

The background of the slide is a composite image. The top left shows a line of yellow school buses, with the number '32' visible on the front of one. The bottom left shows a classroom with blue walls, decorated with colorful balloons and framed pictures. There are several small white tables and chairs arranged in the room.

School Health Screening Programs

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Kentucky Department of
E D U C A T I O N

Objectives:

- Understands initial school entry requirements
- Identifies school screening programs
- Understands etiology of hearing loss
- Can implement hearing screening program including referral
- Understands vision screening process including referral
- Can identify conditions that may cause decrease in visual acuity
- Identifies what BMI is and how to accurately calculate in students

Initial Entry Requirements:

1. A valid Kentucky Immunization Certificate
2. A physical examination done within one year prior to entering school
3. Eye examination performed by ophthalmologist or optometrist by Jan. 1 of the year of enrollment
4. Proof of a dental screening or examination by a dentist, dental hygienist, physician, registered nurse, advanced registered nurse practitioner or physician assistant. This evidence shall be presented to the school no later than Jan. 1 of the first year that a 5 or 6-year-old is enrolled in public school

Basic School Health Requirements:

702 KAR 1:160 School Health Services:

A local board of education may extend the deadline by which to obtain a preventive student health care examination, not to exceed two months, (up to and including Oct. 15).

Basic School Health Requirements Part 2:

Type	Age of child	School Documentation	Data Entry into IC?
Physical exam*	3,4 or 5	Initial entry to school (may accept Headstart or Preschool if they are in district)	Yes
Physical exam**	10, 11 or 12 (usually)	Performed up to one year prior to 6 th -grade entry	Yes
Vision exam	3,4,5 or 6	Initial entry to school (can accept Headstart or Preschool)	Yes
Dental exam/screening	5 or 6**	Entry to grade 00 - ONLY	Yes
Hearing and vision screening	Any age	School district determine which grades screened	Yes
Immunizations	Varies	Immunization certificate for Grades 00 and 6 th ,7 th , 11 th	Yes
Medication administration	Varies	Medication administration for scheduled, PRN and ER	Preferred
Health office visits	Varies	Individual health office visits and treatments	Preferred

Screening Programs:

[702 KAR 1:160 Section 2 \(10\) \(a\) \(b\).](#)

The Board of Education shall adopt a program of continuous health supervision for all enrollees. Supervision shall include scheduled, appropriate screening tests for vision and hearing. **The specific scheduling (grades) for vision and hearing is at the local district's discretion.**

Hearing:

Measured in decibels (loudness)

Normal speech is 50-70 decibels

Sound also has pitch, high or low sounds, measured in Hertz'

Hertz- is the frequency/number of cycles per second of pure tone

Threshold – is the softest level at which one hears the frequencies



Hearing Screen:

- Identifies children with hearing impairment
- Aids in planning for medical referral, treatment and educational programs
- Five to 10 percent of school age children do not pass audiometric tests
- Approximately 2% of children will show permanent hearing loss and require special educational services

Pure tone screening:

1. Perform biological check on pure tone screening equipment prior to daily screening.
2. Screen populations age 3 (chronologically and developmentally) and older using pure tone screening.
3. Perform a pure tone sweep at 1000, 2000 and 4000 Hz at 20 dB HL.
4. Present a tone more than once but no more than **four** times if a child fails to respond.
5. Only screen in an acoustically appropriate screening environment.
6. Lack of response at any frequency in either ear constitutes a failure.
7. Rescreen immediately.
8. Screen for high frequency hearing loss where efforts to provide education on hearing loss prevention exist.
9. Suggested minimum grades to be screened: preschool, kindergarten and grades 1, 3, 5 and either 7 or 9.

