

# February 6-8, 2026 • Hudson, WI



Thank you to our Corporate Sponsor:



## Educational Booklet

**Join us in Hudson, Wisconsin for winter family fun!  
Friday - Sunday, February 6-8, 2026**

Greetings students, children of all ages and fellow hot air enthusiasts. For the 37th Annual Hudson Hot Air Affair, we have selected the theme of Sky Walkers Return to Rock.

The Hudson Hot Air Affair winter festival and hot air balloon rally offers family fun activities for kids of all ages, starting with our school programs and Torchlight Parade, the biggest little parade in the Midwest. Come watch the balloon launches, the smooch board competition or the prize drop fundraiser (just to name a few of the free spectator activities). Don't miss the free Kids' Ice Fishing Contest at Perch Lake on Sunday.

Seeing the skies filled with hot air balloons is amazing and truly magical! But did you know, the pilots need to master the art of ballooning and have a license to fly? Come see and talk to our amazing pilots at the Moon Glow or Field of Fire.

This year's Hudson Hot Air Affair event theme is Sky Walkers Return to Rock. The event will be returning to its longtime venue at EP Rock School where our pilots will "walk" their colorful balloons across the sky (weather permitting). The theme is inspired by Star Wars, the epic space adventure and its timeless battle between good and evil. From the Torchlight Parade to the Smooch Board Competition we expect to see some visitors (in costumes) from a galaxy far, far away. (Hint, hint... Star Wars costumes welcome.) Keep your eyes peeled for wookiees, storm troopers and more!



See a complete schedule and event details at [HudsonHotAirAffair.com](http://HudsonHotAirAffair.com)



## SKY WALKERS RETURN TO ROCK

Watching hot air balloons “walking” through the sky is a treat for your eyes. While we hope Mother Nature cooperates and balloons will be aloft around Hudson, they won’t be flying into any galaxies far, far away where the adventures of Luke Skywalker took place. Luke’s adventures began when the first Star War movie was released in 1977 and the saga has continued with sequels, prequels and spin-offs. Almost 50 years, dozen movies, and more on the way, the Star Wars saga continues..

## LET’S HAVE SOME FUN WITH STAR WARS GAMES

**Star Wars Tag:** Choose two players to be the “Taggers” and give them each a same-colored pool noodle. Choose one player to be the “Healer” and give him/her a pool noodle that is a different color. The Taggers try to tag players with their noodle. If a player is tagged they must stand in the spot where they were tagged. They can be freed if the Healer taps them with his/her noodle. If the Healer is tagged by a Tagger, the Healer must freeze but can hold out the noodle and another player may take their noodle to become the new Healer. Taggers may not take the Healer’s noodle. The game continues until the Taggers win or you end the game. If you have a lot of players you can add more Taggers and Healers but it seems to work best with a 2:1 ratio of Taggers to Healers.

**Lightsaber Levitation:** Kids are given a balloon and a foam lightsaber (use a two foot pool noodle or an inflatable toy lightsaber). The object is to use the lightsaber to keep the balloon aloft. First do it to music, so everyone can practice and get the hang of keeping the balloon in the air. Then have them all line up at a starting point and race to see who can keep their balloon in the air as they traverse the playing field (room).

## FIND THE STAR WARS CHARACTERS

Can you find the 10 Star Wars characters hanging out in this booklet? Write down the page number where each of them appear. (See the answers on page 11)

\_\_\_C-3PO \_\_\_Chewbacca \_\_\_Darth Vader \_\_\_Han Solo \_\_\_Luke Skywalker  
\_\_\_Obi-Wan Kenobi \_\_\_Princess Leia \_\_\_R2-D2 \_\_\_Storm Trooper \_\_\_Yoda

## STAR WARS JOKES

What do you call Chewbacca when he has chocolate chips stuck in his hair?  
Chocolate Chip Wookiee.

Which Star Wars character works at a restaurant? Darth Waiter.

What do you call an invisible droid? C-through-PO.

Why is Yoda such a good gardener? Because he has a green thumb.

What do you call a pirate droid? Arrr-2 D2.

