

Functional Independence

Fall 2010



Science

Item Descriptors

Grade 8

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 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 which enables a person to complete the specified task
- C** selects a device that does not enable a person to complete the specified task

2 P.ME.FI.EB.IV.1.m.3a:

Recognize that all items are made of smaller particles

Given three substances, recognize which substance is the example of the specified category of matter

- A** selects a substance that is not an example of the specified category of matter
- B** selects a substance that is not an example of the specified category of matter
- C** selects the substance that is an example of the specified category of matter

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

Given 3 drawings of cell arrangements, recognize the drawing representing cells that have a specified cellular feature

- A** selects a cell arrangement drawing that does not illustrate cells that have the specified feature
- B** selects a cell arrangement drawing that does not illustrate cells that have the specified feature
- C** selects the cell arrangement drawing which displays the specified cellular feature

5 L.OR.FI.EB.III.2.m.1a:

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

Recognize the type of organism that reproduces via a specified birthing process

- A** selects the type of organism that reproduces via the specified birthing process
- B** selects an organism that does not reproduce using the specified birthing process
- C** selects an organism that does not reproduce using the specified birthing process

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

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

- A** selects an organism that is not an example of the specified type
- B** selects the organism that is an example of the specified type of organism
- C** selects an organism that is not an example of the specified type

7 L.OR.FI.EB.III.2.m.4a:

Identify how selected systems and processes work together in animals

Recognize which 2 body systems work together to carry out a specified physiological function

- A** selects the 2 body systems that carry out the specified life-support function
- B** selects 2 body systems for which neither is involved in the specified function
- C** selects 2 body systems for which only 1 is involved in the specified function

- 8 L.OR.FI.EB.III.2.m.2a:**
Identify stages of the life cycle of flowering plants

Recognize the plant part that produces a specified plant product

- A** selects the plant part that is the source of the plant product
- B** selects a plant part that does not directly produce the specified plant product
- C** selects a plant part that does not directly produce the specified plant product

- 9 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

- A** selects a step that precedes the step illustrated by the drawing
- B** selects a step that is beyond the step that follows the step illustrated by the drawing
- C** selects the step in the procedure that immediately follows the step illustrated by the drawing

- 10 L.OR.FI.EB.III.2.m.1a:**
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

- A** selects the organism that is an example of the specified type of organism
- B** selects an organism that is not an example of the specified type
- C** selects an organism that is not an example of the specified type

- 11 L.OR.FI.EB.III.2.m.3a:**
Explain where the plants make and store food

Given a drawing of a specific plant, identify the part of the plant that stores food

- A** selects the part of the plant that primarily stores food
- B** selects a part of the plant that primarily transports food
- C** selects a part of the plant that primarily produces food

12 R.RO.FI.EB.II.1.m.5a:

Develop an awareness of and sensitivity to the natural world

Given a situation of a specific large scale and immediate pollution event, recognize the next immediate action to be taken to mitigate the pollution

- A** selects an action that will not remove or clean up the pollution
- B** selects an action that is not immediate in response to the pollution
- C** selects the action that will initiate immediate action to clean up and best mitigate the pollution

13 L.EV.FI.EB.III.4.m.2a:

Identify how species may become extinct

Recognize the likely change in an animal population given a specific change in the environment

- A** selects a change that reflects misconceptions in an animal's ability to adapt to environmental changes
- B** selects the most likely change that would occur in the population
- C** selects a change that reflects misconceptions in an animal's ability to adapt to environmental changes

14 L.EV.FI.EB.III.4.m.1a: Explain how fossils provide evidence about the nature of ancient life

Recognize scientific facts that are based on fossil evidence

- A** selects a past process for which fossils do not provide evidence
- B** selects a past process for which fossils do not provide evidence
- C** selects the scientific facts that can be derived from fossils

15 L.EC.FI.EB.III.5.m.5a:

Identify how humans use and benefit from plant and animal materials

Given 3 drawings of different products, recognize the product that is made from two types of organisms

- A** selects the product that can be made from both types of organisms
- B** selects the product made from just 1 type of organism
- C** selects the product made from just 1 type of organism

16 L.EC.FI.EB.III.5.m.5a:

Identify how humans use and benefit from plant and animal materials

Given 3 drawings of common household items, recognize the item made from animal resources

- A** selects an item not made from animal resources
- B** selects an item not made from animal resources
- C** selects the item made from animal resources

17 L.EC.FI.EB.III.5.m.5a:

Identify how humans use and benefit from plant and animal materials

Given 3 drawings of common household items, recognize the item made from animal resources

- A** selects an item not made from animal resources
- B** selects an item not made from animal resources
- C** selects the item made from animal resources

18 L.EC.FI.EB.III.5.m.1a:

Describe common patterns of relationships among populations

Recognize the ecological relationship between 2 animals as specified in the drawing

- A** selects an incorrect statement of relationship
- B** selects an incorrect statement of relationship
- C** selects the correct relationship for the animal as depicted in the drawing

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

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

21 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

22 P.ME.FI.EB.IV.1.m.2a: Identify when length, weight, area, volume, or temperature is appropriate

Given a drawing of a common household task, recognize the physical property of matter that is changing

- A** selects a property not changing
- B** selects a property not changing
- C** selects the property of matter that changes due to the action taken

23 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

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

Given 3 similar yet different circuit drawings, identify the drawing that depicts a specific circuit condition

- A** selects a drawing that does not depict the specified circuit
- B** selects a drawing that does not depict the specified circuit
- C** selects a drawing that depicts the specified circuit condition

25 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 the best source of information for work on an electric-powered machine

- A** selects the best source of electrical information for work on the machine
- B** selects a reference that does not apply to work on an electric-powered machine
- C** selects a reference that does not apply to work on an electric-powered machine

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.2a:

Describe common chemical changes in terms of properties of reactants and products

Recognize the type of change when 2 substances combine to form other substances

- A** selects the correct type of changes when 2 or more substances combine to form other substances
- B** selects a change in a substance where the chemistry is the same on both sides of the change
- C** selects a word that is meaningless in regard to types of substance 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

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.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

31 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

- 32 P.CM.FI.EB.IV.2.m.4a:** Identify common energy transformations in everyday situations

Recognize which 1 of 3 components 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

- 33 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

- 34 E.GE.FI.EB.V.1.m.4a:** Identify fossils and/or explain that they are evidence of past life

Given 3 drawings of a once-animate object, identify the fossil example

- A** selects the drawing of a fossil
- B** selects a drawing of an animal that is alive or is merely a dead specimen
- C** selects a drawing of a plant part that appears fresh

- 35 E.HY.FI.EB.V.2.m.2a:** Explain the behavior of water on the surface

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 the 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 which 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.h.4ADDm:

Demonstrate an awareness of tools used to learn about the universe

Recognize a benefit from space travel

- A** selects a problem that occurs from space travel
- B** selects a required investment for space travel
- C** selects the benefit derived from space travel

39 E.AW.FI.EB.V.3.m.1a:

Interpret temperature, precipitation, and cloud cover information

Using predicted weather information, select appropriate clothes for comfort in the weather conditions

- A** selects clothing that is not needed for the weather conditions
- B** selects clothing that is not needed for the weather conditions
- C** selects clothing that is most appropriate for comfort in the weather conditions

40 E.AW.FI.EB.V.3.m.1a:

Interpret temperature, precipitation, and cloud cover information

Identify the state of matter of a specified form of precipitation

- A** selects the incorrect state of matter
- B** selects the incorrect state of matter
- C** selects the correct state of matter for the type of specified precipitation



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