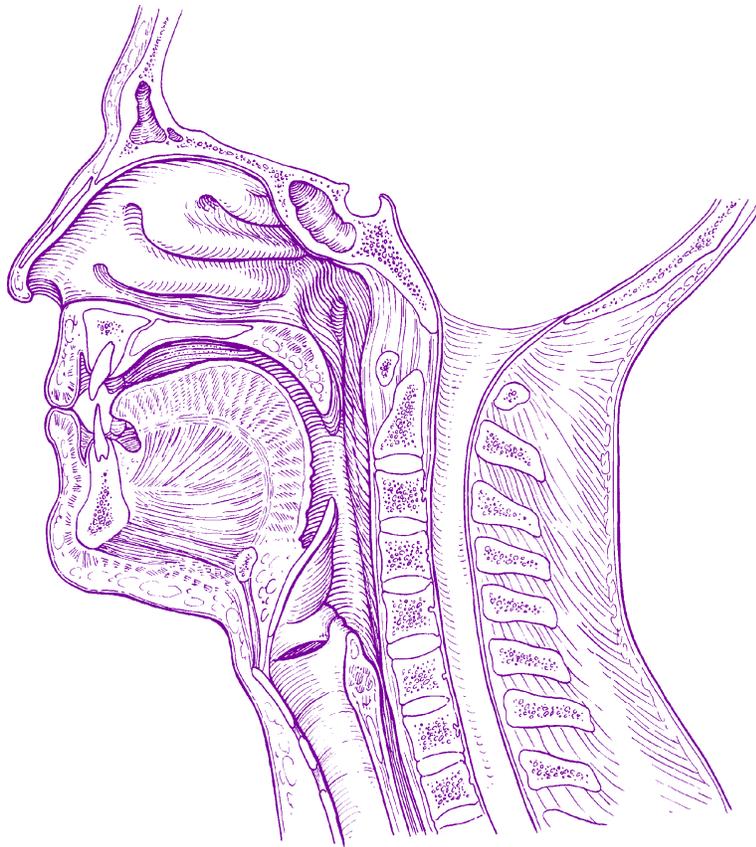


Designing Your  
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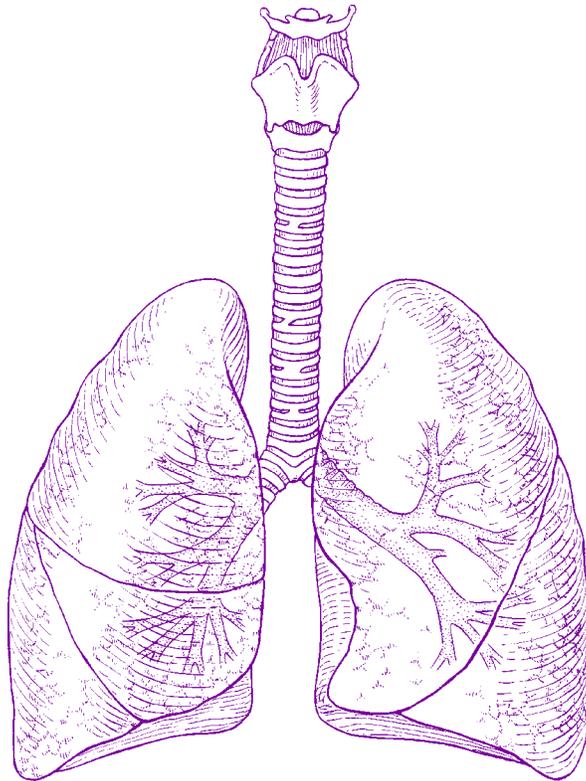
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# THE VOCAL Cords



A "True Education" Voice Series

“Let me see thy countenance,  
let me hear thy voice;  
for sweet is thy voice,  
and thy countenance is comely.”  
Song of Solomon 2:14



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# Student Section



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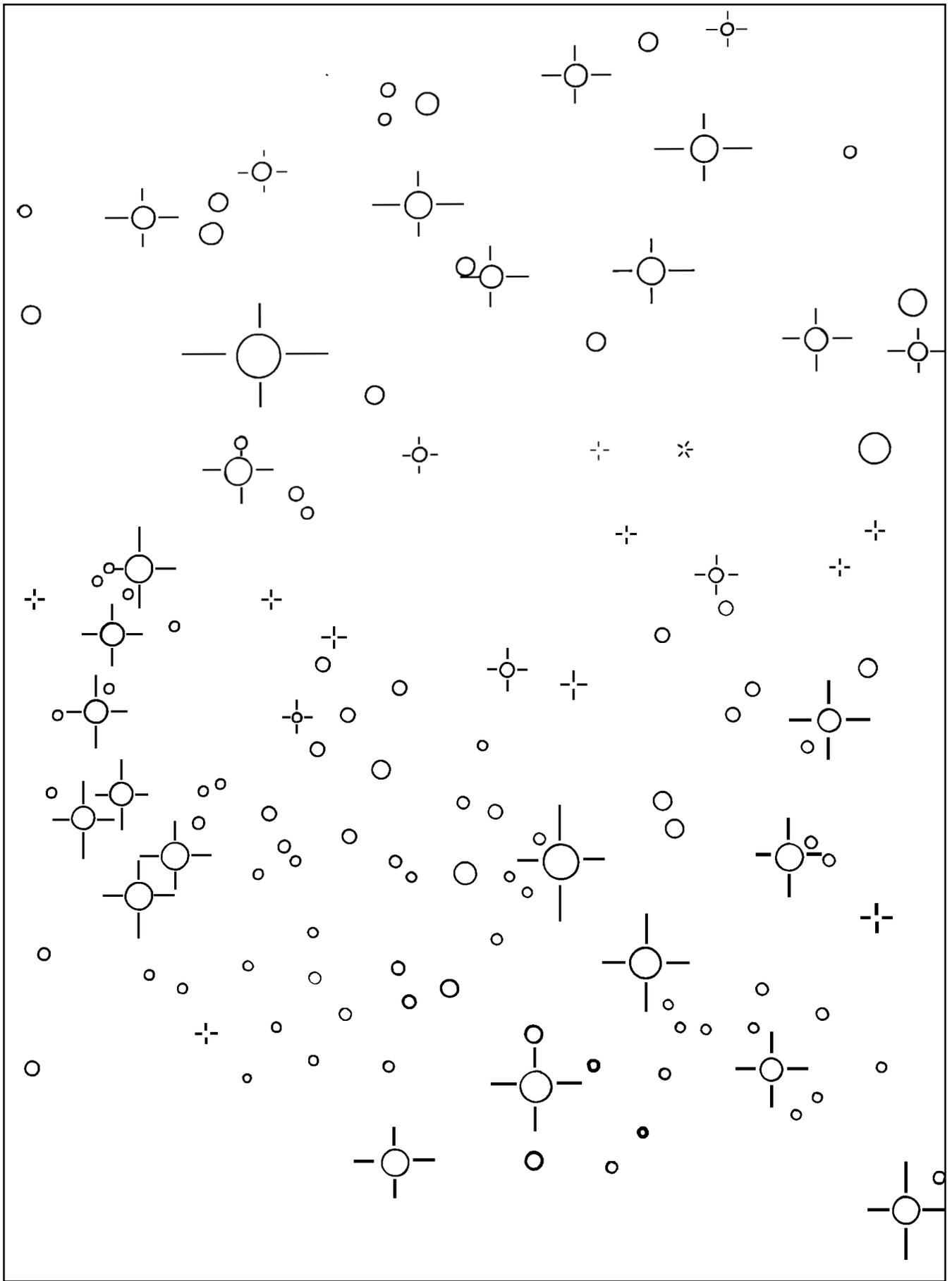
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# THE VOCAL CORDS

