

UV-Detecting Beads



These UV-detecting beads are normally **white**, but turn **color** when exposed to **UV light**!



Become more aware of where and when you are exposed to the sun's harmful **UVA and UVB rays**!

Wear the beads on your wrist or neck, or hang them on your purse, keys, or backpack.



When the beads change **color**, this serves as a reminder to wear your sunscreen and hat.



PRICING:

All proceeds from the sales of the beads will go to an **organization that promotes sun safety**.

Note: 1 packet of each color bead and 1 packet of rawhide makes 2 bracelets, with 5 extra beads.

5 Pink beads \$1

5 Orange beads \$1

5 Yellow beads \$1

5 Blue beads \$1

5 Purple beads \$1

3 Feet of Rawhide \$1

Add 8.3% AZ Sales Tax

You may purchase beads and rawhide in person at our **Phoenix** location only (not our Gilbert location).

If you have further questions about the beads after reviewing the information on this website, please complete the online form under the tab "Contact Us."

If you would like to order beads and have them sent to you, please provide all the information provided below and send it to us either by:

- 1) **Fax 480-706-8157**
- 2) **Online form under the tab "Contact Us"** – just make sure you include the information below.

Someone will then contact you to make payment arrangements as soon as possible. Please do not expect an immediate reply.

Note: the transaction is not complete until we actually receive payment.

PLEASE DO NOT CALL THE OFFICE FOR INFORMATION ABOUT OR FOR ORDERING BEADS. Our phone lines are already saturated with calls for our busy clinic.

To order beads that will be shipped, please complete the following:

Name: _____

Phone number(s): (_____) _____ - _____ or (_____) _____ - _____

Email address: _____

Shipping address:

Name: _____

Address: _____

City, State, Zip: _____

Questions or Comments:

Quantity and subtotal of each:

	Quantity	Subtotal
5 Pink beads \$1	_____	\$_____
5 Orange beads \$1	_____	\$_____
5 Yellow beads \$1	_____	\$_____
5 Blue beads \$1	_____	\$_____
5 Purple beads \$1	_____	\$_____
3 Feet of Rawhide \$1	_____	\$_____

Please see information below for approximate bead and rawhide requirements.

Product subtotal: \$_____

Add 8.3% AZ Sales Tax \$_____

Add shipping and handling \$_____

***Please look at the chart provided below to determine sales tax, shipping and handling charges, and total**

Note: we have not yet determined the S&H charges. It will cover the cost of the envelope and postage by the USPS. We estimate \$2-\$3 in most cases, for small orders within the U.S.

TOTAL due \$_____

RAWHIDE - approximate lengths you will need (1 yard = 36 inches = 3 feet):

- Large bracelet (e.g., men's): at least 18 inches
- Medium bracelet (e.g., petite women's): at least 16 inches
- Small bracelet (e.g., small child's): at least 15 inches
- Zipper pull: approximately 15 inches
- Long necklace: approximately 36 inches

BEADS – approximate number of beads you will need:

- The provided directions suggest 10 beads (2 beads of each color) per bracelet, zipper pull, etc.
- We provide beads in the following quantities:
 - 5 Pink beads \$1
 - 5 Orange beads \$1
 - 5 Yellow beads \$1
 - 5 Blue beads \$1
 - 5 Purple beads \$1
- If you purchase one pack of each color bead plus one pack of rawhide (product total = \$6), you can make two bracelets or zipper pulls, leaving you with 5 extra beads (one of each color).

