

Functional Independence

Fall 2010



Science

Item Descriptors

Grade 5

MICHIGAN STATE BOARD OF EDUCATION
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DIRECTIONS: Read each question. Choose the **BEST** answer for each question.

NOTE: For each item listed throughout this booklet, the first statement is a summary of the Michigan Extended Benchmark (EB) and the second statement or problem is the descriptor for the item's stem or question.

1 L.OR.FI.EB.III.2.e.4a: Identify the basic life requirements of plants and animals

Recognize which 1 of 3 listed substances a specified organism needs to survive

A selects a substance that does not contribute to an organism's survival

B selects an essential substance needed by the organism to survive

C selects a substance that does not contribute to an organism's survival

2 L.OR.FI.EB.III.2.e.2a: Identify observable physical characteristics that distinguish plants from animals

Recognize which 1 of 3 listed organism types has a specified physical feature

A selects an organism that does not have the specified physical feature

B selects an organism that does not have the specified physical feature

C selects the type of organism that has the specified physical feature

3 L.OR.FI.EB.III.2.e.4a: Identify the basic life requirements of plants and animals

Recognize that plants display directed growth to obtain essential life requirements

A selects a resource toward which a plant does not show directed growth to obtain

B selects the basic life requirement for which a plant shows directed growth to obtain

C selects a basic life requirement for which a plant does not show directed growth to obtain

- 4 L.OR.FI.EB.III.2.e.5a:** Identify functions of selected seed plant parts

Using drawings of progressive growth stages for a specified organism, identify the feature of the organism from which the organism began to grow

- A** selects a feature of the organism that is not the origin of the organism's growth
- B** selects a feature of the organism that is not the origin of the organism's growth
- C** selects the correct feature of the specified organism from which the organism began to grow

- 5 L.OR.FI.EB.III.2.e.3a:** Identify life cycles of familiar organisms

Recognize a specified stage of growth in an organism's life cycle

- A** selects the correct illustration for the specified stage of growth
- B** selects an illustration of a growth stage that was not specified
- C** selects an illustration of a growth stage that was not specified

- 6 L.OR.FI.EB.III.2.e.1a:** Identify characteristics of observable body parts in a variety of animals

Recognize which type of organism has a specified body feature

- A** selects an organism that does not have the specified body feature
- B** selects the organism that has the specified body feature
- C** selects an organism that does not have the specified body feature

- 7 L.OR.FI.EB.III.2.e.4a:** Identify the basic life requirements of plants and animals

Recognize the type(s) of organism(s) that have a specified life function

- A** selects an incomplete set of organisms which have the specified life function
- B** selects an incomplete set of organisms which have the specified life function
- C** selects all organisms that have the specified life function

- 8 E.GE.FI.EB.V.1.e.5a:** Identify uses of materials taken from the Earth

Recognize which activity uses an Earth material for production

- A** selects an activity that does not use an Earth material
- B** selects the activity that uses an Earth material for production
- C** selects an activity that does not use an Earth material

- 9 R.RO.FI.EB.II.1.e.3a:** Identify ways in which technology is used in everyday life

Recognize which of 3 electronic-technology objects is used for a specified function

- A** selects the object used for the specified function
- B** selects an object that does not support the specified function
- C** selects an object that does not support the specified function

- 10 L.HE.FI.EB.III.3.e.1a:** Identify how parents and their young look alike

Using a listing of the physical features of a parent organism, recognize which feature will most likely occur among the offspring

- A** selects a feature description not likely to be observed among the offspring
- B** selects a feature description not likely to be observed among the offspring
- C** selects the feature description most likely to occur

- 11 L.HE.FI.EB.III.3.e.1a:** Identify how parents and their young look alike

Recognize which 1 of 3 observable traits is biologically passed from parent to offspring

- A** selects an observable trait which is not passed biologically from parent to offspring
- B** selects the observable trait that is biologically passed from parent to offspring
- C** selects an observable trait that is not passed biologically from parent to offspring