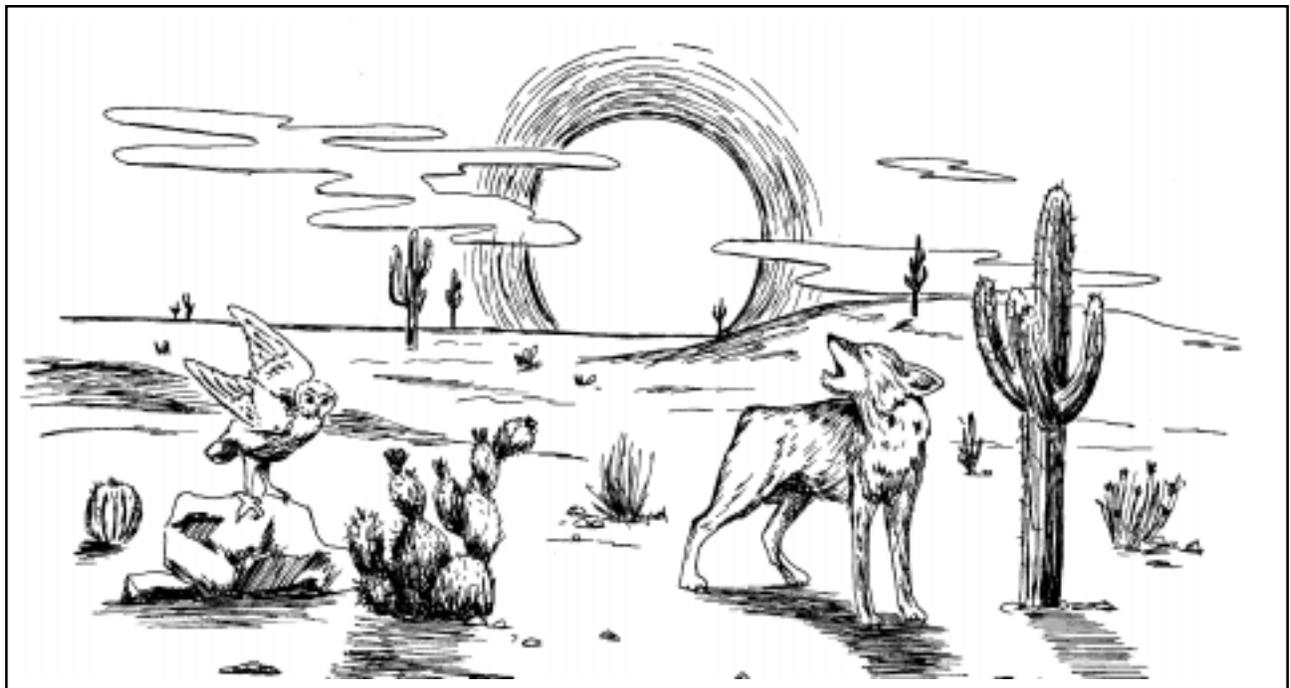
## Research The Human Voice

“So they read in the book in the law of God distinctly,  
and gave the sense, and caused them  
to understand the reading.”

NEHEMIAH 8:8

The human voice is one of the most precious gifts of God. If properly used, it is a wonderful power for good and a source of great happiness. Articulate speech (spoken in distinct syllables or words) is a characteristic peculiar to man. It is one of the features that distinguishes him from other creatures.

Most animals have a voice by which they are capable of making sounds expressing pain, joy, or good will. The lion roars, the owl hoots, the wolf howls, the dog barks, the horse neighs, and the birds sing; but none of these creatures have a voice that is capable of so much variation in tone and pitch as man's voice.



## Channel

“A MAN HATH JOY  
BY THE ANSWER  
OF HIS MOUTH:  
AND A WORD SPOKEN  
IN DUE SEASON,  
HOW GOOD IS IT!”