Which Star Wars character travels around the world? Globi-wan Kenobi.

What do you call a potato that has turned to the dark side? Darth Tater.

What’s a baseball player’s least favorite Star Wars movie? The Umpire Strikes Back.





# STAR WARS WORD SEARCH

Can you help Han Solo find the hidden words below.



- |             |            |               |           |
|-------------|------------|---------------|-----------|
| ALDERAAN    | DEATH STAR | LEIA          | SITH      |
| ANAKIN      | DROID      | LUCAS         | SKYWALKER |
| BATTLESHIP  | EMPIRE     | STORM TROOPER | LUKE      |
| C-3PO       | FORCE      | OBI-WAN       | TATOOINE  |
| CHEWBACCA   | HAN SOLO   | PALPATINE     | WOOKIEE   |
| DARTH VADER | JEDI       | R2-D2         | YODA      |

## HOW DOES A HOT AIR BALLOON FLY?

Hot air balloons use the basic scientific principle of hot air rises. A balloon is lifted upwards when the warmer air inside the balloon rises in the cooler air outside of the balloon. This is because hot air is lighter than cool air because it has less mass per unit of volume. The actual balloon part (called an envelope) has to be very large because it takes a lot of heated air to lift the balloon off the ground. For example, to lift 1000 pounds of weight you would need almost 65,000 cubic feet of heated air! To help keep the balloon in the air and rising, hot air needs to be pushed upwards into the envelope using the burner. The burner uses propane gas to heat up the air inside the envelope to lift the balloon off the ground and into the air. The pilot must keep firing the burner at regular intervals throughout the flight to ensure that the balloon continues to stay afloat. Because the wind blows in different directions at different altitudes, the pilot can maneuver the balloon. If the pilot wants to move in a particular direction they simply ascend and descend to the appropriate level and ride with the wind.

## PARTS OF A HOT AIR BALLOON

A hot air balloon is made up of three main parts:

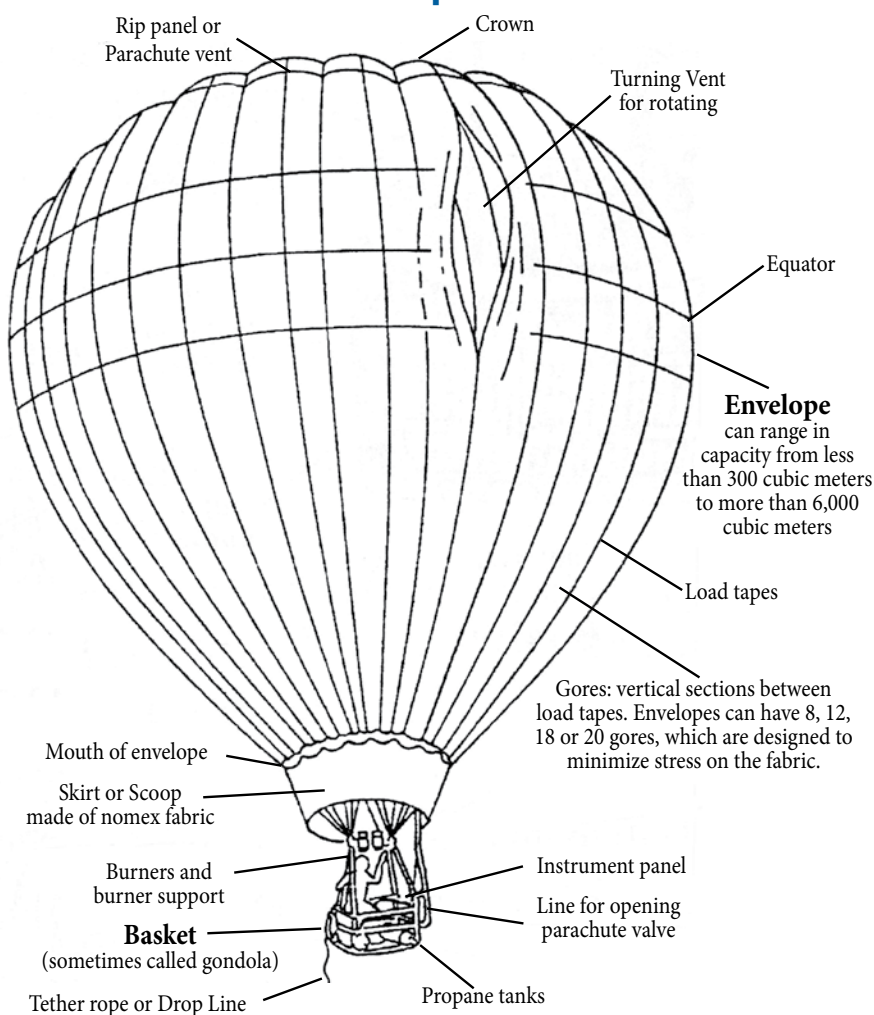
**The Envelope** - the fabric balloon which holds the air

