

SAFETY

Level 7-8

STUDENT JOURNAL

This journal belongs to:



THE GOOD AND THE BEAUTIFUL



INSTRUCTIONS

This Student Journal accompanies The Good and the Beautiful *Safety* science unit. It contains all the worksheets and journal pages that are needed to complete the unit. Each student will need his or her own copy of the science journal.

The lesson extensions are also found here. These extensions are optional for older students (grades 7–8) to complete on their own. Each extension is accompanied by lined paper so the student can keep his or her work in one place.

Have each student take his or her time to create high-quality work as the activities and worksheets are completed. Students may enjoy looking back on their past discoveries when they have finished.





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EXTENSION

Instructions:

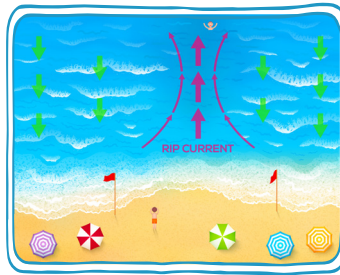
1. Read the information below.
2. Design a brochure (a trifold piece of paper with information about the topic on each page) with water safety tips for swimming in the ocean. Include illustrations and graphics.
3. Present your brochure to your class or family.

Advanced Water Safety

Ocean Danger

Millions of people across the world enjoy vacationing at the beach each summer, and while there, many people go swimming in the ocean. While there are risks to swimming in any kind of body of water, even a pool, the ocean poses far more risks than most. Ocean swimmers have to contend with more aspects of nature than pool swimmers. Here are just a few.

- **Rip currents:** Super strong ocean currents can pull you away from the shore and toward the open ocean. Beginning at the shoreline, rip currents move directly out to sea past the break in the waves. Before you swim, take note of how the water is moving and try to spot any rip currents. These will be areas where the waves aren't breaking and the water is moving in the opposite direction to the surrounding waves. If you are caught in a rip current, don't panic. Calmly swim parallel to the shore until you are out of the rip current and can then swim safely to the beach. If you need additional help, wave your hands to let the lifeguard know you are in distress.
- **Animals:** Many animals make their home in the ocean. All are wild and are unpredictable. Remember that you are visiting their home. Respect their habitat and be aware. Watch out for jellyfish, sharks, or other dangerous animals. Know basic first aid in case you are stung or bitten.
- **Tides:** As the tide moves in and out throughout the day and night, the shoreline and depth of water can change drastically. Be aware of the timing of the tides and don't get caught unaware and unable to get back to where you started.



- **Large waves:** Many people seek the thrill of jumping in the waves but don't realize how easily you can be knocked down or swept away by a large wave. If the surf is especially rough, stay out of the water or in more shallow places.

Hypothermia

Hypothermia is one of the greatest risks when swimming in cool water, whether that is the ocean or other natural bodies of water. It occurs when the body's temperature falls significantly below normal. This can happen quickly, even on a hot day.

The body's normal temperature is around 37 °C (98.6 °F). Even in 24 °C (75 °F) water, there is still a huge drop in temperature, and if the internal body temperature drops below 35 °C (95 °F), hypothermia begins.

In this case the body can't keep up with the heat being lost, and so it focuses on preserving heat for the brain. Other organs begin to shut down.

Hypothermia causes shivering, confusion, fatigue, loss of coordination, shallow breathing, slurred speech, and a slower pulse. In severe cases of hypothermia, the person will not be shivering and may lose consciousness.

If you suspect hypothermia, call 911 immediately. Be gentle in handling the person. If their movements seem impaired, have them sit or lay down in a sheltered place and rest. Wrap them in something dry and warm and give them a high-calorie food or drink.



THE POWER IS OUT

4

Circle the emotion below that best describes how you felt with the lights out.



5

Name one way you could cool down without air-conditioning. Name one way you could warm up without heat.

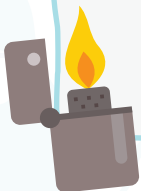
6

Name three things you could do to have fun during a power outage.

1

2

3



EXTENSION

Instructions:

1. Read the information below.
2. Draw or write three examples of what you should do during a lightning storm.

Lightning Myths Debunked

The odds of getting struck by lightning in a given year are around 1 in 500,000–1,000,000. There are a few risk factors that increase the odds of a person being struck. Living in the southeastern part of the United States, which gets more lightning than any other part of the country, and working in an outdoor occupation are just two of those risk factors.

Did you know that lightning is actually a gigantic spark of electricity? It can occur from cloud to cloud or cloud to ground. Usually air acts as an insulator that resists electricity passing between the clouds and the ground. However, when there is too much positive charge in the ground or negative charge in the clouds, that insulation becomes overwhelmed. This results in a very quick discharge of that excess electricity; this is lightning!

You may have learned many things about lightning and how to stay safe in a lightning storm. But some of those ideas have been around for a long time and are actually myths! Can you bust these myths about lightning? Under each myth is the answer. Cover each answer with a piece of paper as you read the myth and guess whether each one is true or false before revealing the answer.

#1: Lightning can and will strike the same place twice.

True. Lightning can definitely strike the same place, often several times, especially if it is a tall object, such as a lightning pole. Make sure to avoid those types of objects in a lightning storm.