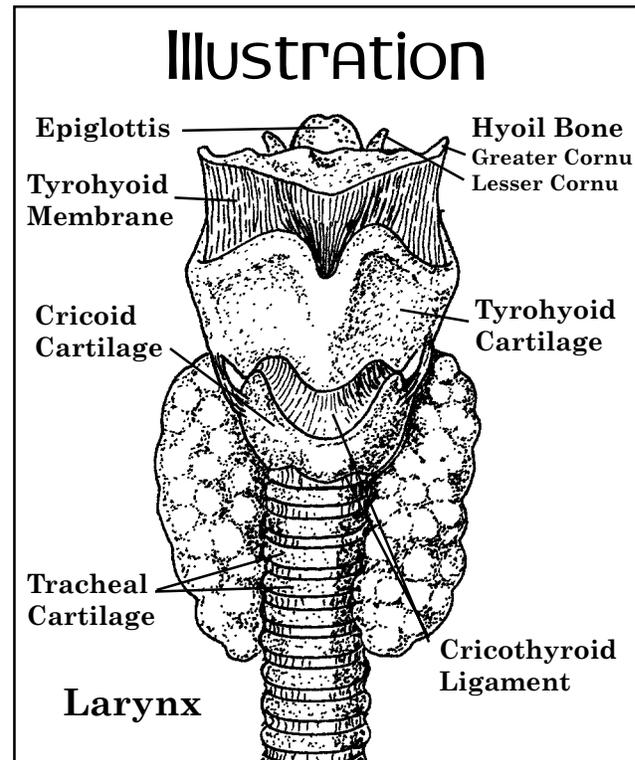
Proverbs 15:23

Voice begins as a column of air in the lungs, starting at the diaphragm; it is given pitch and variety by the larynx; and finally it receives individuality from the size and shape of the tongue, the teeth, the cheeks, and the lips. The way the voice begins as a column of air can remind us of how man had his beginning with God's breath. And, just as the voice receives individuality by the body it passes through, so the Holy Spirit uses people as channels of communication to give different, distinct expressions to God's character.

When we choose to make sound, the vocal cords respond and vibrate as the air moves out of the lungs. It can bring to mind how the wise men of **integrity** were moved by the Holy Spirit. When the Spirit prompted them to follow the star they did so, and when the Spirit warned them not to go to Herod they refrained. Likewise, our vocal cords should be under the Spirit's control. We must learn when to speak and when to refrain from speaking. *“To every thing there is a season,”* and God wants us to know how to speak a *“word in season.”*

## Music Box

The larynx is the music box of the body. It is located at the base of the tongue and in front of the lower part of the pharynx. The music or voice box forms a type of framework for the vocal cords. In this frame there are nine cartilages (tough, elastic, and whitish tissues) held together by several little ligaments (tough bands). The largest of the cartilages is called the “thyroid” which means “shield.” It forms a V-shaped structure which can be felt under the chin. It can remind us of the shield of faith which we need in order to guard our voice from being captured by the enemy (Satan). By faith, we can overcome so that all our words are spoken in **integrity**.



## Vocal Cords

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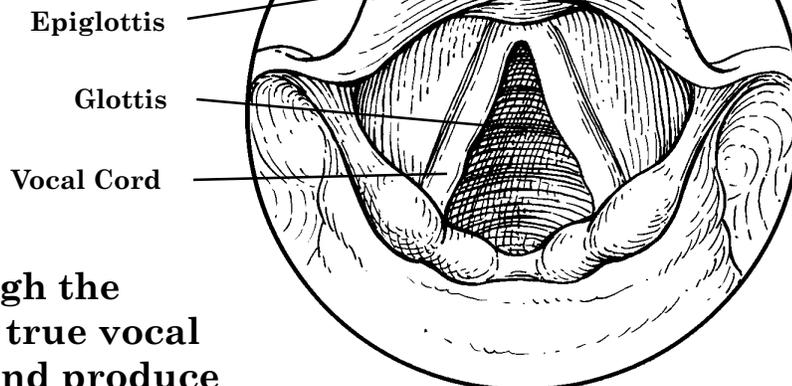
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The vocal cords are two delicate, pearly white bands on the inside of the larynx, extending from before, backward, diverging as they pass back. They form the shape of a V. These cords are not bare, loose strings, but are covered by a very thin mucous membrane. They are loose only at their inner border. Between the two vocal cords is a slit, called the “glottis.” In quiet breathing the vocal cords are separated, and are thick and rounded in appearance. But in singing or speaking, they come close to each other and are more tense and thin, while the inner border vibrates.

These cords are controlled by different muscles. At rest, the top of the V is at the front behind the cartilage of the Adam’s apple. When they get the message from your brain that you want to make a low tone, the cords become less tense and separate into a broad V. Then, when you want to make a high note, the cords tense and form a thin V. In passing up and down the scale from one musical note to another, the vocal cords only contract one twelve-hundredth of an inch (.002 centimeter). So, you see, that whether they form a broad V or a narrow V, they do not move much either way.

### Illustration

#### Superior View of the Larynx



**Air passing through the glottis causes the true vocal cords to vibrate and produce a sound.**

## Inflammation

“HE SHALL NOT CRY, NOR LIFT UP, NOR CAUSE HIS VOICE  
TO BE HEARD IN THE STREET.”

ISAIAH 42:2

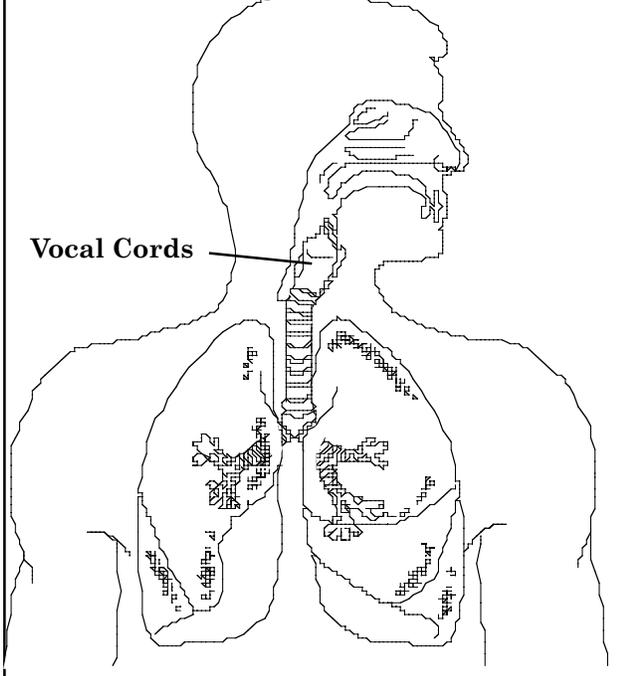
The larynx section of the route air passes through the body is very much restricted. It can be closed altogether, and very serious results may grow out of any diseased condition such as laryngitis. Laryngitis narrows the passage and inflames the delicate tissue of the voice harp. The common cold causes the vocal cords to thicken and fill with blood so that they cannot vibrate properly, causing hoarseness.

