

## Rubric for the Inservice Project

### Summary of the Assignment

You have been asked to present an inservice to all other music educators in your district (new and old, K-12, choral, strings, band, general music). You have been given a two-hour slot on the next inservice day. This is a group project. You will be assigned in either pairs or groups of three dependent upon the enrollment in the class.

You will be assigned one disability category (i.e., autism) or one collective group (i.e., sensory impairments-hearing and vision). You will need to cover: characteristics, potential problems in a variety of music settings, appropriate adaptations, where and how they can get help.

### Evaluated Components

Name: \_\_\_\_\_ Disability: Physical

#### Detailed Outline

- timings for each component ✓
  - detailed, clear, easy to follow ✓
  - information on facilitation of group discussion ✓
  - use of audio or visual media ✓
  - description of a small group activity ✓
  - section on dealing with negativity (teachers or parents) ✓
- 5/5

#### One Page Handout

- one page or one page front and back
  - room for taking notes OK
  - appropriate contact information NO
- not sure - powerpoint?*  
4.5/5

#### Powerpoint Slides

- minimum of 10 slides ✓
  - appropriate content ✓
  - visual clarity ✓
  - use of graphics/photos/color to enhance slides ✓
- 5/5

#### Comments

Final Grade

14.5/15

MEMT 407  
Colwell

**In-service Outline:**

**Topic:** Physical Disabilities in the Music Classroom - From 1-3 pm

- I. Introduction (5 mins)
  - a. Give scenario or student with physical disability and solution, starter story
    - i. A man named Tony Melendez was born with no arms and a clubfoot due to his mother being prescribed the drug thalidomide. Adapting his body to the best of its ability, Melendez is now a very talented guitarist by playing a normal guitar with his two feet. In 1987 he played for Pope John Paul II and since then has made numerous television appearances and played for the pope three more times.
  - b. Go over what will happen this afternoon (3 mins)
    - i. Overview and learning of physical disabilities
    - ii. Group discussion
    - iii. Resources you can use
- II. Overview of Physical Disabilities (PowerPoint Slideshow, slides 1-21) (40-45 mins)
  - a. Definitions
  - b. Types
  - c. Characteristics/Symptoms
  - d. Adaptations

**BREAK!!!! 10 MINUTES!**

- III. Group discussion (Hand out mock situation worksheet, display on Smartboard) (30 mins)
  - a. Give mock situations to groups of teachers and brainstorm ways to adapt the classroom/instruments/lesson etc.
  - b. Go around the room at each group and discuss the situation and solution.
- IV. Wrap-up (PowerPoint Slideshow, slide 22) (20 mins)
  - a. End with an overview of what you can do
  - b. Hand out worksheet with resources on it (display on SmartBoard)
  - c. Discuss how these different resources can be used

Questions if time

**Technology used:** PowerPoint, as well as an overhead (or SmartBoard) to display worksheets when talking about them.

# 1 ■ PHYSICAL DISABILITIES

## 2 ■ Overview:

- Students with physical disabilities exhibit a wide range of different characteristics.
- Often do not have cognitive impairments.
- There are over 73,000 special education students between the ages of 6-21 who have physical disabilities (U.S. Dept. of Education, 2002).

## 3 ■ Definitions:

- There are two terms used interchangeably:
  - Orthopedic Impairments
  - Physical Disabilities
- Can be caused by congenital anomaly, injury, or disease.

## 4 ■ Types of Physical Disabilities:

- All types of paralysis or types of physical disabilities can be classified by the limbs involved.
  - Hemiplegia : one side of the body is involved.
  - Diplegia: the legs are involved more than the arms.
  - Monoplegia: one limb is involved.
  - Paraplegia: only the legs are involved.
  - Quadriplegia: all four limbs are involved.

