

ARIZONA DEPARTMENT OF EDUCATION  
VOCATIONAL TECHNOLOGICAL EDUCATION CURRICULUM SYSTEM

COMPETENCIES, INDICATORS, AND EVALUATIVE CRITERIA

1998 DRAFT

PROGRAM: Applied Biological Systems-Health  
CIP CODE: 99.0300.30

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COMPETENCY 1.0 DEMONSTRATE SAFETY COMPLIANCE IN THE  
LABORATORY

1.1 Demonstrate safety practices and procedures

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M034, M037, M047, M073, M092, M127, M134, M136, M154, M164, M171, M188, M189, M190, M191, M192, M193, M246, M256, M255, M261, M262, M266, M268, S031, S032, S033, S034, S035, S036, S039, S040, S041, S042, S043, S044, S046, S047, S048, S049, S050, S052, S070, S237, S238, S239, S240, S242, S245, S246, S248, S251, S252, S256, S257, S282, S283, S285, S291, S293, S303, S305, S307, S308, S319, S340, S346, S352, S389, S394, S395, S405, S406, S445, S447, S448, S449, S466, S467, S468, S472, S474, S477, S480, S481, S482, S483, S485, S486, S495, S497, S498, S499, S501

**KNOWLEDGE:**

1. Identify safety standards
2. Describe protective clothing, disposable gloves, and protection for the eyes, nose, and mouth
3. Explain the importance of asepsis and sterilization
4. Examine universal safety precautions when handling body fluids
5. Define biohazard
6. Examine safety practices when handling hazardous materials
7. Describe protective clothing and equipment when handling biotechnical materials
8. Describe safety practices in using, storing, and maintaining equipment
8. Describe fire safety procedures
9. Describe safe body mechanics

COMPETENCY 1.0 DEMONSTRATE SAFETY COMPLIANCE IN THE  
LABORATORY

**PROCEDURE:**

1. Follow laboratory standards
2. Use aseptic and sterilization techniques
3. Follow universal safety precautions when handling body fluids
4. Wear protective clothing, disposable gloves, and eye protection
5. Clean equipment and work surfaces with acceptable cleansing agents
6. Read operator's manual before operating equipment
7. Use equipment only for intended purpose
8. Store equipment properly
9. Repair worn or damaged equipment
10. Practice safe body mechanics

**PRODUCT/QUALITY:**

1. Laboratory rules are posted and followed
2. A floor plan identifies fire extinguishers, eye wash stations, and emergency exits
3. Asepsis and sterilization techniques are used
4. Protective clothing, disposable gloves, and eye protection are used
5. Hand washing techniques are followed
6. Equipment is properly used and stored
7. Proper body mechanics are used

**COMPETENCY 1.0 DEMONSTRATE SAFETY COMPLIANCE IN THE LABORATORY****1.2 Analyze the impact of safety compliance to employees and businesses**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M013, M014, M015, M021, M026, M029, M034, M039, M040, M041, M042, M047, M065, M066, M068, M073, M084, M085, M086, M087, M092, M116, M127, M132, M139, M140, M146, M148, M158, M159, M061, M170, M171, M174, M177, M178, M188, M190, M256, M258, M259, M261, M262, M266, M268, S010, S011, S012, S031, S032, S033, S034, S035, S036, S039, S040, S041, S131, S445, S466, S467, S468, S486

**KNOWLEDGE:**

1. Describe the effects of local, state, and national safety laws and regulations on business
2. Explain OSHA requirements
3. Describe how compliance with safety laws and regulations affect the cost of insurance for a business
4. Describe how safety equipment and materials can affect the cost of business facilities
5. Describe how safety practices affect the price of products sold by a business
6. Analyze the value of safety to employees

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.1 Describe basic chemistry in relationship to the human body**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M002, M015, M018, M026, M027, M034, M065, M073, M084, M091, M092, M124, M126, M127, M146, M158, M159, M161, M171, M174, M176, M188, M191, M192, M193, M229, M230, M231, M232, M262, M268, S042, S043, S051, S053, S054, S055, S056, S057, S058, S074, S075, S076, S107, S108, S114, S117, S121, S123, S131, S134, S136, S211, S212, S213, S220, S222, S235, S236, S282, S299, S340, S341, S346, S348, S352, S365, S380, S389, S394, S395, S449, S451, S454, S455, S459, S461, S462, S466, S467, S477, S486, S493, S495, S497

