Class Voice Reading Worksheet Name: _____
***The Singing Book*, Chapters 7 & 8**

1. Always look at the _____ _____ first to give you vital clues to how the body functions.

2. Skeletal _____ create movement of the body – not ligaments and membranes. When a muscle _____, a joint changes position. Any move we make takes a _____ of intent from the brain. . . . The muscle then _____ or _____. . . The body needs to replace _____ with appropriate muscle use.

3. To determine the action of a muscle, you need to know where it is _____ and in which direction the fibers are running. Again, muscles only _____ to create action. (They do _____ push or expand.) In general, muscles are named according to where they are _____ in the body, their _____, or their _____.

4. In order for muscles to _____ and move a joint in one direction, muscles on the opposite side of the joint must _____. When muscles don't let go (relax) when they're supposed to, there is restriction of movement. A tug-of-war between opposing muscles creates muscular _____. When this kind of antagonism is used to stabilize a joint to help its performance, it is known as _____. It is unwanted _____ that creates problems.

5. Freeing your body is not just for singing; it has a direct relationship to your physical _____, _____, _____, _____, _____, and image. . . . A balanced, free, and _____ body is fundamental to efficient vocal production and lovely vocal quality. The alignment of the breathing mechanism – the _____, the voice box (_____), and throat (_____) – is the starting point for healthy singing.

6. One habit that drains energy is _____ the head _____ rather than aligning it over the shoulders. . . . Experts in physical function, including those who study biomechanics and other techniques such as Alexander, have agreed on the following description of good posture. When a plumb line is dropped beside you, it falls through the _____, the point of the _____, the highest part of the _____ _____, just behind the _____ _____ and barely in front of the _____. (see Fig. 7.1)

7. Know the "Guidelines for Good Physical Balance" on p. 262.

8. Do all the "Finding out for yourself . . . " activities always, as well as the "More ways to improve your alignment" on p. 263.

9. Breath is the essence of life and _____, and normally breathing is a _____ process. . . . More physical activities (like singing) require more breath, however, you may need less air than you think for singing, particularly when your

_____ and the _____ of muscle use and _____ _____ are maintained.

10. Airflow is a matter of _____ between the pressures of air _____ and _____ the chest. . . .For now, remember the two most important things: (1) use the most physically and vocally _____ way of breathing, and (2) keep the air _____ rather than attempting to hold it back.

11. Subconsciously, we take about _____ breaths a day. When we become _____ of the need to take in air while singing, we can develop many _____ and worries.

12. Efficient breath is not just for "_____" singing; pop singers could improve immensely from work on their breathing as well. . . . People breathe in many ways according to their own physical habits and physical health. However, for singing, there are only _____ and _____ ways of breathing.

13. Know the seven pointers for "Efficient Breathing" on p. 265. Also be able to identify the parts of the skeleton in Fig. 8.1 (Rib cage), as well as the anatomy illustrated in Figs. 8.2A, 8.2B, and 8.3.

14. The _____ (check your spelling!) is the most important muscle of inhalation (_____) and acts as a partition between the chest and the abdomen. . . . When the diaphragm contracts, it moves _____, displacing the lower _____ and the _____ and soft structures below it.

15. The action of the diaphragm causes the abdomen to _____ and the lower ribs to move _____. This abdominal expansion is caused by organs being displaced and has often caused people to _____ it for the diaphragm itself. When the body is in good alignment, this action will happen easily without specific attention being paid to the diaphragm.

16. The muscles between the ribs (_____) are often mentioned as contributing to inhalation and exhalation. However, they are most effective as _____ of the ribs. All these muscles seem to work very well when we are _____well.

17. Ideally, singers think first of _____, and then of allowing the _____ to be a _____ action. . . . Exhaling during the introduction of a song and then allowing a _____ breath a beat or two just before you sing is a more secure approach.

18. Exhalation during minimal physical activity is a simple matter of releasing the muscles of inspiration (such as the _____) and letting the _____ _____ of the lungs and gravity do the rest (accomplished subconsciously). For singing, we need to use more _____ _____, and it is best accomplished by the muscles of the _____.