Product Subtotal	Add 8.3% AZ sales tax	Add \$2 S&H **	TOTAL	Product Subtotal	Add 8.3% AZ sales tax	Add \$2 S&H	TOTAL
\$1.00	\$0.08	\$2.00	\$3.08	\$26.00	\$2.16	\$2.00	\$30.16
\$2.00	\$0.17	\$2.00	\$4.17	\$27.00	\$2.24	\$2.00	\$31.24
\$3.00	\$0.25	\$2.00	\$5.25	\$28.00	\$2.32	\$2.00	\$32.32
\$4.00	\$0.33	\$2.00	\$6.33	\$29.00	\$2.41	\$2.00	\$33.41
\$5.00	\$0.42	\$2.00	\$7.42	\$30.00	\$2.49	\$2.00	\$34.49
\$6.00	\$0.50	\$2.00	\$8.50	\$31.00	\$2.57	\$2.00	\$35.57
\$7.00	\$0.58	\$2.00	\$9.58	\$32.00	\$2.66	\$2.00	\$36.66
\$8.00	\$0.66	\$2.00	\$10.66	\$33.00	\$2.74	\$2.00	\$37.74
\$9.00	\$0.75	\$2.00	\$11.75	\$34.00	\$2.82	\$2.00	\$38.82
\$10.00	\$0.83	\$2.00	\$12.83	\$35.00	\$2.91	\$2.00	\$39.91
\$11.00	\$0.91	\$2.00	\$13.91	\$36.00	\$2.99	\$2.00	\$40.99
\$12.00	\$1.00	\$2.00	\$15.00	\$37.00	\$3.07	\$2.00	\$42.07
\$13.00	\$1.08	\$2.00	\$16.08	\$38.00	\$3.15	\$2.00	\$43.15
\$14.00	\$1.16	\$2.00	\$17.16	\$39.00	\$3.24	\$2.00	\$44.24
\$15.00	\$1.25	\$2.00	\$18.25	\$40.00	\$3.32	\$2.00	\$45.32
\$16.00	\$1.33	\$2.00	\$19.33	\$41.00	\$3.40	\$2.00	\$46.40
\$17.00	\$1.41	\$2.00	\$20.41	\$42.00	\$3.49	\$2.00	\$47.49
\$18.00	\$1.49	\$2.00	\$21.49	\$43.00	\$3.57	\$2.00	\$48.57
\$19.00	\$1.58	\$2.00	\$22.58	\$44.00	\$3.65	\$2.00	\$49.65
\$20.00	\$1.66	\$2.00	\$23.66	\$45.00	\$3.74	\$2.00	\$50.74
\$21.00	\$1.74	\$2.00	\$24.74	\$46.00	\$3.82	\$2.00	\$51.82
\$22.00	\$1.83	\$2.00	\$25.83	\$47.00	\$3.90	\$2.00	\$52.90
\$23.00	\$1.91	\$2.00	\$26.91	\$48.00	\$3.98	\$2.00	\$53.98
\$24.00	\$1.99	\$2.00	\$27.99	\$49.00	\$4.07	\$2.00	\$55.07
\$25.00	\$2.08	\$2.00	\$29.08	\$50.00	\$4.15	\$2.00	\$56.15

*** more than \$50

** Shipping and Handling charges: we have not yet determined the S&H charges. It will cover the cost of the envelope and postage by the USPS. We estimate \$2-\$3 in most cases, for small orders within the U.S. This \$2 charge may be increased if needed to cover the mentioned costs. You will be notified of any change prior to completing your transaction.

*** If your total exceeds \$50, we will notify you of your final charges prior to completing your transaction.

CREATING A UV-DETECTING BRACELET

These beads are colorless, but turn color when exposed to ultraviolet (UV) light in the range of 300-360nm. This includes part of the UVA (320-400nm) and UVB (280-320nm) spectrums, but they are not affected by visible light (400-700nm). These beads will educate you about the presence of UV light and serve as a reminder to protect yourself from the harmful UVA and UVB rays!

1. Cut the rawhide to the approximate length needed, accounting for the knots and the length needed to fit over the hand. Here are some general guidelines and considerations:

- Large bracelet (e.g., men's): at least 18 inches
- Medium bracelet (e.g., petite women's): at least 16 inches
- Small bracelet (e.g., small child's): at least 15 inches



2. String ten UV-beads in the desired pattern (e.g., pink-orange-yellow-blue-purple-purple-blue-yellow-orange-pink).
3. Tie a knot at each end of the beads so that they are centered.