**KNOWLEDGE:**

1. Define matter, mass, and energy
2. Distinguish between atoms, molecules, elements, and compounds
3. Define chemical bonds and reactions
4. Define biochemistry
5. Distinguish between organic and inorganic substance

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.2 Describe the organization of the human body**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M008, M034, M041, M116, M124, M125, M126, M132, M144, M145, M148, M161, M171, M174, M176, M183, M185, M188, M192, M193, M244, S043, S080, S092, S107, S108, S109, S110, S111, S115, S116, S131, S136, S282, S283, S284, S288, S294, S296, S300, S301, S302, S303, S304, S305, S306, S307, S308, S309, S310, S311, S312, S313, S346, S389, S392, S393, S395, S466, S493

**KNOWLEDGE:**

1. Distinguish between anatomy and physiology
2. Describe the levels of structural organization
3. Identify the life processes
4. Define homeostasis
5. Define anatomical position and directional terms
6. Describe the location of major body cavities

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.3 Describe cells, tissues, organs, and systems**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M073, M092, M127, M134, M148, M159, M171, M176, M196, M247, M253, M255, M256, M263, M266, M268, S002, S003, S004, S005, S006, S010, S011, S037, S039, S042, S043, S050, S051, S053, S056, S058, S060, S063, S066, S068, S069, S070, S071, S072, S073, S074, S075, S076, S077, S078, S082, S083, S084, S085, S089, S090, S091, S094, S103, S104, S105, S106, S107, S108, S109, S110, S111, S112, S113, S114, S115, S116, S117, S118, S119, S120, S121, S220, S221, S222, S223, S224, S226, S228, S229, S230, S231, S232, S233, S261, S262, S263, S264, S265, S266, S267, S268, S269, S270, S271, S272, S282, S283, S284, S285, S286, S287, S288, S289, S290, S291, S292, S293, S294, S295, S296, S297, S298, S299, S300, S301, S302, S303, S304, S305, S307, S308, S309, S310, S311, S312, S313, S314, S315, S336, S337, S338, S339, S342, S343, S344, S345, S365, S366, S367, S369, S370, S449, S451, S452, S454, S455, S459, S460, S461, S462, S466, S467, S486, S469, S471, S472, S475, S477, S479, S480, S481, S483, S485, S486

**KNOWLEDGE:**

1. Define a cell
2. Describe the structures of the cell
3. Describe the functions of the cell and cell structures
4. Define mitosis and meiosis
5. Describe epithelial, connective, muscle, and nerve tissue
6. Describe how tissues repair themselves
7. Distinguish between organs and systems
8. Define metabolism

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.4 Describe the integumentary system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M073, M092, M134, M148, M159, M164, M171, M176, M189, M191, M266, M268, S002, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S074, S075, S076, S094, S100, S102, S107, S108, S118, S119, S120, S127, S131, S134, S136, S252, S261, S262, S263, S265, S266, S267, S268, S269, S270, S272, S273, S274, S279, S280, S281, S282, S283, S284, S291, S293, S294, S295, S296, S297, S298, S299, S301, S302, S303, S307, S308, S309, S336, S365, S367, S439, S441, S443, S446, S459, S460, S461, S462, S466, S467, S468, S469, S470, S477, S479, S480, S481, S485, S486, S493, S495

**KNOWLEDGE:**

1. Define the integumentary system
2. Describe the structures of the integumentary system, including the accessory organs
3. Describe the functions of the integumentary system, including the accessory organs
4. Distinguish between types of body membranes
5. Explain care and prevention for the integumentary system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.5 Describe the muscular system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M073, M092, M148, M159, M171, M176, M193, M268, S002, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S056, S074, S075, S076, S083, S089, S094, S100, S102, S107, S108, S114, S115, S118, S119, S120, S131, S134, S136, S231, S233, S239, S248, S249, S250, S251, S252, S253, S254, S255, S256, S257, S261, S268, S270, S273, S277, S282, S283, S284, S289, S291, S294, S296, S298, S299, S300, S301, S302, S303, S305, S306, S307, S308, S309, S348, S349, S350, S365, S367, S380, S381, S459, S460, S461, S462, S466, S467, S468, S469, S470, S477, S479, S480, S485, S486, S491, S492, S493, S495