Another cause of the vocal cords becoming inflamed is using them too much or straining them by yelling. *“He shall not cry, nor lift up, nor cause his voice to be heard in the street”* (Isaiah 42:2). Using the voice too much causes the muscles to become very tired, and this condition results in the bowing of the cords.

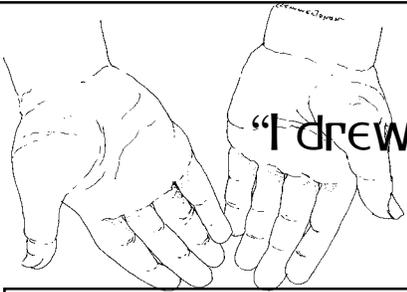
The vocal cords are also injured by letting the labor of speaking or singing come upon the throat instead of the abdominal muscles. The lungs and throat should be the channel, and should not do all the work, just like we should be a channel for God to work through. Speaking in a rapid way or in a high, unnatural tone are also harmful.

Let us take care to preserve the **integrity** of our vocal cords. Doctors tell us that there are more diseases of the throat than in any other equal area of the body.

**The common cold causes the vocal cords to thicken and fill with blood so that they cannot vibrate properly, causing hoarseness.**



**THERE ARE MORE DISEASES  
OF THE THROAT THAN IN ANY  
OTHER EQUAL AREA OF THE BODY.**



## Range

“I drew them with cords of a man,  
with bands of love.”

HOSEA 11:4

Men

Women and Children

The range of the human voice is about three octaves, although some great singers can go beyond this. In women and children the larynx is small, and the cords are shorter than men's. This is why women's and children's voices are pitched higher than men's. Men's vocal cords are about an inch long (2.5 centimeters); women and children have vocal cords about half that length.

The vocal cords, (or vocal bands as they are sometimes called), are a small member in the body, but their effect on lives is very great. They can be used in such a way as to draw others toward reconciliation with God by their tender tones. It reminds me of how Jesus used His voice to win others. “*I drew them with cords of a man, with bands of love*” (Hosea 11:4).

THE VOCAL CORDS OR VOCAL BANDS ARE A SMALL MEMBER IN THE BODY, BUT THEIR EFFECT ON LIVES IS VERY GREAT.

The length of the cords and the size of the voice box determines whether the voice will be soprano, mezzo soprano, alto, tenor, baritone, or base. The individual character of the voice depends upon the structure of the cords and other parts that aid in producing tone. In the formation of each tone, more than eighty different structures must play a part, and all are in perfect harmony.

The involuntary nervous system controls the vocal cords. A person must only think the pitch he wishes to sing, and the involuntary nervous system takes care of the rest. The right tone will then be produced unless it is blocked by a tight jaws, a pulled back tongue, or a lack of breath support. The Jewish priests were blocking the working of the Spirit in their lives. Even though they were the appointed guardians of the Holy Oracles, the eager questionings of the magi touched “no chord of sympathy.”\*

\*The Desire of Ages 61

While singing in the middle range of the voice, the thought of tone is directed into the cheek bones. Each middle range tone needs a wide open back space in the oral cavity. This space is made possible by what professional singers call “the inside smile.” When a person is singing correctly, the muscles below the eyes rise slightly. To help you feel the inside smile technique, imagine that you are in a room full of people and you see someone across the room that you want to smile at without others noticing it. The slight smile you give the person will cause the cushions underneath the eyes to lift slightly. This pleasant expression on the face results in a widening of the side walls of the nose. It also lifts or arches the soft

palate. These, in turn, improve the tone of the voice. Thus, sweetness and warmth of tone are related to the look on a person’s face. This idea is suggested in Song of Solomon 2:14. *“Let me see thy countenance, let me hear thy voice; for sweet is thy voice, and thy countenance is comely.”*

While the middle range of tones are sensed in the cheek area, the high tones feel as though they are going through the top of the head. The lower range tones are directed into the lower teeth and loose lower lip. The jaws do not swing as much in the middle range as they do on the higher and lower pitches.

“LET ME SEE THY COUNTENANCE,  
LET ME HEAR THY VOICE;  
FOR SWEET IS THY VOICE,  
AND THY COUNTENANCE IS COMELY.”  
Song of Solomon 2:14



## Quality of Voice

The vocal cords are what give the voice its “tune” or melody. Many people who have many other more attractive qualities have voices of a most repulsive character. They are sometimes so harsh and rasping, or shrill and piercing as to be intolerable to a sensitive ear. A melodious voice is one of the most important qualifications for a successful speaker or a witness for God. It is no less important at home.

In modern society unfortunately, male voices are often expected to be somewhat coarse and rough because men sometimes have to work with noisy machinery. But, the voices of the gentler sex are naturally expected to be soft and musical. It is especially disappointing and unpleasant to hear a girl or lady speak in shrill, unmelodious tones when otherwise she is attractive in her manners.

It is not possible that everyone can have equally attractive voices, but there is no doubt that most of the lack in this area is due to carelessness. If young people would devote as much time to the cultivation of their voices as they do to some other less important things, they would have accomplished something better than a mastery of

any other musical instrument. The subdued melody and rich cadence (rhythm) of a well-trained voice are qualities which give to their possessor no small advantage.

THE VOCAL CORDS  
ARE WHAT GIVE  
THE VOICE ITS  
“TUNE” OR MELODY.



A melodious voice  
is one of the most  
important qualifications  
for a successful speaker  
or a witness for God.



Some of the shrill, unmusical quality in voices come from students straining their voices to be heard in large classrooms. The weak lungs of the children are strained to fill a room too large for their capacity, and the voice is raised in pitch to make the words sound more distinct. In this way a “school tone” is formed which soon becomes permanent, and the voice is spoiled.

