



# **2014 ISAT Science Assessment**

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[www.isbe.net/assessment](http://www.isbe.net/assessment)



# 2014 ISAT Window

- Regular Test Window: March 3 -14, 2014
- Requests to modify the testing window must be made through Pearson's Assessment Network



# 2014 Science ISAT Assessment

- Item formats: 82 Multiple Choice (MC) questions
- Field-test items within the test
- Four answer choices for MC at all grades
- Two 45-minute\* sessions
- All science standards assessed
- Approx. 10% of the test is devoted to each standard

\* Plus up to 10 additional minutes for all students



## Science Content Category Table

Grade	4	7
<b>State Goal 11</b>	<b>20%</b>	<b>20%</b>
Standard 11A – Scientific Inquiry	10%	10%
Standard 11B – Technological Design	10%	10%
<b>State Goal 12</b>	<b>60%</b>	<b>60%</b>
Standard 12A – Living Things <sup>3</sup>	10%	10%
Standard 12B – Environment and Interaction of Living Things	10%	10%
Standard 12C – Matter and Energy <sup>4</sup>	10%	10%
Standard 12D – Force and Motion	10%	10%
Standard 12E – Earth Science <sup>5</sup>	10%	10%
Standard 12F – Astronomy	10%	10%
<b>State Goal 13</b>	<b>20%</b>	<b>20%</b>
Standard 13A – Safety and Practices of Science	10%	10%
Standard 13B – Science, Technology, Society <sup>6</sup>	10%	10%
<b>Total</b>	<b>100%</b>	<b>100%</b>



# Linguistically Modified (LM) ISAT in Math and Science for LEP Students

- LM ISAT form will be available for 2014
  - Only for ISAT math and science
  - Only for LEP students
- Text modified for LEP students
  - Simplified English text
  - Extended and Short Response math items presented in both Spanish and English
  - LM form developed by IL educators and ELL specialists who reviewed and modified the math and science ISAT items



# Testing Policies and Prohibitions

- Must be administered uniformly across the state
- Read and use Test Administration Manual
- Read the Professional Testing Practices for Educators
- Supervise students during testing
- Do not help students with test items
- Do not read any part of the science test to students unless it is in their IEP.



# Test Preparation Suggestions

- Be familiar with the Illinois Learning Standards and the Assessment Frameworks
- Integrate test-taking skills into regular classroom instruction
- Be familiar with and practice multiple-choice items with students
- Create a positive atmosphere for testing and adopt a “do your best” attitude with students