**KNOWLEDGE:**

1. Define the muscular system
2. Describe the structures of the muscular system
3. Describe the functions of the muscular system
4. Describe the function of muscles in body movement
5. Explain care and prevention for the muscular system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.6 Describe the skeletal system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M136, M148, M154, M159, M164, M171, M176, M190, M193, S002, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S035, S036, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S074, S075, S076, S093, S094, S100, S102, S107, S108, S131, S134, S136, S233, S261, S268, S270, S282, S283, S284, S291, S294, S296, S298, S299, S300, S301, S302, S306, S309, S348, S349, S350, S365, S367, S459, S460, S461, S462, S466, S467, S468, S469, S470, S477, S480, S485, S486, S493, S495

**KNOWLEDGE:**

1. Define the skeletal system
2. Describe the structures of the skeletal system
3. Describe the functions of the skeletal system
4. Describe the functions of bones in body movement
5. Describe the structures of joint articulations and connective tissue
6. Describe the functions of joint articulations and connective tissue
5. Explain care and prevention for the skeletal system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.7 Describe the nervous system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M073, M148, M159, M176, M266, S002, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S035, S036, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S074, S075, S076, S093, S094, S100, S102, S107, S108, S131, S134, S136, S114, S115, S116, S117, S124, S125, S126, S127, S129, S211, S223, S233, S261, S268, S270, S282, S283, S284, S287, S288, S290, S291, S292, S293, S294, S296, S297, S298, S299, S300, S301, S302, S304, S305, S306, S307, S309, S316, S317, S318, S319, S329, S333, S335, S336, S365, S367, S396, S397, S398, S402, S404, S405, S406, S408, S409, S410, S415, S459, S460, S461, S462, S466, S467, S468, S469, S470, S477, S480, S482, S485, S486, S493, S495, S496

**KNOWLEDGE:**

1. Define the central nervous system
2. Describe the structures of the central nervous system
3. Describe the functions of the central nervous system
4. Define the peripheral nervous system
5. Describe the structures of the peripheral system
6. Describe the functions of the peripheral system
7. Describe types, structures, and functions of neurons
7. Describe the body's sense organs
8. Explain care and prevention for the nervous system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE HUMAN BODY SYSTEMS****2.8 Describe the cardiovascular system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M073, M092, M148, M159, M171, M176, M192, M266, M268, S002, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S074, S075, S076, S093, S094, S096, S098, S100, S102, S107, S108, S109, S112, S113, S114, S117, S131, S134, S136, S211, S233, S252, S261, S268, S270, S282, S283, S284, S285, S286, S287, S289, S290, S291, S292, S293, S294, S296, S298, S299, S300, S302, S303, S308, S365, S367, S459, S460, S461, S462, S466, S467, S468, S469, S470, S477, S479, 480, S485, S486, S493, S495, S496, S497

**KNOWLEDGE:**

1. Define the cardiovascular system
2. Describe the structures of the cardiovascular system
3. Describe the functions of the cardiovascular system
4. Describe the structures and functions of blood
5. Explain care and prevention for the cardiovascular system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE HUMAN BODY SYSTEMS****2.9 Describe the lymphatic system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M148, M159, M171, M176, S002, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S074, S075, S076, S093, S094, S098, S100, S102, S104, S107, S108, S113, S131, S134, S136, S252, S261, S268, S270, S282, S283, S284, S285, S286, S287, S288, S290, S291, S293, S294, S296, S297, S298, S299, S302, S303, S308, S365, S367, S394, S459, S460, S461, S462, S466, S467, S468, S469, S470, S477, S479, S480, S485, S486, S493, S495

**KNOWLEDGE:**

1. Define the lymphatic system
2. Describe the structures of the lymphatic system
3. Describe the functions of the lymphatic system
4. Explain the body's immune response
5. Explain care and prevention for the lymphatic system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.10 Describe the respiratory system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M073, M092, M127, M134, M148, M159, M171, M176, M192, M266, M268, S002, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S029, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S029, S075, S076, S094, S100, S102, S107, S108, S109, S112, S113, S114, S117, S131, S134, S136, S251, S255, S261, S268, S270, S282, S283, S284, S251, S255, S291, S293, S294, S296, S298, S299, S300, S302, S305, S306, S307, S308, S365, S367, S459, S460, S461, S462, S466, S467, S468, S469, S470, S477, S479, S480, S381, S384, S408, S414, S433, S443, S481, S485, S486, S493, S495, S497

