

EXTRA!

FROM THE OLD FARMER'S ALMANAC

CASSEROLE COMFORT FOOD

SMALL PLANTS
FOR THE GARDEN

ADD ON A LITTLE
MORE WEIGHT

GETTING ROBOCALLS?
BLAME THE MEASLES

FEBRUARY 2019



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FEBRUARY

Holidays, Fun Facts, and More



EYE ON THE SKY

MOON PHASES

New Moon:

February 4, at
4:04 P.M. EST

First Quarter:

February 12, at
5:26 P.M. EST

Full Cold Moon:

February 19,
at 10:54 A.M. EST

Last Quarter:

February 26, at
6:28 A.M. EST



TAP FOR MORE
ABOUT MOON
PHASES



TAP FOR MORE
ABOUT FEBRUARY'S
FULL MOON

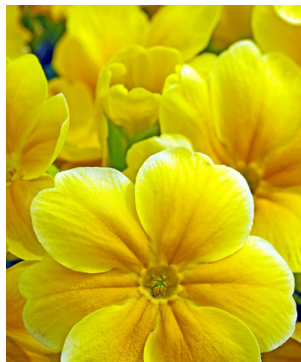
ABOUT THIS MONTH

This month's name came from the Latin *februa*, "to cleanse." The Roman Februalia was a festival of purification and atonement that took place during this time of year.

Birthstone: Amethyst

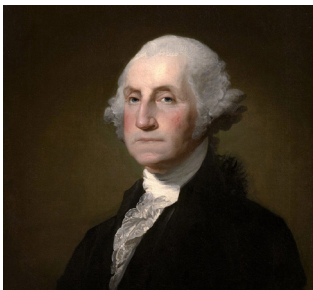


Birth Month Flower: Violet or Primrose



HOLIDAY HAPPENINGS

- Feb. 2:** Groundhog Day
Feb. 5: Chinese New Year (Year of the Pig)
Feb. 12: Abraham Lincoln's Birthday
Feb. 14: Valentine's Day
Feb. 15: National Flag of Canada Day
Feb. 18: Presidents' Day
Feb. 22: George Washington's Birthday



WACKY TIMES

- National Bird-Feeding Month
 Return Shopping Carts to the Supermarket Month
Feb. 3: Carrot Cake Day
Feb. 5: Weatherperson's Day
Feb. 9: Read in the Bathtub Day
Feb. 27: International Polar Bear Day



RHYME TIME

*Here delicate
 snow-stars, out
 of the cloud,
 Come floating
 downward in
 airy play,
 Like spangles
 dropped from
 the glistening
 crowd*

*That whiten
 by night
 the milky way.*

—“The Snow-Shower,” by William Cullen Bryant, American poet (1794–1878)

Answer: 1. The poem, titled “How Do I Love Thee?,” is Sonnet 43 in Browning’s book *Sonnets From the Portuguese*, which was dedicated to her husband, poet Robert Browning.

FEBRUARY'S QUIZ

In celebration of Valentine’s Day: Which English poet wrote the sonnet that includes the famous line, “How do I love thee? Let me count the ways”?

1. Elizabeth Barrett Browning (1806–61)
2. Lord George Gordon Byron (1788–1824)
3. William Shakespeare (1564–1616)

(See answer below rhyme.)



1.



2.



3.

 TAP TO READ THE POEM “HOW DO I LOVE THEE?”

HOW DO I LOVE THEE?

by Elizabeth Barrett Browning

How do I love thee? Let me count the ways.

I love thee to the depth and breadth and height

My soul can reach, when feeling out of sight

For the ends of being and ideal grace.

I love thee to the level of every day's

Most quiet need, by sun and candlelight.

I love thee freely, as men strive for right;

I love thee purely, as they turn from praise.

I love thee with the passion put to use

In my old griefs, and with my childhood's faith.

I love thee with a love I seemed to lose

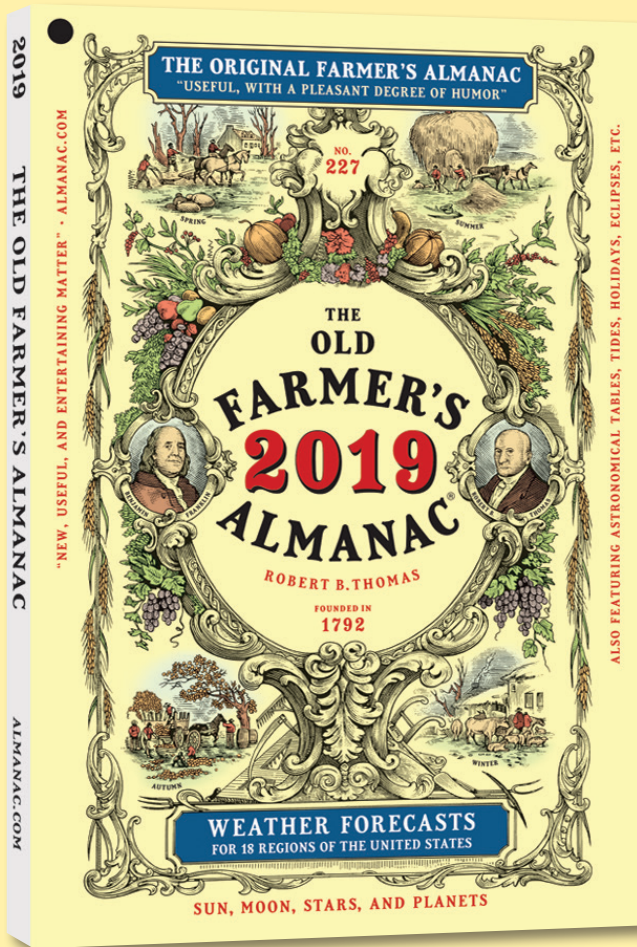
With my lost saints. I love thee with the breath,

Smiles, tears, of all my life; and, if God choose,

I shall but love thee better after death.

