



Functional Independence Science

Official Released Items

Grade 11

**Spring 2009
Official Released Items**

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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 2009 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 2009 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

Science Strand	Number of Core Items
Life	14
Physical	14
Earth	8
Constructing	2
Reflecting	2
Total Core Items/Points	40
Released Items	6 (Numbers vary by strand and topic.)

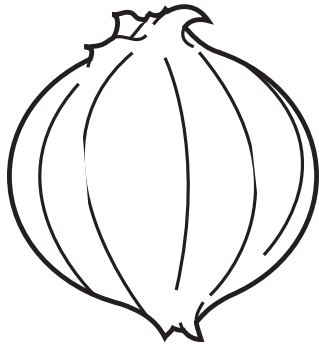
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DIRECTIONS: Read each question. Choose the **BEST** answer for each question.

- R1** What happens when hair grows?
- A** New hair cells are made.
 - B** The hair cells are stretched.
 - C** The hair cells get bigger.

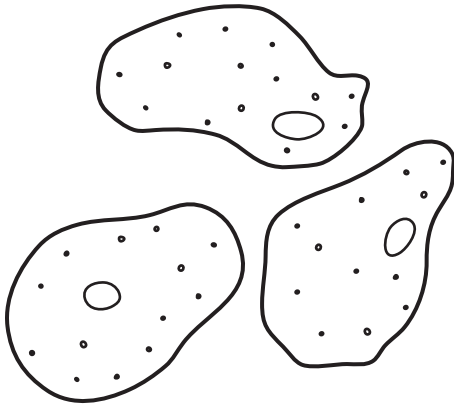
Use the picture below to answer question **R2**.



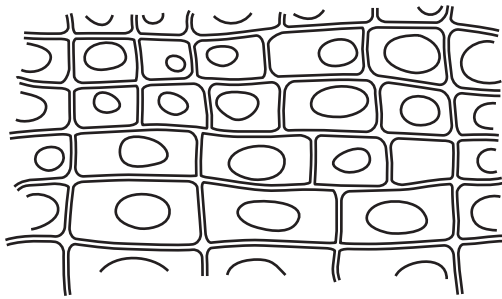
onion

R2 Which cells on the following page came from an onion?

