Flexibility and Fitnessgram
BJ Santos, Murray High School
Albemarle County Public Schools
bsantos@k12albemarle.org

Flexibility is the “ability to move a joint through its complete range of motion.” (ACSM, 2006) Flexibility facilitates athletic movement and activities of daily living.
- Stretching can decrease pain and soreness after exercise.
- Range of motion of a joint is increased by a daily 15-30 second stretch of involved muscles
- Stretching is relaxing
- Stretching maintains a balance in body mechanics

The Fitnessgram field tests for flexibility include the backsaver sit and reach and the shoulder stretch. Each appropriate for different ages and populations. The actual assessment of flexibility is one component of the assessment process.
Step 1: to understand the concept of aerobic capacity and its importance to health.
Step 2: to participate in conditioning exercises for aerobic capacity.
Step 3: instruction in how to perform the test.
Step 4: actual assessment.
Step 5: the development of a fitness plan and fitness goals.
Step 6: participation in physical activity designed to meet fitness goals.
Step 7: the reassessment of the test.
Step 8: revision of goals to reflect progress made.
(Fitnessgram, 2005)

Back-saver sit and reach
Test objective: to be able to reach the specified distance on the right and left sides of the body.
The test is scored to the nearest ½ inch. Both sides must meet the “healthy fitness” standard.

Shoulder stretch
Test objective: to be able to touch the fingertips together behind the back by reaching over the shoulder and under the elbow.
The test is scored Y or N; the student must be able to touch on both sides to achieve “healthy fitness zone”

Types of stretching
Static stretching – a slow sustained stretch for 10-30 seconds
Active stretch – self stretch
Passive stretch – partner assisted
Proprioceptor neuromuscular facilitation (PNF) – overcoming the stretch reflex by contracting the muscle before stretching. Not appropriate for elementary aged children.
Ballistic or dynamic stretching – using quick or bouncing movement to generate momentum. Appropriate for conditioning for sport specific movement for competition but not for general stretching in physical education class.
Guidelines for stretching

- Warm up (raise the core body temperature) before stretching
- Stretch until there is slight pull, but no pain – hold until the muscle relaxes
- Proprioceptor Neuromuscular Facilitation (PNF) stretching has the greatest increases in range of motion
- Static, or held stretches increase range of motion
- Ballistic (bouncing) stretches increase risk of injury because the muscle may contract reflexively if restretched quickly following a short relaxation period

Activities to improve performance
Stretching is a great way to end a class. Since it a quiet activity, the time can also be used for closure, a time to review the class objectives and make connections to the next lesson.

Standing Series

A great stretch to do while winding down class. Complete the sequence on one side, repeat on the other.

Calf/shoulder - lunge, straight knee, heel down; arm pressed across chest

Achilles/tricep - close lunge, bend knee, heel down; tricep press over head

Hip flexor/Bicep - raise heel, hip forward; extend arm to side, thumb to rear

Thigh/chest - bend knee and lower; hands to small of back, elbows back

Hamstring/spine - sit back, bend knee, flex foot; round back, arch back, release foot to floor

IT band - cross one foot behind other, reach sideways toward back foot, hand to inside knee

Proprioceptor Neuromuscular Facilitation (PNF)

Self hamstring stretch – On back, with one leg extended, the other knee bent with foot on the floor. Hold leg above knee (around thigh) and press heel toward floor (contract hamstrings). Hold 15-30 seconds and relax and stretch.

Hamstring/low back - From a sit-reach position, press back against partner 15-30 seconds, In/exhale and lean forward while partner pushes on low back.

Shoulders – From a shoulder reach position, press elbows against partner’s hands 15-30 seconds. In/exhale, relax, partner presses into shoulder stretch.
On the Floor for More

Lying down
Crossover
Quads
Hamstrings
Glutes

Sitting
Hamstring hurdle – 3 positions
Straddle – forward lean, sideward lean
Inner thigh
Deep hip
Obliques
Lateral spine
Sit/reach
Calves
Shins
Upper back/triceps/biceps/chest

Prone
Abdominals/Upper back
Hip
Cat/cow
Child’s pose
Corpse

www.exrx.net is a great resource for all fitness information