Shipping Now!

THE 2019 OLD FARMER'S ALMANAC



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BEST DAYS TO DO THINGS

These February dates, deemed to be propitious in astrology, are based on the astrological passage of the Moon. However, consider all indicators before making any major decisions. —*Celeste Longacre*

PERSONAL

Advertise to sell: 11, 12

Ask for a loan: 24, 28

Begin diet to lose weight: 20, 25

Begin diet to gain weight: 7, 12

Buy a home: 12, 16

Color hair: 11, 12

Cut hair to discourage growth: 21, 22

Cut hair to encourage growth: 11, 12

Get married: 21, 22

Have dental care: 19, 20

Move (house/household): 13, 14

Perm hair: 3–5

Quit smoking: 20, 25



Straighten hair: 26, 27

Travel for pleasure: 17, 18

Wean children: 20, 25

AROUND THE HOUSE

Bake: 15, 16

Brew: 23–25

Can, pickle, or make sauerkraut:
23–25

Demolish: 23–25

Dry fruit/vegetables/meat: 26, 27

End projects: 3

Lay shingles: 17, 18

Make jams/jellies: 6, 7

Paint: 11, 12

Start projects: 5

Wash floors: 6, 7

Wash windows: 8–10

OUTDOORS

Begin logging: 1, 2, 28

Go camping: 26, 27

Go fishing: 4–19

Set posts or pour concrete: 1, 2, 28

IN THE GARDEN

Destroy pests and weeds: 8–10

Graft or pollinate: 15, 16

Harvest aboveground crops: 11, 12

Harvest belowground crops: 1, 2,
28

Mow to decrease growth: 23–25

Mow to increase growth: 8–10

Pick fruit: 19, 20

Plant aboveground crops: 15, 16

Plant belowground crops: 23–25

Prune to discourage growth: 26, 27

Prune to encourage growth: 8–10

ON THE FARM

Breed animals: 23–25

Castrate animals: 3–5

Cut hay: 8–10

Purchase animals: 15, 16

Set eggs: 13, 14, 22, 23

Slaughter livestock: 23–25

Wean animals: 20, 25



GARDENING BY THE MOON'S SIGN

Use the February dates shown in the Moon's Astrological Place calendar below to find the best days for the following garden tasks:

PLANT, TRANSPLANT, AND GRAFT: Cancer, Scorpio, Pisces, or Taurus

HARVEST: Aries, Leo, Sagittarius, Gemini, or Aquarius

BUILD/FIX FENCES OR GARDEN BEDS: Capricorn

CONTROL INSECT PESTS, PLOW, AND WEED: Aries, Gemini, Leo, Sagittarius, or Aquarius

PRUNE: Aries, Leo, or Sagittarius. During a waxing Moon, pruning encourages growth; during a waning Moon, it discourages growth.

THE MOON'S ASTROLOGICAL PLACE IN FEBRUARY

1 Capricorn	9 Aries	17 Leo	25 Scorpio
2 Capricorn	10 Aries	18 Leo	26 Sagittarius
3 Aquarius	11 Taurus	19 Virgo	27 Sagittarius
4 Aquarius	12 Taurus	20 Virgo	28 Capricorn
5 Aquarius	13 Gemini	21 Libra	
6 Pisces	14 Gemini	22 Libra	
7 Pisces	15 Cancer	23 Scorpio	
8 Aries	16 Cancer	24 Scorpio	



TAP FOR
MERCURY IN
RETROGRADE
DATES



APP EXTRA!
TAP FOR
FEBRUARY
MOON PHASES

MERCURY IN RETROGRADE

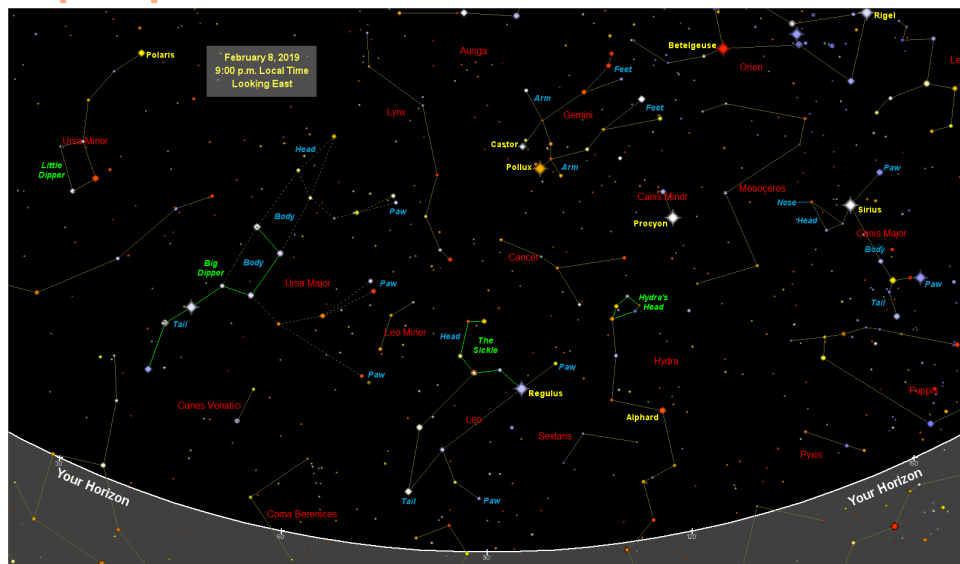
Sometimes the other planets appear to be traveling backward through the zodiac; this is an illusion. We call this illusion *retrograde motion*.

Mercury's retrograde periods can cause our plans to go awry. However, this is an excellent time to reflect on the past. Intuition is high during these periods, and coincidences can be extraordinary.