## 5 ■ Neurological Conditions:

- A neurological condition affects the central nervous system (the brain or spinal cord).
- Causes of neurological impairments are often classified as *non-traumatic* or *traumatic*.
- The most common neurological conditions affecting school age children are:
  - Cerebral palsy
  - Spina Bifida
  - Seizure disorders
  - Spinal cord injuries
  - Traumatic brain injury (TBI)

## 6 ■ Neurological Conditions:

- Cerebral Palsy:
  - Most common physical disability among school aged children.
  - Generally a result to injury to the brain before or during birth.
  - Characterized by a lack of muscular control that affects a child's ability to move or maintain balance.
    - Spasticity: contraction, tightness
    - Athetosis: abrupt, twisting, involuntary

- **Ataxia:** poor balance and hand use

7 ■ **Neurological Conditions:**

- **Seizure Disorders:**
  - A result of abnormal discharges of electrical energy in the brain.
  - Anyone can have a seizure, but having repeating seizure is referred to as *epilepsy*.
  - Many children with cerebral palsy have epilepsy, as well as other children who have had a brain injury or an illness affecting the brain.
  - There are two types of seizures:
    - **Grand mal:** involves the whole body, last a few minutes, loss of consciousness.
    - **Petit mal:** rapid eye blinking, inattentive staring.

8 ■ **Neurological Conditions:**

- **Spina Bifida:**
  - Characterized by a abnormal opening in the spinal column.
  - There are three prominent types of spina bifida:
    - **Spina Bifida occulta:** most common form, small portion of the vertebrae is missing, however the spinal cord and the cover are *NOT* protruding.
    - **Meningocele Spina Bifida:** more serious form, the covering of the spinal cord is protruding, but *NOT* the spinal cord
    - **Myelomeningocele Spina Bifida:** most serious form, *BOTH* the spinal cord and the covering are protruding. This form generally results in lower limb paralysis and loss of bladder and bowel control.

9 ■ **Neurological Conditions:**

- **Spinal Cord Injuries:**
  - Results in a loss of mobility or feeling.
  - Causes often involve trauma (diving accidents, car accidents, gun shot wounds).
  - Can be classified as:
    - **Complete:** no function below the level of injury
    - **Incomplete:** some functioning below the level of injury

10 ■ **Musculoskeletal Conditions:**

- Occurs due to disease of defects to the bones or muscles.
- Can involve the arms, legs, joints, or spine.
- Causes can be *congenital* (appearing at birth) or *adventitious* (appearing after birth).
- The most common musculoskeletal conditions affecting school aged children are:
  - **Muscular dystrophy**
  - **Amputations**
  - **Juvenile rheumatoid arthritis**

11 ■ **Musculoskeletal Conditions:**

- **Muscular Dystrophy:**
  - Not a singular disability, but a group of nine hereditary muscular disorders that vary in age of onset, the muscles involved, and the rate of progression.
  - Voluntary muscles progressively become weak.
  - The most common in children (especially boys) is *Duchenne* muscular dystrophy.
    - Genetically transmitted
    - Typically diagnosed before the child goes to school
    - Life expectancy is in the early 20's

12 **Musculoskeletal Conditions:**

- Amputations or Congenital Malformations:
  - Result in absent or abbreviated limbs.
  - Also includes curving of the spine and club feet.
  - Can be caused by medications or drugs ingested by the mother during pregnancy, however, many malformations have no known cause.

13 **Musculoskeletal Conditions:**

- Osteogenesis Imperfecta (OI)
  - Also known as "brittle bone" disorder.
  - Genetic disorder characterized by bones that break easily, often for little or no apparent reason.
  - There are four types of OI based on the severity of the disorder:
    - Type I: most common, most mild, most of the fractures occur before puberty. Generally have loose joints and low muscle tone.
    - Types II-IV: more severe, often results in hearing loss, smaller stature, bone deformity, more fractures, curvature of the spine.

14 **Musculoskeletal Conditions:**

- Juvenile Rheumatoid Arthritis:
  - Condition of the joints, most common arthritis in children.
  - Can range from mild to severe.
  - Symptoms include:
    - Stiffness of joints
    - Weakness of muscles
    - Limited mobility
    - Limited strength and endurance

15 **Musculoskeletal Conditions:**

- Achondroplasia
  - Most common form of skeletal dysplasia, or conditions where bones do not grow or develop normally.
  - *Achondroplastic dwarfism* is characterized by a average sized trunk, but short arms and legs, a slightly enlarged head and a prominent forehead.