19. The abdominal muscles form a kind of _____ around the abdomen and are located in the best place to facilitate breathing with interfering with the _____ _____ . . . . The muscles that form the abdominal _____ tend to work as a _____ for breathing. They _____ and cause the abdominal contents (_____) to move toward the back and the diaphragm, thus helping the diaphragm to _____ to its original position and to send air _____ of the lungs.

20. *Where* the singer chooses to activate the abs is very important. The most efficient area is the _____ one near the pelvis. Contracting the muscles in this area sends pressure toward the _____ and lower _____ _____ from below. . . . Inefficient use of the muscles of exhalation can cause unwanted _____ to transfer to the _____, _____, and _____. The better you maintain your alignment, the easier it will be to use the more effective lower part of the abdomen for _____. Collapsing the body will cause the air to release too quickly and you will pay the price by _____ _____ of breath.

21. Easy days in singing occur when the _____, _____, and _____ work as a unit rather than fighting each other. Achieving good coordination makes it easier to sing, resulting in a "high" or being in the singing "zone," which is satisfying.

22. A number of things are happening when the coordination is good: There is a _____ of pressures in the abdomen, chest, at the level of the vocal folds (_____ _____), and in the _____ that help the singer maintain steady _____ appropriate to the music and phrasing of the text. These pressures include: (1) the lower _____ contracting up toward the lower _____ at the back, slowing the return of the _____ and ribs; (2) the flow of air meeting resistance of the _____ _____ as they close for phonation, keeping a certain amount of pressure in the chest and resistance to the diaphragm; and (3) the exhaled air hitting the _____, _____, or even _____ and moving back toward the vocal folds to create _____ _____ in the mouth. These pressures are the product of coordinated _____ _____ and _____. (Understand Fig. 8.5?) All of these pressures need to work well together (think of Functional Unity Fred) and it will give you a sense of the physical _____ that happens when you sing well.

23. Avoid _____ by maintaining the thought of an _____ _____ from the upper back to the ceiling. Don't gasp. . . _____ your breathing pipe. Take in just as much air as you need and use all of it. Remember to do all of the "Finding Out for Yourself" activities!!!

Class Voice Reading Worksheet Name: _____
***The Singing Book*, Chapter 9**, pp. 272-279

1. Sound is made and amplified in the _____ _____, which consists of the voice box (_____) and throat area all the way up to the _____ _____ (and the nose, for nasal sounds).

2. The initiation of the voiced sounds we make comes from the vibration of two _____ of muscle, housed in the larynx (_____ _____) that sits on top of the windpipe (_____). These folds are commonly (and incorrectly) known as the "vocal cords."

[Note: memorize Figs. 9.1 and 9.2. See the videos on my blog to aid your understanding of vocal anatomy and physiology: https://gemmell-posts.com/2017/03/03/the-anatomy-of-the-larynx-videos/

3. The larynx consists of several _____ and is a housing for the vocal folds that are _____ by _____ from the lungs. The sound is then modified and _____ by _____ in the "vocal tract" (the _____ or throat and mouth)….The number of times the vocal folds vibrate per second determines the _____. For example, for A 440 (the A immediately above middle C), the folds vibrate 440 times [or cycles] per second [or "cps"].

4. The larynx is suspended and supported in the neck from in front, behind, above and below by groups of _____ _____. (see Fig. 9.3.) It is able to move _____ when we swallow and speak. The connections of the larynx and how it operates involves a complex relationship with the throat (_____), soft _____, tongue, jaw, neck, and _____. The interaction of all these factors contribute to laryngeal efficiency and affect _____ _____.

5. The vocal folds act as a sensitive _____ and guardian for preventing foreign material from entering the lungs. Read about how they function here.

6. Main structure of the larynx consists of four cartilages and a bone:

a. Cricoid –

b. Two arytenoids –

c. Thyroid cartilage –

d. Hyoid bone –

7. Muscles of Phonation. To make sound, the vocal folds need to _____ _____. To breathe, they need to _____. To create higher pitches, the vocal folds must be able to _____. To accomplish all this some small muscles do a lot of work

without our having to _____ much about it. A vocal fold consists of a muscle: *Vocalis* or *Thyro-arytenoid*. The muscle is covered with mucous membrane and there is a ligament on the inside edge of each fold known as the _____ _____. . . . Generally speaking, the vocal folds are _____ and _____ when relaxed or singing on low notes; they are _____ as you move higher in pitch. [Again, please see videos on blog!!!]