Hearing Loss:

- Interferes with normal speech and language development
- Development of abnormal social growth and behavior
- Interference with education human potential
- Isolation in a hearing world



Hearing Loss Continued:

- Mild loss – 15-30db, difficulty hearing faint or distant speech
- Moderate hearing loss - 30-50db, difficulty hearing distant speech
- Moderate - Severe loss – 50-70db difficulty hearing conversations unless loud
- Severe/loss - 70-90db, may hear loud voice close to ear

Types of hearing loss:

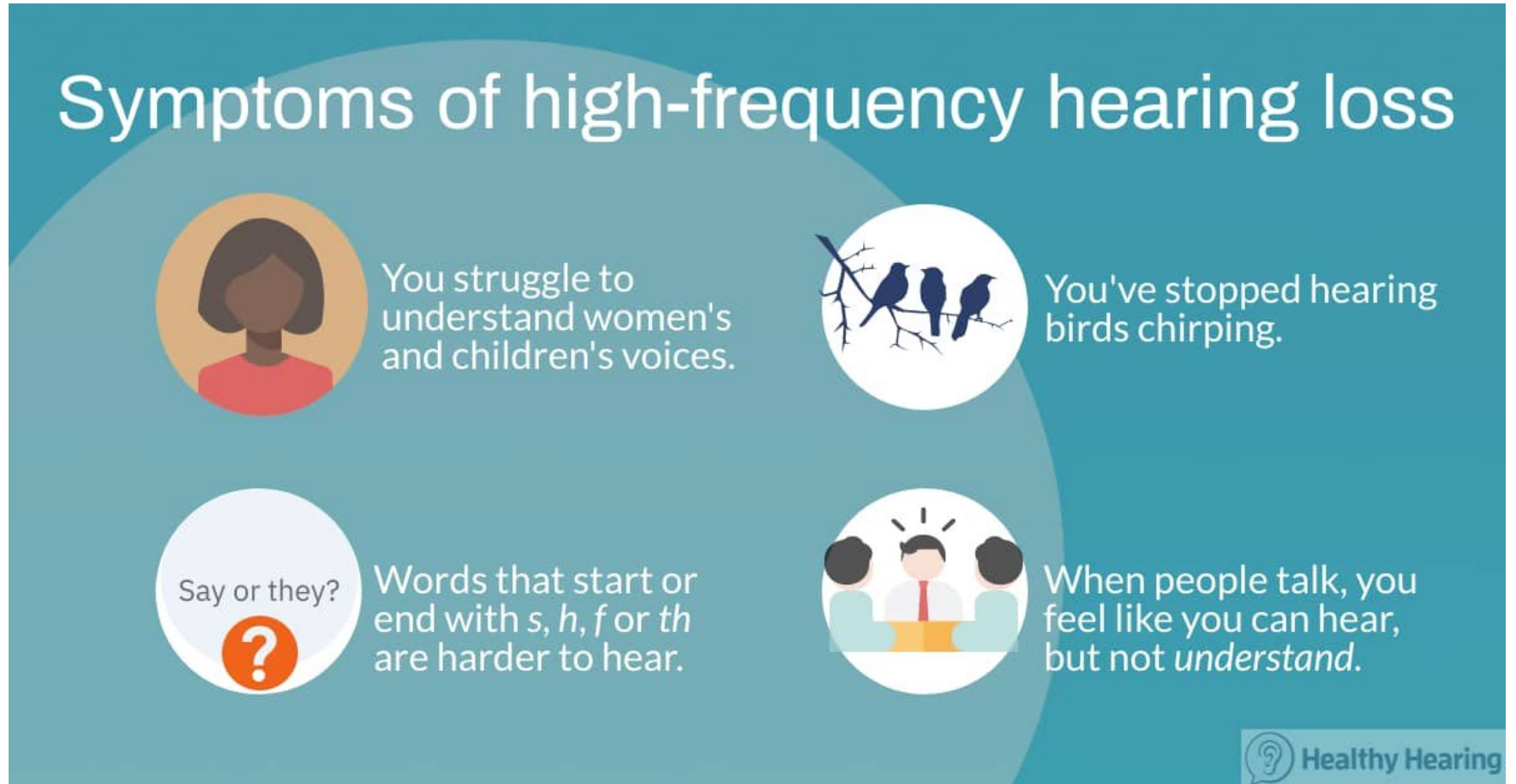
- Minimal Sensorineural Hearing Loss: The most common form of permanent hearing loss. It is defined as a hearing loss of at least 30 decibels within 3 days. SNHL results from damage to the hair cells in the inner ear or to the nerve pathways between the inner ear and the brain.
- Unilateral Hearing Loss: Approximately one out of every 1,000 children is born with UHL, and nearly 3% of school-age children have UHL.
- High Frequency Hearing Loss: One of the most common types of hearing loss is known as high-frequency hearing loss. Can be caused by exposure to loud noises.
- Hearing Loss due to Otitis Media with Effusion:

High Frequency Hearing Loss:

One of the most common types of hearing loss is known as high-frequency hearing loss.

