Functional Independence
Fall 2012

Science

Item Descriptors

Grade 8

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DIRECTIONS: Read each question. Choose the BEST answer for each question.
1. **P.ME.FI.EB.IV.1.m.1a:**
   Describe and compare objects in terms of weight and width.

   Based on the illustrations, identify the pair of plants having equal amounts of a physical characteristic.

   - A selects a pair with unequal amounts of the characteristic.
   - B selects a pair with unequal amounts of the characteristic.
   - C selects the pair having equal amounts of the characteristic.

2. **R.RO.FI.EB.II.1.e.3ADDm:**
   Identify and/or describe ways in which technology is used in everyday life.

   Recognize which of 3 listed electronic devices enables a person to accomplish a specified task.

   - A selects a device that could provide access to the necessary technology but does not enable task completion.
   - B selects the device that enables a person to complete the specified task.
   - C selects a device that does not enable a person to complete the specified task.

3. **C.CN.FI.EB.I.1.m.3a:**
   Identify and/or use tools and equipment appropriate to scientific investigations.

   Recognize the appropriate tool to use to accomplish a specified task.

   - A selects a tool that would not enable a person to complete the specified task.
   - B selects a tool that is appropriate for use to complete the specified task.
   - C selects a tool that would not enable a person to complete the specified task.

4. **L.CE.FI.EB.III.1.m.1a:**
   Recognize that all living things are made of cells.

   Distinguish plant cells from other types of cells.

   - A selects cells that are not plant cells.
   - B selects the drawing that represents plant cells.
   - C selects cells that are not plant cells.
### 5. L.OR.FI.EB.III.2.m.1a:
**Science – Grade 8 Item Descriptors**

Compare and/or classify organisms in major groups based on their structure.

Given 3 drawings of different organisms, recognize which organism is a specified type.

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>A</strong></td>
<td>selects an organism that is not an example of the specified type</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>selects the drawing that is an example of the specified type of organism</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>selects an organism that is not an example of the specified type</td>
</tr>
</tbody>
</table>

### 6. L.OR.FI.EB.III.2.m.1a:

Compare and/or classify organisms in major groups based on their structure.

Recognize which animal is an example of a specified animal classification.

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<thead>
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<tbody>
<tr>
<td><strong>A</strong></td>
<td>selects an animal not included within the specified classification</td>
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<tr>
<td><strong>B</strong></td>
<td>selects an animal not included within the specified classification</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>selects the animal that is a member of the specified animal classification</td>
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### 7. L.OR.FI.EB.III.2.m.2a:

Identify stages of the life cycle of flowering plants.

Based on a procedure list, recognize the step in the procedure that follows the step illustrated by the drawing.

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<tbody>
<tr>
<td><strong>A</strong></td>
<td>selects a step that precedes the step illustrated by the drawing</td>
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<tr>
<td><strong>B</strong></td>
<td>selects a step that is beyond the step that follows the step illustrated by the drawing</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>selects the step in the procedure that immediately follows the step illustrated by the drawing</td>
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<tr>
<td>Item</td>
<td>Description</td>
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<tr>
<td>8 L.OR.FI.EB.III.2.m.2a:</td>
<td>Identify stages of the life cycle of flowering plants</td>
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<tr>
<td>9 L.OR.FI.EB.III.2.m.4a:</td>
<td>Identify how selected systems and processes work together in animals</td>
</tr>
<tr>
<td>10 L.OR.FI.EB.III.2.m.3a:</td>
<td>Explain where plants make and store food</td>
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</tr>
<tr>
<td>12 R.RO.FI.EB.II.1.m.2a:</td>
<td>14 L.EV.FI.EB.III.4.m.1a:</td>
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<tr>
<td>---------------------------------</td>
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<tr>
<td>Recognize limitations in personal knowledge</td>
<td>Explain how fossils provide evidence about the nature of ancient life</td>
</tr>
<tr>
<td>Classify the type of scientific information provided by a given statement</td>
<td>Recognize the best reason to explain how dinosaurs became extinct</td>
</tr>
<tr>
<td><strong>A</strong> selects the correct type of scientific information provided by the statement</td>
<td><strong>A</strong> selects a statement not supported by evidence</td>
</tr>
<tr>
<td><strong>B</strong> selects a type of scientific information not provided by the statement</td>
<td><strong>B</strong> selects a reason that would not lead to extinction of all dinosaurs</td>
</tr>
<tr>
<td><strong>C</strong> selects a type of scientific information not provided by the statement</td>
<td><strong>C</strong> selects the most tenable statement for dinosaur extinction</td>
</tr>
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<thead>
<tr>
<th>13 L.EV.FI.EB.III.4.m.1a:</th>
<th>15 L.EC.FI.EB.III.5.m.5a:</th>
</tr>
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<tbody>
<tr>
<td>Explain how fossils provide evidence about the nature of ancient life</td>
<td>Identify how humans use and benefit from plant and animal materials</td>
</tr>
<tr>
<td>Recognize scientific facts that are based on fossil evidence</td>
<td>Given 3 drawings of different products, recognize the product that is made from two types of organisms</td>
</tr>
<tr>
<td><strong>A</strong> selects a past process for which fossils do not provide evidence</td>
<td><strong>A</strong> selects the product that can be made from both types of organisms</td>
</tr>
<tr>
<td><strong>B</strong> selects a past process for which fossils do not provide evidence</td>
<td><strong>B</strong> selects the product made from just 1 type of organism</td>
</tr>
<tr>
<td><strong>C</strong> selects the scientific facts that can be derived from fossils</td>
<td><strong>C</strong> selects the product made from just 1 type of organism</td>
</tr>
</tbody>
</table>
16 L.EC.FI.EB.III.5.m.2a:
Identify and/or describe that organisms acquire energy directly or indirectly from sunlight