8. On the back of the cricoid cartilage are two muscles that **move the vocal folds apart** (_____ them) for breathing. . . . They are called the *posterior crico-arytenoids* (See Fig. 9.5). When these muscles contract, they _____ the arytenoids wide taking the vocal folds with them.

9. It takes two sets of muscles to **fully close** (_____) **the vocal folds** for phonation. . . . These muscles are called the *lateral crico-arytenoids*. When they contract they swing the front of the arytenoids (vocal processes) together causing the vocal folds to _____ in the center. However, the meeting is not complete; this leaves a small chink between the arytenoid cartilages where air can escape. To complete the process and ensure a clear, clean sound, the arytenoids must slide toward each other and _____ the _____. The muscles that contract to do this are a group called the *interarytenoids* – all very logical.

10. The vocal folds are _____ for the lowest pitches and are _____ to create higher pitches. Muscles are in place to cause the thyroid and cricoid cartilages to move apart and create the stretch. The _____ of muscles that perform this task are the *cricothyroids*, running from the front of the cricoid to the thyroid. When they contract they tilt the thyroid cartilage forward and cricoid backward a little, creating a pull on the vocal folds. . . . When the vocal folds are not stretched, they are thick. This produces the low, heavier sounds (sometimes called "_____" voice). When the folds are stretched, the sounds are higher and lighter (often called "_____" voice). It is when you sing the high notes with a very heavy sound that "muscular arguments" (_____) can occur and create uneven changes in the sound.

11. Read, learn and digest the next section carefully, "A Note About Pitch."

12. The initiation of vocal sound is called the _____ or _____. For a clear sound, the vocal folds need to touch each other _____ and _____. This happens when the muscles of _____, the _____, and the _____ of sound are _____. When the folds close with a lot of pressure, they can beat on each other and create little explosions of sound (_____ _____). The sound this makes is usually tight and irritating to the ears. Continual abuse like this can cause growths on the folds called _____.

13. Inefficient coordination can also cause the sound to be too _____. This happens when the folds do not close well and air leaks out. It is all right to make a deliberately breathy sound for some popular styles, but a consistently breathy sound is indicative of poor vocal balance. And do not confuse breathiness and hoarseness (see chapter on vocal health).

14. Read carefully the next sections: "Quality Within the Vocal Range," "Vibrato," and "Straight Sound." Be ready for any questions regarding this material.

Chapter 10: Voice Quality and Resonance

1. Sound is initiated in the larynx, but the _____ depends upon the _____ of the pharynx, which is highly _____ and capable of forming many different shapes. Each variation will cause your voice to produce a different voice _____ (or tone color (*timbre*)).

2. Pharynx serves a dual purpose: as an _____ and _____ passageway. For breathing, it is relaxed and spacious; for swallowing it closes around the food and squeezes it down into the esophagus.

3. When you swallow, the whole pharynx is pulled _____and narrowed to _____ food down, which brings the larynx up with it. Whole throat is short and narrow – not a good space for singing. When pharynx muscles relax, the space is _____ and _____ – optimum for the most resonant and freely produced sound. In reality, people sing in many gradations between the open and closed throat.

4. The _____ is a muscular sleeve-like structure that hangs from the base of the skull and attaches itself to various bone and cartilages along the way. It opens into the nose, the mouth, and the larynx, and then becomes completely _____ and continues as the esophagus.

5. Anatomists and acousticians usually divide the pharynx into _____main sections: the nasal pharynx, the oral pharynx, and the laryngeal pharynx (see Fig. 10.1). Know the location of these areas and be able to identify them on a diagram. These three areas are continuous but are usually described separately to help explain the structures better.

6. The_____ pharynx is located between the base of the skull and soft palate. The soft palate (the soft part located at the end of your hard palate) can move up and close off the nose as in making non-nasal sounds or swallowing, and it can be lowered for nasal sounds or breathing.