**The Burner** - this heats up the air inside the envelope

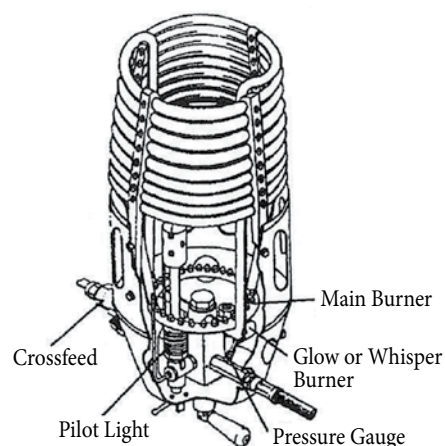
**The Basket** - where the pilot and passengers ride



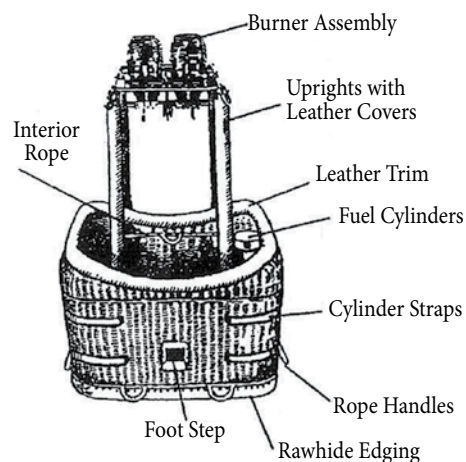
### The Envelope



### The Burner



### The Basket



## "WEATHER" TO FLY OR NOT - THAT IS THE QUESTION?

Before a hot air balloon can lift off, the pilot must ALWAYS first check the weather. Hot air balloons depend on different weather factors, including wind speeds, visibility and more.

### *How do pilots steer balloons?*

Generally speaking, they don't. A balloon drifts in the same direction and at the same speed as the wind. The skill is for the pilot to pick the altitude that has the most desired wind direction. Surface winds many times blow in a different speed or direction than the winds aloft.

### *What are winds aloft?*

The winds on the ground may not even have a hint of a breeze, but balloon flights may be canceled due to wind. How come? Pilots look at winds at the surface (the wind you can feel) and the winds at 1 to 9,000 feet. The balloons are not going to 9,000 feet, but it tells the pilot if they might encounter issues such as wind shear, turbulence, or strong surface winds later on. Even if there are no winds at the surface, the winds aloft may drive the decision not to fly. Winds aloft of 18-20 knots or 20 miles per hour can be sufficient to cancel a flight.

### *Can it be too windy to fly?*

Balloons fly best in light and stable winds of 4-6 miles per hour. Maximum safe winds are 8-10 mph. Wind affects every phase of a flight. Here are the reasons wind is such an issue:



During inflation the balloon envelope is filled with cold air using a fan. The balloon fabric is like a giant sail, and winds approaching 10 mph make it almost impossible to fill the balloon, caving in the side and rolling the balloon around, sometimes violently.

High winds can carry a balloon into areas that are unsuitable for a landing—such as metropolitan areas, forests, restricted airspace or large bodies of water.

Very low winds can strand you over unsuitable landing areas.