- 12 L.EV.FI.EB.III.4.e.2a:** Identify how an animal may adapt to its environment
- Recognize how specific types of animals adapt to their specified environmental conditions
- A** selects a general statement which does not indicate adaptation to the specified environmental conditions
 - B** correctly selects a behavior by the animals which is adaptive to the specified environmental conditions
 - C** selects an animal feature that has no bearing on adaptation to the specified environmental conditions
- 13 L.EC.FI.EB.III.5.e.4a:** Identify positive and negative effects of humans on the environment
- Recognize which event is the most likely cause of the specified environmental incident
- A** selects the event that most likely caused the specified environmental incident
 - B** selects an event that most likely would not cause the specified environmental incident
 - C** selects an event that most likely would not cause the specified environmental incident
- 14 L.EC.FI.EB.III.5.e.2a:** Identify the basic requirements for all living things to maintain their existence
- Recognize which human activity would temporarily benefit a specified organism’s survival
- A** selects a human activity that does not benefit the specified organism’s survival
 - B** selects the human activity that provides some support for the specified organism’s survival
 - C** selects a human activity that does not benefit the specified organism’s survival
- 15 L.EC.FI.EB.III.5.e.4a:** Identify positive and negative effects of humans on the environment
- Recognize the environmental benefit from a specified technological change
- A** selects the environmental issue that benefits from the technological change
 - B** selects an environmental issue that does not directly benefit from the technological change
 - C** selects an environmental issue which would have some benefit, however not the most benefit, from the technological change

- 16 P.ME.FI.EB.IV.1.m.3ADDe:**
Identify mixtures or components of mixtures

Recognize the state of matter of a substance after combining 2 other substances each having a different state of matter

- A** selects an incorrect state of matter for the final substance after combination
- B** selects an incorrect state of matter for the final substance after combination
- C** selects the correct state of matter of the 2 substances after these substances are combined

- 17 P.ME.FI.EB.IV.1.e.5a:** Identify possible electrical hazards to be avoided at home and at school

Recognize the safest action to remove power from a specified device after the device becomes disabled

- A** selects an action to remove power that is not safe
- B** selects the safest action to remove power from the specified device
- C** selects an action to remove power that is not safe

- 18 P.ME.FI.EB.IV.1.e.2a:** Identify properties of materials that make them useful

Recognize which material is best for a specified use

- A** selects the best material for the specified use
- B** selects a material that is very inefficient and unstable for the specified use
- C** selects a material that is very inefficient and unstable for the specified use

- 19 C.CN.FI.EB.I.1.e.5a:** Identify and/or use various scientific sources of information

Recognize the resource which enables access to a specified source of information

- A** correctly selects the resource through which access to the information occurs
- B** selects a resource that does not provide access to the specified information
- C** selects a resource that does not provide access to the specified information

- 20 C.CN.FI.EB.I.1.e.2a:** Explore problems and solutions through observation and investigation

Recognize the question that applies to the specified research topic

- A** selects an off topic question
- B** selects the question that directly relates to the purpose for the investigation
- C** selects an off topic question

- 21 P.CM.FI.EB.IV.2.e.2a:** Prepare mixtures and separate them into their component parts

Recognize the lab technique that will accomplish a specified task

- A** selects a lab action that does not address the specified task
- B** selects a lab action that does not address the specified task
- C** selects the lab technique that will accomplish the specified task

- 22 P.CM.FI.EB.IV.2.e.1a:** Identify common physical changes in matter

Recognize the action that will cause a specified physical change in state of a specified material

- A** selects an action that will not bring about the specified change in state
- B** selects the action that will produce the specified change in state for the specified material
- C** selects an action that will not bring about the specified change in state

- 23 P.CM.FI.EB.IV.2.e.2a:** Prepare mixtures and separate them into their component parts

Recognize the scientific term that best classifies a specified food arrangement

- A** selects a scientific classification that does not describe the specified food arrangement
- B** selects the scientific term that appropriately describes the food arrangement
- C** selects a scientific classification that does not describe the specified food arrangement

- 24 P.CM.FI.EB.IV.2.e.2a:** Prepare mixtures and separate them into their component parts