7. The _____ pharynx begins at the level of the soft palate and continues to the level of the middle of the epiglottis near the back of the tongue. This area is most _____ and subject to many different shapes. Because the soft palate can move up and down and your tongue and larynx can move as well, the oral pharynx can get taller, wider, narrower, short, etc. This is the place where _____ of your resonance occurs.

8. The _____ pharynx is the area from the middle of the epiglottis to the lower border of the cricoid cartilage. It is the area credited with contributing to the _____ part of the voice responsible for its _____ power, often referred to as the "_____" of the voice.

9. Bones and Cartilages to Which the Muscles of the Pharynx Attach. In Fig. 10.2, you should know and be able to identify the following:

a. Outline of hard palate
b. Styloid process
c. Styloid-hyoid ligament

d. Hyoid bone
e. Thyroid cartilage
f. Cricoid cartilage

10. Important muscles that form the pharynx. To swallow something the muscles need to contract and narrow the back of the throat in order to squeeze the food down. The larynx comes _____ under the tongue as part of the same action. What muscles are contracting to cause these actions to happen? **Constrictors!** When they contract, they exert a pull on the least stable area – in this case, the back of the throat – and cause a narrowing of the throat. Release or _____ these muscles to have a wide, _____ pharynx.

11. **Soft palate.** Not considered part of the pharynx, but through shared muscles the two are linked intricately. Soft palate is very _____ and capable of moving up and down. Closes off the back of the nose to prevent food from entering the nasal passages. In efficient vocal production, the palate does the same thing to prevent air from going into the nose and causing an unwanted nasal resonance. _____ of the soft palate also creates more resonance space n the throat. Palate will be lowered during intentional use of nasal consonants or sounds. [Note the tip offered in the book for determining nasality in sound.]

12. Muscles of the soft palate. Four main muscles form the soft palate: two that are above it and two below it. There is a pair of muscles that _____ the palate (***levator palate***) and a pair that _____ it (***tensor palate***). See Fig. 10.4. On each side of your tongue is a fold that forms an arch with the _____ hanging down in the middle. That fold is the ***palatoglossus muscle***.

13. The _____ and the palatal relationship is a particularly important one. When a singer has the habit of tensing the tongue or pulling it down in the back to make sound, the soft palate can be prevented from going up because the *palatoglossus* is acting as an **antagonist** to the *levator palate*. The sound that results is a bit garbled and not too _____.

14. Relationship between Pharynx and Larynx. Notice illustration that shows relationship between **skull, jaw, hyoid bone, and larynx**. When these structures are in _____, the muscles of the pharynx and the position of the larynx is _____ suspended in the neck. They are in position to respond easily to what is asked of them. When the head or jaw pushes _____, this alignment is distorted and the pharynx and larynx are put at a disadvantage.

15. Acoustic Deception. How you _____ you sound and how you _____ sound can be very different. Reason: you have so much feedback inside of your head. Your bones act as _____ of vibrations. Larynx buzzes, and sound bouncing around your throat can be noisy and deceptive. Your audience does not hear all of this! This is why "outside feedback" (voice teacher, friends, video, etc.) is so important.

16. Even Tone. Many singers, especially classical ones (bel canto), aspire to create beautiful, _____ sounds throughout their ranges: creating a _____

sound from top to bottom!! Trying to do this by exerting excessive control over everything in the throat and mouth results in an even sound inside the head and an uneven or _____ one to the listener. With _____ and pure vowels your voice will be consistent throughout.

17. Your expression and vocal color (_____) will respond to your understanding of the text and to your _____ and energy. Focusing on and deeply understanding your message will go a long way toward crating the vocal effects you want—whether they are dark, bright, light, or heavy. You can sing any song in a variety of characters—old, young, kind, queen, witch, or any other you desire.

18. A resonator needs to be _____ and have an opening for the sound to escape. In singing, your throat acts as the primary _____ with help from the nose (nasal sounds) and mouth.

19. Tension is the main problem associated with the pharynx. Tension will _____ the space of the throat and cause the larynx to _____ under the tongue. Misalignment of the head and shoulders is another major contributor to poor tone quality and to potential vocal damage.

20. You speaking voice needs the same careful _____ that you give to your singing. Using good speaking habits may feel _____to you at first, but keep working at it!