When Mercury is retrograde, remain flexible, allow extra time for travel, and avoid signing contracts. Review projects and plans at these times, but wait until Mercury is direct again to make any final decisions.

In 2019, Mercury will be retrograde during **March 5–28**, **July 7–August 2**, and **October 31–November 20**.

—Celeste Longacre



THERE'S MORE TO CONSTELLATIONS THAN MEETS THE EYE

When gazing into the night sky in search of constellations, we typically find them by identifying a handful of their brightest stars. Most constellations contain only a few bright stars, but if you know the sky well enough (or have a good map), that's sufficient to tell you which constellation you're looking at. What's more, if you do your observing from a dark location with minimal light pollution, you'll find that there is more to constellations than a few bright stars.

The distinctive patterns formed by the brighter stars are known as "asterisms," which are an ideal starting point for a deeper dive into some popular constellations. One of the most familiar asterisms in the sky is the Big Dipper, part of the constellation Ursa Major, the Greater Bear. The seven stars of the Big Dipper are outlined in green on this month's sky map

APP EXTRA!
TAP TO GET
A PRINTABLE
FEBRUARY
SKY MAP

APP EXTRA!
TAP TO
FOLLOW
OHIOAN JEFF
DETRAY'S SKY
ADVENTURES



and are easy to spot even in light-polluted suburban skies. But from a dark, rural location, Ursa Major gets much larger as fainter stars come into view.

Under a truly dark sky, we can see that the Big Dipper comprises only the hindquarters and tail of the Greater Bear. Fainter stars outline the forward portion of the body and the head of the bear. Extending from the front and rear of the body are legs that end in three pairs of brightish stars representing the animal's paws. Altogether, the Big Dipper plus the constellation's fainter stars trace out a stick figure that many ancient cultures imagined to be the Greater Bear.

Looking due east, we see another asterism come into view: the Sickle in Leo, the Lion. A sickle is a short-handled cutting tool of ancient design typically used for harvesting grain. The bright star Regulus marks the base of the Sickle and is considered to be "the heart of the Lion." Angling downward toward the left are other moderately bright stars constituting the body, tail, and paws of the beast. Leo is one of the few constellations that looks like its namesake at first glance. After tracing out the constellation for the first time, you'll easily spot the Lion whenever he's in view.

Just to the right of the Sickle, look for the compact five-sided asterism known as Hydra's Head. It's not nearly as impressive as the Big Dipper or the Sickle, but it's the starting point for spotting Hydra, the Water Snake. The body of Hydra slithers downward in a meandering chain of faint stars, interrupted only by bright Alphard, a star known as "the solitary one" because it's the only bright star in the vicinity.

Above the Sickle and Hydra's Head, you'll find the constellation Gemini, the Twins. Here, the asterism consists of just two bright stars, Castor and Pollux, named for the twins of the Gemini legend. With Castor and Pollux representing the heads of the twins, fainter stars constitute their bodies, including arms, legs, and feet.

Finally, on the far right shines Sirius, the Dog Star, the brightest star in the sky and the heart of Canis Major, the Greater Dog. It's a stretch to refer to a single star as an asterism, but Sirius is so bright that we'll make an exception. Arrayed around Sirius are fainter stars representing all of the parts of the dog's anatomy, right down to his nose!

—Jeff DeTray



Casserole Comfort Food

When it comes to comfort food, it's hard to beat the satisfying flavors that you get from casseroles. But the best part of a casserole is how easy it is to make. See for yourself with these simple and scrumptious recipes.

FOOD

 TAP FOR RECIPE

Broccoli Noodle Casserole

PHOTO: SAM JONES/QUINN BREIN

BROCCOLI NOODLE CASSEROLE

2 eggs, beaten

1 can (10-3/4 ounces) condensed cream of mushroom soup

1 cup shredded sharp cheddar cheese

1 cup mayonnaise

1/2 cup milk

2 tablespoons finely chopped onion

2 packages (16 ounces each) frozen chopped broccoli, prepared according to package directions

8 ounces egg noodles, prepared according to package directions

cracker crumbs

Preheat oven to 350°F. Grease a 13x9-inch baking dish.

In a bowl, combine eggs, soup, cheese, mayonnaise, milk, and onions.

In the prepared dish, make several alternating layers of broccoli, soup mixture, and noodles, beginning and ending with broccoli. Top with cracker crumbs.

Bake for 45 minutes.

Makes 6 to 8 servings.



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THIS
RECIPE

FOOD



TAP FOR
RECIPE

Beef 'n' Biscuit Casserole



PHOTO: SP/CO

BEEF 'N' BISCUIT CASSEROLE

- 1 pound ground beef
- 1/2 cup chopped onion
- 1/4 cup chopped green bell pepper
- 1 can (8 ounces) tomato sauce
- 2 teaspoons chili powder
- 1/2 teaspoon garlic salt
- 1 can (8 ounces) refrigerator buttermilk biscuits
- 1-1/2 cups shredded cheddar cheese, divided
- 1/2 cup sour cream
- 1 egg, slightly beaten

Preheat oven to 375°F. Get out an 8- or 9-inch baking dish.

In a nonstick skillet, brown ground beef with onions and peppers. Drain grease. Stir in tomato sauce, chili powder, and garlic salt. Let simmer.

Separate biscuit dough into 10 biscuits; split each in half. Press 10 biscuit halves over the bottom of the ungreased baking dish.

In a bowl, mix 1/2 cup of the cheese with sour cream and egg. Remove meat mixture from heat and stir in sour cream mixture. Spoon over biscuits in baking dish. Arrange remaining biscuit halves on top. Sprinkle with remaining 1 cup of cheese.

Bake for 25 to 30 minutes, or until golden brown.

Makes 4 to 6 servings.

