How Can I Watch a Solar Eclipse?

A solar eclipse is an exciting event to witness, but it can hurt your eyes if you do not take proper precautions. Use the following information to view the next solar eclipse safely.

Why is it dangerous to look at the sun?
The sun gives off radiation that reaches Earth in amounts that are unsafe for your eyes. Looking directly at the sun can burn the retina and cause temporary or permanent blindness. Looking directly at the sun can damage your eyes.

Won’t I feel if my eye is being hurt?
Your retinas feel no pain and can be damaged without warning.

Vision loss usually occurs hours after exposure.

What can I use to view a solar eclipse?
You can safely view an eclipse using a pinhole camera. It works by projecting an image of the sun onto another surface. The only way to look directly at the sun is by using specially designed filters. Regular sunglasses are not safe.

Where can I get more information?
Astronomy clubs, your local science center, and planetariums can provide information about safely viewing eclipses.

Fill in the Column Chart with examples of text or graphic features in the passage and the purpose each one serves.

<table>
<thead>
<tr>
<th>Text or Graphic Feature</th>
<th>Location</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
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<td>2.</td>
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<td>3.</td>
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</table>
Your Own Sky Journal

A sky journal is the perfect project for amateur astronomers and budding astronauts. It is also great for anyone who loves stargazing and enjoys writing or drawing. Starting a sky journal is easy. The instructions below will help you begin.

What You Will Need

- A blank notebook
- Pens and pencils
- A comfortable place to sit while you look at the sky
- 20-40 minutes of uninterrupted time

When to Start

Pick your favorite time of night (or day) to begin your sky journal. Get comfortable and spend a few minutes just looking at the sky. Jot down any words or sketch any images that come to your mind. When you feel ready, expand your notes into a more descriptive story.

How to Keep Going

Try observing the sky at the same time and from the same location for several days. Note how the sky changes depending on the weather or the time of the month. Later, you can start varying the times, and maybe even the locations, of your observations. Describe the things that are the same and the things that are different.

Once you have entered a variety of descriptions in your sky journal, you can start evaluating your observations. Ask yourself questions such as: *When is the sky most active? When is it most interesting?* Use your sky journal to record the descriptions and thoughts that are most meaningful to you. Have fun!

Create a Column Chart that lists each example of text or graphic features in the selection, its location, and its purpose. Then answer the questions below.

1. How does the underlined text help your overall understanding of the selection?

2. Why do you suppose the author used bullets in the selection?
Suffixes -ous, -ic, -ure

The words in the box all end with the suffix -ous, which means “full of,” -ic, which means “characteristic of,” or -ure, which means “act of” or “process of.” Choose the word from the box that best completes each sentence.

perilous courteous courageous allergic poetic
apologetic melodic departure exposure failure

1. Although space travel is ____________ astronauts believe it is worth the risk.
2. He read the classic story with his deep, ____________ voice.
3. The ____________ mother protected her family from harm.
4. A ____________ to communicate can result in a misunderstanding.
5. Words that create strong images and sounds are ____________
6. Some restaurants do not serve peanuts because many people are ____________
7. Too much ____________ to the sun is unhealthy for the skin.

Use the remaining words to write three new sentences.

________________________________________
________________________________________
________________________________________
Final /ɪz/, /ɪv/, /ɪʃ/

Basic Write the Basic Word that best completes each group.

1. tradition, legacy, ________________
2. appealing, pleasing, ________________
3. change, modify, ________________
4. remember, retain, ________________
5. certain, definite, ________________
6. lack, scarcity, ________________
7. publicize, promote, ________________
8. university, institute, ________________
9. persuade, inspire, ________________
10. energetic, lively, ________________
11. condense, shorten, ________________
12. fitness, workout, ________________
13. know, identify, ________________
14. sort, group, ________________
15. comment, judge, ________________

Challenge Imagine you are buying and furnishing a new house. Write sentences that tell about it. Use three of the Challenge Words. Write on a separate sheet of paper.
Spelling Word Sort

Write each Basic Word beside the correct heading.