**KNOWLEDGE:**

1. Define the respiratory system
2. Describe the structures of the respiratory system
3. Describe the functions of the respiratory system
4. Describe the process of gas exchange
5. Explain care and prevention for the respiratory system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.11 Describe the digestive system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M148, M171, M176, M192, S002, S004, S005, S006, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S029, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S069, S074, S075, S076, S077, S079, S080, S084, S089, S090, S093, S094, S098, S100, S102, S107, S108, S110, S113, S114, S115, S116, S117, S119, S131, S134, S136, S229, S231, S232, S261, S268, S270, S282, S283, S284, S286, S287, S288, S289, S290, S291, S292, S293, S294, S296, S298, S299, S300, S301, S302, S308, S309, S315, S365, S367, S368, S380, S381, S392, S393, S394, S395, S459, S460, S461, S462, S466, S467, S468, S469, S470, S477, S479, S480, S485, S486, S493, S495, S496

**KNOWLEDGE:**

1. Define the digestive system
2. Describe the structures of the digestive system
3. Describe the functions of the digestive system
4. Describe the structures and functions of accessory organs
5. Explain care and prevention for the digestive system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.12 Describe the urinary system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M034, M092, M127, M148, M159, M171, M176, M192, M261, S002, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S053, S057, S058, S074, S075, S076, S084, S094, S100, S102, S104, S107, S108, S113, S117, S127, S131, S134, S136, S261, S268, S270, S282, S283, S284, S286, S287, S288, S290, S291, S293, S294, S296, S298, S299, S300, S301, S302, S304, S308, S309, S338, S365, S367, S392, S393, S395, S443, S449, S459, S460, S461, S462, S466, S467, S468, S469, S470, S474, S477, S479, S480, S485, S486, S493, S495, S497

**KNOWLEDGE:**

1. Define the urinary system
2. Describe the structures of the urinary system
3. Describe the functions of the urinary system
4. Explain care and prevention for the urinary system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.13 Describe the reproductive system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M073, M092, M127, M148, M159, M171, M176, M247, M253, M256, M258, M266, M268, S002, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S031, S032, S033, S034, S035, S036, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S074, S075, S076, S081, S089, S090, S093, S094, S100, S102, S105, S107, S108, S127, S131, S134, S136, S261, S262, S263, S264, S265, S266, S267, S268, S269, S270, S271, S272, S282, S283, S284, S288, S289, S290, S291, S292, S293, S294, S296, S297, S298, S299, S300, S301, S303, S304, S305, S306, S307, S308, S309, S312, S364, S365, S366, S367, S370, S459, S460, S461, S462, S466, S467, S468, S469, S470, S477, S479, S480, S481, S485, S486, S493, S495, S496

**KNOWLEDGE:**

1. Define the male reproductive system
2. Describe the structures of the male reproductive system
3. Describe the functions of the male reproductive system
4. Define the female reproductive system
2. Describe the structure of the female reproductive system
5. Describe the function of the female reproductive system
6. Describe the stages of embryonic development
7. Explain genetics
8. Explain care and prevention for the reproductive system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 2.0 DESCRIBE THE HUMAN BODY SYSTEMS****2.14 Describe the endocrine system**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M148, M176, S002, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S031, S032, S033, S034, S035, S036, S037, S039, S040, S041, S042, S043, S046, S047, S048, S049, S050, S057, S074, S075, S076, S094, S100, S102, S103, S105, S107, S108, S113, S116, S117, S121, S131, S134, S136, S261, S268, S270, S282, S283, S284, S286, S287, S288, S289, S290, S291, S292, S294, S296, S298, S299, S300, S301, S302, S304, S306, S307, S308, S309, S365, S367, S369, S370, S459, S460, S461, S462, S466, S467, S468, S469, S479, S470, S477, S480, S485, S486, S493, S495

**KNOWLEDGE:**

1. Define the endocrine system
2. Describe the structures of the endocrine system
3. Describe the functions of the endocrine system
4. Describe hormones and their functions
5. Explain care and prevention for the endocrine system

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 3.0 DESCRIBE BASIC PRINCIPLES OF HUMAN NUTRITION****3.1 Describe nutritional needs**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M021, M034, M047, M068, M092, M127, M148, M159, M176, M256, M258, M261, M262, M266, M268, S002, S004, S005, S006, S010, S011, S012, S013, S014, S015, S016, S017, S018, S019, S020, S021, S022, S023, S024, S025, S026, S027, S029, S030, S031, S032, S033, S034, S035, S036, S037, S039, S040, S041, S042, S043, S044, S051, S052, S057, S058, S074, S077, S083, S084, S089, S090, S091, S093, S094, S096, S098, S100, S102, S103, S104, S107, S108, S109, S112, S113, S114, S115, S116, S117, S127, S226, S231, S261, S268, S270, S273, S283, S284, S287, S288, S289, S290, S291, S292, S293, S294, S295, S296, S297, S298, S299, S300, S301, S302, S304, S305, S306, S307, S308, S309, S347, S365, S366, S367, S369, S392, S393, S394, S395, S451, S452, S459, S460, S461, S462, S463, S466, S467, S468, S469, S470, S477, S479, S483, S486, S493, S497

