

**Kid Scoop** .COM THE AWARD-WINNING PRINT & ONLINE FAMILY FEATURE

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# Sunny Question

Why are sunny winter days COLD, while sunny summer days are HOT? *Kid Scoop's* winter expert Dr. I. Cicle explains it all!

As you can see, it's a sunny winter day here and ...

YEAH! It's a sunny day! Let's hit the waves, Bro!

Uh, Dude, there's something really wrong with this sand. It's, like, frozen!

That's because it isn't sand. It's snow!

SNOW? But it's, like, sunny today. So why isn't the snow, like, melted?

I'm glad you asked! Let's pretend this snowball is Earth.

Earth is, like, WAY bigger, Dude!

The Earth tilts on its axis as it travels around the sun. In the winter, if the part of the Earth where you live is tilted away from the sun, it gets indirect sunlight.

Indirect sunlight doesn't warm up the Earth as much as the direct sunlight we get in the summer.

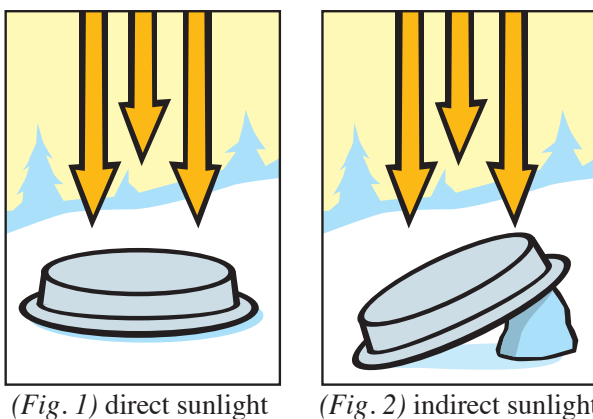
That is so cool! Now, why is this sand so COLD?

**Standards Link:** Earth Science: Students know that weather can be observed, measured and described; changes in weather and seasons are affected by the Earth's position.

**Experiment Tells All**

Try this experiment to understand the difference between indirect and direct sunlight.

Keep track of your work on a separate sheet of paper like the Scientist's Notebook.



**Stuff you need:**

- 2 metal pie tins or flat pans
- a sunny winter day
- watch or clock
- a rock

**What to do:**

1. Lay one pan flat on the ground in the direct sunlight. (Fig. 1)
2. Tilt the other pan on its side. Lean it against a rock or a shoe. This pan is being hit with indirect sunlight. (Fig. 2)
3. Wait three minutes.
4. Which pan is warmer?

**Standards Link:** Investigation: Students will make predictions based on observation; answer meaningful questions and draw conclusions.

**SCIENTIST'S NOTEBOOK**

Question	Hypothesis	Observation	Conclusion
Which pan do you think will feel warmer after three minutes in the winter sun?	What do you think the answer to the question is? <input type="checkbox"/> pan in direct sunlight <input type="checkbox"/> pan in indirect sunlight	Which pan was warmer in three minutes? <input type="checkbox"/> pan in direct sunlight <input type="checkbox"/> pan in indirect sunlight	Was your hypothesis correct? What did you learn from this experiment?

**Without the Sun ...**

Without the sun we wouldn't have newspapers because newsprint is made from trees and trees need the sun to grow. Look through the newspaper for other things that need the sun to exist.

**Standards Link:** Language Arts/Research: Use the newspaper to locate information.

**Sun Spot Mystery**

The sun is covered with spots! Use the spots to solve the mystery questions.

How far is the sun from the Earth?  
 5M million miles (149.6 million km)

How long does it take the sun to make one complete rotation?  
 28 Earth days

What is the diameter of the sun?  
 864,000 miles (1.4 million km)

**WARNING!** Never look directly at the sun as this can damage your eyesight!

**Standards Link:** Earth Science: Students know about the sun, planets and stars.

**Kid Scoop Word Search**

SUNLIGHT  
EXPERIMENT  
SUMMER  
MILES  
PAPER  
DIAMETER  
HYPOTHESIS  
METAL  
WINTER  
SAND  
SNOWBALL  
PAN  
AXIS  
SHOE

Find the words by looking up, down, backwards, forwards, sideways and diagonally.

S I S E H T O P Y H  
D A L L A B W O N S  
I W N I R E M M U S  
A S S D N X T N E R  
M I M E T A L R S E  
E X P E R I M E N T  
T A R S G T L P U N  
E E O H S I N A S I  
R H T I M N A P N W

**Standards Link:** Letter sequencing. Recognized identical words. Skim and scan reading. Recall spelling patterns.

**FROM THE Kid Scoop LESSON LIBRARY**

**Who cares about the weather?**

Why is the weather report important to different people? Why is it important to a farmer, an astronaut or a fireman? Find an article or picture in the newspaper of a person who cares about the weather. Tell why this person cares.

**Standards Link:** Reading Comprehension: Understand the main idea and supporting details in expository text.

**What kind of caps do snowmen wear?**

ANSWER: Ice caps.

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