And then there is the landing. High wind speeds mean that the pilot needs a larger area in which to land. A balloon relies on the friction of the basket dragging along the ground to come to a stop as balloons do not have brakes.

### *Can balloons fly in cold temperatures?*

The temperature difference between inside and outside the balloon envelope determines the lift of a balloon, so balloons can fly well in cold weather. However, if the liquid propane in the fuel tanks is too cold, it may become too cold for the propane to work well. But the tanks can be warmed before the flight.



### *When is the best time to fly?*

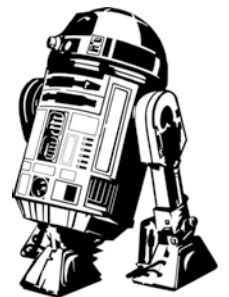
Hot air ballooning is a year-round sport. Weather conditions for ballooning are best just after sunrise and 2-3 hours before sunset. Good winds (2-8 mph) often occur during these times. During the day, when the sun is high, thermals (large bubbles of hot air that rise from the sun-heated earth) make ballooning hazardous.

## FACTS ABOUT HOT AIR BALLOONS

### *What are balloons made of?*

The bag or envelope, as it's more properly called, is made from a light weight ripstop nylon or polyester fabric much like parachute fabric. Balloon fabric is coated with polyurethane or silicone to help stop air leaking through. The bottom of the balloon is usually made from a fire resistant fabric called "Nomex." This is the same material as fire suits. Nomex is

used because it protects the balloon from accidental burn damage. The Nomex is also used to make a 'scoop' or 'skirt' which helps to direct heat from the burners' flame up into the balloon. The scoop has some added advantages when the balloon is on the ground.



## FACTS ABOUT HOT AIR BALLOONS

### ***How are the baskets made?***

The baskets are made from rattan or wicker. Each one is individually woven by hand.

### ***Why are most balloons shaped like a teardrop?***

The shape of a typical hot air balloon is derived from a set of mathematical equations which reduce the stress on the fabric. The resulting shape, sometimes referred to as the natural shape, minimizes the horizontal stress on the fabric. Vertical stresses are carried by webbing tapes, which run from the top to the bottom of the balloon. Computer design software can now engineer balloons in almost any shape.



### ***How big are hot air balloons?***

Typical sport balloons range in size from 65,000 to 105,000 cubic feet in volume and stand about 70 ft. tall. This is about the same as a 7-story building. The most popular sport balloon is approximately 55 feet wide (diameter) and carry 3 to 4 people. A typical 77,550 cubic foot balloon has 1,750 sq. yards of nylon fabric in its envelope (or one-fifth of an acre in surface area). It also includes more than 3 miles of thread and almost one-half mile of nylon webbing used for reinforcing. It displaces almost 3 tons of air. These sport balloons carry 3 to 4 people.

### ***Where does the balloon land?***

The balloon lands on the ground. Since the balloon travels with the wind, it is difficult to predict the exact landing site prior to the launch. However, a pilot is able to determine the general flight direction and landing area by studying the winds.

### ***How do you get the balloon back?***

Your chase crew driving a van or pickup truck helps get the balloon back. This chase crew follows the flight of the balloon (as well as the existing roads allow) and should be on hand to make the recovery when the balloon touches down.

### ***Do you need a license to pilot a balloon?***

Yes. The Federal Aviation Administration issues a Balloon Pilot Certificate. You must pass an FAA written examination, obtain a prescribed number

of hours in a balloon, make a solo flight and a flight to altitude, pass a flight test and submit a medical statement.

### ***Are you afraid of heights?***

Because there is very little sense of motion in a balloon, many people are able to overcome their fear of height. Rather than looking down, the natural reaction is to look “out” at the horizon and, because the balloon is moving relatively slowly, you probably won’t react the same way you would in an airplane (or even on a shaky stepstool!). It’s always an option to sit down in the basket, which seems to solve any uneasiness for most people after just a few moments.



