If you require further information or have any questions, please contact the Canadian Cancer Society toll-free at: 1 888-939-3333 or visit www.cancer.ca
SunSense Program Lesson Objectives – Grade 1 to 3

The Canadian Cancer Society’s program is designed to educate people of all ages about the dangers of the ultraviolet radiation (UV rays), and to encourage people to follow the Canadian Cancer Society’s recommended guidelines. The information presented in this lesson plan is targeted for a younger audience.

In order to keep participants thinking about sun safety past a single lesson, the SunSense UV bead bracelet activity is a part of the lesson plan. As a daily reminder of the presence of UV rays and the importance of using their SunSense, participants will be asked to wear their bracelets throughout the summer to keep reminding them to be safe while they are in the sun.

It is recommended to keep the lesson plan to 20 minutes in order to keep the participant’s attention and focus. Activities are included in case you finish early.

At the end of the lesson plan, students will learn:

- The importance of the sun
- The damaging effects of the sun
- What ultraviolet rays and the UV Index are
- The SunSense Guidelines

Helpful presentation tips

The lesson plan provided here is a suggested format to use. Please do not feel limited by these guidelines or that you need to include all the information in your lesson. Adapt the questions or wording to suit your teaching style and your audience in order to get the most out of the lesson and to form a better connection with students. A Power Point presentation and supplementary learning activities are also included to assist with the sharing of information.

Explain to students that the lesson will take about 20 minutes and they will get to take part in making a sun safety craft as well as doing other fun activities during the lesson.

This lesson plan includes several questions in order to avoid lecturing the children about what is right or wrong and to involve the kids as much as possible. This way the information is coming from them and not solely from you.

When asking questions, try to avoid yes or no answers and encourage the children to give more detailed explanations. If you don’t get the answers that you are looking for, try rephrasing the question.

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Remember to use discretion based upon the age and maturity of the group. The information that is provided should be appropriate for most age groups. Most importantly, have fun!

Grades 1 to 3 Lesson Plan

The Importance of the Sun (slide 2)

Q. What activities do you like to do in the summer?
   A. Swimming, camping, biking, going to the park.

Lots of those activities are done outside in the sun.

Q. What are some good things that the sun does?
   A. Provides light, warmth, energy, helps our plants grow and gives us Vitamin D.

But even though the sun is a good thing we need to be careful when we are outdoors.

Q. Do you know what happens if we get too much sun? (slide 3)
   A. We can get sunburn.

Q. Raise your hand if you ever had a sunburn before?

Q. What does a sunburn feel like?
   A. It hurts when you touch it or move, skin is red and peels.

Q. Do you know what part of the sun gives us sunburn? (slide 4)
   A. Ultraviolet (UV) rays.

Q. How do you know when the UV rays are strong?
   A. We cannot see or feel UV rays. So just like we want to know the temperature outside before we get dressed, we will want to know what the UV Index is going to be so we can prepare for the sun’s rays for that day.

Q. Raise your hand if you checked to see what the temperature is today.
   A. Many hands will go up.

Q. Keep your hand up if you checked to see what the UV Index is today.
   A. Few hands will remain up.

It is as important to know what the UV Index is because just like you need to know what to wear for the temperature; you need to know what to wear for the UV rays.
**Explaining the UV Index** (slide 5)

Q. Has anyone heard of the UV Index?
A. Sometimes they talk about it on TV or radio. The UV Index goes from 0 to 11. That number tells you how strong the UV rays are. The higher the number, the more protection you need to take when you go out in the sun. On days when the UV Index reaches 3 or more (moderate), you need to be extra careful to protect your skin.

Optional: For example, if you listen to the radio in the morning, they may say “Today the UV Index is high” or “The UV index is 7 today”. If you hear them say that, what does that mean you should do? You should protect yourself. In general, the UV Index in Canada can be 3 or more from 11 a.m. to 3 p.m. between April and September, even when it’s cloudy.

What if they say the UV Index is low (0-2), is it as important to protect yourself when you go outside? No, it is not as important.

Q. If the UV Index is 3 or higher, what precautions should you take to protect yourself?
A. See SunSense Guidelines

**SunSense Guidelines**

The kids will say one of the options listed below, discuss the information then ask for another way to protect themselves. If they forget to mention one, tell them at the end. After all the guidelines have been discussed move onto the bracelet section. If you choose not to make the bracelets, move onto the conclusion.

1. SEEK Shade or Create Your Own (slide 6)
   (Teaching Aid: An umbrella)

Q. Can you get sunburn when it’s cloudy?
A. Yes, the UV rays can get through light clouds, haze and fog.

Q. Where can you find shade?
A. Tree, play structure, tent, awning, umbrella, etc.

Q. What can you bring with you to create shade?
A. Umbrella, tent, etc.

Q. What time of day are the UV rays the strongest?
A. Between 11 am and 3 pm.
I have a little rhyme for us to say, so we remember the best time is to play. (slide 7)
“When your shadow is short, stay out of the sun.
When your shadow is tall, go out and have fun!”