Distinguish a producer organism among consumer organisms

A selects the organism that is a producer
B selects an organism that is a consumer
C selects an organism that is a consumer

17 L.EC.FI.EB.III.5.m.1a:
Describe common patterns of relationships among populations

Recognize a relationship between organisms in a food chain under a specified condition

A selects a condition not likely to occur based on the specified condition
B selects the condition likely to occur for the predator population
C selects a condition not likely to occur based on the specified condition

18 L.EC.FI.EB.III.5.m.5a:
Identify how humans use and benefit from plant and animal materials

Recognize type of Earth resource used by human beings to produce the listed products

A selects a resource that does not provide material to make the products
B selects the resource that provides the raw material used to make the products
C selects a resource that does not provide material to make the products

19 P.ME.FI.EB.IV.1.m.1a:
Describe and compare objects in terms of weight and width

Based on the illustration, determine if 1 object weighs more than another object

A selects an incorrect conclusion about the weight of the 2 objects
B selects an incorrect conclusion about the weight of the 2 objects
C selects the correct conclusion about the weight of the 2 objects
20 **P.ME.FI.EB.IV.1.m.2a:** Identify when length, weight, area, volume, or temperature is appropriate to describe objects or substances

Recognize which property of a substance is measured using the specified tool

- **A** selects a property of a substance not measured by the tool
- **B** selects the property of a substance measured by the specified tool
- **C** selects a property of a substance not measured by the tool

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21 **P.ME.FI.EB.IV.1.m.2a:** Identify when length, weight, area, volume, or temperature is appropriate to describe objects or substances

Recognize the correct measure required to carry out a specified task

- **A** selects an incorrect measure for the specified task
- **B** selects the correct measure which provides the necessary information for the specified task
- **C** selects an incorrect measure for the specified task

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22 **C.CN.FI.EB.I.1.m.1a:** Identify and/or generate questions about the world based on observation

Recognize how a measure changes for a specified situation

- **A** selects a measured change in the opposite direction of the specified change
- **B** selects a measured change in the opposite direction of the specified change
- **C** selects the measured change that meets the specified change conditions

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23 **P.ME.FI.EB.IV.1.m.6a:** Investigate electrical devices, using instructions and appropriate safety precautions

Recognize best safety precautions when working with electricity

- **A** selects an action that is unrelated to electrical safety
- **B** selects the best action to assure safety when working with electricity
- **C** selects an action that does not provide the best safety when working with electricity
24 P.ME.FI.EB.IV.1.m.5a:
Construct simple circuits and/or identify how they work in terms of the flow of current

Recognize examples of complete and incomplete circuits

A selects an incorrect example of a complete circuit
B selects the correct example of a complete circuit
C selects an incorrect example of a complete circuit

25 P.ME.FI.EB.IV.1.m.6a:
Investigate electrical devices, using instructions and appropriate safety precautions

Identify the appropriate behavior for using a specified type of electrical equipment

A selects an inappropriate behavior for safety using the specified equipment
B selects appropriate behavior for safety using the specified equipment
C selects an inappropriate behavior for safety using the specified equipment

26 P.CM.FI.EB.IV.2.m.1a:
Describe common physical changes in matter

Recognize the physical change that occurs in a specified substance as temperature changes