SHARE
THIS
RECIPE

Chicken, Apple, and Cheese Casserole



TAP FOR
RECIPE

CHICKEN, APPLE, AND CHEESE CASSEROLE

- | | |
|---|---|
| 5 tablespoons butter,
softened | 1/2 cup shredded Swiss
cheese |
| 3 cups sliced apples | 1/2 cup grated Parmesan
cheese |
| 2 onions, thinly sliced | 1/4 cup bread crumbs |
| 6 boneless, skinless chicken
breast halves | 1/2 teaspoon dried thyme |
| 1 teaspoon salt | 2 tablespoons apple cider or
apple juice |
| 1/4 teaspoon freshly ground
black pepper | |

Preheat oven to 350°F. Coat a 2-quart baking dish with 1 tablespoon of the butter.

Melt remaining butter in a heavy skillet over medium heat. Add apples and onions and cook until apples are tender, about 10 minutes. Spoon into prepared baking dish.

Sprinkle chicken with salt and pepper and arrange over apple–onion mixture.

In a bowl, combine cheeses, bread crumbs, and thyme. Sprinkle mixture over chicken. Drizzle apple cider over the cheese.

Bake for 40 minutes, or until an instant-read thermometer inserted into the middle of the chicken breast reads 165°F.

Makes 6 servings.

SHARE
THIS
RECIPE

A man with a short haircut and light beard, wearing a white tank top and black pants, is performing a cable exercise in a gym. He is leaning forward, holding a thick, black, textured cable handle with both hands. The background is a blurred gym environment with various pieces of equipment. The text "LIVING NATURALLY" is printed in the upper right corner of the image.

LIVING NATURALLY

Go Ahead: Add On a Little More Weight

PHOTO: GILAXIA/GETTY IMAGES



I can split wood for hours with the best of them.

I've gotten most of my daily exercise this week splitting big chunks of cedar wood into kindling.

We had a couple of big cedars taken down and sawed up last year to let more winter light into our greenhouse, and the 16-inch logs were just sitting there, nice and dry and begging to be split.

Cedar doesn't give

much heat, but it makes great kindling. These particular logs made for great exercise, too, because the wood was so full of knots. After 10 minutes, I was huffing and puffing and got so hot that I stripped off my jacket.

I can split wood for hours with the best of them. This is because for nearly three decades, I've stayed faithful to regular

weight training. It gives me the strength and coordination that I need, not just for splitting wood, but also for the multitudes of chores and fun activities that demand more than a little oomph.

BEYOND "CARDIO"

When most people think of exercise, they think of aerobic ("cardio") activities such



Weight training offers a raft of health and lifestyle benefits.

as running, walking, bicycling, swimming, and jumping rope. These activities help build stamina, improve heart-lung function, and offer a lot of mental health benefits.

Before beginning weight training, be sure to consult your physician if you have any concerns, and even after you do get the go-ahead, always take care to be safe. You're not out to prove anything to anyone.

But weight training

(“lifting”) does offer a raft of special health and lifestyle benefits. To name a few:

- Preserves muscle mass for people trying to lose weight. Unless you protect muscles by demanding more of them, about half of the weight that you lose will be muscle.
- Protects against age-related loss of muscle. Most people lose muscle (and strength) as they age, simply because they don't demand as much

from their muscles. To stay (or get) strong, you have to ask your body to do the hard work.

- Boosts metabolism; muscles burn calories even at rest.
- Improves kinesthetic awareness (location of body in space, and body parts relative to one another). This results in better balance and more efficient, graceful movements.
- Protects joints. Bigger, stronger muscles take up more of the stress



Weight training strengthens the muscles that you already have.

of physical efforts, thus reducing stress on joints.

- Protects against injury. If your muscles (and the tendons that attach them to your bones) are stronger than ordinary life demands, you'll be less likely to injure yourself when life suddenly requires more strength or faster reactions.

- Stresses, and therefore strengthens, bones. Like muscles, bones respond to increasing increments of stress by growing

denser and stronger.

- Firms muscles, so that you have less jiggle. You may end up wearing the same-size jeans and shirts, but you'll have fewer bulges and look more svelte.

LEARNING HOW

Knowing what to do and how to do it took a few grunt-and-groan lessons with dumbbells and barbells at a local gym. I feel fortunate to have learned from young male trainers who didn't

propagate the myth that women should do different weight training than men, since we all have the same muscles.

They showed me how to execute the basic moves, starting with small, easy-to-handle weights, and then encouraged me to add more weight each time an exercise became easy.

Weight training doesn't make new muscle cells—it just strengthens the muscles that you already have. Through gradually



Taking a few lessons is well worth the time and money.

adding small increments of weight, the practice encourages existing muscle cells to grow and strengthen, allowing them to handle loads beyond what the stresses of daily life ordinarily demand.

By the way, weight training also doesn't "turn fat into muscle." Fat cells shrink as you "lose weight." Muscle cells grow bigger and stronger, responding to the demands of progressively heavier weights.

LEARN FROM KNOWLEDGEABLE PEOPLE

Taking a few lessons from people who know what they're doing is well worth the time and money.

Once you learn the hows and wherefores of muscle-building, you can use many of the activities of daily life to maintain (and even build) your strength. But I still trek to the gym whenever I'm in town—usually two or three times a week. And these maintenance

workouts take only about 20 minutes.

LIFE-CHANGING

Lifting will change your life. Weight training will make you stronger, sleeker, and less injury-prone. Almost as important, it will help you to follow Miss Piggy's sage advice: "Never eat more than you can lift."

—Margaret Boyles



TAP TO READ MORE OF MARGARET BOYLES'S POSTS IN HER "LIVING NATURALLY" BLOG

**'BLUEBERRY GLAZE'
BLUEBERRY**

Small Talk

Petite plants with oversize appeal—and yield

Join the move toward minimalism with mini- and dwarf plants that provide hefty harvests in small pots and plots.