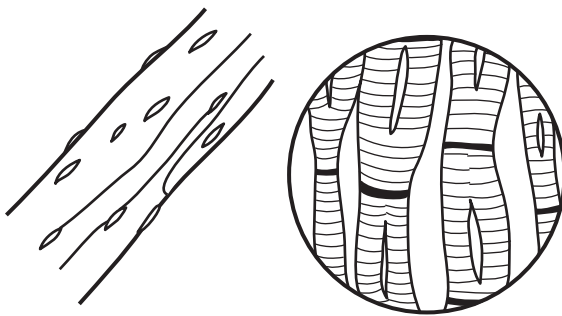
A



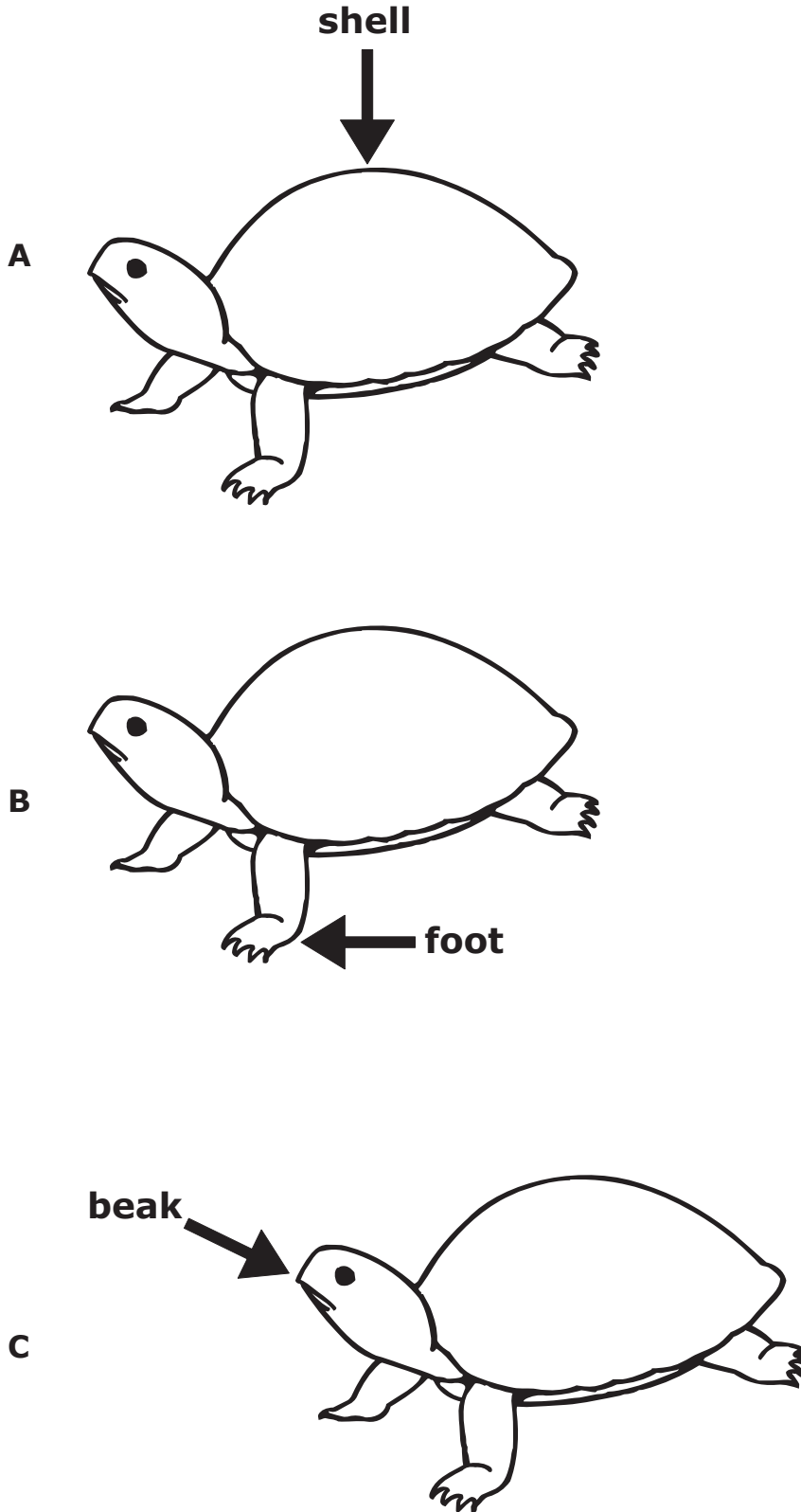
B



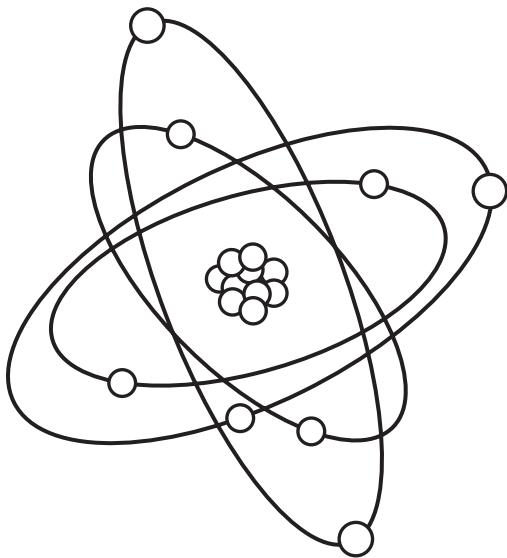
C



R3 Which part of a turtle has the **same** job as a human skeleton?



R4 This is a drawing of an oxygen atom.



oxygen atom

What is the central part of the atom called?

- A** nucleus
- B** proton
- C** shell

R5 What energy change occurs when batteries are being used?

- A** sound to magnetic
- B** mechanical to light
- C** chemical to electrical

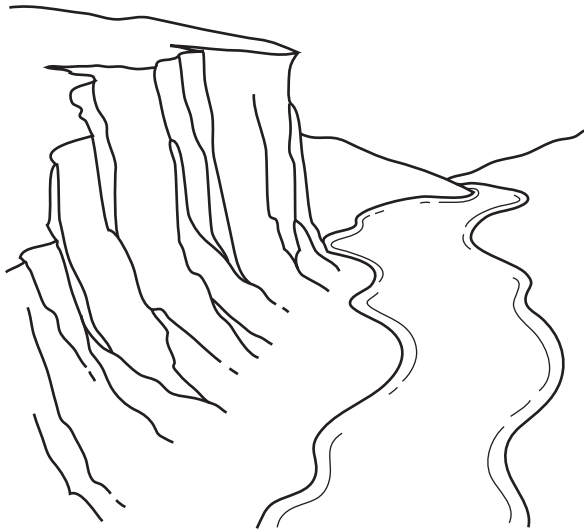
R6 A dolphin creates sound waves that reflect off objects.

The dolphin detects the reflected sound waves.

Why do dolphins do this?

- A** It helps the dolphin swim faster.
- B** It helps the dolphin to locate the nearest ocean.
- C** It helps the dolphin find prey.

R7 A girl is canoeing on a river.