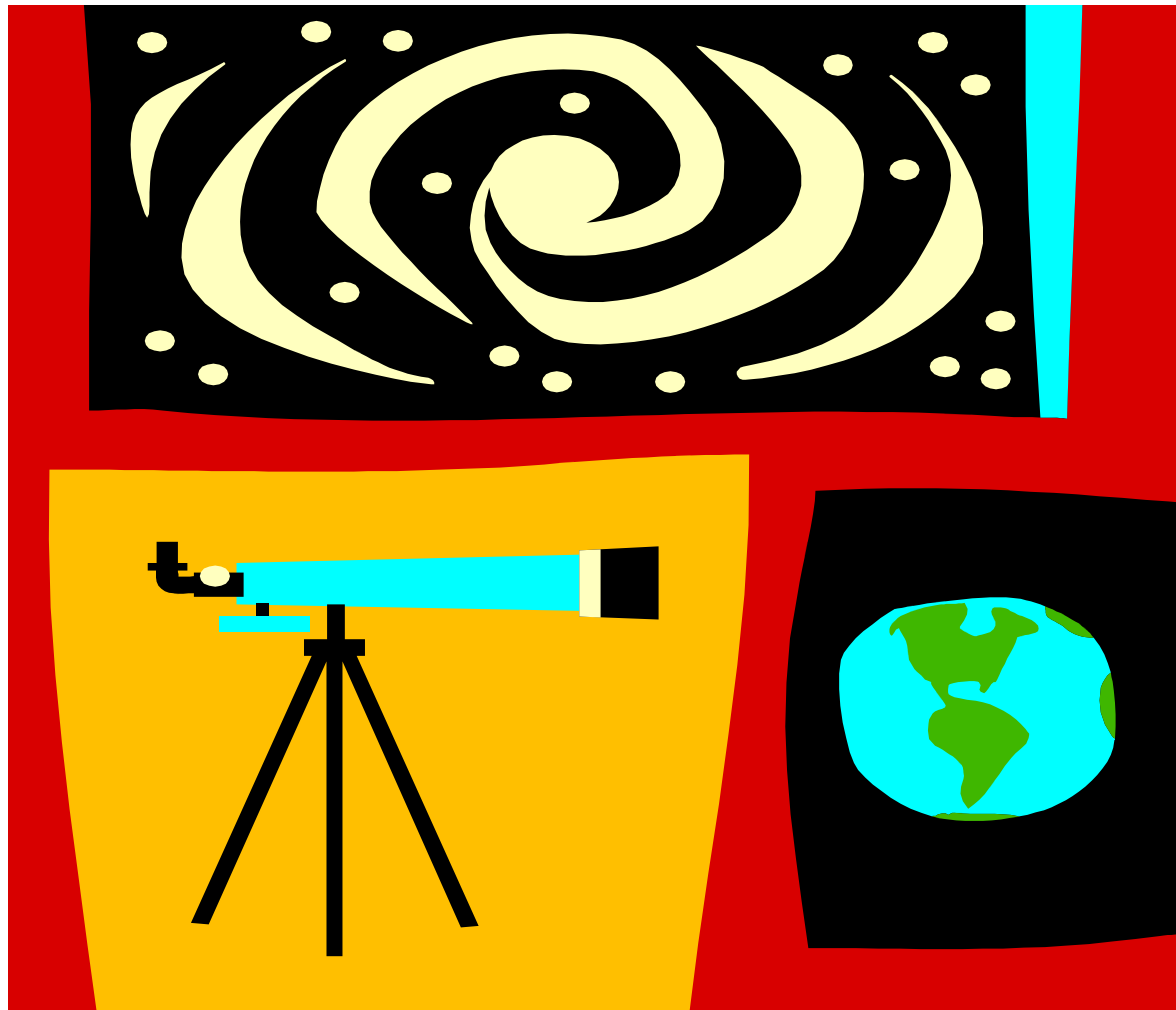


# Next Generation Science Standards (NGSS)

- The NGSS were released in April of 2013 and are being considered for adoption by ISBE.
- The adoption of new standards involves the following steps:
  - Initial presentation (September 19, 2013)
  - 45 day public comment period
  - Final determination by the board
  - Review by Joint Committee on Administrative Rules (JCAR)



# Sample Items: Grade 4





1

3348167\_1

Scientific discoveries have led to many inventions. Which best describes the discoveries?

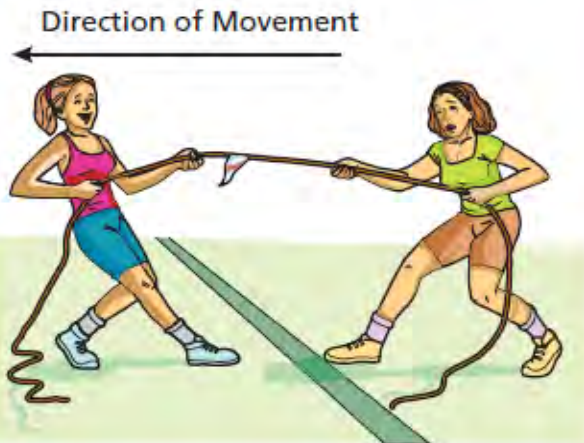
- A** Scientific discoveries improve society.
- B** Scientific discoveries have little effect on society.
- C** Scientific discoveries are not shared.
- D** Scientific discoveries are unimportant.



5

100000092827\_3

Two students are holding a rope.  
They are trying to move each other  
over a line.



Which describes the forces  
caused by the students?

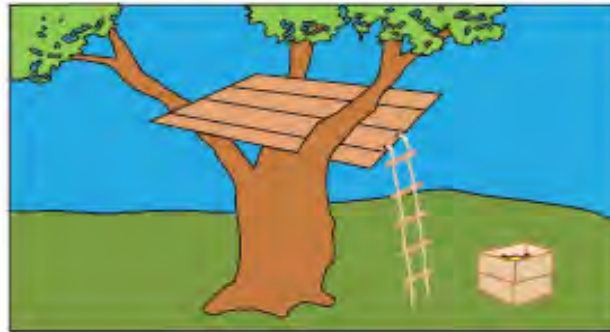
- A** The students are pushing with unequal forces.
- B** The students are pushing with equal forces.
- C** The students are pulling with unequal forces.
- D** The students are pulling with equal forces.



15

100000299721\_4

Janie has a large box of supplies that she wants to take up into her tree house. The box is too big and heavy to carry up the rope ladder.



Which simple machine would work best to help take the box up into the tree house?