GARDENING

LETTUCE IN!

Perfect for containers or as edible edging in flower beds, ‘Pomegranate Crunch’ lettuce is a color sensation. The mini-romaine/butterhead cross produces small, dense heads with cherry leaves and light green hearts dusted with red. Color graduates smoothly from the outer leaves to the heart, creating stunning



contrast. You’ll be picking these fast-growing, crunchy heads 45 days after seeds sprout.

Tip: To prevent slugs from damaging lettuce leaves, mulch your soil with shredded cedar bark or sprinkle diatomaceous earth or finely crushed eggshells around the plants.



BROC-A-BYE, BABY

Got a window box—or a windowsill? Bring either one to life with ‘Aspabroc Baby’ broccoli (the original broccolini). Four plants fit tidily into a 24-inch-long window box or other container. This mild-tasting broccolini (a cross between Chinese kale and broccoli) produces tender, small broccoli heads atop asparagus-thin, tender stems. You’ll be harvesting the center head 50 to 60 days from transplant and snacking on shoots shortly thereafter—and again and again (four or five more times). Oh, and if a flower appears, it’s edible, too.

Tip: Start seeds early, about 3 weeks before planting outdoors.

Transplants will tolerate cold days and nights down to 30°F. Broccolini thrives in cool weather.

A SWEET TREAT

‘Peppermint Stick’ celery is eye candy and tasty, too. Bicolor, it’s full of sweet flavor (raw and cooked) and perfect for kitchen gardens and pots. Use the leaves as an herb and the 1/4-inch-wide stalks as swizzle sticks or for fresh crudités all year long. ‘Peppermint Stick’ is slow to bolt, and its red color is much darker on the outside stalks. Plants grow to about 20 inches tall and are fully mature 85 to 100 days after the seeds are sown. Start indoors 30 days in advance of the gardening season.

Tip: Keep potted celery in the shade during



hot summer months to prevent bolting. Then bring the pot indoors, set it in a sunny window, and use the celery during the autumn and winter for seasoning.

SAY 'CHEESE'!

Brilliant red, orange, and yellow 'Hungarian Cheese' peppers will make you smile. These 28 inch-tall plants produce quickly—about 60 days after being set out as transplants. (Seed packets are an equal mix of the three pepper colors.) Thick-walled, flat, and fluted, these sweet peppers are great for stuffing or eating out of hand. If you have a hefty harvest, don't worry: They store for 2 weeks or more in the refrigerator. Keep peppers picked for



continual production, especially in containers.

Tip: Scratch 1/4 cup of Epsom salts around each plant after it's established; the salts will supply a hefty dose of magnesium, needed for plant vigor and numerous blooms that set fruit.



PEAS, PLEASE!

'Tom Thumb' (aka 'Half Pint') pea is an old variety from the 1850s that is new again, thanks to the interest in container gardening. A true miniature that grows to only 10 inches tall, it's a natural for pots. You'll be picking plenty of full-size pea pods 50 days after sowing. Most peas can withstand a chill; this one can tolerate temperatures down to 20°F. More good news: No staking needed!

Tip: In the spring, soak pea seeds overnight for

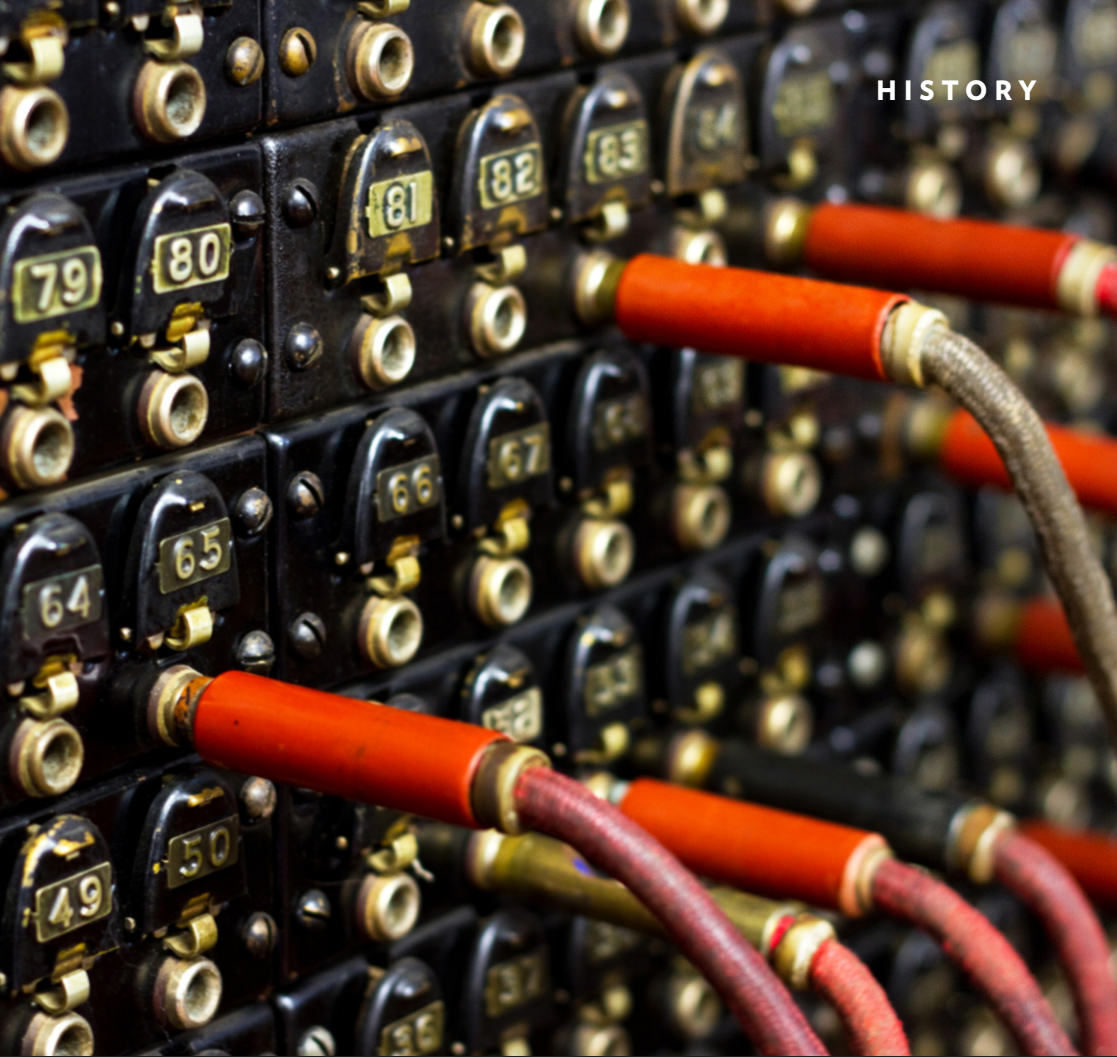
quick germination in cool soil and inoculate them with rhizobia powder. Peas are legumes, which take nitrogen from the air with the help of a rhizobia bacterium that colonizes on pea roots.