**KNOWLEDGE:**

1. Define nutrient
2. Identify the categories of nutrients
3. Describe the importance of each nutrient
4. Explain the use of the food groups and nutrients to develop healthy eating habits
5. Describe importance of roughage in the diet
6. Describe the food pyramid
7. Describe the use of the Recommended Daily Allowance table
8. Identify nutrient contents of common foods
9. Describe a balanced diet
10. Define calorie
11. Describe nutritional needs in various life stages

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 3.0 DESCRIBE BASIC PRINCIPLES OF HUMAN NUTRITION****3.2 Describe common nutrient problems**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M034, M073, M092, M127, M148, M159, M176, M256, M258, M261, M266, M268, S002, S006, S010, S031, S032, S033, S034, S035, S036, S042, S043, S052, S053, S057, S058, S083, S090, S093, S098, S100, S102, S103, S107, S132, S134, S136, S226, S268, S282, S283, S284, S287, S288, S289, S290, S291, S293, S294, S295, S296, S297, S298, S299, S300, S301, S302, S304, S306, S307, S308, S309, S337, S365, S366, S367, S459, S460, S461, S462, S466, S467, S468, S469, S470, S477, S486, S493, S497

**KNOWLEDGE:**

1. Define malnutrition
2. Describe symptoms of malnutrition
3. Describe nutrient imbalances
4. Describe common eating disorders
5. Explain healthful weight loss and weight gain strategies

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 3.0 DESCRIBE BASIC PRINCIPLES OF HUMAN NUTRITION****3.3 Describe food safety practices**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M073, M092, M127, M134, M148, M159, M176, M191, M193, M196, M247, M253, M255, M256, M258, M263, M266, M268, S007, S018, S019, S020, S022, S029, S077, S078, S079, S110, S115, S116, S117, S133, S193, S232, S235, S236, S237, S238, S239, S242, S246, S247, S248, S249, S250, S251, S273, S286, S287, S289, S291, S292, S295, S296, S298, S300, S302, S303, S304, S305, S306, S307, S312, S313, S314, S317, S320, S321, S322, S323, S345, S346, S366, S391, S393, S394, S395, S397, S398, S399, S400, S423, S425, S426, S427, S428, S429, S430, S431, S432, S433, S434, S435, S436, S466, S468

**KNOWLEDGE:**

1. Identify the benefits and risks of food additives and supplements
2. Describe food inspection procedures to ensure a safe food supply
3. Describe methods by which food becomes contaminated
4. Describe food-borne illnesses
5. Describe practices for preventing food-borne illnesses

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 4.0 EXAMINE HEALTH AND WELLNESS ISSUES****4.1 Describe disease, prevention, and control**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M034, M073, M092, M127, M134, M148, M159, M176, M196, M247, M253, M255, M256, M258, M261, M263, M266, M268, S018, S019, S020, S021, S022, S053, S057, S063, S075, S080, S108, S109, S110, S113, S114, S115, S116, S117, S120, S129, S130, S133, S140, S142, S143, S144, S145, S150, S153, S155, S156, S232, S235, S236, S237, S238, S239, S240, S241, S242, S243, S244, S245, S246, S247, S248, S249, S250, S251, S266, S267, S268, S269, S270, S271, S273, S275, S286, S287, S288, S289, S290, S291, S292, S293, S294, S295, S296, S298, S299, S300, S301, S302, S303, S304, S305, S306, S307, S308, S309, S310, S311, S312, S313, S314, S315, S316, S317, S318, S319, S320, S321, S322, S323, S344, S345, S366, S377, S378, S380, S391, S392, S393, S394, S395, S396, S397, S398, S399, S400, S401, S402, S403, S423, S425, S426, S427, S428, S429, S430, S431, S432, S433, S434, S435, S436, S437, S438, S466, S468, S492, S494, S495, S496

