INTERMEDIATE-LEVEL SCIENCE EXAMINATION

TEST SAMPLER DRAFT

Spring 2000

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Office of Curriculum, Instruction, and Assessment
Albany, New York 12234

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THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234

Assistant Commissioner for Curriculum, Instruction and Assessment

May 2000

Dear Colleagues:

Following several years of planning, piloting, and scoring different types of questions, the Intermediate-Level Science Test Sampler Draft is ready for distribution. School districts, science teachers, supervisors, and administrators have assisted the State Education Department in the development process in a variety of ways. Teachers have developed and reviewed the test items and scoring guides and pretested items with their students. Administrators have arranged for their students to participate in the pretest and field-test samples. Teachers and supervisors will continue to develop, pretest, and field-test different types of questions for future Intermediate-Level Science Examinations.

This test sampler is being distributed to each school having grades 5–8, with the request to make additional copies available to all 5–8 science teachers. The test sampler provides examples of the types of questions, formats, and scoring guides that are being developed for the Intermediate-Level Science Examination that will be administered for the first time in spring 2001. We expect that further refinements of the question formats and scoring guides will occur as a result of field tests that will be conducted this spring.

We are interested in receiving your feedback on these preliminary materials. A comment sheet is included on the inside back cover of the test sampler so that you may forward your responses to us. The comment sheet may be faxed to (518) 473-0858 or mailed to the address listed below:

New York State Education Department
Office of Curriculum and Instruction
Room 674 EBA
Albany, New York 12234

Sincerely,

Roseanne DeFabio

Acknowledgments

The State Education Department acknowledges the assistance of the many teachers and school administrators from across New York State who helped develop test items for this sampler. In particular, the State Education Department would like to thank our intermediate-level editors for Parts A, B, and C:

Karen Banovic	Ballston Spa Central School District
Dennis DeSain	Averill Park Central School District (retired)
Linda Hoxie	Watervliet City School District
John Kuzma	South Colonie Central School District
Lori Martin	Rensselaer City School District
Michael Mosall	Greenville Central School District
Fran Pilato	Rensselaer City School District

New York State Education Department staff who contributed to this document were Diana K. Harding, Associate in Science Education, Judy Pinsonnault, Associate in Educational Testing, and Debra Sunukjian, Assistant in Educational Testing.

Additional thanks for Part D development go to project managers Rod Doran and Doug Reynolds, and the Intermediate Science Assessment Liaison network. The following persons contributed to the design and development of the Part D sample stations:

Design Committee:

Michelle Cambier	New York City Community School District #32
Michael Doyle	Cattaraugus-Allegany BOCES
Joseph Filippone	Eastern Suffolk BOCES
Nicholas Hejaily	Williamsville Central School District
Mary Marcinkowski	Niagara Falls City School District
Mary Beth McCarthy	New York City Community School District #31
Sister Christelle Sawicki	Blessed Sacrament School, Buffalo
Joan Wagner	Burnt Hills-Ballston Lake Central School District
Stanley Wegrzynowski	Buffalo City School District

Item Writers:

Maria Barber	New York City Community School District #25
Kathaleen Burke	Buffalo City School District
Ed Denecke	Queens Multidisciplinary Resource Center, New York City Schools
Monica DiCamillo	Niagara Falls City School District
Edward Mesic	Warwick Valley Central School District
Vivian Pokrzyk	Lewiston Porter Central School District
Francine Shea	Sweet Home Central School District

Special thanks go to Jan Christman for technical expertise.

Contents

Introduction

The new Intermediate-Level Science Examination (grades 5–8) has been developed to assess student achievement of Standards 1, 2, 4, 6, and 7 of the *Learning Standards for Mathematics, Science, and Technology*. Items for the new Intermediate-Level Science Examination were developed through the cooperative efforts of teachers, school districts, State Education Department staff, and science educators.

Questions will be content- and skills-based and may require students to graph, complete a data table, label diagrams, design experiments, make calculations, or write a response. As outlined in the Scientific Inquiry section of the *Learning Standards for Mathematics, Science, and Technology*, students may be asked to hypothesize, interpret, analyze, and evaluate data and apply their scientific knowledge and skills to real-world situations.

The two-hour written examination will be administered to students at the end of grade 8. The examination will include three parts. Students should be prepared to answer questions in multiple-choice, constructed response, and extended constructed response formats. In addition, a laboratory performance examination that will assess students' skills will be administered in a separate one-hour test session.

Achievement levels will be based on the student's total test score and will be established by a standard-setting process using student responses from the spring 2000 field tests. Teachers will score the tests in their districts, following scoring guidelines provided by the New York State Education Department.

Students will be required to answer all of the questions on the examination. The examination will include items in these approximate percentages:

Components and Weighting of the Intermediate-Level Science Examination

PART	ITEM TYPE(S)	DESCRIPTION OF THE ITEMS	PERCENTAGE OF THE TEST
A	Multiple-choice questions	Content-based questions assessing the student's knowledge and understanding of core material (primarily from Standard 4)	25–35%
B	Multiple-choice questions Constructed response questions	Content- and skills-based questions assessing the student's ability to apply, analyze, and evaluate material (primarily from Standard 4 and Standard 1)	25–35%
C	Extended constructed response questions	Content and application questions assessing the student's ability to apply knowledge of science concepts and skills to address real-world situations (primarily from Standards 1, 2, 4, 6, and 7) Through the use of real-world situations, students will be asked to apply scientific concepts, formulate hypotheses, make predictions, or use other scientific inquiry techniques in their responses to the questions posed	20–25%
D	Performance questions	Laboratory performance test	15%

In accordance with Commissioner's Regulations 100.2, students who score below the State designated performance level on the Intermediate-Level Science Examination must be provided academic intervention services (AIS) by their school by the start of the next school year. The State designated performance level will be established by a standard-setting process using student responses from intermediate-level science field tests administered in May 2000.

Test modifications must be consistently provided to students with disabilities when it is determined that such accommodations are necessary. Such modifications must be documented in either an Individualized Education Plan (IEP) or in a Section 504 Accommodation Plan. The various State assessments are being developed by both special and general educators to ensure they are appropriate for students with disabilities.

The tasks in the Sampler may be administered in the classroom to help teachers plan for instruction. Sometime before taking the sample test, students should be introduced to the question format, response format, and scoring guidelines. Teachers are encouraged to use the scoring guide in this document for practice in scoring student papers. Teachers and administrators are encouraged to reproduce the sample tests and scoring materials as needed.

Appendix B contains a chart that links each item in the test sampler draft to the intermediate-level core curriculum. This chart can help teachers identify specific areas of the standards in which students might need additional instruction.

In considering implications of the results for curricular planning, teachers may want to ask the following questions:

- On which components did students seem to be most successful? least successful?
- To what extent did students follow the guidelines included with each question type?
- What learning experiences do students need to perform well on each question?
- What opportunities do students in grades 5–8 have to engage in a science instructional program that includes activities requiring higher-order thinking skills?