TRUE BLUES

'Blueberry Glaze' blueberry, a 2-foot-tall compact mound, looks like a boxwood and can be sheared as such after berries are harvested. Perfect for a container on a patio, the shrub has tiny, deep-green leaves, white-with-pink blossoms in the spring, and small, deep-blue berries in midsummer. Their intense flavor is much like that of wild blueberries. The plant needs only 500 chilling hours and grows well in Zones 5 to 8.

Tip: Keep the soil in blueberry containers acidic; scratch sulfur into the soil every spring when you apply granular fertilizer. When planting, use a potting mix that is predominantly peat.

—Doreen G. Howard



Getting Robocalls? Blame the Measles

In 1879, a mere 3 years after Alexander Graham Bell made the first phone call, the Lowell (Massachusetts) District Telephone Company hired teenage boys to run its switchboard.

“Give me John Smith,” a subscriber would request, and the lad on duty would plug the call into John Smith’s line.

However, as time went by, changes had to be made. Young women were hired to handle the switchboard when it was discovered that the women’s voices were better adapted for the work than the boys’ voices. They also were more polite to callers.

Once the women took over the switchboard and the public began to accept the idea of the telephone, business improved for the company. By late 1880, four operators were on duty at the switchboard. The phone company had over 200 subscribers!

Alas, in December, a few days before Christmas, the trouble started. One of the operators phoned in sick.

Back then, a sick operator—even if she were away from work for only a day—rocked the foundation of the brand-new telephone company. She knew the name of each and every subscriber in the Lowell area; a temporary replacement would need to learn them.

As it was, the remaining three switchboard operators managed to keep things going—until the next day, when a second operator, phoned in sick.

At this point, company president W. A. Ingham put through an emergency call to Dr. Moses Greeley Parker, who, in addition to being the best doctor in town, also happened to be a big stockholder in the Lowell District Telephone Company.

“If you can’t get these two women back on the job in a hurry, we’ll be out of business,” Ingham told him. “Those other two operators will collapse from exhaustion.”

So Dr. Parker visited the two ill telephone operators and then went directly to the phone company office.

“You’ll have to train substitute operators,” the doctor informed Ingham. “They both have the measles.”

“It will take weeks to train substitutes,” stated Ingham. “The new girls will have to memorize more than 200 names.”

“Well,” Dr. Parker interrupted, “instead of names, why don’t you just use numbers?”

“Numbers, Doctor?” responded Ingham. “I don’t know what you mean.”

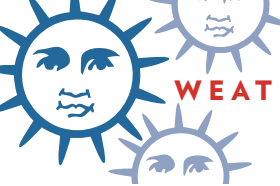
“It’s rather simple, Ingham,” said the doctor smoothly. “Instead of identifying your subscribers by name, identify them by numbers and put a corresponding number over each one’s hole on the switchboard. For example, I had the first phone in town, and I am in the first hole position on your board. I can be Number One!”

Ingham began to get the message, but he scoffed at the idea. “Our subscribers,” he said, “will never accept your idea, Dr. Parker. People have names. They are not numbers.”

“Be that as it may,” countered Parker, “but it’s either numbers or we go out of business if those other operators get the measles.”

So, numbers it became, and robocalls we now have.

—Barbara Craig



WEATHER FORECASTS

IF FEBRUARY GIVE MUCH SNOW,
A FINE SUMMER IT DOTH FORESHOW.



TAP TO FIND
OUT THE
WEATHER
HISTORY OF
THE DAY



LOVE ALL
THINGS
WEATHER?
TAP FOR THE
WEATHER
FOLKLORE
OF THE DAY

HOW WE MAKE OUR PREDICTIONS

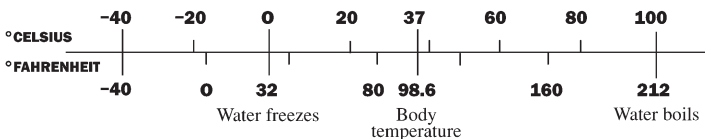
We derive our weather forecasts from a secret formula that was devised by the founder of this Almanac, Robert B. Thomas, in 1792. Thomas believed that weather on Earth was influenced by sunspots, which are magnetic storms on the surface of the Sun.

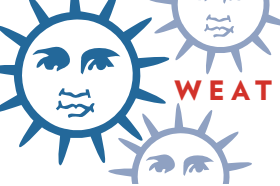
Over the years, we have refined and enhanced this formula with state-of-the-art technology and modern scientific calculations. We employ three scientific disciplines to make our long-range predictions: solar science, the study of sunspots and other solar activity; climatology, the study of prevailing weather patterns; and meteorology, the study of the atmosphere. We predict weather trends and events by comparing solar patterns and historical weather conditions with current solar activity.