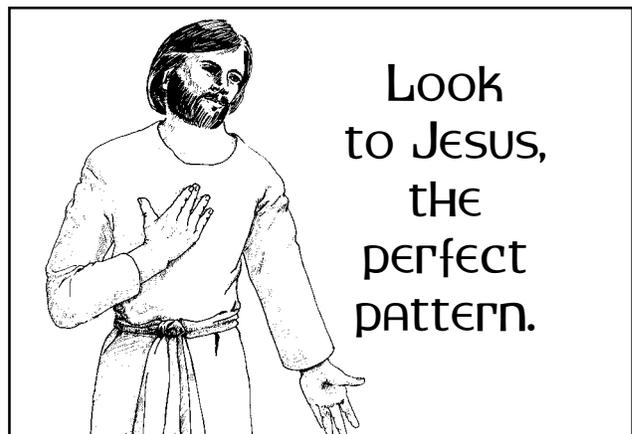
The tone of the voice is even affected by the location of the homeplace. There is a difference between the quiet, low speech of those who dwell in the solitude of the country and the sharp, shrill manner of speaking that the busy city crowd uses. City-life, with its hard pavements and noisy vehicles, gives an upward tendency to the vowels; while country-life, in its grassy fields and mossy woodlands, hushing all noises, lowers the pitch of the voice to a gentle tone.

## Reflect

“By diligent effort all may acquire the power to read intelligibly, and to speak in a full, clear, round tone, in a distinct and impressive manner. By doing this we may greatly increase our efficiency as workers for Christ.

“Every Christian is called to make known to others the unsearchable riches of Christ; therefore he should seek for perfection in speech. He should present the word of God in a way that will commend it to the hearers. God does not design that His human channels shall be uncouth. It is not His will that man shall belittle or degrade the heavenly current that flows through him to the world.

“We should look to Jesus, the perfect pattern; we should pray for the aid of the Holy Spirit, and in His strength we should seek to train every organ for perfect work.”\*



*\*Christ's Object Lessons 335-336*

## Reinforce

1. Put your fingers on your throat just above your breastbone. You should be able to feel the windpipe (trachea), and may notice the ridges upon it. These firm ridges are rings of cartilage. They help to keep the windpipe open. Now, move your fingers up close under the chin. Your larynx is located behind the lump in your throat. You will know for certain you have found it if it moves up and down when you swallow. Hold your finger and thumb gently against the thyroid cartilage shield which is in front of your larynx. Now, make the lowest sound you can, maybe deep growling like your dog might make at strangers. Did you feel a buzzing in your fingers? That was the vibrations made by the vocal cords. The buzzing, vibrating vocal cords cause vibrations in the air. Then the vibrating air strikes your eardrum and causes it to vibrate.

Now, make the highest sound you are able to. Go up and down the musical scale a few times. Did you feel the muscles adjusting the tension for the changes in pitch?

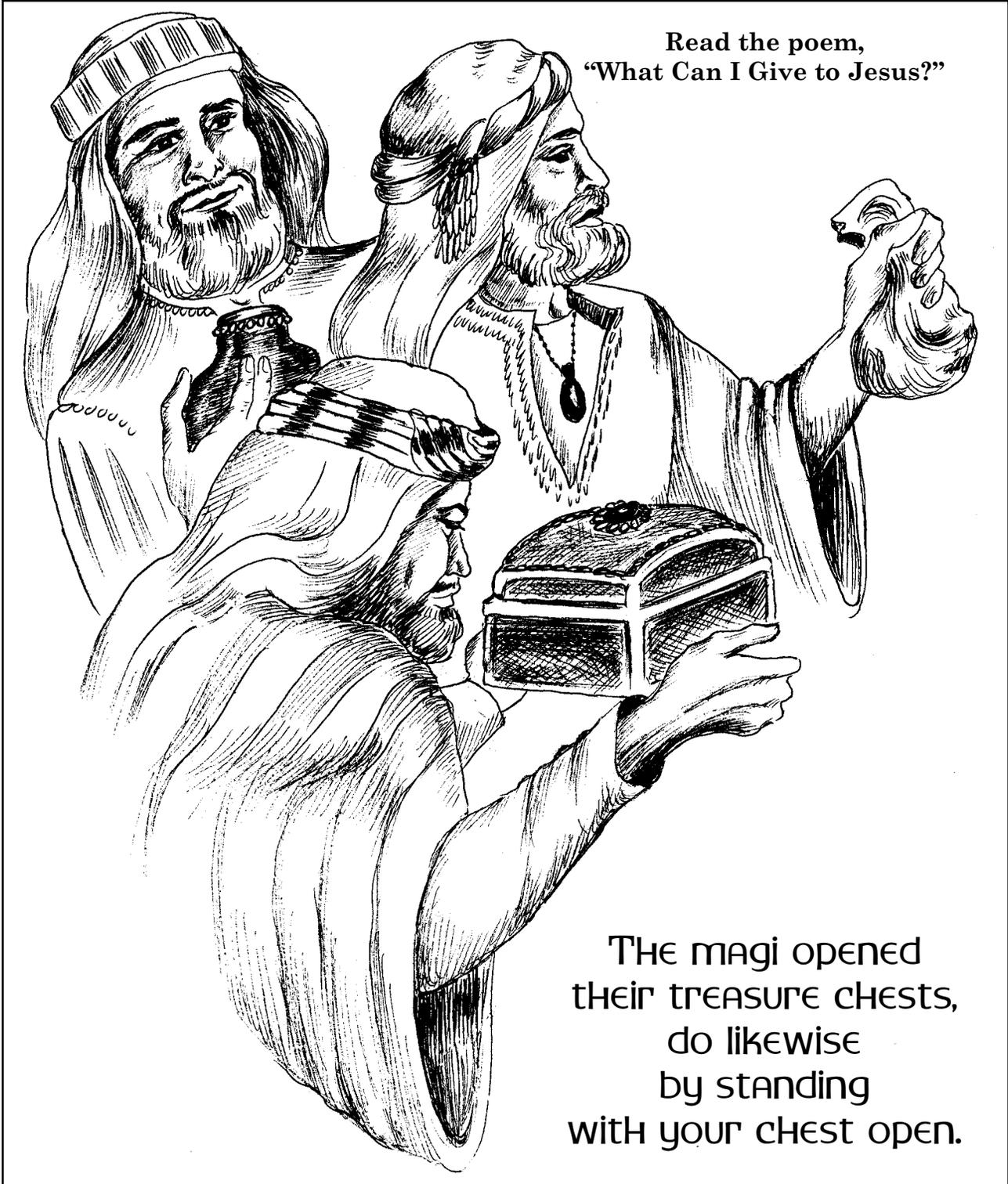
2. Look in a first-aid book and learn how to help a person who is choking. Do you remember about the “lid” of the voice box—the epiglottis and its job?