**KNOWLEDGE:**

1. Define pathogen
2. Distinguish among viruses, bacteria, fungi, protozoa, rickettsia, and parasitic worms
3. Describe how pathogens are spread
4. Describe diseases caused by common pathogens
5. Describe methods of disease prevention and control
6. Differentiate between communicable and noncommunicable disease
7. Describe environmental factors affecting health

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 4.0 EXAMINE HEALTH AND WELLNESS ISSUES****4.2 Describe measures to promote wellness**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M015, M034, M073, M092, M127, M148, M159, M176, M256, M258, M261, M266, M268, S002, S003, S004, S005, S006, S007, S010, S011, S012, S013, S026, S027, S029, S031, S032, S033, S034, S035, S036, S039, S040, S041, S042, S043, S044, S046, S047, S048, S049, S052, S058, S077, S090, S093, S094, S096, S098, S100, S102, S103, S107, S108, S131, S132, S134, S136, S161, S169, S172, S175, S231, S232, S233, S234, S235, S236, S252, S261, S262, S264, S266, S268, S270, S280, S281, S282, S283, S284, S285, S286, S287, S288, S289, S290, S291, S292, S293, S294, S295, S296, S297, S298, S299, S300, S301, S302, S303, S304, S305, S306, S307, S308, S309, S336, S337, S340, S365, S366, S367, S368, S369, S384, S402, S405, S406, S409, S410, S431, S441, S459, S461, S462, S466, S467, S468, S469, S470, S479, S480, S485, S486, S491, S493, S495, S496

**KNOWLEDGE:**

1. Define wellness
2. Define health continuum
3. Describe a balanced diet
4. Identify the causes and effects of stress
5. Identify coping strategies for real-life situations
6. Explain the importance of personal hygiene
7. Explain the importance of exercise and sleep
8. Explain the importance of balancing family and work responsibilities
9. Describe addictive behaviors and treatments
10. Identify professional services and agencies that deal with physical, mental, emotional, and social components of health
11. Identify alternative forms of health care

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 5.0 ANALYZE THE INFLUENCE OF TECHNOLOGY ON HEALTH****5.1 Describe the affects of technological advances on health and health care**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M021, M034, M073, M092, M127, M148, M159, M176, M191, M247, M253, M256, M258, M261, M266, M268, S002, S007, S010, S031, S032, S033, S034, S036, S042, S244, S261, S262, S264, S268, S284, S286, S287, S288, S289, S291, S292, S396, S297, S298, S299, S302, S304, S307, S319, S328, S396, S459, S460, S461, S466, S468, S486

**KNOWLEDGE:**

1. Describe the impact of emerging technologies on production, processing, storage, and preparation of food
2. Describe emerging technologies in diagnosing disease and treating illnesses resulting from new technologies
3. Discuss emerging technologies in health care
4. Explain how biotechnology influences human medicines
5. Describe the use of agricultural products for pharmaceuticals
6. Describe how biotechnology has been used to develop vaccines
7. Describe advances in DNA usage
8. Discuss the disadvantages of using new technologies to improve health care

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 5.0 ANALYZE THE INFLUENCE OF TECHNOLOGY ON HEALTH****5.2 Describe ethical considerations**

LA005, LA007, LA010, LA013, LA035, LA039, LA040, LA041, LA046, LA074, LA092, LA098, LA102, LA103, LA112, LA114, LA123, LA126, LA127, LA129, LA134, LA136, LA138, LA139, LA145, LA149, LA168, LA169, LA173, LA177, LA182, LA207, LA210, LA215, LA265, LA267, LA271, LA277, LA278, M034, M073, M092, M127, M134, M148, M159, M176, M196, M247, M253, M255, M256, M258, M261, M263, M266, M268, S002, S003, S004, S005, S006, S010, S012, S031, S032, S033, S034, S036, S042, S044, S045, S046, S048, S049, S093, S094, S098, S100, S102, S261, S262, S264, S265, S266, S268, S269, S270, S284, S289, S291, S297, S301, S302, S303, S304, S307, S309, S313, S314, S319, S328

**KNOWLEDGE:**

1. Define ethics
2. Describe public concern about using biotechnology to improve human health
3. Discuss ethical concerns about manipulating human genes through genetic engineering
4. Describe regulation regarding the use of biotechnology in human medicines
5. Describe ethical issues of biotechnology used to genetically alter food
6. Describe ethical issues of using biotechnology to improve the processing and preservation of food
7. Discuss benefits and risks of consuming food produced by biotechnology
8. Describe ethical concerns regarding the use of hormone therapy