A selects the change that does occur in the substance as temperature changes
B selects a change that involves such a minute amount of matter as to not be perceptible
C selects a change that is the opposite of what will occur as temperature changes
27 P.CM.FI.EB.IV.2.m.4a:
Identify common energy transformations in everyday situations

Recognize which component is necessary for a physical change to occur

A selects a component that is not necessarily applicable for a physical change

B selects the component that is necessary in the situation for a physical change in matter to occur

C selects a component that is not necessarily applicable for a physical change

28 P.CM.FI.EB.IV.2.m.1a:
Describe common physical changes in matter

Recognize the process by which matter changes state in the specified situation

A selects a process that would not result in the matter disappearing

B selects the process by which the matter disappeared from the focus of the specified situation

C selects a process that would not result in the matter disappearing

29 P.MO.FI.EB.IV.3.m.2a:
Identify forces (push/pull) that speed up, slow down, stop, or change the direction of moving objects

Recognize the relationship between an object’s weight and the force of gravity

A selects an object representing a misconception regarding the relationship

B selects an object representing a misconception regarding the relationship

C selects the object representing a correct understanding of the relationship

30 P.MO.FI.EB.IV.3.m.3a:
Identify and/or describe patterns of interaction of magnetic materials

Given magnets experiencing a specified type of force, choose the description of the expected result

A selects the correct description

B selects a description that has nothing to do with magnetic movement

C selects a description that is the opposite result of specified force
31 P.MO.FI.EB.IV.3.m.5a: Identify which simple machine is best used in a given situation

Recognize the type of simple machine used and described in the drawing provided

A selects a simple machine that is not described or used in the drawing
B selects the simple machine used as displayed and described in the drawing
C selects a simple machine that is not described or used in the drawing

32 P.WV.FI.EB.IV.4.m.1a: Recognize how sounds travel through different media

Recognize the difference in sound intensity among different sound sources

A selects a sound not having the greatest intensity at its source
B selects a sound not having the greatest intensity at its source
C selects the sound that has the greatest intensity at its source

33 E.GE.FI.EB.V.1.m.1a: Identify and/or describe major features of the earth’s surface using maps

Based on a map, recognize the Earth-surface feature that is at most of Michigan’s borders

A selects the Earth surface feature that borders most of Michigan
B selects an Earth surface feature that does not border Michigan
C selects an Earth surface feature that does not border Michigan

34 E.GE.FI.EB.V.1.m.2a: Identify and/or describe major events in the rock cycle

Recognize the process that produces the specified Earth surface change

A selects the process that produces the specified Earth surface change
B selects a process that does not produce the specified Earth surface change
C selects a process that does not produce the specified Earth surface change
35 E.HY.FI.EB.V.2.m.2a: Explain the behavior of surface water

Identify the process by which liquid water changed its state of matter in the specified situation

A selects the process by which the water changed its state of matter

B selects a process by which water did not change its state of matter in the specified situation

C selects a process by which water did not change its state of matter in the specified situation

36 E.HY.FI.EB.V.2.m.4a: Identify sources of pollution in water

Recognize the pollution consequence of the specified action between 2 different bodies of water

A selects an unlikely but possible consequence that does not pollute

B selects a likely consequence of how material from 1 body of water could pollute another body of water

C selects an unlikely consequence that would be considered an accident and not pollution

37 E.SS.FI.EB.V.4.m.1a: Compare and contrast characteristics of the earth and other planets

Recognize planetary conditions necessary for life as we know and understand it

A selects a condition on a planet not apparently necessary for life

B selects a condition on a planet not apparently necessary for life

C selects the condition on a planet that is necessary for life as we know it

38 E.SS.FI.EB.V.4.m.2a: Demonstrate a basic and general awareness about the motion of the earth

Recognize a feature of the Sun when compared to the same feature of other objects in its solar system

A selects an incorrect statement about the Sun’s feature

B selects the correct statement about the Sun’s feature compared to the same feature of other solar-system objects

C selects an incorrect statement about the Sun’s feature
39 E.AW.FI.EB.V.3.m.1a:
Interpret temperature, precipitation, and cloud cover information

Recognize the purpose of a specified weather measurement tool

A selects information not provided by the measurement tool

B identifies the information about a weather condition that the measurement tool provides

C selects information not provided by the measurement tool

40 E.AW.FI.EB.V.3.e.2ADDm:
Identify and/or describe seasonal changes in Michigan’s weather

Identify the season of the year most associated with occurrence of the specified weather condition

A selects the season during which the specified weather condition is most likely to occur

B selects a season during which the specified weather condition is less frequent

C selects a season during which the specified weather condition is less frequent