<table>
<thead>
<tr>
<th>Final /ɪz/ spelled -ise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final /ɪz/ spelled -ize</td>
</tr>
<tr>
<td>Final /ɪv/ spelled -ive</td>
</tr>
<tr>
<td>Final /ɪj/ spelled -age</td>
</tr>
<tr>
<td>Other spellings of final /ɪj/</td>
</tr>
</tbody>
</table>

Challange  Add the Challenge Words to your Word Sort.

Connect to Reading  Look through Team Moon. Find words that have the final /ɪz/, /ɪv/, or /ɪj/ sounds on this page. Add them to your Word Sort.

Spelling Words

1. revise
2. advantage
3. memorize
4. active
5. organize
6. criticize
7. shortage
8. advertise
9. attractive
10. college
11. explosive
12. exercise
13. encourage
14. summarize
15. wreckage
16. recognize
17. positive
18. percentage
19. sensitive
20. heritage

Challenge  utilize
mortgage
merchandise
aggressive
compromise
Proofreading for Spelling

Find the misspelled words and circle them. Write them correctly on the lines below.

“Houston, we have a problem.” With those chilling words, the Apollo 13 moon mission became a huge rescue effort. A fault in a sensitive oxygen tank caused an explosive problem. NASA engineers scrambled to revise plans and organize a way to save the men on the spacecraft. The only advantage NASA had was the cool competence of the men in space. They were active men who knew the importance of exercise even in the small capsule. They looked over the wreckage and were able to recognize the problem they faced. They did not criticize the technicians and maintained a positive attitude, even though there was a shortage of time. Other astronauts worked to encourage the Apollo 13 crew.

1. ______________________ 8. ______________________
2. ______________________ 9. ______________________
3. ______________________ 10. ______________________
4. ______________________ 11. ______________________
5. ______________________ 12. ______________________
6. ______________________ 13. ______________________
7. ______________________

Spelling Words

1. revise
2. advantage
3. memorize
4. active
5. organize
6. criticize
7. shortage
8. advertise
9. attractive
10. college
11. explosive
12. exercise
13. encourage
14. summarize
15. wreckage
16. recognize
17. positive
18. percentage
19. sensitive
20. heritage
Regular and Irregular Verbs

To form the past or past participle of a regular verb, the basic rule is to add -ed. Irregular verbs are verbs that do not follow this basic rule.

regular verb
My brother and I watched several space shuttle launches on TV.

irregular verb
My brother and I saw many images during the show.

Activity Write whether the underlined verb is regular or irregular.

1. Twelve people have walked on the moon. _________________
2. They all listened to Neil Armstrong. _________________
3. On Friday, we left for the moon. _________________
4. He loved flying. _________________
5. He saw beautiful things in the sky. _________________
6. People had never visited the moon before. _________________
7. We began to get excited about the journey. _________________
8. We spoke about our space adventure. _________________
Common Irregular Verbs

The past and past participle of **irregular verbs** are not formed by adding -d or -ed. Some common irregular verbs are *be*, *go*, *have*, *do*, *see*, and *eat*.

**present**
The astronauts **see** Earth from an entirely new perspective.

**past**
The astronauts **saw** Earth from an entirely new perspective.

**past participle**
The astronauts **have seen** Earth from an entirely new perspective.

**Thinking Question**
Can you form the past tense of the verb by adding -ed?

**Activity** Write the past or the past participle of the verb in parentheses to complete the sentence.

1. Many people have _________ to the moon. (go)
2. I _________ a dream last night about being an astronaut. (have)
3. We have _________ images from space for over forty years. (see)
4. They _________ fascinating to look at and learn from. (be)
5. I have never _________ in space. (be)
6. The astronauts _________ into space last month. (go)
7. They _________ food that was specially prepared for space travel. (eat)
8. They _________ Earth from space. (see)
9. Armstrong _________ walk on the moon, marking an important achievement for humans. (do)
10. Space discovery has _________ a great deal of knowledge to our world. (bring)
Irregular Verbs:
Past Tense Form

Irregular verbs do not add –d or –ed in the past tense or past participle.