### ***How long does it take to set up a balloon?***

It usually takes 3 or 4 people about 20 minutes to get a sport size balloon ready for flight. This includes unloading the basket and envelope from the trailer, rigging and checking the system and the cold and hot inflation. Larger and special shaped balloons can take up to an hour to ready for flight.

### ***How high do balloons fly?***

Most balloon flights occur between 500 and 1,000 feet above the ground, but balloons can fly at treetop level or go much higher.

### ***What fuel does a balloon use?***

Hot air balloons use propane, kept in pressurized tanks on the floor of the basket. The balloon carries 30-40 gallons of liquid propane. It is carried under pressure and passes to the burners through flexible hoses. When the valves are opened, the propane atomizes and is ignited by a pilot light in the burners. The flame may shoot out as much as ten or twenty feet, making a loud “whoosh.”

### ***Is ballooning SAFE?***

Statistics have shown ballooning to be the safest segment of general aviation. The two most significant hazards are poor pilot decisions, and contact with power lines. Providing that the aircraft is properly maintained, and that the pilot is prudent in his/her decision-making process and proficient in piloting skills, the risk is minimal. You are probably safer in a balloon than in your own car on an interstate!

### ***How long does a balloon last?***

A hot air balloon will usually last for 500-600 flying hours depending on how regularly it is flown and how well it is maintained. Balloons deteriorate rapidly if they are packed wet or if they aren't aired regularly. A typical sport balloon pilot flies about 50 hours per year so a new balloon should last 8 - 10 years. Commercial pilots fly 150 - 200 hours per year so their balloons tend to last about 3 years.

### ***How much does a balloon cost?***

New 4-passenger sport balloons cost around \$40,000. Of course, the exact price can vary considerably depending on the options that you want. A special shape balloon costs much more, usually \$150,000+.

### ***What is the difference between a gas balloon and a hot air balloon?***

A gas balloon is completely enclosed and is filled with helium, hydrogen, ammonia, or coal gas. A hot air balloon gets its lift from heating the air within it. Gas ballooning is almost completely silent whereas, the propane flame shooting out of the burners of a hot air balloon makes a loud "whoosh" sound.

### ***How fast does a balloon go?***

As fast as the wind; or as slow. Since the balloon has no forward propulsion system, its speed is determined entirely by the speed of the wind. That's why balloon races are events of accuracy not speed.

### ***Can you fly in the winter?***

Yes indeed! As long as you are properly dressed (as you would if, for example, you'd be attending an outdoor football game), winter flying can be incredibly beautiful. The air is frequently clearer, and visibility much improved (25-50 mile visibility is often possible). Because trees are bare, it is also easier to spot wildlife. The only concern may be that access to landing sites may be more difficult if there is significant snow cover.

### ***How long can a balloon stay up?***

It depends. Normally, the balloon carries enough fuel to remain aloft for up to 2 hours, but factors such as outside air temperature, weight being carried in the basket, and weather determine the duration of the flight.



***How about making a snack to take along on your visit to one of our great parks?***

## **S'mores Trail Mix**

### ***Ingredients:***

1 cup mini graham crackers or cereal  
1 cup mini marshmallows

1/2 cup candy-coated chocolate pieces (or chocolate chips)  
1 cup whole-grain cereal squares (or mini pretzels)

### ***Directions:***

Measure out and combine graham crackers, chocolate pieces, marshmallows and cereal in a large bowl. Store airtight for up to 2 weeks at room temperature.

Want to experiment? Try adding 1/2 to 1 cup each some of these extra add-ins. Add peanuts, almonds, walnuts or other nuts or seeds (sunflower, pumpkin, etc.). This will add some protein, as well as taste great. Try adding dried fruit like raisins, banana chips, freeze-dried strawberries or other fruits. Try adding mini pretzels or other cereals like oat squares.

Use your imagination and create your own special s'mores trail mix, but remember to write down your recipe so you will know how to make it again.

Serving size: 1/2 cup, makes 7 servings.



# OUTDOOR ADVENTURES

They don't call Hudson a Tree City for nothing! We have city, county and state parks a plenty within our borders. And we also have self-guided tree treks for the smallest nature enthusiasts. Check out the following parks section with listings for our wonderful Wisconsin Parks!