- A** Lever
- B** Screw
- C** Wheel and axle
- D** Pulley and rope



49

3530631\_1

Pedro and Liz were partners on a science project. Their teacher gave them four different unlabeled liquids to identify. Which would be unsafe for Pedro and Liz to do when working on this experiment?

- A** Mix the liquids together in a bowl.
- B** Find the mass of each liquid.
- C** Place a drop of each liquid on limestone.
- D** Pour each liquid into different test tubes.



28

Sara drew groups of stars she saw during different times of the year. Her drawings are shown below.

**Summer****Winter**

Which best explains why Sara saw different groups of stars in the two seasons?

- A** Earth rotates on its axis.
- B** Earth revolves around the sun.
- C** The constellations spin around Earth.
- D** The constellations orbit around the sun.



59

Joyce and Bill want to find out if tomato plants grow better in sunlight or in the shade. Which should they change in their experiment?

- A** The type of soil
- B** The type of plant
- C** The amount of water
- D** The location of the plant



50

The clouds shown in the picture below look like gray sheets that spread across the sky. They form at 1500 meters and may bring heavy mist, snow, or drizzle.

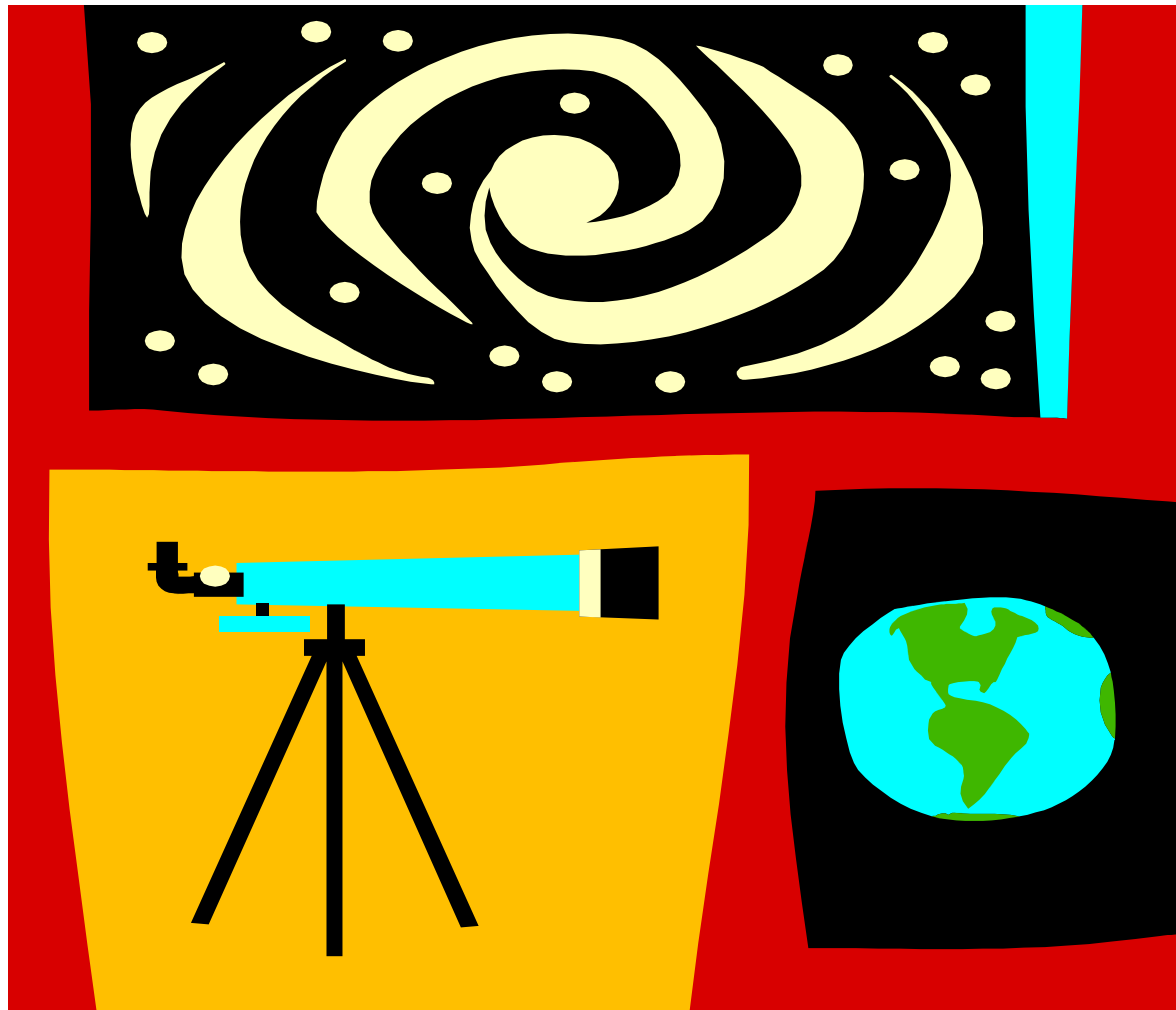


What type of clouds are these?