3. As an exercise to help you become aware of your tones of voice, watch yourself for one week and see if you can make it through without once raising your voice or yelling. Always speak with **integrity**.

4. Practice the inside smile technique while looking at a mirror. You will feel sort of like you do just before you break into a yawn. Try the same tone with and without using this technique. Can you tell a difference? A natural smile is not what you are after. That would tighten the tone too much. When you are using the inside smile, it will feel like there is a dome inside the oral cavity. The same feeling happens when you are surprised and gasp slightly. Always begin singing with the thought of the inside smile. Then your tones will be warm, rich, and full. After you feel comfortable with, and have practiced using the inside smile for a period of time, you can improve your tone by also making sure that your jaw moves easily, swinging straight down and up with your tongue wide and soft against the lower teeth.

**ALWAYS SPEAK  
with integrity.**

5. When you sing, remember how the magi opened their treasure chests, and do likewise by standing with your chest open. Then you may present the rich treasure of the incense of golden words of integrity to your King in songs of worship.



Read the poem,  
“What Can I Give to Jesus?”

The magi opened  
their treasure chests,  
do likewise  
by standing  
with your chest open.

# WHAT CAN I GIVE to JESUS?

What can I give to Jesus,  
Who gave Himself for me?  
The wise men gave Him costly gifts;  
And worshipped on bended knee.

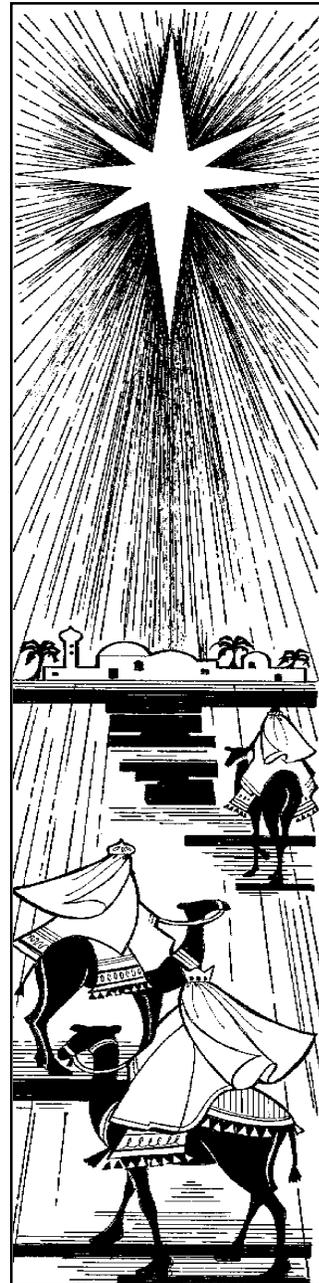
I'll give my voice to Jesus;  
It will His instrument be.  
No harsh or untrue words will mar  
The music coming from me.

I'll give my heart to Jesus,  
And calmly, gladly rest  
Its youthful hopes and fond desires  
Upon His loving breast.

I'll give my mind to Jesus,  
and seek, in thoughtful hours,  
His Spirit's grace to consecrate  
Its early opening powers.

I'll give my strength to Jesus,  
Of foot, of head, and will;  
Run where He sends, and ever strive  
His pleasure to fulfill.

I'll give my time to Jesus;  
Oh, that each hour might be  
Filled up with holy work for Him  
Who spent His life for me!



# Review

## Place II - III

1. How is man's voice different from the animals'?
2. What are the vocal cords covered by?
3. In quiet breathing the vocal cords come \_\_\_\_\_ to each other.
4. How does talking too much affect the vocal cords?
5. The range of the human voice is how many octaves?
6. What determines whether a person is a soprano or an alto?
7. Read the stories on the next pages.

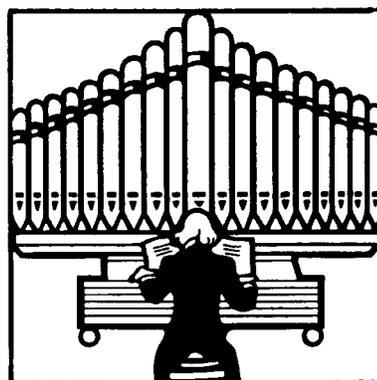


Articulate  
speech  
(spoken in  
distinct  
syllables  
or words)  
is a  
characteristic  
peculiar to man.  
It is one  
of the features  
that distinguishes  
him from  
other  
creatures.

# Are You in Tune?

Some time ago I heard one of the finest orchestras in America. It seemed like the expression of a single inspired soul. Whence came this beautiful music?—From a hundred instruments, but all in tune. For nearly half an hour I sat idly watching the “tuning up.” Most of this time was spent in reaching perfect harmony. As the mighty volume of music swept over that vast assembly of people, at times almost moving them to their feet with its wonderful energy, again becoming so soft and subdued that everyone was breathless, the thought came to me: Suppose the musicians had put off the tuning up until after the concert. Everybody would have left in disgust, and the reputation of the leader would have been ruined. But, is not this what Christians are doing constantly—failing to put themselves in harmony with the divine orchestra, until the work of the day is done? How beautiful the music would be if all God’s children would take advantage of the Lord’s early morning visit to tune their souls with His!

**A greater Musician  
than Mendelssohn has,  
unknown to us, stood  
by the HUMAN ORGAN.**



It is said that the famous composer, Mendelssohn, once went to see the great Freiburg organ. The janitor, not recognizing the musician, would not let him touch it. When, after much persuasion, the old man allowed the persistent youth to play a few notes, he stood entranced; never before had he heard such melody. Finally he asked the player his name; and when he was told, he stood humiliated and self-condemned. A greater Musician than Mendelssohn has, unknown to us, stood by the human organ, which very possibly has given out only “wolf notes” before the world, pleading with us to let Him touch the keyboard, and bring out divine music. Many have refused till age, disuse, and misuse have almost rendered the instrument unfit to produce harmony, even at the touch of the divine hand.