## HUDSON & NORTH HUDSON PARKS

### Hometown Park Challenge:

Get out and explore your hometown parks in Hudson and North Hudson, Wisconsin. Did you know there are over 25 public parks right here in your hometown? Do you know where all of them are? How many of the parks have you been to? Here is a challenge for you and your family. Can you visit all of the public parks in Hudson and North Hudson in 2024? Use this chart below to track when you visited each park.

When you are out visiting all of the great parks, you may want to bring some water to drink and a snack. Please remember to be kind to the



earth and bring your own reusable water bottle and always put your trash in a trash can (or take it home if there are no trash cans available). *Notice for parents: if you are visiting the parks in the winter months, the restrooms, drinking fountains, picnic tables and trash cans may not be available, so plan accordingly.*

Have even more fun by taking a photo of yourself at each park and use your photos to make an album of your park visits adventure.

Learn more about the parks at: [HudsonWI.gov/parks](http://HudsonWI.gov/parks) and [www.NorthHudsonWI.gov/community](http://www.NorthHudsonWI.gov/community).

### Hudson Parks

#### Anderson Park

100 Mont Croix Drive  
Date visited: \_\_\_\_\_

#### Birkmose Park

50 Coulee Road  
Date visited: \_\_\_\_\_

#### Burton Field

1110 9th Street  
Date visited: \_\_\_\_\_

#### Coon's Hill Park

400 Knollwood Drive  
Date visited: \_\_\_\_\_

#### Grandview Community Park

1100 Carmichael Road  
Date visited: \_\_\_\_\_

#### Lakefront Park

505 First Street  
Date visited: \_\_\_\_\_

#### Lake Mallalieu Boat Launch

(Corky's Pier) 1530 2nd Street  
Date visited: \_\_\_\_\_

#### Meadows Park

31 Canary Way  
Date visited: \_\_\_\_\_

#### Prospect Park

511 Wisconsin Street  
Date visited: \_\_\_\_\_

#### Vine Street Square

1005 Vine Street  
Date visited: \_\_\_\_\_

#### Webster Park

602 Laurel Avenue  
Date visited: \_\_\_\_\_

#### Weitkamp Park

648 O'Neil Road  
Date visited: \_\_\_\_\_

#### Williams Park

931 Laurel Avenue  
Date visited: \_\_\_\_\_

### North Hudson Parks

#### Brown's Beach

615 Galahad Road North  
Date visited: \_\_\_\_\_

#### Chief Jensen Memorial Park

1245 Vail Way North  
Date visited: \_\_\_\_\_

#### Deer Run Park

1112 Sommers Street North  
Date visited: \_\_\_\_\_

#### Eagle Woods Park

546 Helen Street North  
Date visited: \_\_\_\_\_

#### Ferry Landing Park

715 Galahad Road North  
Date visited: \_\_\_\_\_

#### Glen Oaks Park

53 4th Street North  
Date visited: \_\_\_\_\_

#### Jens & Gurian Jensen Memorial Park

759 Lund Street North  
Date visited: \_\_\_\_\_

#### Mallalieu Park

1138 Bald Eagle Road North  
Date visited: \_\_\_\_\_

#### Pepper Fest Park

401 7th Street North  
Date visited: \_\_\_\_\_

#### Sommers Landing Park

729 4th Street North  
Date visited: \_\_\_\_\_

#### St. Croix Station Park

235 Station Lane North  
Date visited: \_\_\_\_\_

#### Webster Park

1020 Webster Street North  
Date visited: \_\_\_\_\_

#### Woodcrest Park

1606 Prairie Drive North  
Date visited: \_\_\_\_\_

## LET'S HAVE SOME FUN!

Here are some suggested hot air balloon activities you can enjoy at home.

### GOOD READS:

*Flight for Freedom: The Wetzel Family's Daring Escape from East Germany*, by Kristen Fulton

This is an inspiring true story about one family's escape from behind the Berlin Wall! View a reading of this book on [YouTube](#) or check availability at your local library.