Can be caused by exposure to loud noises.

Symptoms of high-frequency hearing loss



-  You struggle to understand women's and children's voices.
-  You've stopped hearing birds chirping.
-  Say or they? Words that start or end with *s, h, f* or *th* are harder to hear.
-  When people talk, you feel like you can hear, but not *understand*.

 Healthy Hearing

Otitis media with effusion (OME):



- OME is characterized by a non-purulent effusion of the middle ear that may be either mucoid or serous.
- Symptoms usually involve hearing loss or aural fullness but typically do not involve pain or fever.
- In children, hearing loss is generally mild and is often detected only with an audiogram.

Hearing Screening Testing Procedure:

- Hearing is assessed in children 3 years and older
- Room should be as quiet as possible
- Tester may test him/herself to assure noise level in the room will not interfere with testing
- Room should be large enough to accommodate a table, audiometer and chairs
- Student chair should be positioned so the student cannot see the audiometer
- Testing frequencies: 1000, 2000, 4000 Hz @ 20 dB HL

Hearing Screening Testing Procedure (Cont.):

- Follow manufactures instructions
- Give verbal instructions for student to raise a hand when a tone is heard
- For children 6 and below may hand or drop a block when tone is heard
- Without wearing the headset, demonstrate by turning the tone to 90dB, raise your hand when you hear the tone



Audiometer:

- Check the audiometer and headphones for proper functioning
- Calibration and any needed repairs to be completed annually
- If unit has batteries, remove when unit is stored
- Turn off unit when not in use



Pass/Fail Criteria:

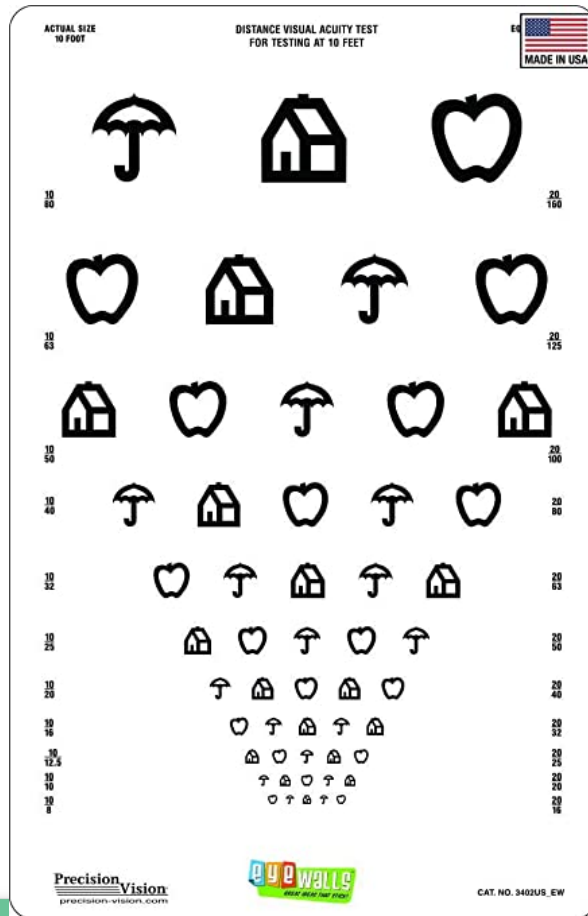
- Screening test is failed if the student fails to hear any one tone, in either ear.
- Rescreen in two weeks; if second screening is failed, student should be referred for proper follow-up.
- Document results on the appropriate forms.