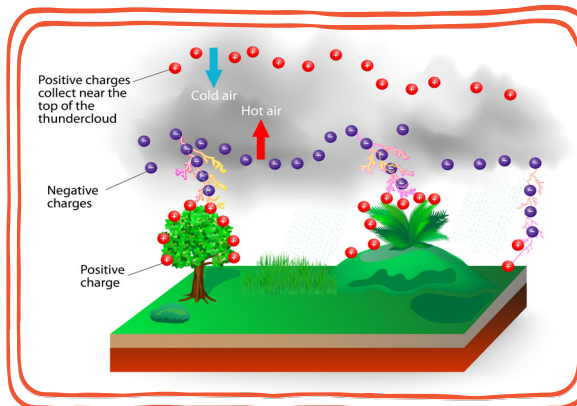
#2: If you are outside in a lightning storm, you should get under the nearest tree to avoid being struck.

False. If you can't find an enclosed shelter, do not go under a tree because this is one of the most dangerous locations to be in during a storm. If you are caught outside during a

lightning storm, continue moving toward shelter. Do not lie flat on the ground, as you want minimal contact with the ground. Spread out from other people. Avoid bodies of water, elevated areas, and objects that conduct electricity.

#3: Rubber tires on your car will not insulate you from a lightning strike.

True. It is not the rubber tires but the metal frame of the car that protects you. If lightning strikes your car, it will go around the frame and then into the ground. So don't touch the doors or frame of the car while traveling through a lightning storm and keep your windows rolled up.

**#4: No rain or only distant thunder means there is no risk of lightning.**

False. Lightning can strike more than 16–19 km (10–12 mi) from the center of the storm. If you hear thunder or see lightning, even at a distance, there is a risk of danger, and you should quickly find a safe place to be.

#5: There is nothing you need to do during a lightning storm as long as you are in your home.

False. Your home is a very safe place to be with the right precautions. You should avoid being near anything with a cord plugged into an outlet, such as a computer. Avoid sinks, baths, and faucets. Stay away from windows and doors. Also, don't lean or stand on concrete walls or floors.

#6: A bolt of lightning can reach up to 28,000 °C (14,400 °F), hotter than the surface of the sun!

True. The sparks of lightning are extremely hot! This is partially why lightning can do so much damage!

Even though lightning is incredibly dangerous, it is one of the marvels of our Creator, and there is a lot we can learn from this amazing natural phenomenon!



NATURAL DISASTER MAP

As your parent or teacher reads to you about different natural disasters, use the key below to color in areas of the map that experience each of the natural disasters mentioned.

Natural Disaster Key:



Wildfires



Tornadoes



Hurricanes/Cyclones/
Typhoons



Earthquakes



Floods

EXTENSION

Instructions:

1. Read the information below.
2. Talk to your parents about what your family does to stay safe online. Write down two things in your journal that you want to start doing or keep doing to be safe online.

Staying Safe Online

The Bible warns us to beware of wolves in sheep's clothing. What do you think that means? Sometimes people can appear kind and sincere, but inside they are deceptive and dangerous. Some people want to trick others and cause them harm. When we are online, it can be hard to tell which people are friendly sheep and which are dangerous wolves.

While the internet is a very useful tool, and technology can be a valuable resource, it should be used in moderation and with boundaries. Here are some guidelines to help you stay safe online:

Ask for supervision: Ask your parents for help and let them know of any potentially dangerous situations. Get their approval for games or apps you'd like to play. Have them set parental controls to limit chat and content if possible. Avoid games that open the door for outsiders to contact you and get personal information from you.

Be extra careful with social media: Although being on a social media site can help you stay connected with friends and family, it is also very risky. If you choose to post a photo of yourself or reveal any personal information, such as the town where you live, you can become an easy target for online predators. These wolves in sheep's clothing are very skilled at tricking you into thinking they are innocent. Online it is simple for an adult to pretend to be a child. They are very good at finding out your personal information, putting you and your family at risk. Also, be aware that spending a lot of time on social media has been linked to higher rates of depression and anxiety. People post their best photos, and seeing these all together can make you feel like your life isn't as good as everyone else's.

Recognize manipulation: Dopamine is a chemical produced in your brain that creates pleasure. When you receive a "like" on social media, your brain is triggered to release dopamine. Creators of these sites know this and manipulate their sites to trigger more dopamine reactions in your brain as you interact with their sites. This can create a technology habit, which results in more money for the site developers.

Avoid cyberbullying: People are willing to say mean things online that they would never say in real life. Avoid writing mean things to others, and if you are ever bullied online, let your parent or a trusted adult know immediately.

Only interact online with people you know: If someone contacts you online that you don't know, don't respond. Let your parents know and only interact with people of whom they approve. NEVER meet up in person with someone you met online unless you have a parent with you.

A scenario: Twelve-year-old Madi enjoyed recording songs with her friends on a social video-sharing app, an activity her parents had approved of. However, one day, someone new contacted Madi on the app. Madi thought the person was one of her cousins' friends. This person claimed to be a nine-year-old girl named Jessie and started messaging Madi. After a few messages, the person asked Madi to send a picture of herself. Madi did, and the person then asked Madi to send another picture—this time without her shirt on. Fortunately, Madi did the right thing: she let her parents know right away that someone was trying to trick her online and get her to do something she knew was dangerous. Madi's dad contacted the police, and the police were able to track down and stop the person.

Madi's story is scary, and it is a good reminder never to chat with someone online unless you know them in real life and unless your parents have said it's okay. Sometimes, like in Madi's case, a person might pretend to be a child, maybe even a friend of someone you know. Others admit they are older but try to flatter children by being interested in them. Keep yourself safe by knowing who's actually online with you.

The internet can provide amazing possibilities for learning and connecting. Let your parents help you stay safe and avoid content and people that would cause you harm.

