Functional Independence

Science

Official Released Items

Grade 11

Spring 2008
Official Released Items
The Grade 11 Functional Independence Science Assessment was administered for the first time in Spring 2008. Beginning with this administration, the Office of Educational Assessment and Accountability (OEAA) will annually release a portion of the items that are administered on the assessment. This booklet contains released items from the Spring 2008 administration and is intended to be used by districts to assist in their interpretation of item analysis data. The information contained in this booklet may also be used by schools, teachers, and parents as a resource for understanding the content and format of the assessment items. In addition to MI-Access training materials and Extended Benchmarks (EB), the released items may also have utility in informing decisions related to instruction, curriculum, and assessment. These items are not secure and may be copied and distributed as needed.

The table below lists the number of core and released items administered on the Spring 2008 Grade 11 Functional Independence Science Assessment. Core items are those that count toward students’ scores. All released items in this booklet were selected from the pool of core items that appeared on the assessment.

### Functional Independence Science Grade 11

<table>
<thead>
<tr>
<th>Science Strand</th>
<th>Number of Core Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life</td>
<td>14</td>
</tr>
<tr>
<td>Physical</td>
<td>15</td>
</tr>
<tr>
<td>Earth</td>
<td>12</td>
</tr>
<tr>
<td>Constructing</td>
<td>2</td>
</tr>
<tr>
<td>Reflecting</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Core Items/Points</strong></td>
<td><strong>45</strong></td>
</tr>
<tr>
<td><strong>Released Items</strong></td>
<td><strong>9</strong> (Numbers vary by strand and topic.)</td>
</tr>
</tbody>
</table>

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**DIRECTIONS:** Read each question. Choose the **BEST** answer for each question.
R1 Which organism is a mammal?

A beaver

B iguana

C penguin
R2  Jeffery has a bacterial infection.

Which statement **best** describes the treatment for the infection?

A  Antibiotics will kill the bacteria.

B  Water will slow the bacteria.

C  Jeffery must stay in bed.

R3  The wolf population in a habitat increased.

What is the **best** explanation for why the local moose population decreased?

A  The wolves ate the moose.

B  The wolves’ howling scared away the moose.

C  The wolves chased the moose away.
R4  What happens to the boiling point of the mixture when salt is added to water?

A  decreases

B  increases

C  stays the same
R5  The picture below shows charged particles.

Why does the small particle in the middle move towards the left?

A  Like charges attract.

B  Unlike charges repel.

C  Unlike charges attract.
Use the picture below to answer question R6.

R6 Why are the two light beams thinner at the bottom than at the top?

A The energy of the sun decreases during the day.

B Some energy is absorbed by the cloud and the air.

C None of the sun’s energy reaches Earth’s surface.
Mining has both positive and negative effects.

What is one **positive** effect of sand mining?

A  Sand mining helps the economy by creating jobs.

B  Sand mining helps the water quality of the river.

C  Moving the sand helps plant and animal habitats.

How does water flow from the Great Lakes to the ocean?

A  through a stream

B  through a river

C  through a wetland
R9  What is the **safest** thing for a person to do if trapped in a car by a blizzard?

A  open all the windows to let in fresh air

B  get out of the vehicle and walk to safety

C  stay inside the vehicle as long as possible
Do not continue until instructed to do so.
Below is a list of the Extended Benchmarks (EB) for each released item found in this booklet. The chart contains the EB code, a brief description of what is measured, and the correct answer for each released item.

Full descriptions of the EB contained in the chart below are available for review and download at [www.mi.gov/mi-access](http://www.mi.gov/mi-access).

<table>
<thead>
<tr>
<th>Science</th>
<th>Released Item Number</th>
<th>EB Code</th>
<th>STRAND or Abbreviated Descriptor/Scoring Focus</th>
<th>Answer Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIFE</td>
<td>R1</td>
<td>L.OR.FI.EB.III.2.h.1a</td>
<td>Compare and/or classify organisms in major groups based on their structure.</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>R2</td>
<td>L.OR.FI.EB.III.2.h.4a</td>
<td>Recognize how living things maintain a healthy balance.</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>R3</td>
<td>L.EC.FI.EB.III.5.h.3a</td>
<td>Identify and/or describe general factors that influence population size.</td>
<td>A</td>
</tr>
<tr>
<td>PHYSICAL</td>
<td>R4</td>
<td>P.ME.FI.EB.IV.1.m.4ADDh</td>
<td>Describe the arrangement and motion of molecules in solids, liquids, and gases.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>R5</td>
<td>P.MO.FI.EB.IV.3.m.3ADDh</td>
<td>Identify and/or describe the non-contact forces exerted by magnets.</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>R6</td>
<td>P.WV.FI.EB.IV.4.m.4ADDh</td>
<td>Identify and/or describe ways in which light interacts with matter.</td>
<td>B</td>
</tr>
<tr>
<td>EARTH</td>
<td>R7</td>
<td>E.GE.FI.EB.V.1.h.3a</td>
<td>Identify and/or describe common objects made from earth materials.</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>R8</td>
<td>E.HY.FI.EB.V.2.m.2ADDh</td>
<td>Describe how surface water in Michigan reaches the ocean and returns.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>R9</td>
<td>E.AW.FI.EB.V.3.e.3ADDh</td>
<td>Identify and explain appropriate safety precautions during severe weather.</td>
<td>C</td>
</tr>
</tbody>
</table>