Teachers who have participated in the development of this test maintain that teachers can make a significant difference in how well their students will score on the new science assessment. Students need multiple opportunities to practice with the written and performance samplers. Test-taking strategies can be taught; students who have been trained in these skills are likely to score better.

New York State
Intermediate-Level Science Test Sampler
Part A: Sample Questions 1–17

Directions (1–17): Each question is followed by four choices. Decide which choice is the best answer. Mark your answer in the spaces provided on the separate answer sheet by writing the number of the answer you have chosen.

1 Which part of a cell allows nutrients and other materials to enter or leave the cell?

1 cytoplasm
2 nucleus
3 chloroplast
4 cell membrane

2 Which human body system controls production of the hormones that regulate body functions?

1 digestive
2 endocrine
3 respiratory
4 skeletal

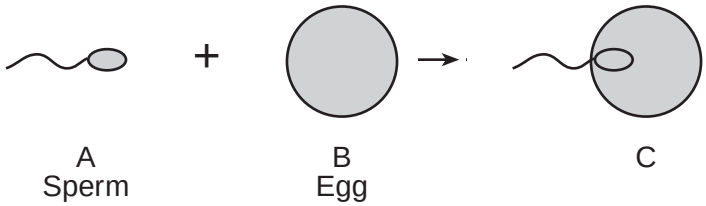
3 Hereditary information is found in a cell's

1 chloroplasts
2 chromosomes
3 cytoplasm
4 membranes

4 What is a major cause of variation within a species?

1 sexual reproduction
2 asexual reproduction
3 extinction
4 photosynthesis

5 Which process is shown in the diagram below?

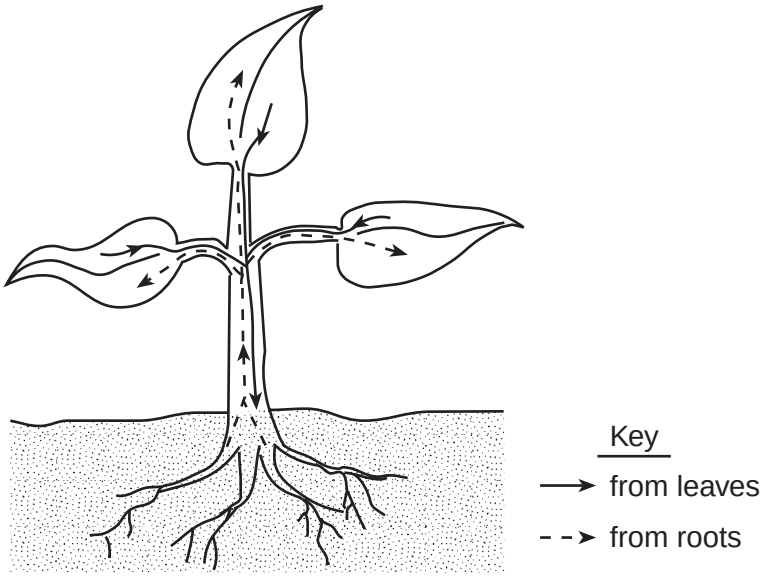


1 metamorphosis
2 regulation
3 fertilization
4 respiration

6 A male chimpanzee has 48 chromosomes in each of his regular body cells. How many chromosomes would be found in each of his sperm cells?

1 96
2 48
3 24
4 12

7 The diagram below shows materials needed for survival being transported inside a plant.



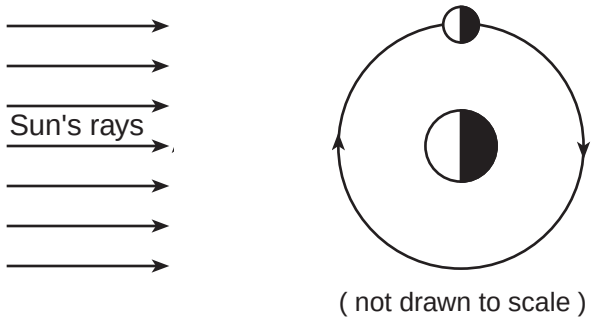
Which body system performs this function in humans?

1 circulatory system
2 digestive system
3 excretory system
4 respiratory system

8 The energy content of food is measured in

1 ounces
2 degrees
3 grams
4 Calories

9 The diagram below shows the Moon revolving around Earth as viewed from space.



What makes it possible to see the Moon from Earth?

1 The surface of the Moon emits its own light, which can be seen from Earth.
2 The Moon absorbs light during the day and emits the light at night.
3 Light emitted by Earth illuminates the Moon's surface, making it visible.
4 Light emitted by the Sun is reflected to Earth by the Moon's surface.

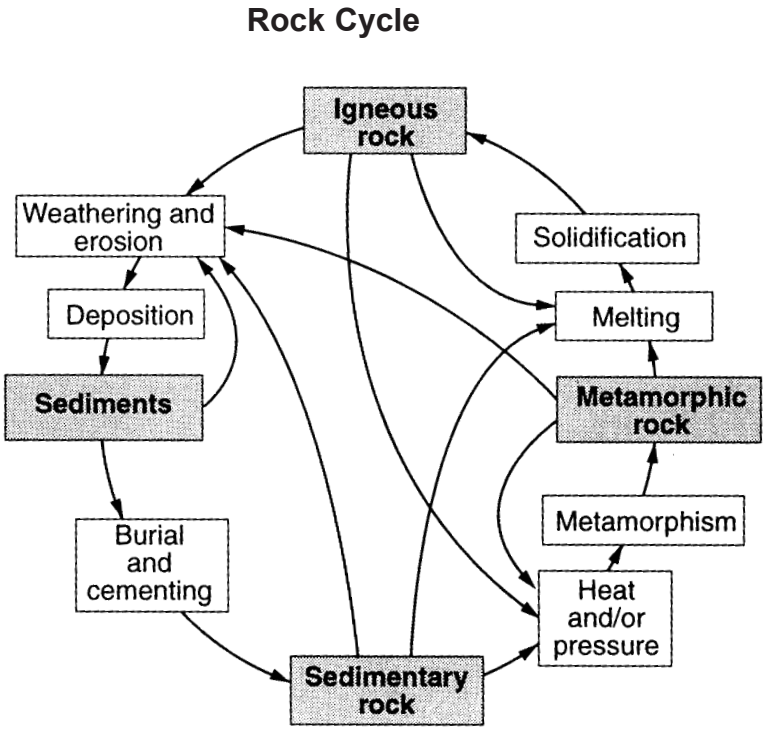
10 The solid part of Earth's surface is called the

1 hydrosphere
2 lithosphere
3 troposphere
4 atmosphere

11 A rock that contains fossil seashells was most likely formed as a result of

1 volcanic activity
2 sedimentation
3 heat and pressure
4 magma cooling

12 The diagram below shows the rock cycle.



Which two processes result in the formation of igneous rocks?

