



2012 ISAT Science Assessment

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www.isbe.net/assessment



2012 ISAT Window

- Regular Test Window: March 5–16, 2012
- Check the following link for more details about modifying the test window dates:
http://www.isbe.net/assessment/pdfs/2012/isat/test_window_waiver_2012.pdf



2012 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
State Goal 11	20%	20%
Standard 11A – Scientific Inquiry	10%	10%
Standard 11B – Technological Design	10%	10%
State Goal 12	60%	60%
Standard 12A – Living Things ³	10%	10%
Standard 12B – Environment and Interaction of Living Things	10%	10%
Standard 12C – Matter and Energy ⁴	10%	10%
Standard 12D – Force and Motion	10%	10%
Standard 12E – Earth Science ⁵	10%	10%
Standard 12F – Astronomy	10%	10%
State Goal 13	20%	20%
Standard 13A – Safety and Practices of Science	10%	10%
Standard 13B – Science, Technology, Society ⁶	10%	10%
Total	100%	100%



Science ISAT and NCLB

- All states were mandated to assess science by 2008
- IL already had science assessments at grades 4, 7 and 11
- Science is not used for AYP



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

- LM ISAT form will be available for 2012
 - Only for ISAT math and science
 - Only for LEP students who qualify
- 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



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

- LEP students taking the LM form will receive ISAT scores for math and science but **not** SAT 10 scores
 - Reason: If SAT 10 items are altered, a norm-referenced score cannot be given
 - LEP students using the LM form will still receive SAT 10 scores for reading since the reading test is the same in both the LM ISAT and ISAT.



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. If it's in their IEP, test the student(s) separately.



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



Improving Science Scores

- Teach science: Use inquiry, use the ILS and fit the Framework objectives into the curriculum
- Spread the Framework objectives across grades, not just for 4 and 7
- Use Item Analysis Summary and School Performance Profile to find strengths and weaknesses