Vision Screening

- [KRS 156.160](#)
- A **vision examination** by an optometrist or ophthalmologist that shall be required by the Kentucky Board of Education (KBE). The administrative regulations shall require evidence that a vision examination that meets the criteria prescribed by the KBE has been performed. This evidence shall be submitted to the school no later than Jan. 1 of the first year that a 3, 4, 5 or 6-year-old child is enrolled in a public school, public preschool or Head Start program.



Vision Screening:



- Screening for distance is the single most important test of visual ability
- Children/parents are often unaware of vision problems
- Detect and prevent serious lifelong and irreversible vision problems
- Educationally significant due to relationship to learning



Instructions for students receiving a vision screen:

- If you wear glasses, bring them.
- If you don't have them, tell me.
- Quietly wait your turn.
- When you get back into your classroom, send the next person right away.

Common Eye Problems: Myopia (nearsightedness):

- Inability to see distant objects
- Thought to be hereditary
- The most common refractive error affecting 1% of 6-year-olds
- In infancy, may be more severe than in school-age children
- Tends to worsen with age

Strabismus:

- Results from eye muscles not working together
- Difficult to detect - may be constant, come and go, or alternate from one eye to the other
- One may remain straight and the other eye turn slightly inward (may score 20/20 on eye chart)
- Affects 30% of children
- If uncorrected, strabismus can result in amblyopia (loss of vision)



Amblyopia (Lazy Eye):



- Reduced visual acuity in an eye, not adequately used during early childhood (often caused by strabismus)
- Is NOT OBSERVABLE, must screen both eyes to find this condition
- Affects 2-5% of general population
- If untreated by age 6, permanent vision loss is likely
- Treatment involves patching the good eye to re-train the brain to accept images from the affected eye

Other Common Vision Anomalies:

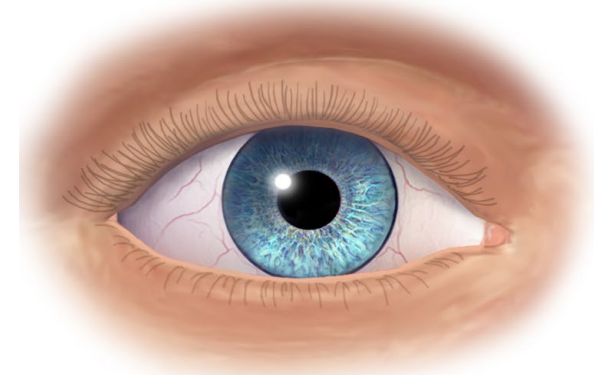
- Astigmatism - light cannot focus clearly on the retina, often causing blurred vision
- Hyperopia - farsightedness, inability to focus on nearby objects
- Ptosis - when the upper eyelid droops over the eye



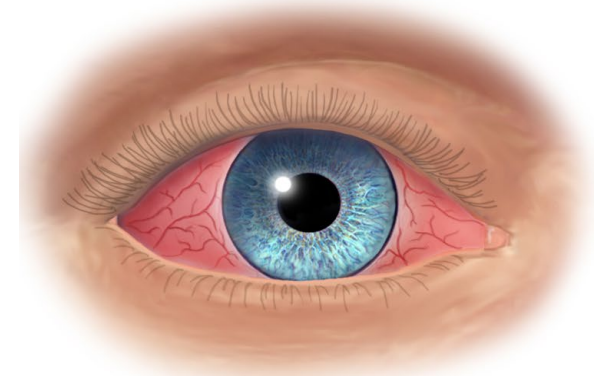
Problem Indicators:

- Eye redness or discharge
- Swelling/crusting of the eyelids
- Haziness or clouding of the eye
- Eye crossing or misalignment (strabismus)
- Eyes “jiggle” (nystagmus)
- Protruding eyes (proptosis)
- Drooping eyelids (ptosis)
- Alignment of the eyes
- Non-round pupils/pupil size

Normal Conjunctiva



Inflamed Conjunctiva



Pink eye



Behavior Indicators:

Constant
head tilt or
face turn

Squinting

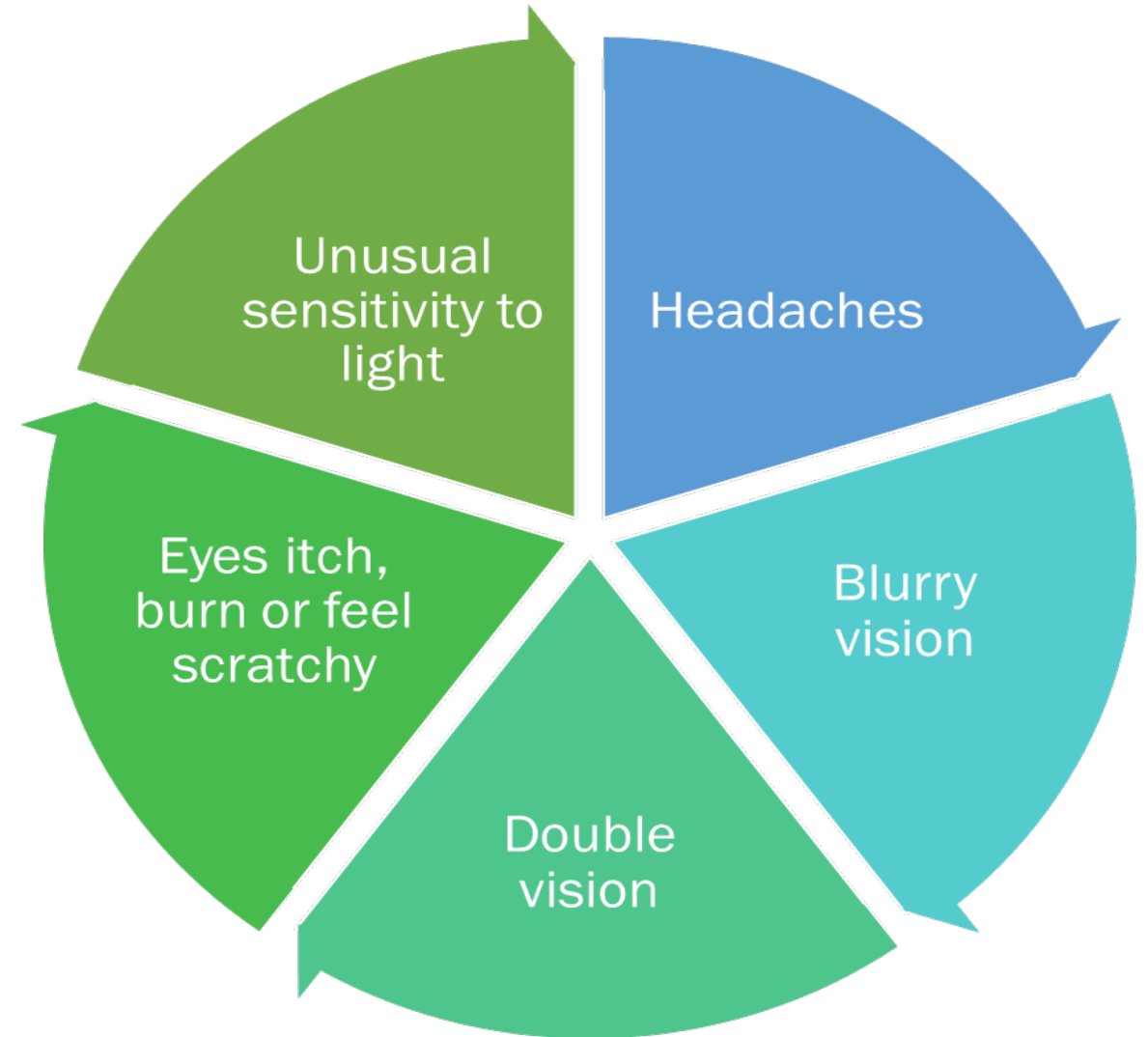
Rubbing eyes
excessively

Closing or
covering one
eye

Holding
objects close
to the eyes

Blinking
excessively

Student Complaints:



Vision Assessment/Acuity:

- Vision acuity is assessed in the school age by chart or vision instrument tester
- AAP recommends LEA Symbols, HOVT letter charts or Sloan letter charts
- Screen same procedure for both eyes
- Begin testing at the top of chart and progress down
- If student wears glasses, TEST with glasses
- Record last line which three of five symbols identified correctly