Now, let’s say it together!
“When your shadow is short, stay out of the sun.
When your shadow is tall, go out and have fun!”

2. **SLIP on Protective Clothing** (slide 8)
(Teaching Aid: Different types of clothing.) Have volunteers put on different types of clothing and make a mini fashion show to explain proper types of clothing.

Q. **What is the best type of clothing to wear?**
A. Clothing with long sleeves and long pants. Can be loose fitting for the season but choose clothing with fabric that is tightly woven or UV-protective labelled.

Q. **What is better at protecting you from UV rays: wet or dry clothing?**
A. Although it is a good idea to wear a shirt when you are swimming, when your clothing is dry it will protect you more than when your clothing is wet.

3. **SLAP on a Wide-Brimmed Hat** (slide 9)
(Teaching Aid: Different types of hats. The child that says hat comes up and one other volunteer. One child wears a baseball cap and the other a bucket or sun hat.)

Q. **Why is the bucket/sun hat better than the baseball cap?**
A. The brim goes all the way around your head to protect your ears, back of your neck and also your eyes. These areas need extra protection.

**SLOP on Sunscreen** (slide 10)
(Teaching Aid: Sunscreen bottle with an SPF 30+)

Q. **How long before going outdoors should you put on sunscreen on?**
A. You should put sunscreen on least 20 minutes before going outside. If you forget to put it on before going outside, it’s not too late! Put it on as soon as you can.

Q. **How often should you re-apply sunscreen?**
A. Read the label and follow the instructions for reapplying sunscreen, especially after swimming, exercising or sweating, it is usually at least every two hours or after you swim or sweat.

Q. **If you also need to wear insect repellent, which do you put on first?**
A. Put your sunscreen on first. This allows it to absorb into your skin properly. Try to avoid products that have both sunscreen and insect repellent as they don’t work well together in the same product.
Be sure to read and follow the instructions for use on both containers to make sure that each product is applied properly.

Q. What is the minimum Sun Protection Factor (SPF) you should use? (slide 11)
   A. SPF 30 or higher.

Q. Did you know that sunscreen expires? How can you tell?
   A. (Pass out your bottle of sunscreen to a student and ask them to find the expiry date.)

Q. What do you do if you have expired sunscreen?
   A. Throw out the old bottle and buy a new one, because it will not protect you as well once it has passed its expiration date.

Q. Should you wear sunscreen in the winter?
   A. Yes. Remember it is not the heat that gives us sunburn but the UV rays which are invisible. The UV rays reflect off the snow. Most of your body is already covered but don’t forget to put sunscreen on your face.

5. SLIDE on Sunglasses (slide 12)
   (Teaching Aid: Different types of sunglasses, the child that says that sunglasses come to the front with another volunteer, one wears sunglasses with light lenses and skinny sides and the other wears sunglasses with dark lenses and thick sides.)

Q. What kind of sunglasses are best to wear?
   A. Contains both UVA (aging rays) & UVB (burning rays) protection.
   The label might have UV 400 or 100% UV protection on it.
   Choose close fitting sunglasses in a wrap-around style.

Q. Why are having wrap-around sunglasses or thick sides better than thin sides?
   A. It protects your eyes from all angles.

6. SMACK on Lip Balm with an SPF (slide 13)
   (Teaching Aid: Lip balm with an SPF)

Your lips are skin and need protection too. You can buy lip balm that has an SPF just like your sunscreen has. Be sure to reapply it just like you would your sunscreen.
**UV Bead Bracelet**

As we said earlier it is hard to know when the UV rays are strong. We have these bracelets (hold your ready-made bracelet up for the group to see) to help remind us when the UV rays are strong and we need to protect ourselves.

After I explain about the bracelets and how to make them you’ll each have a chance to create your own bracelets which you can wear throughout the summer to remind you to protect yourself from the sun.

The UV beads:
- Are special beads that turn from white to orange in UV light only.
- Other light or inside light from a light bulb doesn’t change them.
- Heat doesn’t change them.
- Only when they’re in the presence of UV light will they turn orange.
- When there isn’t any UV light around (inside), they are white.

When the beads are light orange then you need to start taking protection and then the beads are dark orange it means that the sun is very strong, and you should be taking lots of protection. Remember that these bracelets are for when you are already outside, to help remind you to continue protecting yourself from the UV rays. You will need to check the UV index every day before you go outside, so that you are protected from the UV rays before you leave the house.

**Note for teacher:**
Your kit contains enough material to make 25 bracelets.
If you have indicated that there are more than 25 children in your class extra supplies are included.