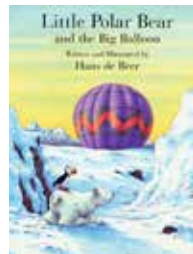
*The World Needs Who You Were Made to Be*, by Joanna Gaines

This book celebrates how creativity and acceptance can come together in a bright and beautiful adventure. View a reading of this book on [YouTube](#) or check availability at your local library.



*Little Polar Bear and the Big Balloon*, by Hans de Beer

A little polar bear helps a puffin who is unable to fly find another way to fly home, which involves a hot air balloon. View a reading of this book on [YouTube](#) or check availability at your local library.



### FUN EXPERIMENTS:

*National Geographic Kids: Racing Rocket Balloons.*

This experiment is fun to do with a few other people so you can race your balloons.

Step by step instructions on the [National Geographic Kids website](#).

*Learning 4 Kids: Hot Air Cold Air Science Activity*

This is a great experiment to watch the effects of hot air and cold air on a balloon. This activity is a great opportunity for kids to talk about what they can see and why it is happening. Kids will absolutely love this activity and will see, first hand, what effects hot and cold air has on a balloon.

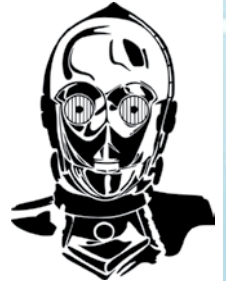
Step by step instructions on [Learning 4 Kids website](#).



### VIDEOS TO WATCH:

Don't miss the Hot Air Affair video *Rivers in the Air... Just Add Wind*.

Kids can tune in for FUN viewing with local artist and educator Liz Malanaphy. Watch and learn about the wind and why hot air balloons rely on it to fly in the sky. Watch on [YouTube](#).



SciShow Kids video: *How Do Hot Air Balloons Work?* Hot Air Balloons! They're those big, beautiful balloons people can float up to the sky in—but how do they get up there?! Watch on [YouTube](#).

Thinking Captain video: *How Do Hot Air Balloons Work?* from Best Learning Videos For Kids. The Thinking Captain shows how a hot air balloon works. Watch on [YouTube](#).

X-Stream Science video: *The Montgolfier Brothers First Flight* Parents will enjoy this video too. Learn about the Montgolfier Brothers and early hot air ballooning. Watch on [YouTube](#).

**Hudson Hot Air Affair**  
**Friday - Sunday, Feb. 6-8, 2026**





See a replica of the Montgolfier Balloon made by Dave & Sue Johnson at Hudson Hot Air Affair.



The French brothers Joseph and Jacques Montgolfier were concerned about the effects of flight on living creatures. This led to the hot air balloon ascent of the *Aerostat Réveillon* on September 19, 1783 with the first living beings in a basket attached to the balloon: a sheep, called Montauciel (Climb-to-the-sky), a duck and a rooster.



## THE BALLOONIST'S PRAYER

*The Winds have welcomed you with softness.  
The Sun has blessed you with his warm hands.  
You have flown so high and so well  
That God has joined you in your laughter  
And set you gently back again  
Into the loving arms of Mother Earth.*

## HOT AIR AFFAIR HISTORY

The Hot Air Affair was conceived back in 1990 as an idea to fuel public pride in Hudson and the St. Croix Valley by drawing local, state and national attention to our area while at the same time providing a mid-winter economic boost to our local businesses. The Hudson Hot Air Affair was incorporated in 1996 and is operated as an all-volunteer, not-for-profit community organization.

All proceeds from the event go to supporting the Hot Air Affair. We hope you enjoy this year's *Sky Walkers Return to Rock* themed event with your family and friends.

Thank you to our Corporate Sponsor:



Also, a special thanks to the following for sponsoring the publication of this educational booklet:



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Sources:

[www.fun-flying.com/weather.htm](http://www.fun-flying.com/weather.htm) • [www.hotairballoon.org/vermont/faq](http://www.hotairballoon.org/vermont/faq) • [www.adventureballoons.co.uk/about/balloon-weather](http://www.adventureballoons.co.uk/about/balloon-weather)  
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