Vision Screening:

- Supplies - eye chart, tape, INDIVIDUAL eye covers and vision logs
- Location - quiet and free from distractions, good lighting, light colored walls and no glare or shadows
- Attach chart to wall, with passing line at student's eye level
- Mark 20 feet (or 10, according to chart used) of distance from chart

Vision Screening Continued:

- Test both eyes first, then right and left
- Test with glasses (if applicable)
- When testing one eye, occlude the other eye
- Begun at the top of chart, if line read correctly, proceed to the next line
- When one line is missed, move back up until most letters/symbols are correctly identified
- Move according to the speed of the student
- It may be necessary to use a pointer to indicate the letter
- To pass, more than half of the symbols/letters on a line (three out of five must be identified)
- Observe for eye problems (head tilt or peeking)
- Record visual acuity (the last successful line read, both eyes, right and left eye)

Documentation:

- Record the results as a fraction – i.e., 20/30, 20/40
- The numerator (top) represents the distance from the chart to the student's eye
- The denominator (bottom) represents the last/smallest line read
- A reading of 20/50:
 - 20 = testing distance from student eyes to chart
 - 50 = smallest line student could clearly identify
 - The larger the denominator, worse the eyesight
- Record screening results on flow sheets, cumulative/individual health records and other appropriate forms

Referral Criteria – Ages 3-5:

- Refer if visual acuity is poorer than 20/40 in both or either eye
- Refer if there is a two-line difference between the eyes even in passing range (examples 20/25, 20/40)
- Refer if possible signs of visual disturbance are present

Referral Criteria for Ages 6-Adult:

- Refer if visual acuity is poorer than 20/30 in both or either eyes
- Refer if there is two-line difference between the eyes, even in the passing range (examples 20/20, 20/30)
- Refer if possible signs of visual disturbance are present
- Avoid using the word fail in front of the student or parent

Body Mass Index – BMI:

- Screening for BMI is **optional**
- Produced by CDC as a screening tool to determine obesity
- BMI can be plotted for children after age 2
- BMI is the ratio of weight to height squared
- Height and weight screening is used to identify children who may be at risk for abnormal growth patterns for age, weight and/or heredity

	Healthy Weight						Overweight					Obese					
BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Height	Weight (in pounds)																
4'10"	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167
4'11"	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173
5'0"	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179
5'1"	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185
5'2"	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191
5'3"	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197
5'4"	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204
5'5"	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210
5'6"	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216
5'7"	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223
5'8"	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230
5'9"	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236
5'10"	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243
5'11"	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250
6'0"	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	256
6'1"	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265
6'2"	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272
6'3"	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279
6'4"	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287



Weight Measurement:

- Balance beam or digital scales (all scales should be zero balanced and calibrated annually)
- Weigh without outer clothing and shoes
- Place student in the middle of scale
- Weight is recorded to the nearest 0.1 Kg or $\frac{1}{4}$ pound
- Read and record measurements
- Do not use bathroom or spring balance scales
- Always provide privacy

BMI:

- Is on the KDE school physical form but is not a requirement
- If BMI is listed on the physical form, this should be entered into Infinite Campus
- Web sites:
 - [CDC Body Mass Index \(BMI\)](#)
 - [BMI Percentile Calculator for Child and Teen](#)

Documentation:

- Kentucky Student Information System (KSIS), Infinite Campus (IC)
- All screening results must be entered and reported at end of each school year
- Data Entry Information in KSIS Health Data Entry Document in [Student Health Services Health Coordinator's Briefcase \(Webpage\)](#)

Reference:

- [American Academy of Audiology Childhood Hearing Screening Guidelines](#)

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спасибо
danke 謝謝
ngiyabonga
teşekkür ederim
tapadh leat
gracias
dank je
moichchakkeram
go raibh maith agat
arigatō
takk
dakujem
merci
ευχαριστώ
grazie
kop khun krap
sukriya
sagolun
dziękuję
hvala
mauriuru
obrigado
bedankt
terima kasih
감사합니다