1 melting and solidification
2 sedimentation and evaporation
3 crystallization and cementation
4 compression and precipitation

13 The cartoon below shows a humorous view of a scientific phenomenon.

What process is occurring that makes the child's breath become visible?

1 boiling
2 melting
3 condensation
4 evaporation

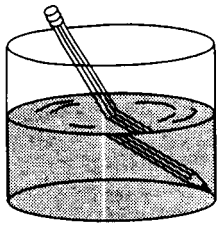
14 In which situation is a chemical reaction occurring?

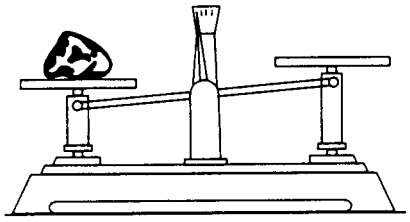
1 salt dissolves in water
2 a nail rusts
3 ice melts
4 a glass breaks

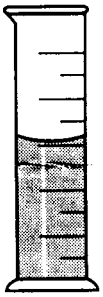
15 As ice cream melts, its molecules

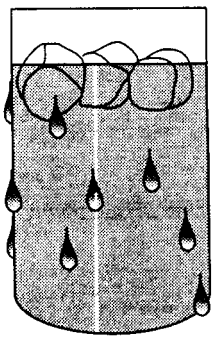
1 absorb heat energy and move farther apart
2 absorb heat energy and move closer together
3 release heat energy and move farther apart
4 release heat energy and move closer together

16 Which diagram best shows the property of refraction?

(1) 

(3) 

(2) 

(4) 

17 A student pushes against a wall with 20 N of force and the wall does not move. In this situation, the wall exerts

1 0 N of force
2 less than 20 N of force
3 20 N of force
4 more than 20 N of force

New York State
Intermediate-Level Science Test Sampler
Part B: Sample Questions 18–34

Directions (18–34): Each question is followed by four choices. Decide which choice is the best answer. Mark your answer in the spaces provided on the separate answer sheet by writing the number of the answer you have chosen.

18 The data table below shows the average distance of four planets from the Sun and the approximate time it takes those planets to orbit the Sun.

Planet	Average Distance from the Sun (millions of kilometers)	Approximate Time It Takes the Planet to Orbit the Sun (Earth days)
Mercury	57.9	88
Venus	108.2	225
Earth	149.6	365
Mars	227.9	687

Which statement is best supported by the data in the table?

1 Venus takes less time to orbit the Sun than Mercury does.
2 Mars takes less time to orbit the Sun than Earth does.
3 Mars takes more time to orbit the Sun than Earth does.
4 Venus takes more time to orbit the Sun than Mars does.

19 The data table below shows the masses and volumes of three objects (A, B, and C).

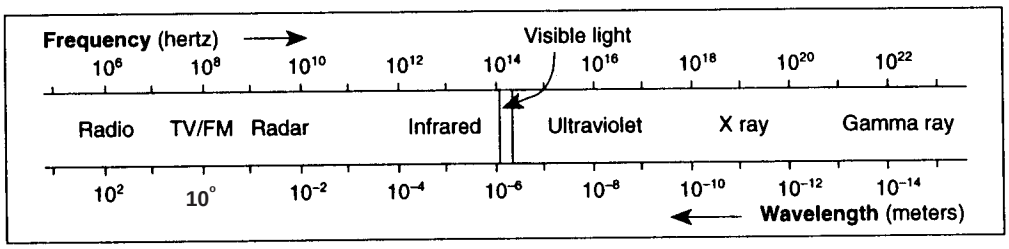
A	B	C
Mass = 4g	Mass = 6 g	Mass = 8 g
Volume = 2 cm^3	Volume = 6 cm^3	Volume = 4 cm^3

The formula for calculating an object's density is: $\text{Density} = \frac{\text{Mass}}{\text{Volume}}$.

Which statement about the densities of these three objects is correct?

1 B is more dense than A.
2 A is more dense than C.
3 B and C have equal densities.
4 A and C have equal densities.

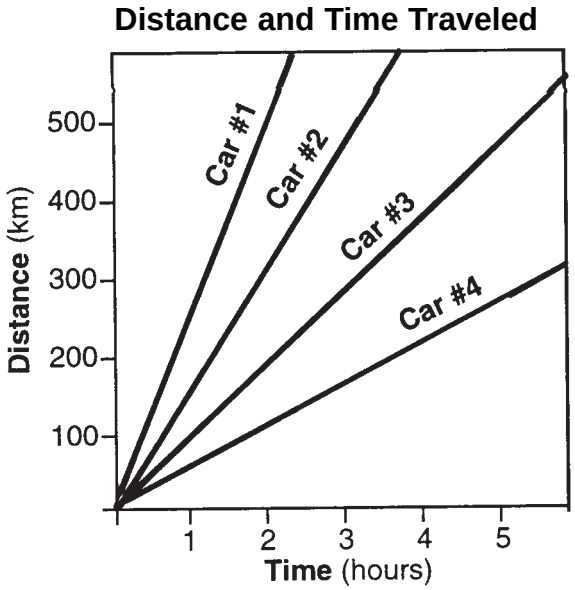
20 The diagram below shows the frequency and wavelength of various types of electromagnetic energy.



Which type of electromagnetic wave has a wavelength of approximately 10^{-10} meter and a frequency of 10^{18} hertz?

1 infrared
2 radio
3 X ray
4 radar

21 The graph below shows the distance and time traveled by four cars.

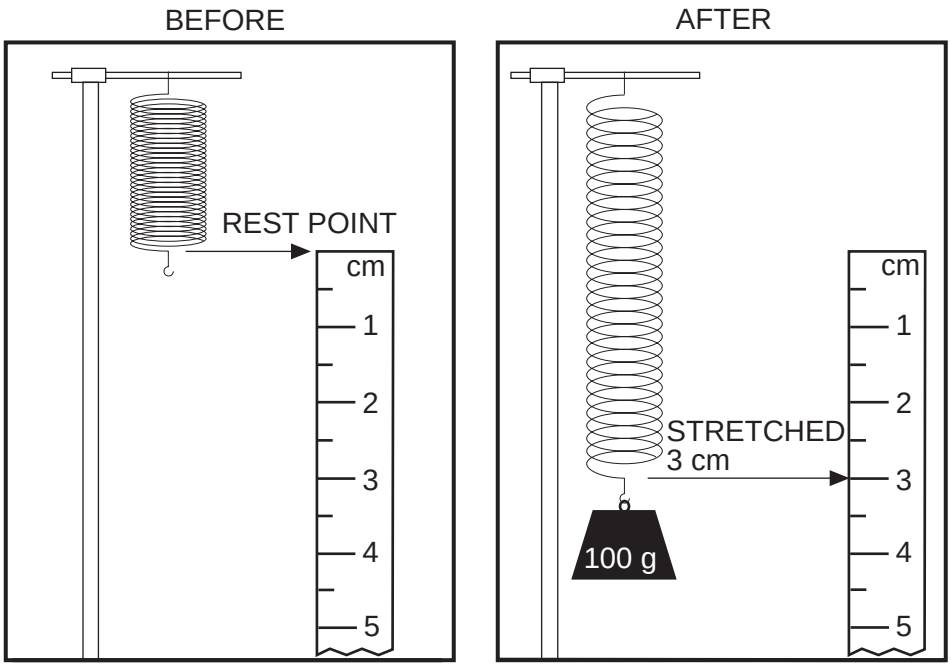


Which car traveled the slowest?

