on your school grounds.
- C Join the International Dark-Sky Association (IDA) and automatically become a local SA-IDA member. Joining helps fund studies and research and to learn more about Light Pollution and its harmful effects.
- C Come to one of our monthly meetings and help with one of our projects or offer to start a new one.

Keep the Southern Arizona Section of the International Dark-Sky Association (SA-IDA) informed of your projects, activities and successes and you might get published on our web site: www.sa-ida.org.
Send your information to: info@sa-ida.org.

Things Families Can Do

- C Review your home or living area for Good outdoor lighting. Use the blue “You Can Make a Difference with Good Outdoor Lighting...” brochure as a guide.

Look at your house from the outside at night or better yet, from you neighbors view? Be sure all fixtures have full cut-off shields and do not emit light horizontally or upward into the sky. Only turn on Outdoor Lights when needed.
- C Survey your neighborhood for Good and Bad outdoor lights. Tell neighbors who have Good lights how much they are appreciated.

If there is a bright outdoor light that gives off a lot of Glare or Sky Glow (light shining outwards or upwards), talk to the owner politely (children should always be accompanied by an adult) to see if they are aware of it and if they would be willing to do something about it. Give them a blue brochure as a guide and for background information. If they are not willing to do anything and you believe the light may be illegal (does not meet city or county lighting codes), fill out an Obtrusive Lighting Complaint Form and mail it as directed on the form (see our web site [Resources](#) page for the Complaint form).
- C Come to one of our Dark Skies monthly meetings and help with one of our projects or offer to start a new one. Gain knowledge about Outdoor Lighting issues and meet some of the people who are actively working to reduce light pollution.
- C Join the International Dark- Sky Association (IDA).

Things a Business / Group Can Do

- C Get a slot on the agenda at one of your neighborhood or Home Owners Association meetings to talk about the importance of Good outdoor lighting. Hand out information brochures. Talk about lights that are good and ones that are not so good and explain why. Don't get personal and start any wars. Tell them about web sites (sa-ida.org) and the IDA web site (www.darksky.org) which have lots of very beneficial information and materials under their Resources page.
- C Review your business properties to see if they have any Poor outdoor lighting and see if you can make improvements. Hand out Good outdoor lighting educational material in your stores. Invite IDA speakers to your business clubs as guest speakers.
- C At the start of a business meeting or a star party or other meeting, give a brief introduction about Dark Skies (hand out a Fact Sheet) stating the importance of doing something to help maintain them.
- C Scout Leaders or other groups, contact IDA or SA-IDA to see what materials are available for discussion for you particular age group. Create a community project or merit badge to help reduce Light Pollution in your area.
- C Join the International Dark- Sky Association (IDA)
- C Make a Tax Deductible Donation. IDA is a 501(c) 3 non-profit organization which means your donations are tax deductible. Donations can be marked for specific projects or Sections like SA-IDA. We need funds to print brochures, give award certificates, and other educational activities.