Our forecasts emphasize temperature and precipitation deviations from averages, or normals. These are based on 30-year statistical averages prepared by government meteorological agencies and updated every 10 years. Most-recent tabulations span the period 1981 through 2010.

We believe that nothing in the universe happens haphazardly, that there is a cause-and-effect pattern to all phenomena. However, although neither we nor any other forecasters have as yet gained sufficient insight into the mysteries of the universe to predict the weather with total accuracy, our results are almost always very close to our traditional claim of 80 percent.

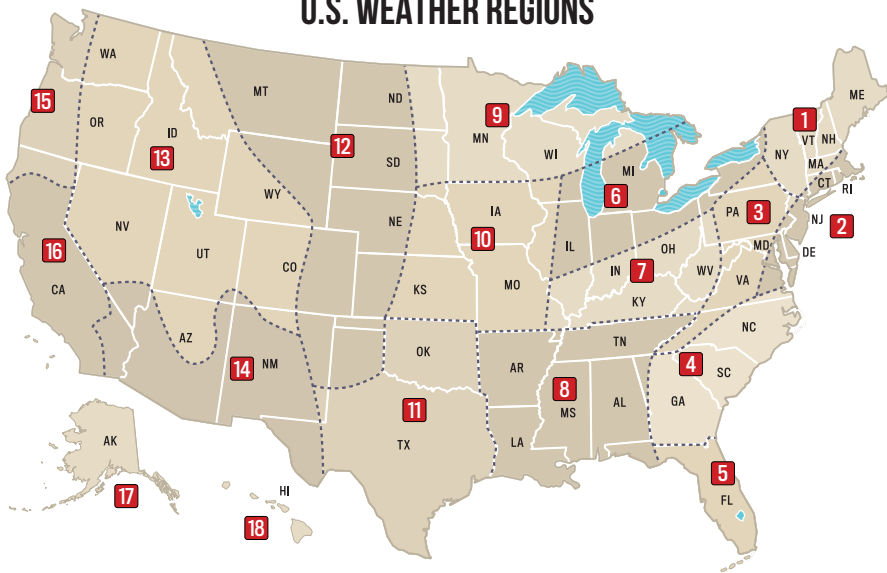
CELSIUS-FAHRENHEIT TABLE



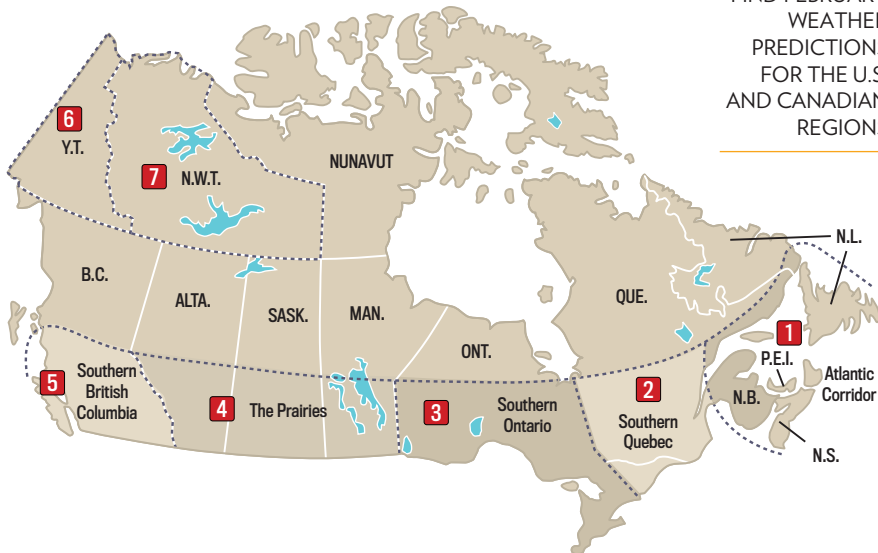


WEATHER FORECASTS

U.S. WEATHER REGIONS



CANADIAN WEATHER REGIONS



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WEATHER
PREDICTIONS
FOR THE U.S.
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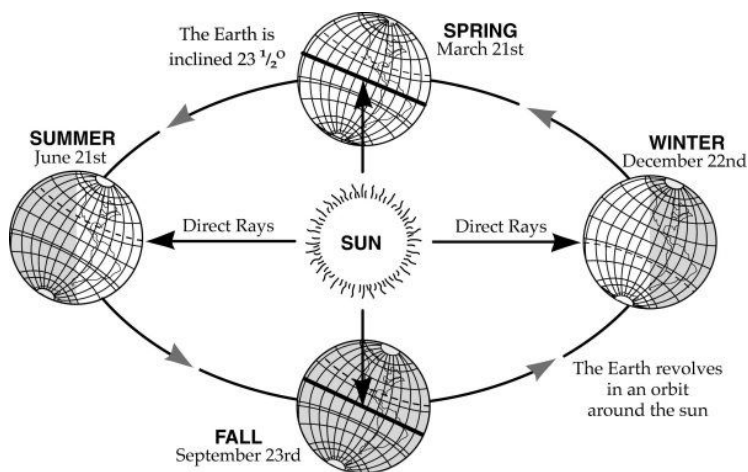


Fig. 1.

WHY FEBRUARY IS COLD

Someone recently asked me how it can be colder in winter even though Earth is closer to the Sun than it is in summer. Although I was taught that Earth's distance from the Sun averages out to be about 93 million miles, in reality this distance varies from 91.4 million miles in early January to 94.5 million miles in July—so Earth is indeed closer to the Sun during our winter.