1 Car #1
2 Car #2
3 Car #3
4 Car #4

Directions (22–34): For each question, write your answer in the spaces provided on the separate answer sheet.

Base your answers to questions 22 through 24 on the diagrams and data table below.



DATA TABLE

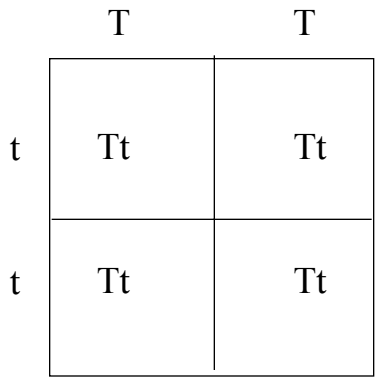
Attached mass (g)	Distance spring is stretched (cm)
100	3
200 g	6 cm
300 g	9 cm
400 g	12
500 g	15 cm
1000 g	30 cm

22 State the relationship between the mass attached to the end of the spring and the length the spring is stretched. [1]

23 Predict how many centimeters the spring will stretch if a total mass of 700 grams were attached. [1]

24 What mass would be needed to stretch the spring to a length of 60 cm? [1]

Base your answers to questions 25 through 27 on the Punnett square and information below.



In a certain plant, the gene for tall height (T) is dominant over the gene for short height (t). The Punnett square shows the results of a cross between a pure tall plant and a pure short plant.

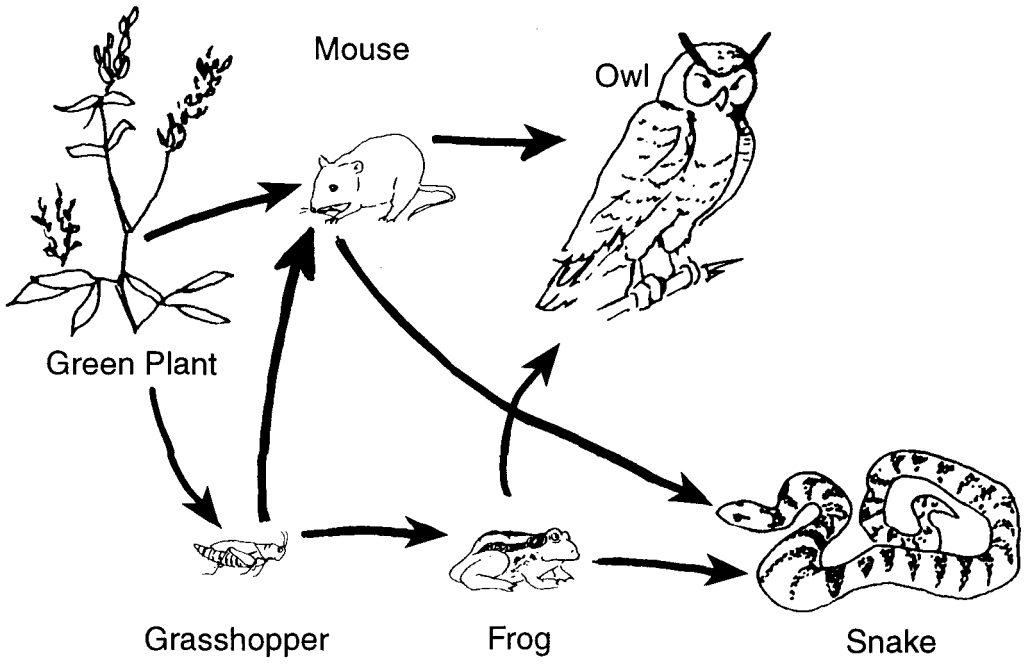
25 What percentage of the offspring would be tall plants? [1]

26 Use the Punnett square on your separate answer sheet to show the results of crossing two of the offspring shown in the Punnett square above. [2]

27 Which process is represented by the use of the Punnett square?

1 natural selection
2 sexual reproduction
3 pollination
4 mutation

Base your answers to questions 28 through 32 on the food web shown below.



28 Identify a producer in this food web. [1]

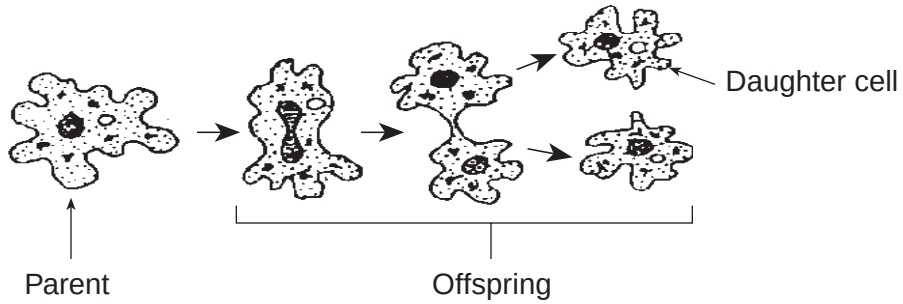
29 Identify an herbivore in this food web. [1]

30 Identify a carnivore in this food web. [1]

31 Identify an omnivore in this food web. [1]

32 Explain why removing the snake from this food web might result in a decrease in the grasshopper population. [1]

Base your answers to questions 33 and 34 on the diagram below, which shows a form of reproduction.



33 Which type of reproduction is shown in the diagram? [1]

34 How does the genetic material of the daughter cell compare to the genetic material of the parent cell? [1]

New York State
Intermediate-Level Science Test Sampler
Part C: Sample Questions 35–45

Directions (35–45): For each question, write your answer in the space provided on the separate answer sheet.

Base your answers to questions 35 and 36 on the charts below, which show two elements (iron and sulfur) and their properties. The arrows indicate that these elements may combine to form either a mixture of iron and sulfur or the compound iron sulfide.

