Functional Independence
Fall 2010

Science

Item Descriptors

Grade 5

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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

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

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

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
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<tr>
<td><strong>32</strong> <strong>E.HY.FI.EB.V.2.e.1a:</strong> Identify the three states of water on Earth</td>
<td><strong>34</strong> <strong>E.AW.FI.EB.V.3.e.3a:</strong> Identify and explain appropriate safety precautions during severe weather</td>
<td></td>
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<tr>
<td>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</td>
<td>Recognize the safest action for shelter and protection from a specified storm</td>
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<tr>
<td>A selects the drawing that represents the common Earth resource</td>
<td>A selects the safest action to take during the specified storm</td>
<td></td>
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<tr>
<td>B selects a drawing that does not represent the common Earth resource</td>
<td>B selects an action that does not provide safety from the specified storm</td>
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<tr>
<td>C selects a drawing that does not represent the common Earth resource</td>
<td>C selects an action that does not provide safety from the specified storm</td>
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<td><strong>33</strong> <strong>E.AW.FI.EB.V.3.e.2a:</strong> Identify and/or describe seasonal changes in Michigan’s weather</td>
<td><strong>35</strong> <strong>E.HY.FI.EB.V.2.e.1a:</strong> Identify the three states of water on Earth</td>
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<td>Recognize the difference in expected weather conditions between 2 specified seasons</td>
<td>Recognize the change in states of matter sequence as illustrated</td>
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<tr>
<td>A selects weather condition differences that are not expected between the 2 specified seasons</td>
<td>A selects a change in state sequence that does not correspond to the sequence in the drawing</td>
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</tr>
<tr>
<td>B selects weather condition differences that are not expected between the 2 specified seasons</td>
<td>B selects a change in state sequence that does not correspond to the sequence in the drawing</td>
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<tr>
<td>C selects the weather condition differences that are expected to occur between the 2 specified seasons</td>
<td>C selects the change in states of matter sequence that corresponds to the drawing</td>
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