ISAT Report Templates

ISAT report templates are available online at

<http://www.isbe.net/assessment/isat.htm>

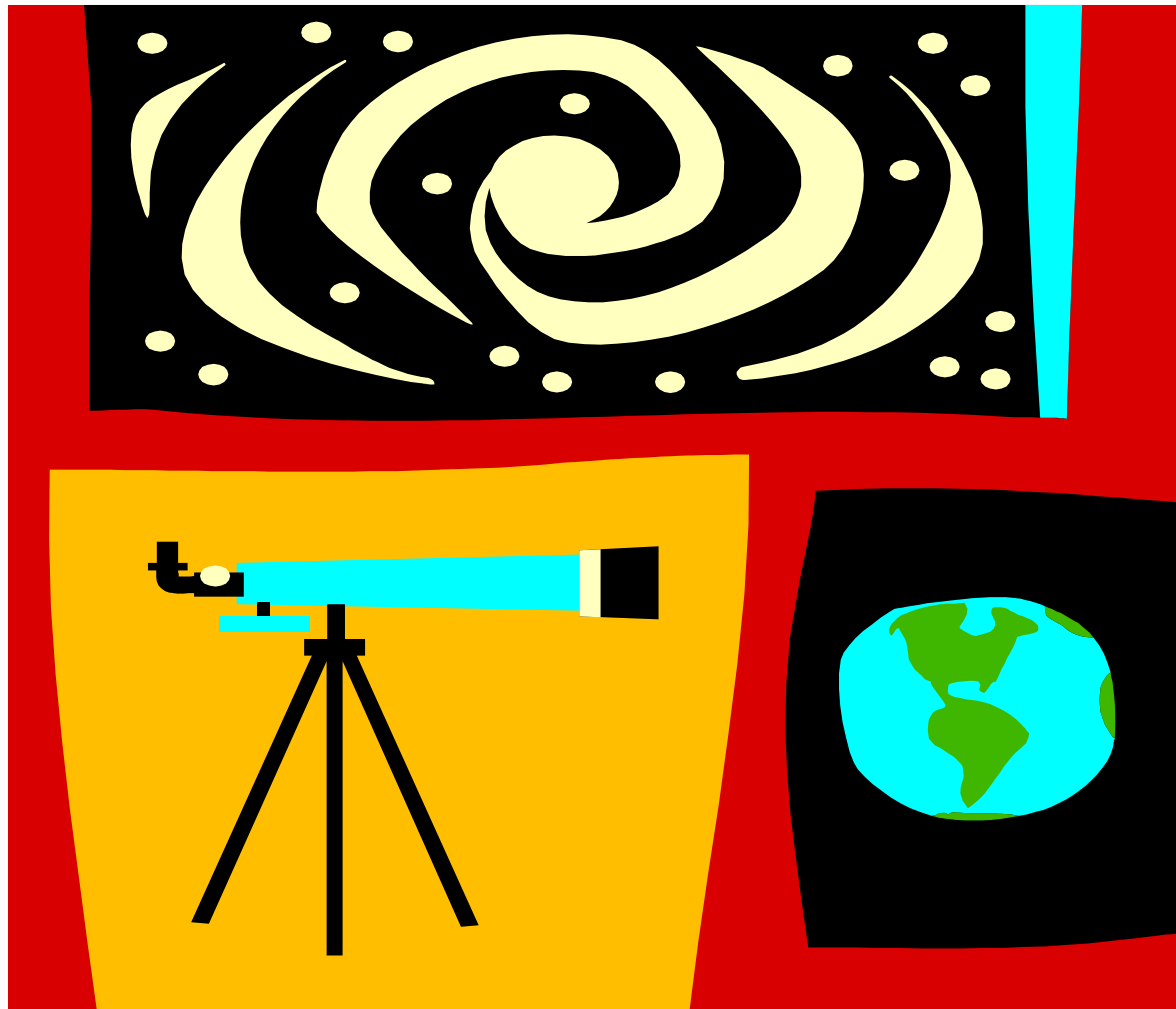


Sample Books and Interactive Items

- The 2011-2012 Sample Books are posted. No new sample items will be added for 2012 and hard copies are no longer mailed to schools.
- The 2011-2012 Interactive ISAT items are posted online at www.isbe.net/assessment/htmls/sample_books.htm



Sample Items: Grade 4





Four groups of students were trying to find out how to make a car roll the farthest distance after going down a ramp. The table below contains the results of each group's experiment.

Distance Car Traveled (in meters)

	Trial 1	Trial 2	Trial 3
Plain Wheels	3m	4m	3m
Oiled Wheels	6m	7m	7m
Wheels Wrapped In Sandpaper	2m	2m	1m
Ramp Raised 30 cm	5m	7m	6m

Based upon this information, which would be the best for a new group to do to make a car roll the farthest?

- A** Raise the ramp and wrap sandpaper around the wheels.
- B** Oil the wheels and wrap sandpaper around the wheels.
- C** Lower the ramp and oil the wheels.
- D** Raise the ramp and oil the wheels.



56

Jess and Chandra asked students to taste four different juice drinks to find the one they liked the best. Their results are in the table below.

Juice Drinks Fourth-Grade Students Liked

Juice Drink	Number of students
W	2
X	6
Y	1
Z	2

Which statement best describes how the students can improve on their experimental methods?

- A** They should have tested more students.
- B** They should have tested fewer students.
- C** They should have tested fewer juice drinks.
- D** They should have tested more boys than girls.



51

Carlos and Rowanda were writing a report on rabbits. They learned that rabbits blend in with their environment, are fast runners, and reproduce quickly. Which best describes the students' discoveries?

- A** Rabbits adapt to their surroundings for survival.
- B** Rabbits are more intelligent than their predators.
- C** Rabbits do things to make it easier for people to hunt them.
- D** Rabbits are less interesting than their predators.



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.