Class Voice Mid-Term Exam Vocabulary Review Sheet

Introduction: *Getting Started*/Chapter 1: *The First Steps to Singing Easily*

Singing if fun, joyful, imaginative, exciting, and satisfying
Singing = any sustained sound you make with your voice
Balance intellect, feeling, emotion, and intuition
Human beings are meant to sing
Think positively
Importance of "inner child" and use of your right brain
Technique serves message
Physical balance or a state of readiness
Self-perception: how we *think* we look and how we actually look can be very different
Breathing for singing needs to be accomplished easily and deeply
Stay present at all times. What is "staying present?"

Chapter 2: *Preparing to Sing*

Focusing
Movement
Rib stretches
Cross Crawl
Lazy 8's
Energy yawn
Warming up your voice

Chapter 3: *Selecting Music to Sing*

Range vs. tessitura
Melody (legato and staccato)
Text
Rhythm
Do you like it?

Chapter 4: *Learning Music Efficiently*

First, the words
Second, the rhythm
Third, the melody
Finally, putting it all together

Chapter 5: *Practice Habits*

It would be ideal for you to spend 30 to 45 minutes practicing per day. However, 10 focused minutes is better than nothing. At the very beginning, it causes more harm than good for you to sing more than 45 minutes.

Practicing in a small room. Not optimal, as you will minimize your sound to fit the room.
Checklist for practice session

Chapter 6: *Performing*

Your perception of your performance vs. the audience's perception
Best reply to audience comment about your performance?
Nerves
Presence
The Message

Chapter 7: *Muscles and Physical Balance*

Muscles vs. ligaments vs. membranes
How do muscles work?
How are muscles named?
Antagonism vs. synergy
Importance of: alignment, flexibility, freedom
What is good posture, alignment, balance?

Chapter 8: *Breathing*

Atmospheric pressure, the rib cage, lungs, diaphragm, etc.
Pointers for efficient breathing
Diaphragm (major muscle of inspiration): location, how it works, etc.
Abdominals (major muscles of exhalation): location, how they work, etc.
Intercostals
Elastic recoil
What are the results of poor breath management?
What are the results of good breath management? (be specific)

Chapter 9: *Making Sound* [Phonation]

Vocal tract
Larynx
Anatomy of Larynx
Soft palate
Vocal folds/vocal cords
Adam's Apple
Trachea
Esophagus
Pharynx
Pitch, c.p.s.
Extrinsic muscles
Intrinsic muscles
Connections of the larynx as related to pharynx, soft palate, tongue, jaw, neck, chest
Vocal folds = sensitive valve
Cricoid cartilage
Two arytenoid cartilages
Thyroid cartilage
Hyoid bone
Muscles of phonation and how they work
Vocalis or Thyro-arytenoid
Vocal ligament
Abduct
Posterior crico-arytenoids
Adduct
Lateral crico-arytenoids
Front of the arytenoids (vocal processes)
Interarytenoids
Cricothyroids
"Chest" voice
"Head" voice
Antagonism ("muscular arguments")
"A Note About Pitch," p. 276
Onset or attack

Glottal attack
Nodules
Breathy phonation vs. hoarseness
"The Initiation of Sound," p. 276
"Quality Within the Vocal Range," p. 277
"Vibrato," p. 278
"Straight Sound," p. 279

Chapter 10: *Vocal Quality and Resonance*

Pharynx
Voice quality (tone color; *timbre*)
Purpose of pharynx; how it works for swallowing vs. singing
Esophagus
Three main sections of pharynx (nasal, oral, laryngeal)
Carrying power of the voice; "ring"
Anatomy of Pharynx
Constrictors
Soft palate
Levator palate
Tensor palate
Uvula
Palatoglossus muscle
Tongue
Relationship between pharynx and larynx, including skull, jaw, hyoid bone, etc.
Importance of alignment for freedom and flexibility
Acoustic Deception
Bones as conductors of sound
Even tone (consistent sound from top to bottom of range)
Importance of understanding/expressing text and use of imagination to promote appropriate timbre
General nature of resonator: hollow with an opening for sound to escape
What are the signs of tension in pharynx/larynx?
Importance of giving attention to your speaking voice!!! Use good speaking habits!!