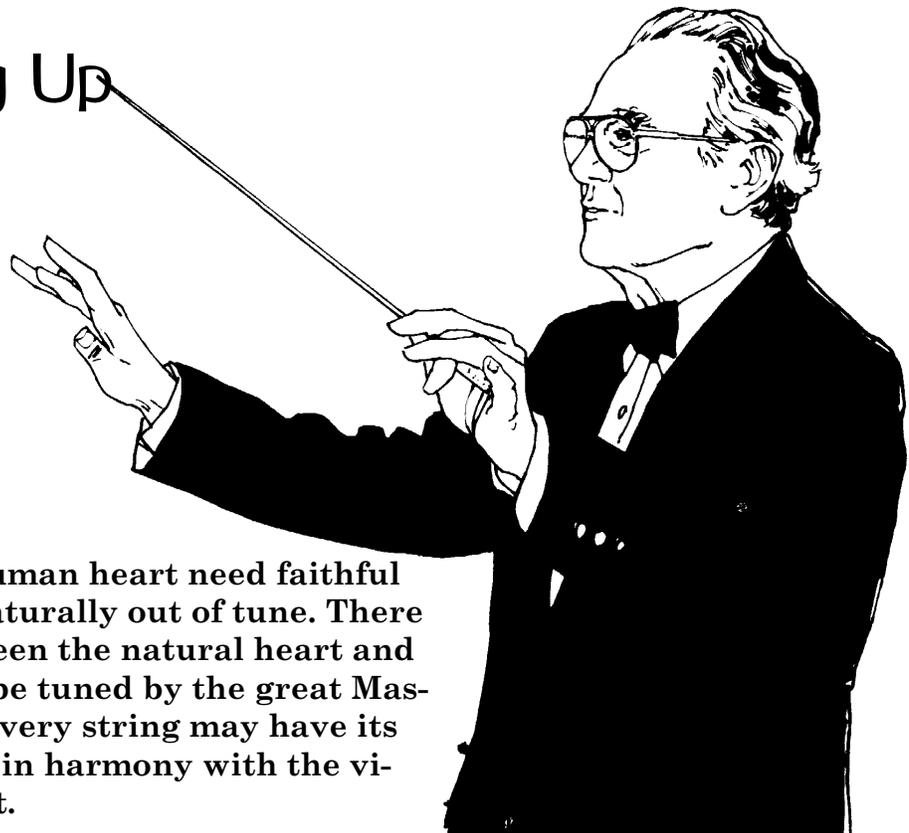


The strings of the human heart need faithful tuning. We are all naturally out of tune. There is no harmony between the natural heart and heaven. Some strings are pitched too high; others, too low. It may be that the string of sympathy or **integrity** is flat, or the string of charity sharps a little. We need to be tuned by the great Master Himself so that every string may have its proper pitch and be in harmony with the vibrations of His heart. Then we shall be in accord, not only with Him, but also with all human instruments like-tuned, so that we may have a part in the beautiful symphony of human lives to be heard by men and angels.

How can one be tuned so as to be in harmony with heaven? As a perfectly tuned instrument in a room will vibrate to accurate tones produced in some other part of the room, so the true follower of Christ will respond in melodious vibrations to tones from the courts above. In order, then, to be daily in tune, it is necessary to pray—to pray much—to pray at the beginning of the day. The Bible should be studied in the morning. Let us give God our best moments, that our lives may make one music with His.

—Adapted From *F.M. Rossiter*

## Tuning Up



The strings of the human heart need faithful tuning. We are all naturally out of tune. There is no harmony between the natural heart and heaven. We need to be tuned by the great Master Himself so that every string may have its proper pitch and be in harmony with the vibrations of His heart.

# Religion in the Countenance

Carry your religion in your heart first of all, and your face will take care of itself. Business may press, and worldings may oppress, but the God of peace will as surely write His new name of love upon the face as upon the heart, and not a moment quicker in the one than the other.

Some one tells a story of a poor, little street girl who was taken sick one holiday, and carried to a hospital. While there, she heard the story of Jesus' coming into the world to save us. It was all new to her, but very precious, and the knowledge made her very happy as she lay upon her little bed. One day the nurse came at the usual hour, and "Little Broomstick" (that was her street name) held her by the hand, and whispered:

"I'm having real good times here—ever such good times! Do you suppose I shall have to go away from here just as soon as I get well: but I'll take the good time along—some of it, anyway. Did you know about Jesus being born?"

"Yes," replied the nurse, "I know. Sh-sh-sh! Don't talk any more."

"You did? I thought you looked as if you didn't, and I was going to tell you."

"Why, how did I look?" asked the nurse.