16 **Factors Influencing the Impact of Physical Disabilities:**

- The duration of the disability
- The age of onset
- Limitation of age-appropriate activities
- The visibility of the disability
- Length of expected survival
- Degree of Mobility
- Degree of physical functioning
- Cognitive abilities
- Emotional or social implications
- Sensory functioning
- Communication functioning
- Course of the disability (stable or progressive)
- Unpredictability of the disability
  - Perrin et al. (1993)

17 **Adaptations:**

- Adapting the environment:
  - Desks or chairs to accommodate wheelchairs
  - Ramps

- Shelving to store instruments
- Assistive technology
  - Computers, Smartboard, speech synthesizers

18  **Adaptations:**

- Adapting instruments:
  - Touch sensitive pads
  - Instruments stands
  - Large knobs
  - Molding clay
  - Velcro
- West Music [www.westmusic.com](http://www.westmusic.com) , a good source for purchasing commercially available adapted instruments

19  **Adaptations:**

- Selecting instruments:
  - Size and weight of instrument
  - Ability to succeed in ensemble
  - Timbre of instrument
  - Is motivating and has reasonable repertoire
  - Can it be adapted if needed?

20  **Music Technology:**

- Soundbeam
- Kaoss Pad
- The Tactile Musical MIDI Mate
- **Remember:** There is always a way to allow a student to participate, **BE CREATIVE!**

21  **Instrument Playing to Improve Physical Functioning:**

- Instruments can be selected so that students can not only learn to love music, but also improve their physical functioning.
  - Range of Motion
  - Hand grasp strength
  - Hand dexterity
  - Digital flexibility
- Also, participating in a musical ensemble offers students an opportunity to interact socially with their peers, thus improving the quality of life.

22  **As the Teacher:**

- Let students with physical disabilities be as independent as possible.
- Monitor behavior and offer help when needed.
- Create a classroom that teaches acceptance.
- Involve every student as much as possible.
- Adapt materials so that everyone may participate.

# PHYSICAL DISABILITIES



## Overview:

- Students with physical disabilities exhibit a wide range of different characteristics
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## Definitions:

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## Types of Physical Disabilities:

- All types of paralysis or types of physical disabilities can be classified by the limbs involved:
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## Neurological Conditions:

- A neurological condition affects the central nervous system (the brain or spinal cord).
- Cause of neurological impairments are often classified as non-traumatic or traumatic.
- The most common neurological conditions affecting school age children are:
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  - Spina Bifida
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  - Traumatic brain injury (TBI)

## Neurological Conditions:

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  - Most common physical disability among school aged children.
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  - Characterized by a lack of muscular control that affects a child's ability to move or maintain posture.
  - Symptoms: contraction, spina Bifida
  - Abnormalities: absent, walking, involuntary
  - Abnormal: poor balance and hand use

## Neurological Conditions:

- Seizure Disorders:
  - A result of abnormal discharges of electrical energy in the brain.
  - Anyone can have a seizure, but having repeated seizures is referred to as epilepsy.
  - Many children with cerebral palsy have epilepsy, as well as other children who have had a brain injury or an illness affecting the brain.
  - There are two types of seizures:
    - Generalized: involves the whole body, last a few seconds and involves eye blinking, head/arms shaking.
    - Focal: one, rapid eye blinking, head/arms shaking.

## Neurological Conditions:

- Spina Bifida:
  - Characterized by a abnormal opening in the spinal canal.
  - There are three prominent types of spina Bifida:
    - Spina Bifida: most severe form of the spinal cord and the cover are NOT protecting.
    - Meningocele: Spina Bifida: more serious form, the covering of the spinal cord is protruding, but NOT the spinal cord itself.
    - Myelomeningocele: Spina Bifida: most serious form, NOT the spinal cord and the covering are protruding. The meninges protrude and cover the spinal cord and brain tissue.

## Neurological Conditions:

- Spinal Cord Injuries:
  - Results in a loss of mobility or feeling.
  - Causes often involve trauma (falling accidents, car accidents, gun shot wounds).
  - Can be classified as:
    - Complete: no function below the level of injury
    - Incomplete: some functioning below the level of injury

### Musculoskeletal Conditions:

- Occurs due to disease or defects to the ones or muscles.
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  - Amputations
  - Juvenile rheumatoid arthritis

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  - Not a singular disability, but a group of nine hereditary muscular disorders that vary in age of onset, the muscles involved, and the rate of progression.
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  - Can range from mild to severe.
  - Symptoms include:
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    - Swelling of muscles
    - Limited strength and endurance

### Musculoskeletal Conditions:

- **Achondroplasia**
  - Most common form of skeletal dysplasia, or conditions where bones do not grow or develop normally.
  - *Achondroplastic dwarfism* is characterized by an average sized trunk, but short arms and legs, a slightly enlarged head and a prominent forehead.