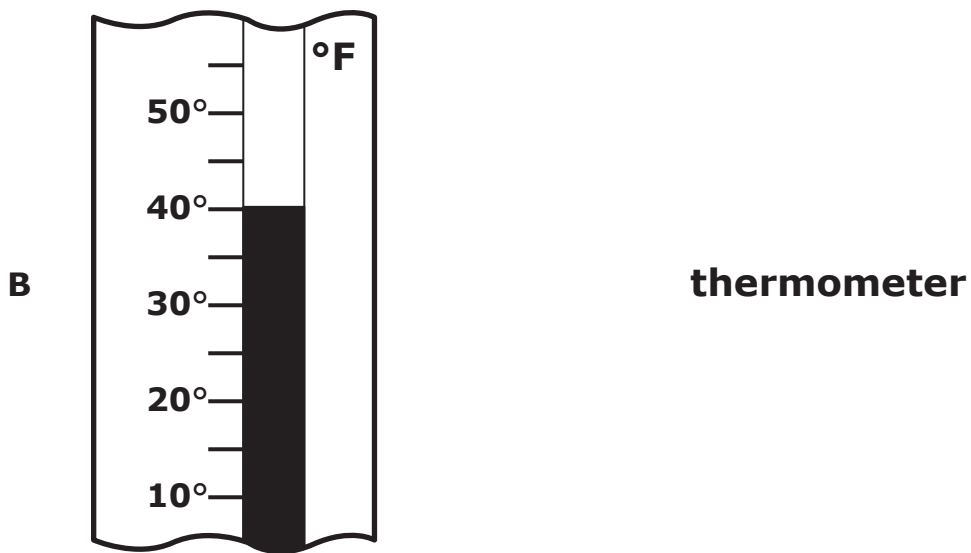
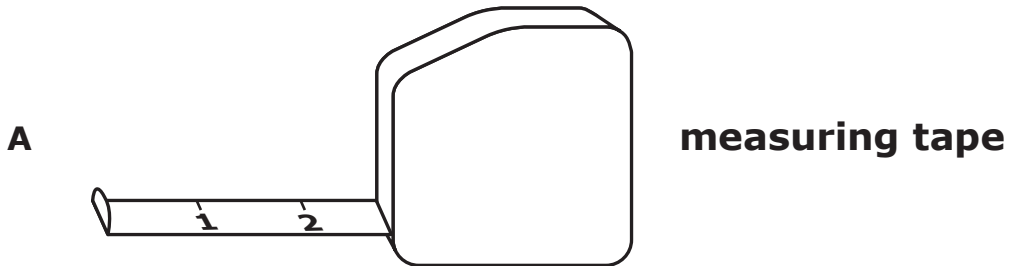


She notices there are grooves in the land on a steep hill next to the river.

What is the **most** likely cause of these grooves?

- A** soil erosion from water
- B** soil erosion from wind
- C** digging in the soil by animals

R8 What would be the **best** thing to use to measure the thickness of ice?

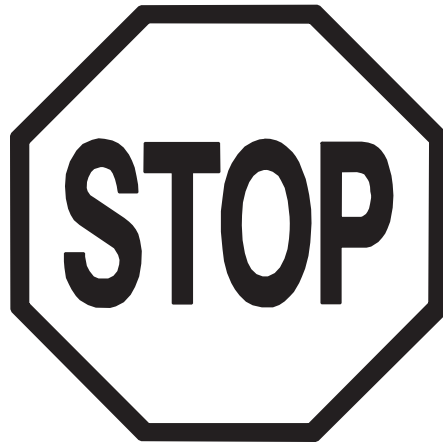


R9 Why does it take longer to stop a car on an icy road when the temperature is above 32 degrees Fahrenheit?

- A** The ice has started to melt into water.
- B** The tires of the car are a lot smoother.
- C** The driver is too cold to step on the brake.



Do Not Continue.

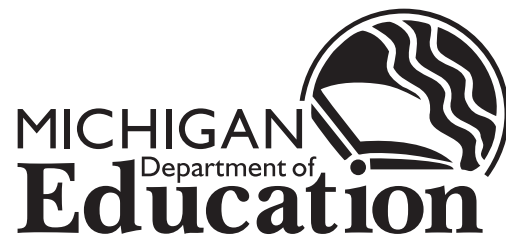


Do not continue until instructed to do so.

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.

Science			
Released Item Number	EB Code	STRAND or Abbreviated Descriptor/Scoring Focus	Answer Key
		LIFE	
R1	L.CE.FI.EB.III.1.h.1a	Recognize that multi-cellular organisms grow and reproduce.	A
R2	L.CE.FI.EB.III.1.h.2a	Recognize that plants and animals have specialized cells.	B
R3	L.OR.FI.EB.III.2.e.1ADDh	Identify specific variations of observable body parts in a variety of animals.	A
		PHYSICAL	
R4	P.ME.FI.EB.IV.1.h.3a	Identify the structural parts and electrical charges of atoms.	A
R5	P.CM.FI.EB.IV.2.h.4a	Identify common energy transformations in everyday situations.	C
R6	P.WV.FI.EB.IV.4.m.1ADDh	Recognize how sounds travel through different media.	C
		EARTH	
R7	E.GE.FI.EB.IV.1.h.1a	Identify and/or describe surface features caused by the Ice Age.	A
R8	E.HY.FI.EB.V.2.e.1ADDh	Identify safety precautions with the three states of water.	A
R9	E.AW.FI.EB.V.3.e.3ADDh	Identify and explain appropriate safety precautions during severe weather.	A



Michigan Department of Education
Office of Educational Assessment and Accountability
608 West Allegan Street
P.O. Box 30008
Lansing, MI 48909
877-560-8378
www.mi.gov/mi-access