I told him to look at the rockets.
We have chosen to watch the shuttle launch.
Linda chose a book about Mars.
It was cold, so I wore a jacket.

Thinking Question
How is this irregular verb formed in the past tense?

Activity  Write the past tense of the irregular verb in parentheses to complete the sentence.

1. The astronauts ________ to the moon. (fly)
2. Armstrong ________ a special suit that enabled him to walk on the moon. (wear)
3. Our parents ________ us about seeing the images on TV. (tell)
4. The astronauts ________ space travel very seriously. (take)
5. They ________ in a ship powered by a rocket. (ride)
6. The crew ________ moon rocks back to Earth. (bring)
7. Maria once ________ of becoming an astronaut. (think)
8. I ________ an awesome picture of the shuttle. (draw)
9. We ________ to talk about space travel in class. (choose)
10. Marc ________ a report on the topic. (write)
For each sentence, write simple, compound, complex, or compound-complex. Add missing commas.

1. The rockets fired and the shuttle blasted off into space. ________________

2. After the shuttle left the atmosphere the boosters detached and the shuttle orbited the earth. ________________

3. The spacecraft soared into space. ________________

4. We floated around the cabin because there is no gravity in space. ________________

5. Although outer space is cold the astronauts stay warm inside the shuttle and they wear shorts and T-shirts. ________________

6. The crew will conduct scientific experiments. ________________

7–8. Rewrite the sentences to form compound-complex sentences.

7. Outer space is a vacuum. There is no air. It is very cold. ________________

8. Humans have traveled to space for decades. We still have much to learn about the universe. We will continue to explore outer space. ________________
When you write, it is important to use **exact verbs**. A weak verb does not show action as clearly as an exact verb.

<table>
<thead>
<tr>
<th>Weak Verb</th>
<th>Exact Verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>The boy got to school late.</td>
<td>The boy arrived late to school.</td>
</tr>
</tbody>
</table>

**Write an exact verb to replace the underlined verb.**

1. The astronauts looked through the window. ____________
2. The moon was ahead. ____________
3. Armstrong went down the ladder of the lunar module. ____________
4. He walked on the surface of the moon. ____________
5. The scientists talked excitedly. ____________
6. They all watched his legendary excursion. ____________
7. The astronauts got soil and rock samples from the moon’s surface. ____________
8. They put an American flag on the moon. ____________
Focus Trait: Voice
Expressing Honest Feelings

<table>
<thead>
<tr>
<th>Sentences</th>
<th>Sentences That Express Honest Feelings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I did not enjoy raking leaves in the yard this afternoon. It was windy and dirty. My jeans became dirty, and dust got in my eyes.</td>
<td>Raking leaves this afternoon was terrible! The wind kept blowing the dirt and leaves everywhere. My jeans were a mess, and my eyes were burning from the dust.</td>
</tr>
</tbody>
</table>

Read the passage below. Underline the sentences that express honest feelings or show strong emotion.

The sun had barely begun to rise when Mom woke me up for the long drive to the cabin. “Ugh!” I groaned. “Can’t you give me five more minutes?”

Mom sighed. “Have it your way,” she replied sarcastically. “In fact, take another twenty minutes! We will surely miss you while we relax by the lake and go tubing!”

My panic shot me out of bed like a rocket as I heard my mother’s words. I scrambled to get changed. “No!” I cried out in desperation. “I’m coming! Please don’t leave without me!”

Pair/Share Read the paragraph below. Work with a partner to revise the paragraph by adding at least three sentences that express honest feelings or show strong emotion. Write on a separate sheet of paper.

We stood at the beginning of the trail. It would be two long days before I would come to the end. The trail stretched out for miles and was full of obstacles. I had planned long and hard for this hike. My backpack was stocked with everything I needed. I shifted my backpack, and we set out down the trail.