Your kit contains:
- 1 SunSense CD-ROM with revised lesson plan, Sun Sense activities and experiments to do with UV beads, Power Point presentation and printable letter to parents
- 50 yellow beads
- 50 blue beads
- 75 UV beads
- 250” of cord
- 25 SunSense fortune teller for each child

1 bracelet = 2 yellow beads, 2 blue beads, 3 UV beads and 10” cord
Activities

Testing your UV Beads Bracelets

Once the kids have finished making their bracelets the group can begin to experiment. There are experiments for both outside and inside. Each experiment can be done while the kids wear their bracelets.

If you are unable to try the experiments with the students for some reason (e.g. it’s raining) you can still explain to them how they work. On these days, check the list of indoor activities for the bracelets and other fun games. Have them guess what will happen and encourage them to test their bracelets when the weather is better and they are outside at home, in the park, etc.

Outside Activities

Test # 1 – Does clothing really protect us from the sun?

Are some types of materials better at blocking UV light than others?

While outdoors, have the kids hide the bracelets under different articles of clothing for 20 seconds at a time. After the 20 seconds, bring the bracelets out from hiding. Has the UV light been able to get through?

Test # 2 – Shade

Have the kids gather in a shady spot and watch what happens to the colour of the beads. (The beads will turn pale in colour.) What does this mean? (The UV light isn’t as strong in the shade.)

Test # 3 – Can UV light travel through water?

Materials required – 4L ice-cream pails, water, and towel.

Fill the pails with water. While wearing their bracelets, have the kids gather around the pails and place their bracelets underwater. What happens to the colour? What doesn’t this tell them about UV light? Note: Make sure that the kids don’t crowd so much that the light can’t reach into the pail.)

UV light travels through water. Remember, you are not protected from the sun when you are swimming in the pool or in the lake, and UV rays will reflect off of the water.
**Inside Activities**

If you are outdoors with the kids you will want to head indoors where the kids can see the beads turn white. Ask them why this happens (no UV rays present).

**Test # 4 – Flashlight**

*Materials required:* Flashlight. Optional: using indoor light will produce the same results.

While inside ask the children if shining a flashlight on the beads will get them to change colour. Why doesn’t this work? (The beads will only react to UV light. An indoor light from a flashlight does not contain UV light.)

**Test # 5 – Can UV light go through windows?**

While indoors, have the kids hold their bracelets up to the light of a window. What happens to the colour of the beads? (The UV beads are pale in colour demonstrating that some degree of UV light can travel through windows) When traveling on a long distance car trip, should you remember to protect yourself? What about truck drivers? Does anyone have tinted windows in their car? What about tinted sunglasses?

**Test # 6 - Observing the Beads**

Watch the beads and record any changes that you notice during the day. When you go outside do the beads change color? When you go back inside, away from sunlight, do the beads lose their color?

What causes the beads to lose color?

**Additional Activities**

**Sunsense Tongue Twister**

Together as a group repeat **SEEK, SLIP, SLAP, SLOP, SLIDE, SMACK.**


**Canadian Dermatology Association Colouring Page** (Download from: http://www.dermatology.ca/wp-content/uploads/2012/01/SunSafeColouringEN.pdf)
**Design a Flyer/Poster about the Danger of UV Rays**

Use what you have learned about UV rays to develop a UV ray information poster to inform young people about the dangers of UV rays. Your target audience will be students your age and your design should encourage them to actually pick it up and read it! How would you convince someone that exposure to something you can’t see or feel can be harmful to your skin and possible lead to skin cancer?

**Become Sun Scientists for a week**

Try some of these experiments. Make predictions about what the students think will happen. Do it and see if they were right.

Place some newspaper in direct sunlight and another piece in a dark cupboard.
Place a fruit in direct sunlight and another piece in the shade, both outdoors. A banana works well. Place a coil of clay or play dough in direct sunlight and another piece in the shade. Place some interesting shapes on a piece of coloured paper in direct sunlight and place a similar grouping in a dark cupboard.

**Talk about the changes the sun has caused in each experiment you tried.** Record your findings. **Discuss how the sun’s power cannot be seen but the changes it causes can.** Talk about the power of the sun to change our skin by burning.

**Make a Poster or Banner!**

Create a large poster or banner with sun safety slogans to hang in your classroom. You can also ask every grade to make one part of the banner, then piece together and hang somewhere in the school that everyone can see.


**Conclusion**

*This is an important part of the presentation since we want to encourage the children to wear the beads beyond this one day. Please be sure to emphasize this in your wrap up.*

If you wear your UV bead bracelet every day, it will serve as a reminder for you so you don’t forget how to protect yourself. You can also have a bookmark and your Fortune Teller that has all the tips we’ve talked about today. Remember, UV light is not related to temperature so you can still get sunburn on a cool, cloudy day and in winter too. Enjoy the sun safely. Protect your skin, protect your eyes. Don’t forget to: SEEK shade; SLIP on protective clothing; SLAP on a hat; SLOP on the sunscreen; SLIDE on sunglasses SMACK on SFP lip balm.