But when you think about it, Earth's distance from the Sun can not be seen to be the reason for the seasons, as when it is winter for me in Pennsylvania, it is summer for my friend in Australia. As we all know,

seasons in the Southern Hemisphere are the opposite of those in the Northern Hemisphere.

Instead, the answer lies in the 23.5-degree tilt of Earth's orbit as it revolves around the Sun (see Fig. 1). You can see how this works by using a flashlight. If you point the flashlight straight ahead, you will see a circle of light, with the brightest light in the center (Fig. 2), while if you tilt the flashlight, its light is more diffuse and weaker away from where it is shining directly (Fig. 3). The the weaker light in the case of the Sun and our solar system means that Earth is receiving less energy from the Sun, which is



Fig. 2.

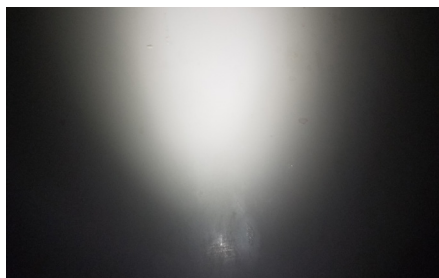


Fig. 3.

why the weather is colder and the daylight hours are shorter in winter.

Since the amount of sunlight is at its minimum at the winter solstice, which occurs around December 22, you might expect that day to be the coldest of the year, on average. But instead, the coldest time of year in the Northern Hemisphere occurs in February, nearly 2 months later.

The reason this happens is that while Earth receives energy from the Sun, it also emits energy into space. And Earth's Northern Hemisphere emits more energy than it receives for nearly 2 months after the winter solstice,

which means that temperatures continue to trend downward. Think about what happens when you turn off the burner on an electric stove—it does not cool down to room temperature instantly, but instead remains hot for a while, until it finally reaches room temperature.

In a similar manner, Earth still retains warmth from the previous summer, and it takes more time to fully cool down after sunlight reaches its seasonal minimum.

Because land and water have different specific heat capacities, they warm and cool at different rates. Thus oceans and other large bodies of water heat and cool more slowly than the land surrounding them. This is why a sea breeze from the ocean brings cooling in the summertime and why the Great Lakes are able to produce snow squalls in the winter.

So, the seasons are not produced because of changes in how far Earth is from the Sun, but instead because Earth is tilted in its orbit. And there is a lag between when incoming solar energy reaches its high and low points and when we record the warmest and coldest temperatures because Earth not only receives energy from the Sun but also emits energy into space.

—Michael Steinberg, Old Farmer's
Almanac meteorologist



HUMOR ME

GRINS AND GROANS FROM THE ALMANAC

WE SHOULD HAVE KNOWN

A determined-looking woman strode into the police station and demanded that her husband be arrested.

“Well, what did he do?” asked the sergeant.

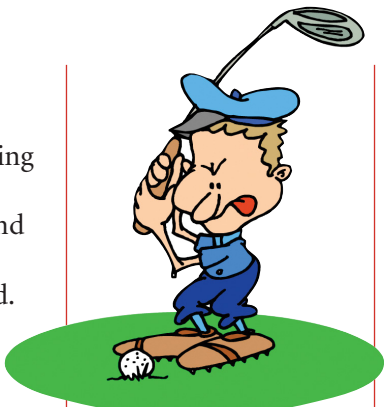
“He attempted to strike me.”

“Do you know where we can find him now?”

“I sure do—he’s at the Emergency Room.”

OF COURSE

A gentleman known as “Alibi Bill” was trying his hand at golf. On the first tee, he took a vigorous and lusty swing at the ball but missed it completely. His second attempt



proved equally futile. After five more heavy swings and five more misses, he turned to his host and said, “By gosh, this sure is a tough course you’ve got here!”

TROUBLE AHEAD

“I feel so tired every night,” said the farmer’s wife to her husband, as she took up her darning after yet another day’s work was done. “My bones ache, and I have

fits of dizziness, and no appetite, and I’m worried, too, about the heifer. When I was feeding the stock tonight, she acted very strangely and refused to eat. I’m afraid she’s going to die.”

“Yes,” said the farmer, with an anxious look on his face. “I’m worried about that heifer myself.”

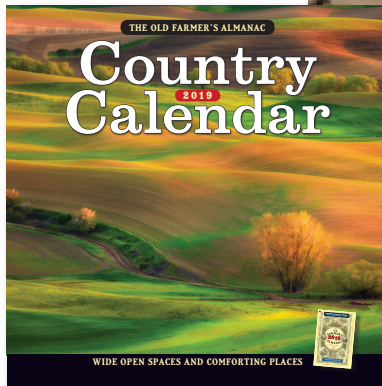
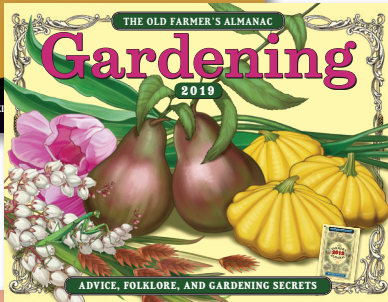
NEWSPAPER ITEM: THE REAL GREAT CONFLICT

“Colonel Guzzler, our distinguished citizen and Civil War veteran, just celebrated his 50th wedding anniversary. The colonel tells some interesting tales of the great conflict.”

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APRIL 2019

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8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	<p>April Fool's Day The custom of playing practical jokes on one another is said to have originated in the 15th century.</p>				

Good News In the last 100 years, the world's population has grown by 3 billion people. That's a lot of mouths to feed!

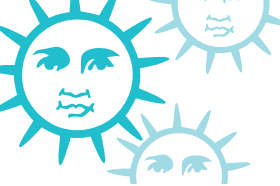
Did You Know? The first ever hot air balloon flight was made in 1783 by two Frenchmen. They were launched from a basket tied to a wicker frame, and they floated for 20 minutes over a village in France.

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