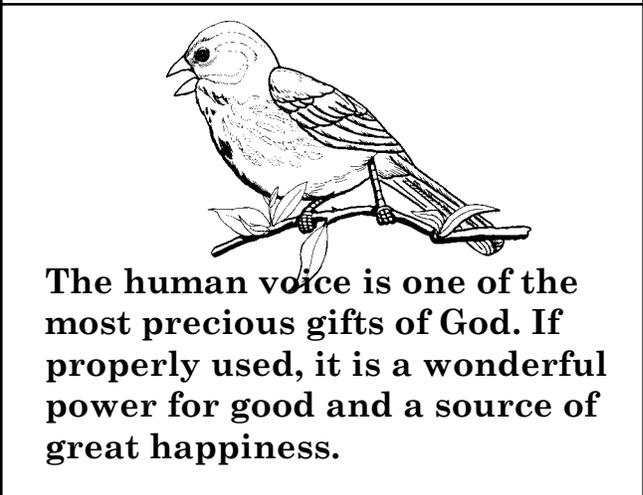
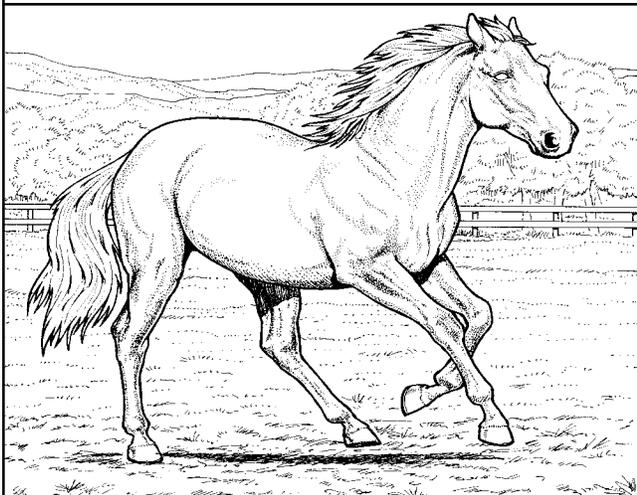
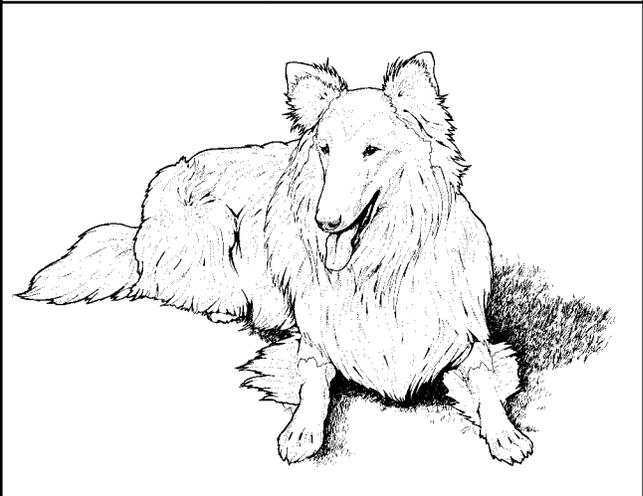
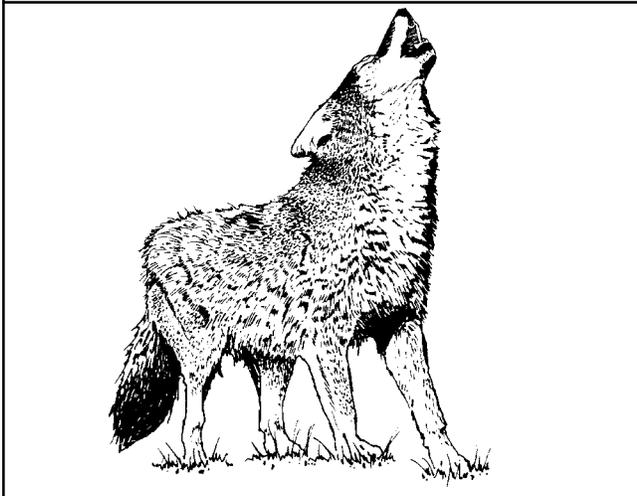
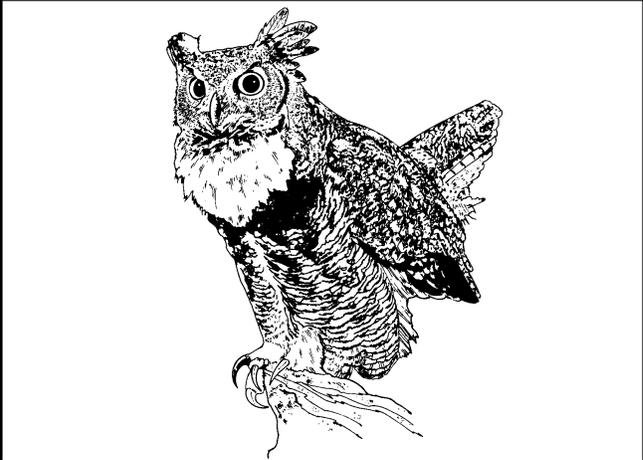
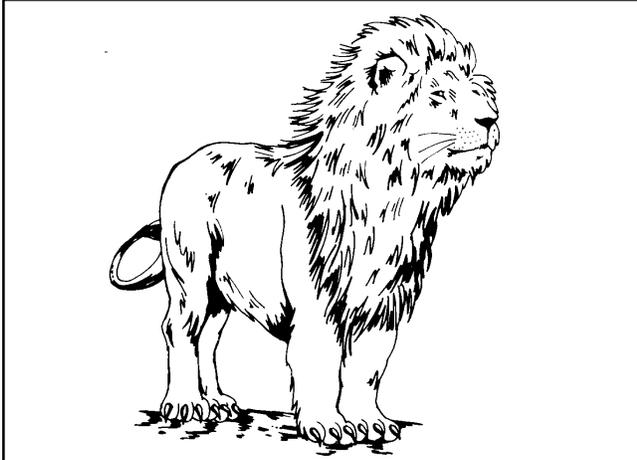
"Oh, just like most folks—kind of glum. I shouldn't think you'd ever look gloomy if you knew about Jesus being born."

Friend, do you know "about Jesus being born?"



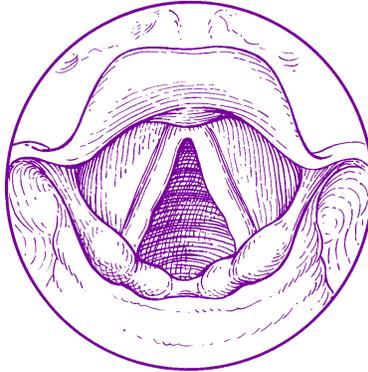
# Reflect

Remember, the lion roars, the owl hoots, the wolf howls, the dog barks, the horse neighs, and the birds sing; but none of these creatures have a voice that is capable of so much variation in tone and pitch as man's voice.



The human voice is one of the most precious gifts of God. If properly used, it is a wonderful power for good and a source of great happiness.

“I drew them  
with cords of a man,  
with bands of love.”  
HOSEA 11:4



Each booklet in the series,  
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- 3 – Voice Culture
- 4 – THE Principle of Breathing
- 5 – Muscles and Breathing
- 6 – THE Vocal Cords
- 7 – Correct Bodily Alignment
- 8 – Resonating Chamber, Resonance
- 9 – Growing Voice
- 10 – Voice in Communication



Mark 4:29