ELEMENT	PROPERTIES
Iron	magnetic, black
Sulfur	nonmagnetic, yellow

physical change →

PROPERTIES OF IRON AND SULFUR MIXTURE
partially magnetic, black and yellow

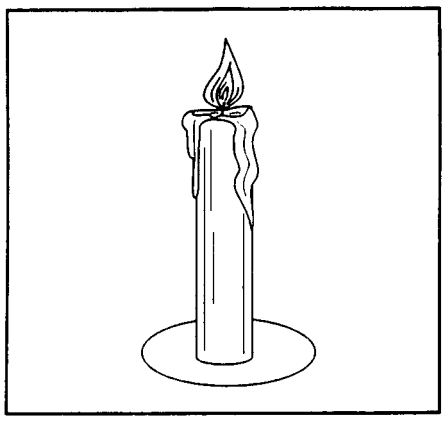
chemical change →

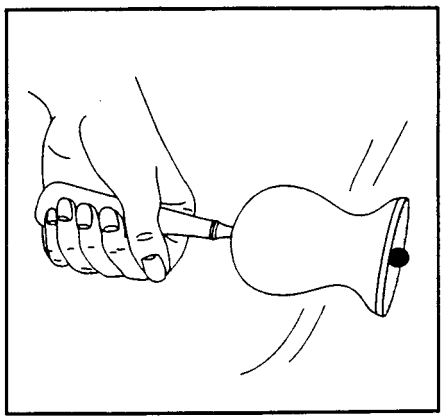
PROPERTIES OF IRON SULFIDE COMPOUND
nonmagnetic, shiny, gray

35 How could a student use a magnet to indicate that combining iron and sulfur to produce the mixture of iron and sulfur is a physical change? [1]

36 What evidence indicates that a chemical change took place when the iron and sulfur combined to form iron sulfide? [1]

Base your answers to questions 37 and 38 on the diagrams below, which show two situations in which energy transformations are occurring.





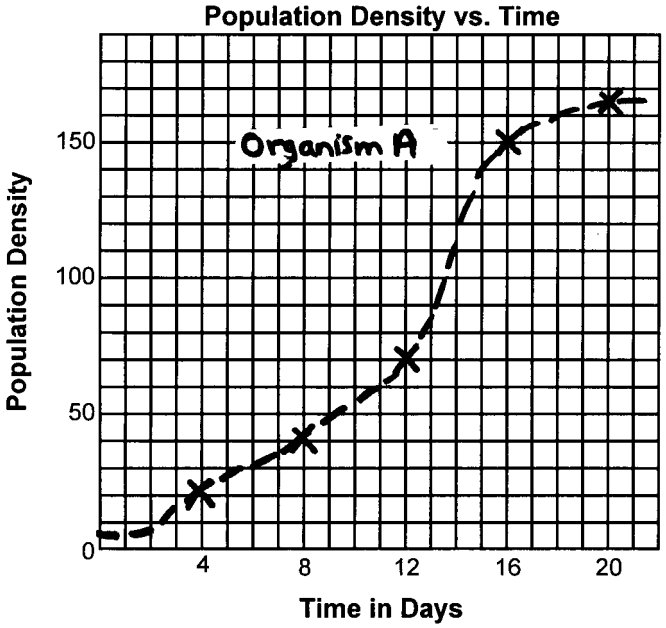
37 As the candle burns, which energy transformation occurs? [1]

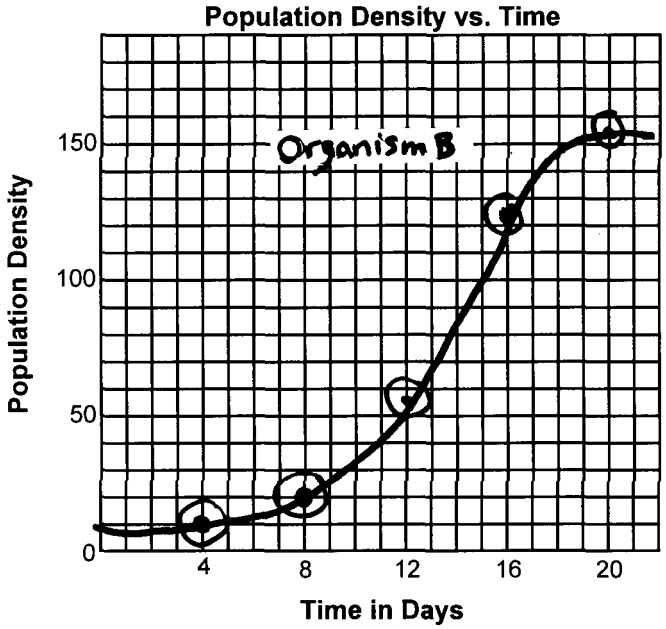
38 As the bell rings, which energy transformation occurs? [1]

39 A student plays tennis several times a week. She notices that the tennis ball seems to bounce higher on some courts than on other courts. She wonders if this has something to do with the surface of the court. Design an experiment to see if her hypothesis is correct. Include these elements in your response:

- State the hypothesis. [1]
- Identify the factor to be varied. [1]
- Identify two factors that should be held constant. [2]
- Clearly describe the procedures. [1]

Base your answers to questions 40 through 42 on the graphs below, which show the laboratory growth of two microorganisms when provided with adequate food and grown in **separate test tubes**.





40 The data below were obtained when organism A and organism B were grown with adequate food in the **same test tube**.

Population density	**Day**					
	0	**4**	**8**	**12**	**16**	**20**
Organism A	5	50	100	75	25	10
Organism B	5	25	75	125	150	125

On the grid provided on your separate answer sheet, make a graph of the data from the table above according to the instructions below. [3]

a Place an *X* to show the population of organism A for each interval in the 20-day period.

b Connect the *X's* with a *dashed* line. Make a key that indicates this line represents the data for organism A.

c Place a dot in a circle to show the population of organism B for each interval in the 20-day period.

d Connect circled dots with a *solid* line. Make a key that indicates this line represents the data for organism B.

41 State a relationship that may have produced the results shown when organism A and organism B were grown together. Explain your answer, using the graphed data. [2]

42 Based on your graph, predict the population density of organism A *or* organism B at day 21. Explain your prediction. [2]

Base your answers to questions 43 through 45 on the information below and on your knowledge of science. The page of notes shown below was made by a student doing a research project about hail.