4. Loop one free end around the other free end two times



5. Loop the same free end around and through the two loops you just made, to create a knot.



6. Pull to tighten the knot, leaving only a short free end at the end of the knot.



7. Take the remaining long free end and create another double loop around the other side of the bracelet



8. Pull to tighten the knot, again leaving only a short free end at the end of the knot.



9. The knots will slide across the bracelet to make the loop larger and smaller.
10. Slide the knots towards each other to make the bracelet loop larger so that it fits over your hand.
11. Slide the knots towards the stationary knots at either side of the beads to make the bracelet loop smaller to fit more snugly around your wrist.

DR. YUE WOULD LOVE TO HAVE A PICTURE OF YOU SHOWING OFF YOUR UV-DETECTING BEADS, TO SHOW US WHAT YOU CREATED, HOW IT IS A PART OF YOUR LIFESTYLE, AND HOW IT REMINDS YOU TO PROTECT YOURSELF FROM THE SUN!

Other ideas:

- Make a necklace. You can use more beads if you want. One yard (3 feet) of rawhide allows you to slip it over your head.
- Make a zipper pull for your backpack, purse, or other bag. The colors may stay more vibrant if your sunscreen is not rubbing off onto the beads (e.g., when it is on your hand as a bracelet).
- Make an anklet.
- Incorporate them into other forms of jewelry (chains, colored strings, etc.) Use your imagination and give us your ideas!
- Share the meaning of the beads with others to make them more aware of the presence of UV radiation and its harmful effects.

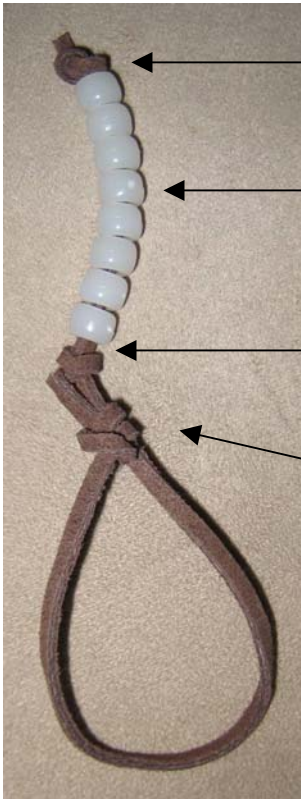
Please make sure you read the **“Sun Safety” pamphlet** to understand the prevalence of UV radiation and how to protect yourself from its harmful effects. Then try testing for the presence and the intensity of UV radiation under various conditions, such as:

- Early or late in the day vs. midday – although UVB is more intense at midday, UVA is still present throughout the day.
- Cloudy day vs. sunny day – UVB may be somewhat filtered by the clouds, but UVA penetrates right through the clouds.
- Dark colored clothing and tight weaves vs. light colored clothing and looser weaves or wet clothes – darker colors, tighter weaves, and dry fabric will block UV light better.
- Untinted glass vs. tinted glass (UV-protective film) – glass naturally blocks UVB, but not UVA light. UV-protective film will filter out the majority, but not all UVA light.
- The tinted strip of glass on upper part of the car's windshield vs. the other windows – usually only the small strip blocks all UV light.
- Your sunglasses – make sure they block the majority of UV light. Cup your hand around the beads, allowing light only through the glass.
- In the shade (patios, trees, etc.) vs. in the direct sun – although less intense in the shade, about 30% of UV light can reflect off the ground (concrete, sand, snow) and water and reach you in the shade.
- With a fluorescent black light (UVA).

▪ **Handout created by Dr. K. Yue. Please do not duplicate without permission.**

Zipper pulls

Generally, requires about 15 inches of rawhide



1. Tie single knot near one end of rawhide
2. String desired number and pattern of beads on rawhide
3. Tie single knot at other end of beads
4. Take opposite, free end of rawhide, loop it over the end of the rawhide near the second knot, and tie a double looped knot (see bracelet handout).

To attach the zipper pull to a backpack, purse, or any zipper:



Insert looped end of zipper pull through the zipper hole



Loop the knotted end through the far end of the loop



Pull the knotted end through the loop to secure the zipper pull

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