



Congratulations to V.I.P

## Douglas Fletcher

For his first place finish at Band Day finals at the Indiana State Fair.



This is Doug's third consecutive win. He is joined by Assistant Director, Amy Fletcher and Auxiliary Director, Ric VanSkyock

## Conn-Selmer DIVISION of EDUCATION

Dr. Tim Lautzenheiser Vice President of Education tlautzenheiser@conn-selmer.com Cell: 260.410.0717

Michael Kamphuis
Managing Director,
Division of Education
mkamphuis@conn-selmer.com
Work: 574.523.0677

Cell: 574.607.6000

Kelly Bryan

Manager of Educational Outreach, Division of Education kbryan@conn-selmer.com Work: 574.523.0651 Cell: 574.329.8727

**Grant Johnston** 

Program Coordinator gjohnston@conn-selmer.com Work: 574.523.0701 **A Note from Dr. Tim** Greetings. In this edition of Touchpoint, Dan Moore, Director of Bands at Naperville North High School in Illinois hits one out-of-the-park with his INSIGHTFUL and PRACTICAL look into breathing and maximizing air usage.

## **Lengthening the Bow** by Dan Moore

Okay, band directors. Don't panic! We're going to talk "wire-choir" for a moment. Bear with me. Imagine a great virtuoso standing on-stage with his hands behind his back. The applause dies down, the house lights dim and the orchestra begins the introduction to the concerto. As his entrance approaches, the virtuoso brings his left hand out from behind his back and places a fine Stradivarius violin under his chin. The accompaniment builds to a rousing perfect authentic cadence as the virtuoso reveals his right hand. In it is a bow that is only three inches long! Now, unless the concerto in questions consists of nothing but tremolo, we're probably in for a very disappointing performance no matter how our virtuoso is otherwise skilled or how much he paid for that Strad.

The short bow is analogous to the shallow breath. It might be good for one spectacular staccato eighth-note, but that's about it. I often hear directors (including myself) demand that students "put more air through the horn". Though important, I feel that this is like talking about the pitch without the wind-up; the jump without the knee-bend; the ictus without the prep. Getting students to play with a "full-length bow" requires some discussion as to how the lungs actually work, as well as some exercises that will help maximize the use of their ultimately finite lung capacity (bow-length).

Basically, our lungs weren't designed for (through they are amazingly well-suited to) playing wind instruments. Respiration really has only one active purpose: to deliver oxygen to the body's various organs (its passive purpose is to rid the body of carbon dioxide). As the brain senses an oxygen deficit (and/or surplus of carbon dioxide), it sends a signal to the intercostal muscles between the ribs to contract, swinging the ribcage forward and out (creating a vacuum), thereby pulling in just enough air (and oxygen) to replenish the deficit. How far these intercostal muscles can expand the lungs is limited. When, due to fatigue or exertion, the oxygen deficit becomes greater than the intercostal muscles can handle, the brain asks for extra help from the diaphragm. The diaphragm is a large membranous muscle that separates the lungs from the abdominal organs. It is shaped essentially like an inverted bowl. As it contracts, it flattens out into a shallower bowl (or plate, if you will), pulling the lower lobes of the lungs downward, drawing in a larger volume of air. When we yawn or gasp, we are experiencing an involuntary contraction of the diaphragm (a hiccup is a diaphragmatic spasm).

Playing a wind instrument requires a voluntary, purposeful contraction of the diaphragm followed by a voluntary, purposeful expulsion of air. It's more than just passively inhaling or exhaling. It's more akin to gasping or sneezing. It should be pointed out that blowing is not a function of the diaphragm. By contracting, it can take in air, hold in air or control the release of air, but it cannot push air out. Forcefully expelling air is largely a function of the abdominal muscles literally pushing the lungs back up (again, aiding the intercostal muscles). The rate and steadiness of expulsion is ultimately a balancing act between the diaphragm and the abdominals. This active, controlled expulsion of air is what we commonly call "breath support".

So, getting back to the violin bow analogy, we need to not only use a full-length bow but learn how to use the entire bow from frog to tip. This is not necessarily about increasing lung capacity. The length of a violin bow ( twenty-five and a quarter inches) is finite and so is the capacity of our lungs. They are really more like a Mylar balloon than a latex balloon in that they don't so much stretch as just fill up. However, we can strengthen the diaphragm and increase its ability to go from a bowl to a plate, thereby allowing the lungs to fill to maximum capacity.

For the remainder of this article as well as some great breathing exercises, please click here.