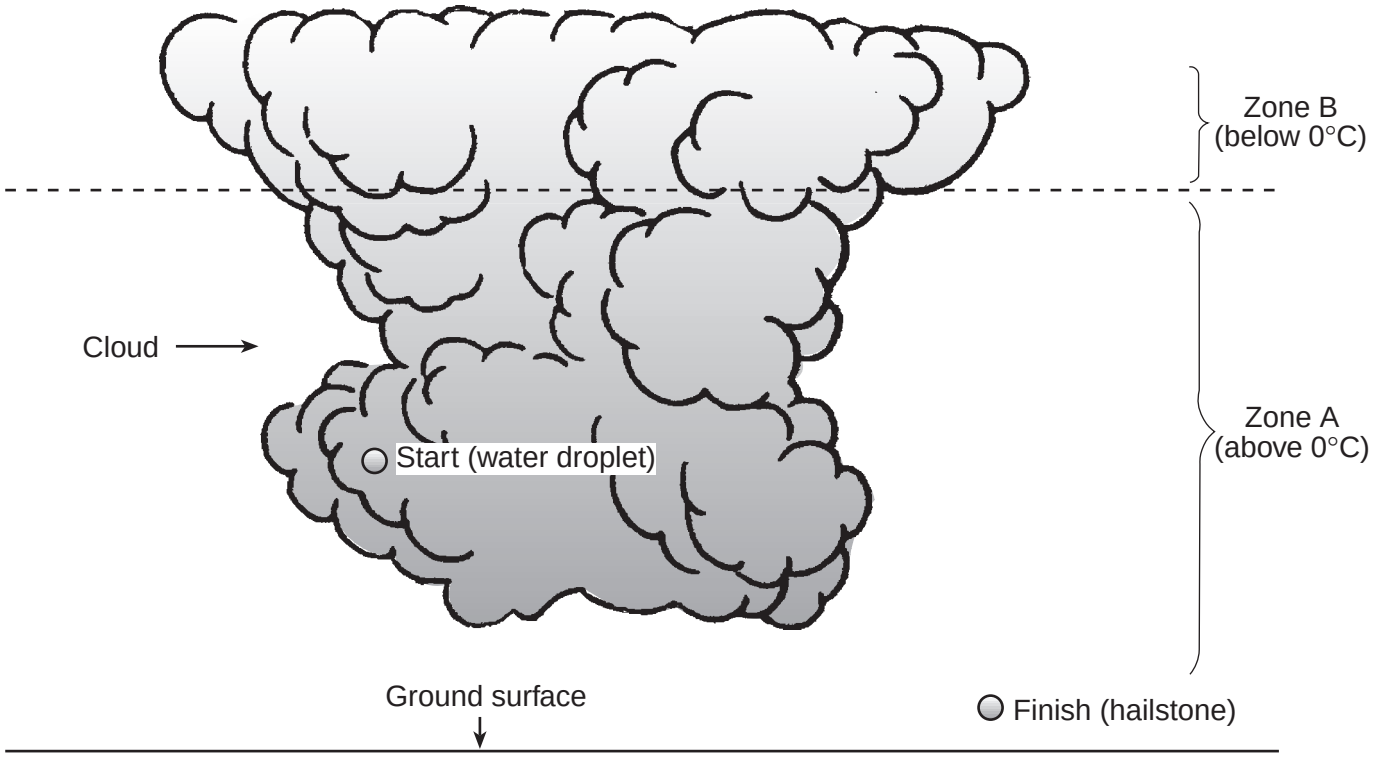
Some Observations about Hail:

1 Hailstones are fairly round in shape.
2 When cut in half or held up to the light, layers can be seen in the hailstone.
3 Average diameter of hailstones found after last summer's storms:
July 12 - 6 mm
July 26 - 9 mm
August 12 - 20 mm
August 26 - 12 mm

Background Information Found in Science Book:

1 The precipitation dropped during a hailstorm is called hailstones.
2 Hail causes damage to crops, buildings, and vehicles.
3 Hailstones are usually more than 5 mm in diameter.
4 Thunderstorms form from tall clouds which have temperatures below 0°C in their upper regions. They have strong updrafts pushing the air toward the top.
5 The layers in a hailstone are caused by the path the hail takes as it falls.
6 A new layer forms each time the hailstone is pushed into the freezing zone.

43 On the diagram on your separate answer sheet, draw a path that would produce a hailstone that has three layers. You can practice on the drawing below. Be sure your path starts and finishes at the points shown. The dotted line separates the thunderstorm into Zone A, which is above 0°C, and Zone B, which is below 0°C. When you are satisfied with your path, copy it onto the diagram on your answer sheet. Your answer will be evaluated by how well the path you have drawn could produce a three-layer hailstone. [2]



44 Based on the student's observations above, which of last summer's storms most likely had the strongest updrafts associated with it? Give two reasons to support your answer. [3]

45 Based on the background information in the student's notes above, identify one problem that can be caused by hailstorms. [1]

New York State
Intermediate-Level Science Test Sampler
Student Answer Sheet for Parts A, B, and C

Student Name _____

Directions (1–21): Each question is followed by four choices. Decide which choice is the correct answer. Mark your answer in the spaces below by writing the number of the answer you have chosen. (NOTE: A scannable answer sheet will be provided for the actual exam. This format is provided for the sampler only.)

1 _____	8 _____	15 _____
2 _____	9 _____	16 _____
3 _____	10 _____	17 _____
4 _____	11 _____	18 _____
5 _____	12 _____	19 _____
6 _____	13 _____	20 _____
7 _____	14 _____	21 _____

Directions (22–39): For each question, write your answer in the spaces below.

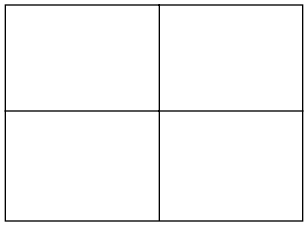
22 _____

23 _____ cm

24 _____ grams

25 _____ %

26



27 _____

28 _____

29 _____

30 _____

31 _____

32 _____

_____

33 _____

34 _____

_____

35 _____

_____

36 _____

37 _____

38 _____

39 Hypothesis:_____

_____

Factor to be varied: _____

Two factors to be held constant:

1 _____

2 _____

Procedure: _____

_____

_____

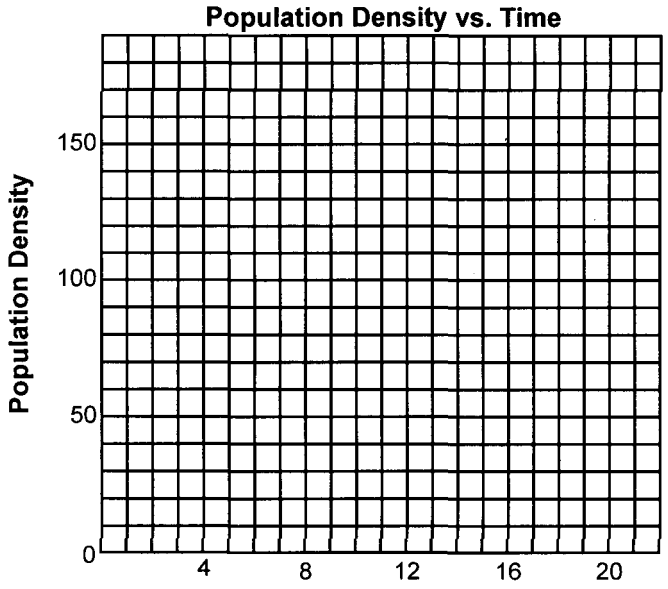
_____

_____

_____

_____

40



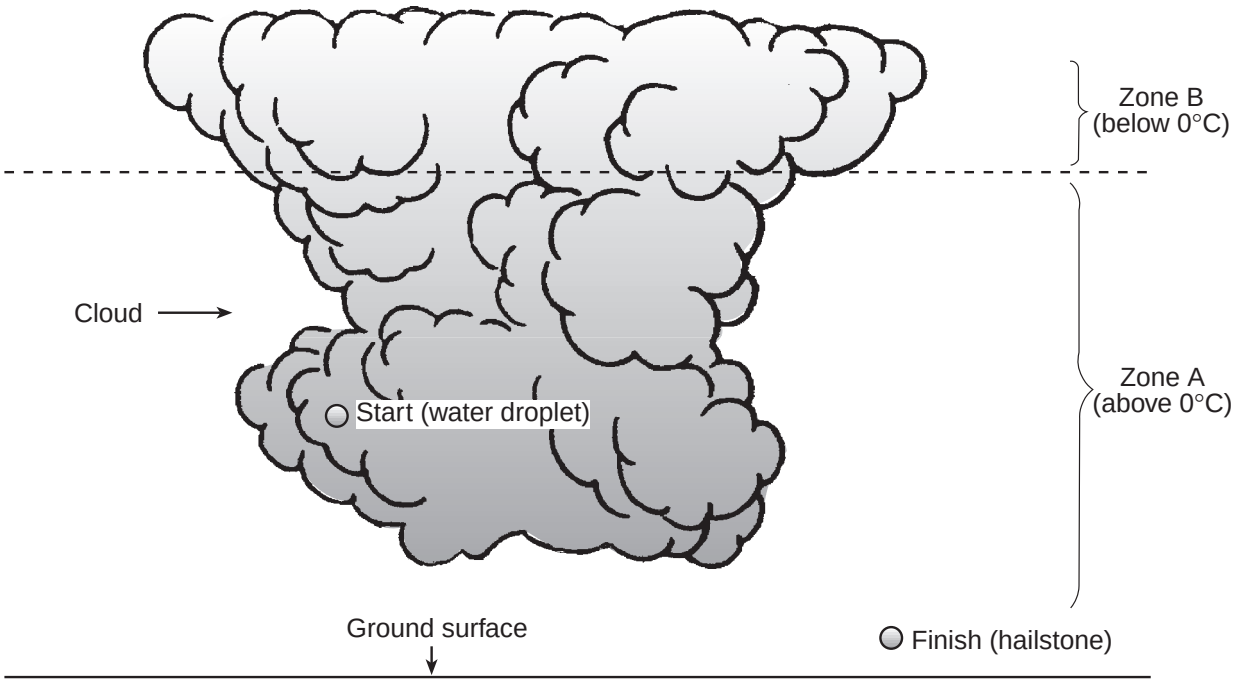
41 _____

_____

42 _____

_____

43



44 _____

_____

_____

45 _____

New York State
Intermediate-Level Science Test Sampler
Scoring Key for Multiple-Choice Questions

1	4
2	2
3	2
4	1
5	3
6	3
7	1
8	4
9	4
10	2
11	2
12	1
13	3
14	2
15	1
16	1
17	3
18	3
19	4
20	3
21	4

New York State
Intermediate-Level Science Test Sampler
Scoring Guide for Constructed Response and Extended Constructed Response Questions

22 [1] Allow 1 credit for describing a positive relationship between the mass and length. Examples:
— The more mass, the longer the spring.
— The spring gets longer if the mass increases; one depends on the other.
— There is a direct relationship between the mass and the length of the spring.

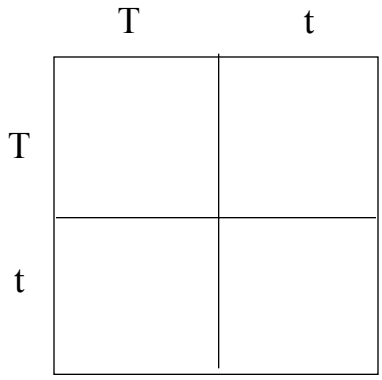
23 [1] Allow 1 credit for the answer **21 cm**.

24 [1] Allow 1 credit for the answer **2,000 grams**.

---

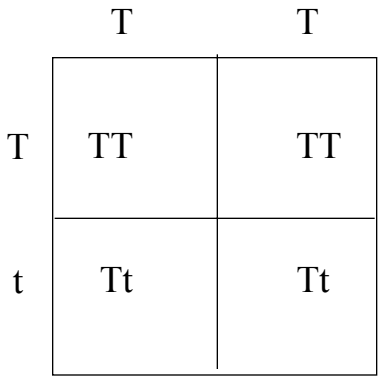
25 [1] Allow 1 credit for the answer **100%**.

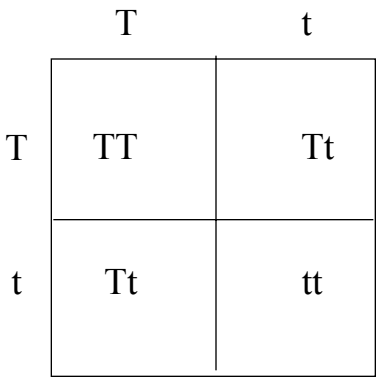
26 [2] Allow 1 credit for placing the correct genotypes on the outside of the Punnett square.



Allow 1 credit for correctly completing the Punnett square. NOTE: Base your evaluation on the information that the student provides on the outside of the square. If the student was not correct above, score this part of the question based on the genotypes the student used. This credit is awarded for an understanding of the process rather than the knowledge of genotype.

Examples:





27 [1] Allow 1 credit for the answer 2 or the answer **sexual reproduction.**

---

28 [1] Allow 1 credit for the answer **green plant.**

29 [1] Allow 1 credit for the answer **grasshopper**.

30 [1] Allow 1 credit for any of these answers:
frog
snake
owl

31 [1] Allow 1 credit for the answer **mouse.**

32 [1] Allow 1 credit for a scientifically accurate explanation.
Examples:
— If there were no snakes, there would be an increase in the number of frogs because snakes prey on frogs. If there were more frogs, there would be a decrease in the number of grasshoppers, because the frogs eat the grasshoppers.
— If there were no snakes, there would be an increase in the number of mice because snakes prey on mice. If there were more mice, there would be a decrease in the number of grasshoppers, because the mice eat the grasshoppers.

---

33 [1] Allow 1 credit for any of these answers:
asexual reproduction
mitosis
binary fission

34 [1] Allow 1 credit for an answer that explains that the daughter cell contains an exact copy of the parent's genetic material.

---

35 [1] Allow 1 credit for an answer that indicates at least one of these understandings:
A magnet can separate the mixture (iron and sulfur).
A magnet can not separate the compound (iron sulfide).
Only part of the mixture is magnetic.

36 [1] Allow 1 credit for an answer that indicates a characteristic of a chemical change. For example:
A compound was formed.
The change resulted in a new property.
The new material can not be separated by physical means.

---

37 [1] Allow 1 credit for either answer:
Chemical energy is converted to light energy; chemical to light.
Chemical energy is converted to heat energy; chemical to heat.

38 [1] Allow 1 credit for the answer:
Mechanical energy is converted to sound energy; mechanical to sound.