Recognize the lab equipment needed to accomplish a specified task

- A** selects lab equipment that does not accomplish the specified task
- B** selects lab equipment that does not accomplish the specified task
- C** selects the specific lab tool that is necessary to accomplish the specified task

- 25 P.MO.FI.EB.IV.3.e.1a:** Describe motions of common objects in terms of speed and direction

Recognize the change in speed of an object as it moves in a specified situation

- A** incorrectly selects the object's change in speed
- B** correctly selects the object's change in speed as it moves in the specified situation
- C** incorrectly selects the object's change in speed

- 26 P.MO.FI.EB.IV.3.e.4a:** Identify and/or use simple machines to change effort

Given 3 type of tools, recognize which tool represents a specified simple machine

- A** selects a tool that is not an example of the specified simple machine
- B** selects the tool that is an application of the specified simple machine
- C** selects a tool that is not an example of the specified simple machine

- 27 P.WV.FI.EB.IV.4.e.1a:** Describe sounds in terms of their properties

Recognize how a specified action affects the property of the sound from a specified object

- A** selects a change in sound property that does not occur from action on the source of the sound
- B** selects the correct change in sound property by the action taken on the source of the sound
- C** selects a change in sound property that does not occur from action on the source of the sound

- 28 P.WV.FI.EB.IV.4.e.2a:** Identify and/or recognize how sounds are made

Recognize essential requirements for sound production

- A** selects an event that does not necessarily produce sound
- B** selects an event that does not necessarily produce sound
- C** selects the situation that lists essential requirements for sound production

- 29 P.WV.FI.EB.IV.4.e.3a:** Identify and/or use prisms and filters with light sources to produce various colors

Recognize the atmospheric component through which light must pass to produce a natural phenomenon

- A** selects an atmospheric component light does not pass through
- B** selects the correct atmospheric component which light passes through in order to produce the phenomenon
- C** selects an atmospheric component that is not involved with the phenomenon

- 30 E.GE.FI.EB.V.1.e.3a:** Identify and/or describe changes in the Earth's surface

Recognize an event that leads to a specified change in Earth's surface

- A** selects the geophysical event that leads to the change
- B** selects a weather event that has no relation to the specified change
- C** selects a weather event that has no relation to the specified change

- 31 E.GE.FI.EB.V.1.e.1a:** Identify major features of the Earth's surface

Given three different drawings of water on Earth's surface, recognize the drawing that corresponds to the text-specified Earth surface water feature

- A** selects a surface water drawing that does not match the specified feature
- B** selects a surface water drawing that does not match the specified feature
- C** selects the surface water drawing that does match the specified feature

- 32 E.HY.FI.EB.V.2.e.1a:** Identify the three states of water on Earth

Given three different drawings of specific features found either on Earth’s surface or Earth’s atmosphere, recognize the drawing that represents a common Earth resource

- A** selects the drawing that represents the common Earth resource
- B** selects a drawing that does not represent the common Earth resource
- C** selects a drawing that does not represent the common Earth resource

- 33 E.AW.FI.EB.V.3.e.2a:** Identify and/or describe seasonal changes in Michigan’s weather

Recognize the difference in expected weather conditions between 2 specified seasons

- A** selects weather condition differences that are not expected between the 2 specified seasons
- B** selects weather condition differences that are not expected between the 2 specified seasons
- C** selects the weather condition differences that are expected to occur between the 2 specified seasons

- 34 E.AW.FI.EB.V.3.e.3a:** Identify and explain appropriate safety precautions during severe weather

Recognize the safest action for shelter and protection from a specified storm

- A** selects the safest action to take during the specified storm
- B** selects an action that does not provide safety from the specified storm
- C** selects an action that does not provide safety from the specified storm

- 35 E.HY.FI.EB.V.2.e.1a:** Identify the three states of water on Earth

Recognize the change in states of matter sequence as illustrated

- A** selects a change in state sequence that does not correspond to the sequence in the drawing
- B** selects a change in state sequence that does not correspond to the sequence in the drawing
- C** selects the change in states of matter sequence that corresponds to the drawing



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