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None

**COMPETENCY 6.0 DEVELOP AN EMPLOYMENT PLAN****6.1 Apply interests, skills, and personal orientation to careers**

LA013, LA020, LA035, LA038, LA121, LA132, M018, M158, M159, M174, M240, S044, S466

**KNOWLEDGE:**

1. Define career
2. Identify factors that influence career choices
3. Identify personal interests and skills
4. Explain how ideas about one's self impact career choices
5. identify career options
6. Explain transferable skills as they apply to a variety of occupations
7. Examine traditional occupational choices
8. Examine nontraditional occupational choices
9. Examine entrepreneurial options

**PROCEDURE:**

1. Complete a career interest inventory
2. Compare and contrast wages to cost of living
3. Summarize career interest inventory results

**PRODUCT/QUALITY:**

1. A list of career interest areas

**COMPETENCY 6.0 DEVELOP AN EMPLOYMENT PLAN****6.2 Collect career opportunity information**

LA013, LA020, LA035, LA038, LA121, LA132, M018, M158, M159, M174, M229, M240, S042, S044, S466

**KNOWLEDGE:**

1. Define labor market
2. Identify formal and informal sources of occupational information
3. Identify high-demand occupations
4. Explain job descriptions for a high-demand occupation
5. Describe employment conditions for a high-demand occupation
6. Describe salary ranges for a high-demand occupation
7. Identify training and education requirements for a high-demand occupation
8. Identify emerging occupations

**PROCEDURE:**

1. Gather labor market data
2. Organize labor market data
3. Prepare a report on the labor market research

**PRODUCT/QUALITY:**

1. A list of potential career opportunities

**COMPETENCY 6.0 DEVELOP AN EMPLOYMENT PLAN****6.3 Develop a plan to achieve employment goals**

LA013, LA020, LA035, LA038, LA121, LA132, LA176, LA188, M018, M158, M159, M174, M183, M186, M229, M240, S042, S044, S045, S046, S466

**KNOWLEDGE:**

1. Define employment goal
2. Differentiate between short-range goals and long-range goals
3. Analyze the relationship among wants, needs, values, and goals
4. Discuss school-to-work transitions
5. Identify tentative employment goals
6. Identify objectives to meet employment goals; training, education, part-time jobs, and volunteer work
7. Utilize career planning resources

**PROCEDURE:**

1. Assemble career assessment results
2. Determine career goals and objectives
3. Establish a career timeline
4. Develop a plan

**PRODUCT/QUALITY:**

1. Plan includes career assessment results, goals and objectives, and timelines

**COMPETENCY 7.0 DEMONSTRATE JOB SEARCH SKILLS****7.1 Research employment opportunities**

LA013, LA020, LA035, LA038, LA121, LA132, M158, M159, M174, M240, S046, S466, S486

**KNOWLEDGE:**

1. Explain planning and organizing for the job search
2. Define job lead
3. Identify sources of job leads
4. Describe the content of a job description

**PROCEDURE:**

1. Identify potential job opportunities
2. Analyze job requirements
3. Compare education requirements, skills, and interests to job requirements
4. Compare wages to chosen careers

**PRODUCT/QUALITY:**

1. Job search is documented

**COMPETENCY 7.0 DEMONSTRATE JOB SEARCH SKILLS****7.2 Complete a job application**

LA013, LA020, LA035, LA038, LA062, LA102, LA103, LA112, LA114, LA115, LA121, LA132, M158, M159, M229, M240, S046, S466, S486

**KNOWLEDGE:**

1. Identify reasons employers use job applications
2. Explain various job application procedures
3. Identify information required to complete a job application
4. Explain the process of obtaining a reference
5. Describe equal employment laws and regulations

**PROCEDURE:**

1. Obtain a job application
2. Complete a job application

**PRODUCT/QUALITY:**

1. Application is complete
2. Application is keyed or written in black or blue ink
3. Application is signed and dated
4. Rules of spelling and grammar are followed

**COMPETENCY 7.0 DEMONSTRATE JOB SEARCH SKILLS****7.3 Prepare an employment resume, portfolio, and cover letter**

LA013, LA020, LA035, LA038, LA062, LA063, LA102, LA103, LA112,  
LA114, LA115, LA121, LA132, M158, M159, M240, S039, S046, S466, S486

**KNOWLEDGE:**

1. Explain purposes of the resume, portfolio, and a cover letter
2. Describe information found in a resume, portfolio, and a cover letter
3. Explore alternative formats for resumes, portfolios, and cover letters