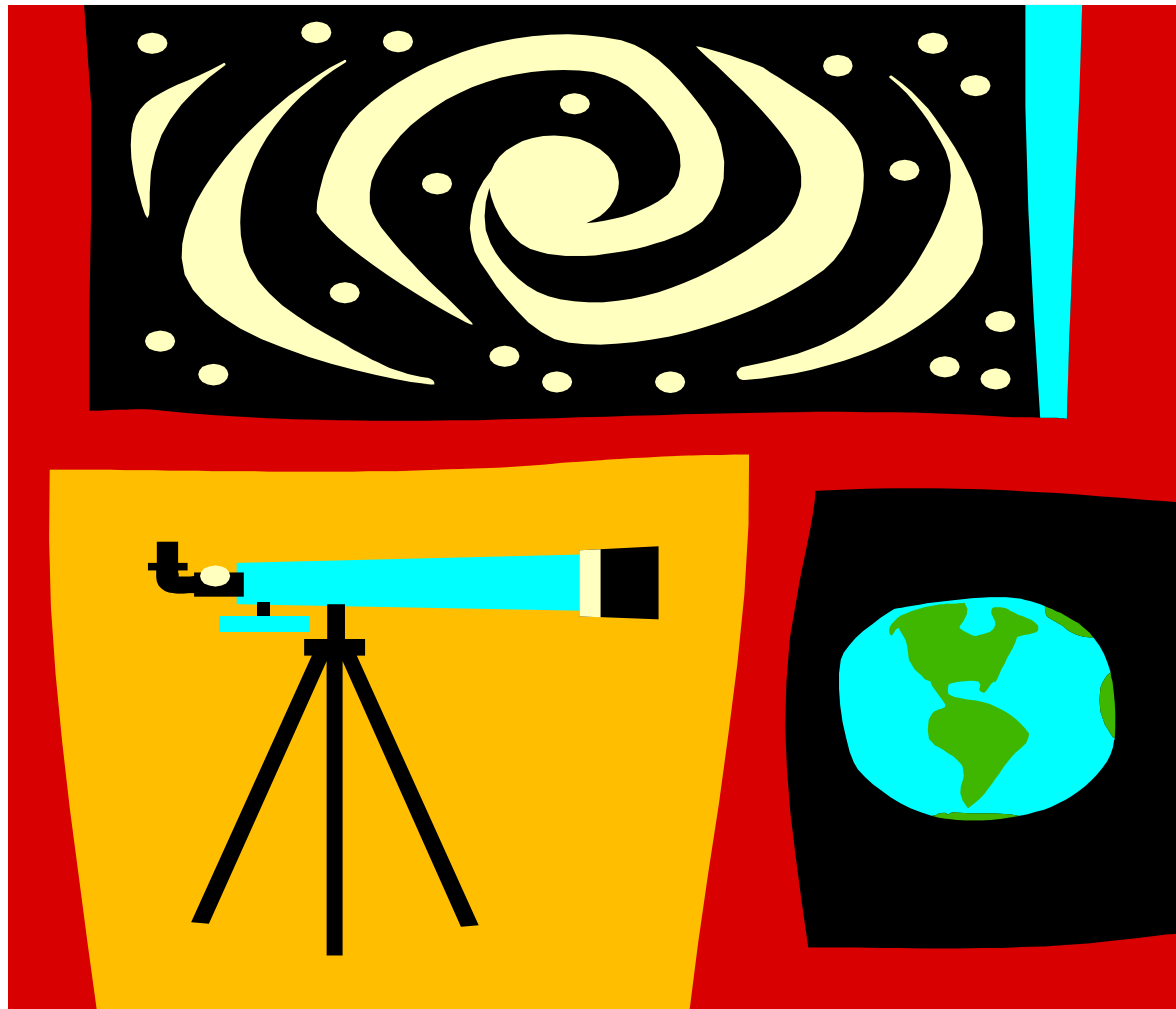


What type of clouds are these?