- A** Cirrus
- B** Cumulus
- C** Cumulonimbus
- D** Stratus



# Sample Items: Grade 7





1

3348176\_1

Ramon sat two glasses of water outside next to each other for 15 minutes. Each glass had the same amount of water. One glass was covered with black paper and one was covered with white paper. He took the following temperatures.

Time (Minutes)	Temperature of Water With Black Paper (°C)	Temperature of Water With White Paper (°C)
1	22	22
5	24	23
10	27	25
15	28	27

What is the variable being tested in this experiment?

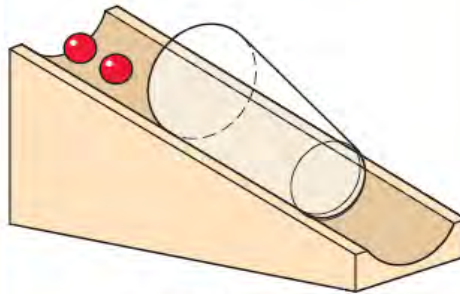
- A** The color of paper
- B** The size of glass
- C** The amount of water
- D** The location of the glass



3

3348136\_1

Tim rolled marbles down a ramp to discover how far a cup would move as more marbles were added.

**Marble Motion**

Number of Marbles	Distance the Cup Slides
1	2 cm
2	3 cm
3	4 cm
4	5 cm

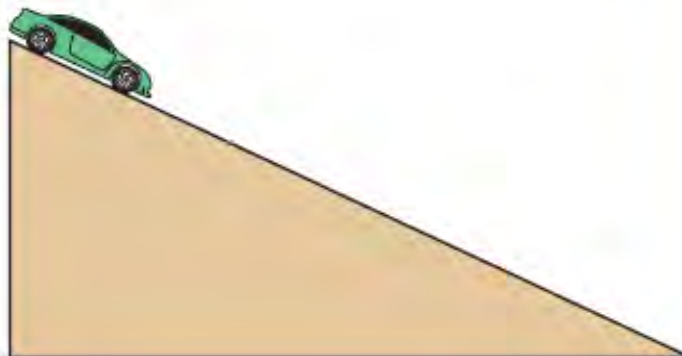
Which conclusion is best supported by the data?

- A** Using more marbles made the cup move farther.
- B** Using fewer marbles made the cup move faster.
- C** Gravity moved the cup no matter how many marbles were used.
- D** Friction stopped the cup when no marbles were used.



4

3346224\_2



Miguel wants his toy car to reach the bottom of a ramp as fast as possible. Which ramp will result in the fastest speed?

- A** A carpeted ramp
- B** A wood ramp
- C** A sandpaper ramp
- D** A cork ramp



58

3345501\_4

Which statement is a lab safety rule?

- A Work in small groups.
- B State your hypothesis.
- C Carefully record all data.
- D Wear safety goggles when pouring chemicals.

59

100000427654\_2

How many different elements are found in the chemical compound  $\text{AgNO}_3$ ?

- A 2
- B 3
- C 4
- D 5

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57

3578818\_1

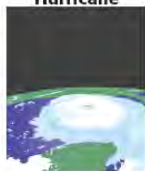
Will and Adelle are making a slide show presentation. The topic of the presentation is, "The Effects of Movement in the Lithosphere." Which of these slides would most likely be included in their presentation?

Volcano



A

Hurricane



B

Tornado



C

Sunspots



D



3

3461802\_1

Dave read that on January 1, Earth is slightly closer to the sun than on July 1. Why, then, is it colder in Illinois in January than in July?

- A** The Northern Hemisphere is tilted away from the sun in January.
- B** The greenhouse effect is stronger in the Northern Hemisphere in July.
- C** The snow on the ground lowers the air temperature in January.
- D** The moon pulls the heat away from Earth in January.

54

3345507\_1

Jenna flips a coin ten times. It lands on heads seven times and on tails three times. She concludes that a coin lands on heads more often than on tails. Why is her conclusion possibly invalid, even though it agrees with her results?

- A** Her results would probably differ if she collected more data.
- B** Newton's third law of motion contradicts her conclusion.
- C** She should have flipped the coin only twice.
- D** She did not state a hypothesis.



# Questions?

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