### Factors influencing the impact of Physical Disabilities:

- The duration of the disability
- The age of onset
- Limitation of age-appropriate activities
- The visibility of the disability
- Length of expected survival
- Degree of disability
- Degree of physical functioning
- Cognitive abilities
- Emotional or social implications
- Necessary functioning
- Communication functioning
- Cause of the disability (static or progressive)
- Irreversibility of the disability
- Patten et al. (1992)

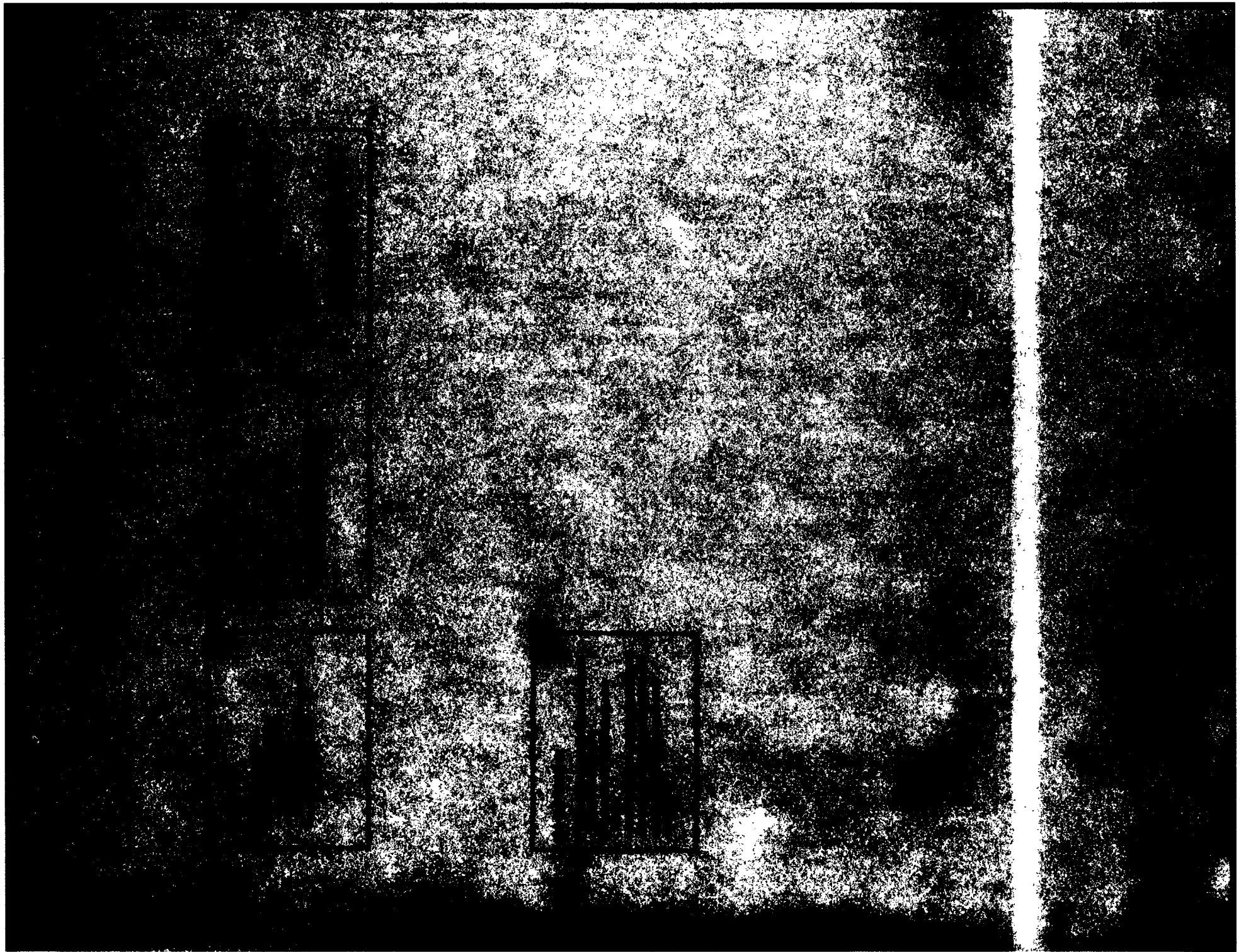
### Adaptations:

- **Adapting the environment:**
  - Desks or chairs to accommodate wheelchairs
  - Ramps
  - Shelving to store instruments
  - Assistive technology
    - Computers, Smartboard, speech synthesizers

### Adaptations:

- **Adapting instruments:**
  - Touch sensitive pads
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  - Molding clay
  - Velcro
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## SCENARIOS WORKSHEET

**Sally is a young girl with juvenile rheumatoid arthritis. She has particular problems with her elbows and wrists. She is interested in joining the band and becoming a flute player. What kinds of adaptations can you do? How can you accommodate?**

**Tom is a young man with Duchenne muscular dystrophy. He has been wheelchair bound since he was a small child. He is currently a sophomore and is an active member in the choir. What kind of issues might you have to deal with? What kind of adaptations might you have to make in your classroom?**

**Jan is a young girl with only one arm. Her amputation is a result of an unknown birth defect. She hopes to join the band next year. What kind of instruments can you suggest? What kind of adaptations can you make?**

**Sue is a young woman who suffers from grand mal seizures. She is active in both the band and choir. If she experiences an episode what should you do? What adaptations can you make to your classroom to accommodate this situation?**

**John is a young man who has "brittle bone" disorder. He has been an active member of the band for 3 years, playing trumpet. He is also a talented piano player and an overall excellent musician. This year he is a freshman and is excited about marching band, pep band, and solo and ensemble contests. What problems might you encounter? How might you adapt your ensemble?**

## RESOURCES YOU CAN USE

**West Music:** [www.westmusic.com](http://www.westmusic.com)

-A good source for purchasing commercially available adapted instruments

**A Day's Work:** [www.adaysworkmusiceducation.com/](http://www.adaysworkmusiceducation.com/)

-Source for adaptive percussion instruments; includes mallets, stands etc.

**Adaptive Music Controller:**

[http://www.web.media.mit.edu/~dmerrill/adaptive\\_controller.html](http://www.web.media.mit.edu/~dmerrill/adaptive_controller.html)

-Interesting idea, shows what you can do with a little thought!

**Muscular Dystrophy Campaign:** [www.muscular-dystrophy.org/](http://www.muscular-dystrophy.org/)

-Information, resources, adaptations

**Cerebral Palsy:** [www.ninds.nih.gov/disorders/cerebral\\_palsy/cerebral\\_palsy.htm](http://www.ninds.nih.gov/disorders/cerebral_palsy/cerebral_palsy.htm)

-Information, resources, links to other sites

**Brittle Bone Disease:**

[www.dundee.ac.uk/medther/tayendoweb/images/brittle\\_bone\\_disease.htm](http://www.dundee.ac.uk/medther/tayendoweb/images/brittle_bone_disease.htm)

-Information, resources

**Spina Bifida:** [www.sbaa.org](http://www.sbaa.org)

-Information, resources

As always the Internet is a very useful resource, Google is your friend!

Also, do not be afraid to ask other colleagues, especially your special education teachers, for help.

## **SUGGESTIONS ON HOW TO TALK TO PARENTS WHO HAVE NEGATIVE ATTITUDES:**

- **Have a calm conversation, privately**
- **Explain, if needed, the legal rights of the students with disabilities**
- **Perhaps describe the adaptations made (if any) so that the parent understands**
- **Show how it benefits the student with a disability**
- **Show how it doesn't necessarily affect the other students ability to perform well**
- **Make it personal**
- **Ask what problems they have, and how to combat them**
- **Invite the parent to view a class period, or maybe have them come along on a trip (contest, parade marching)**
- **Never be negative**
- **Ask other colleagues for help, especially the special education staff**
- **Call in your principal or another teacher for help if needed**