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



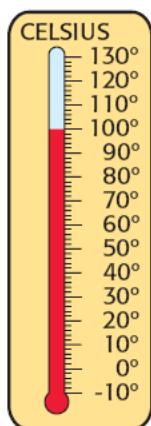
Sample Items: Grade 7



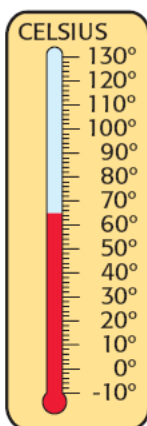


52

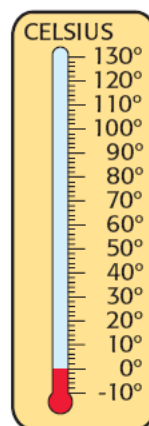
Ryan and Kim-Lee boiled some water in a beaker. Then they turned off the heat source and added five ice cubes to the water. Which of these thermometers shows what most likely happened to the temperature of the water after ten minutes?



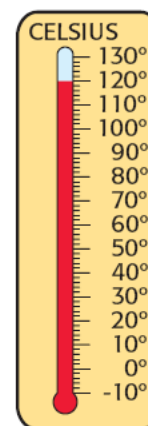
A



B



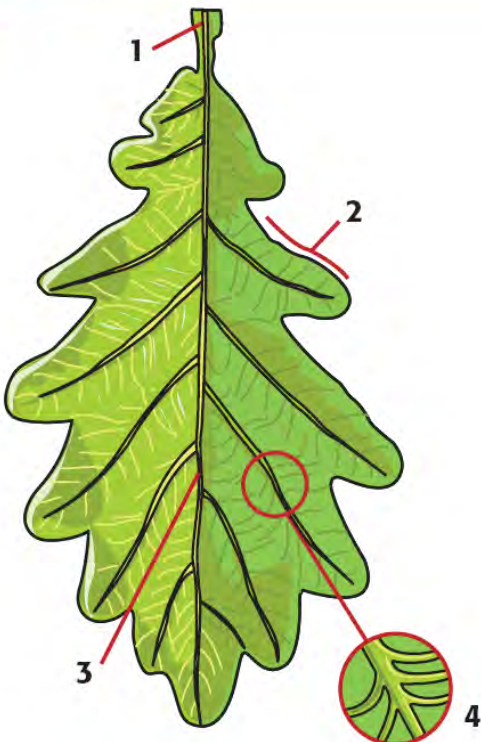
C



D



55



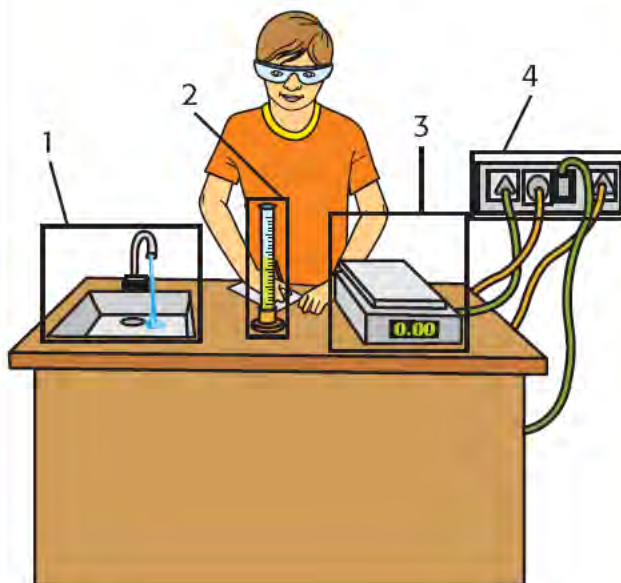
In the diagram, which feature is most useful in classifying this leaf as a dicot?

A 1
B 2
C 3
D 4



6

Which label represents the greatest potential hazard in the lab setup shown?



- A** 1
- B** 2
- C** 3
- D** 4



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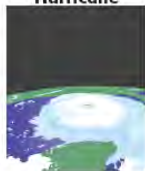
Will and Adelle are making a slide show presentation. The topic of the presentation is, "The Effects of Movement in the Lithosphere." Which of these slides would most likely be included in their presentation?

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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