**PROCEDURE:**

1. Gather information for resume, portfolio, and cover letter
2. Format, key, and print documents
3. Produce a resume, portfolio, and a cover letter

**PRODUCT/QUALITY:**

1. Resume, portfolio, and a cover letter are well designed and neatly keyed
2. Resume, portfolio, and a cover letter are complete
3. Resume, portfolio, and a cover letter target a specific job
4. Resume, portfolio, and a cover letter follow rules of spelling and grammar

**COMPETENCY 7.0 DEMONSTRATE JOB SEARCH SKILLS****7.4 Demonstrate interviewing skills**

LA005, LA007, LA011, LA013, LA020, LA035, LA036, LA037, LA038,  
LA121, LA132, LA169, LA207, LA209, LA269, M158, M159, M240, S046,  
S466, S486

**KNOWLEDGE:**

1. Identify the necessary skills for effective interviewing
2. Identify information to be asked when confirming the interview
3. Discuss the importance of appearance
4. Describe equal employment laws and regulations

**PROCEDURE:**

1. Participate in an interview

**PRODUCT/QUALITY:**

1. Correct language and grammar are used
2. All questions are answered
3. Composure is maintained under pressure
4. Handshake is firm and eye contact is good
5. Dress and grooming is appropriate

**COMPETENCY 8.0 DEMONSTRATE EMPLOYABILITY SKILLS****8.1 Demonstrate communication skills**

LA002, LA003, LA004, LA010, LA011, LA012, LA013, LA020, LA035, LA036, LA037, LA038, LA121, LA132, M158, M159, M240, S466, S486

**KNOWLEDGE:**

1. Describe styles of communication
2. Describe personal comfort zones
3. Describe levels of communication
4. Explain barriers to communication
5. Describe the importance of respecting differences among individuals
5. Describe listening skills
6. Describe nonverbal behavior
7. Describe questioning techniques

**PROCEDURE:**

1. Demonstrate questioning techniques
2. Demonstrate expository writing

**PRODUCT/QUALITY:**

1. Directions are correctly followed
2. Questioning technique is appropriate
3. Handwriting is legible
4. Rules of spelling and grammar are followed

**COMPETENCY 8.0 DEMONSTRATE EMPLOYABILITY SKILLS****8.2 Demonstrate problem-solving and critical thinking skills**

LA002, LA003, LA004, LA005, LA007, LA010, LA011, LA012, LA013, LA020, LA035, LA036, LA037, LA038, LA121, LA129, LA132, LA209, M158, M159, M240, S044, S045, S046, S047, S048, S049, S466

**KNOWLEDGE:**

1. Describe problem solving skills
2. Describe critical thinking skills
3. Discuss how problem solving and critical thinking apply to various processes

**PROCEDURE:**

1. Identify the problem
2. Identify available solutions and their impact
3. Evaluate options
4. Select and implement options and decisions
5. Evaluate results

**PRODUCT/QUALITY:**

1. A proposed solution
2. Solution is evaluated

**COMPETENCY 8.0 DEMONSTRATE EMPLOYABILITY SKILLS****8.3 Practice leadership skills**

LA002, LA003, LA004, LA005, LA007, LA010, LA011, LA012, LA013, LA020, LA035, LA036, LA037, LA038, LA048, LA121, LA129, LA132, LA209, LA264, M158, M159, M229, M240, S045, S046, S047, S048, S049, S466, S486

**KNOWLEDGE:**

1. Describe personality traits
2. Describe leadership styles
3. Describe skills needed by leaders in the workplace
4. Explain continuous improvement techniques used by leaders and teams

**PROCEDURE:**

1. Determine personality traits
2. Identify leadership styles to be used
3. Identify the goal to be accomplished by the team
4. Match member to tasks
5. Set time frame to accomplish tasks
6. Complete tasks
7. Evaluate outcomes

**PRODUCT/QUALITY:**

1. Leadership style matches individuals' and groups' needs and preferences

**COMPETENCY 8.0 DEMONSTRATE EMPLOYMENT SKILLS****8.4 Discuss work ethics**

LA013, LA020, LA035, LA038, LA121, LA132, M158, M159, M240, S047, S466

**KNOWLEDGE:**

1. Describe ethical and unethical behavior
2. Describe ways to demonstrate responsibility
3. Discuss the importance of rules, regulation, and policies
4. Discuss the importance of ethical standards in business
5. Compare workplace ethics to school ethics

**PROCEDURE:**

None

**PRODUCT/QUALITY:**

None