---

39 [5] • Allow 1 credit for an acceptable statement of the hypothesis. Examples:
— Height of bounce is affected by surface.
— The ball will bounce higher on a harder surface.

• Allow 1 credit for correctly identifying the factor to be varied—**surface of court**.

• Allow 1 credit each for a maximum of 2 credits for correctly identifying the factors to be held constant.

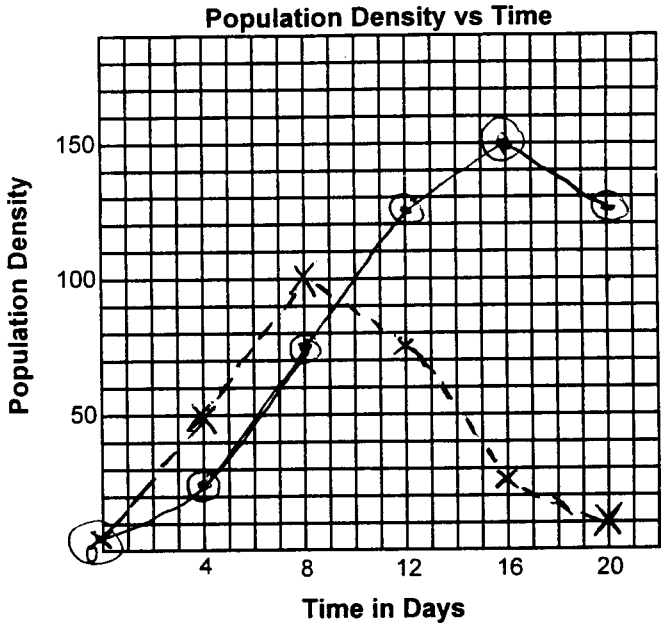
Examples:
— ball
— environmental temperature
— drop height
— other scientifically accurate answers

• Allow 1 credit if student correctly provides a clear description of the procedures.

Examples of procedures:
— Set up a meterstick on several courts made of different materials. Drop the ball from the exact same height every time. Record the height of the bounce. Repeat this test several times on each court.
— Drop a tennis ball from a 10-foot ladder onto one court and measure how high the ball bounces each time. Do the exact same thing on the other courts with different surfaces and compare the results.
— Take one tennis ball and bounce it next to a wall that has a yardstick taped to it. Bounce it several times and record how high the ball bounces each time on a chart. Go to different courts and repeat the procedure. Put all of the information into a table or a graph and come to a conclusion.
— Drop the same tennis ball 10 times from a fixed height on court A. Repeat this on court B and court C.

---

40 [3] Allow 1 credit for each of the following attributes on the student's graph:
• Line for organism A is correctly plotted (5 of 6 data points correct ±5 units).
• Line for organism B is correctly plotted (5 of 6 data points correct ±5 units).
• Student-plotted data reflects the appropriate key/graph relationship.
Example:



Key
Organism A - - - - - - -
Organism B ————

41 [2] • Allow 1 credit for the answer **competition.** Other scientifically accurate answers can also be accepted. For example:

— Organism A gives off a toxin.
— Organism A preys on organism B.

• Allow 1 credit for an explanation that supports the answer and refers to the graph. For example:

— Organism A produces a toxin that repressed the growth of organism B, reducing the population of organism B, as organism A continued to increase.

42 [2] • Allow 1 credit for an answer that is supported by the student's graph:

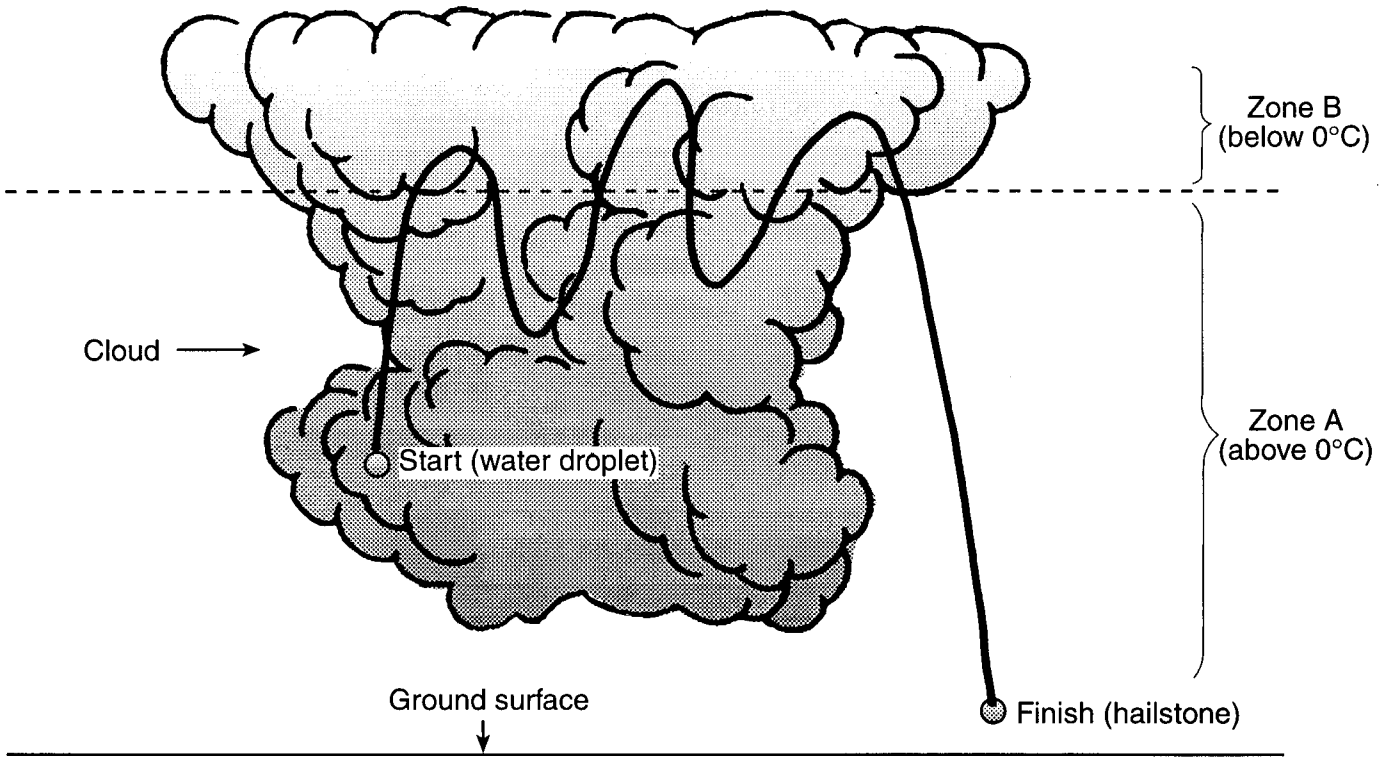
— Organism B = 0–10
— Organism A = 100–125

• Allow 1 credit for a scientifically accurate explanation. For example:

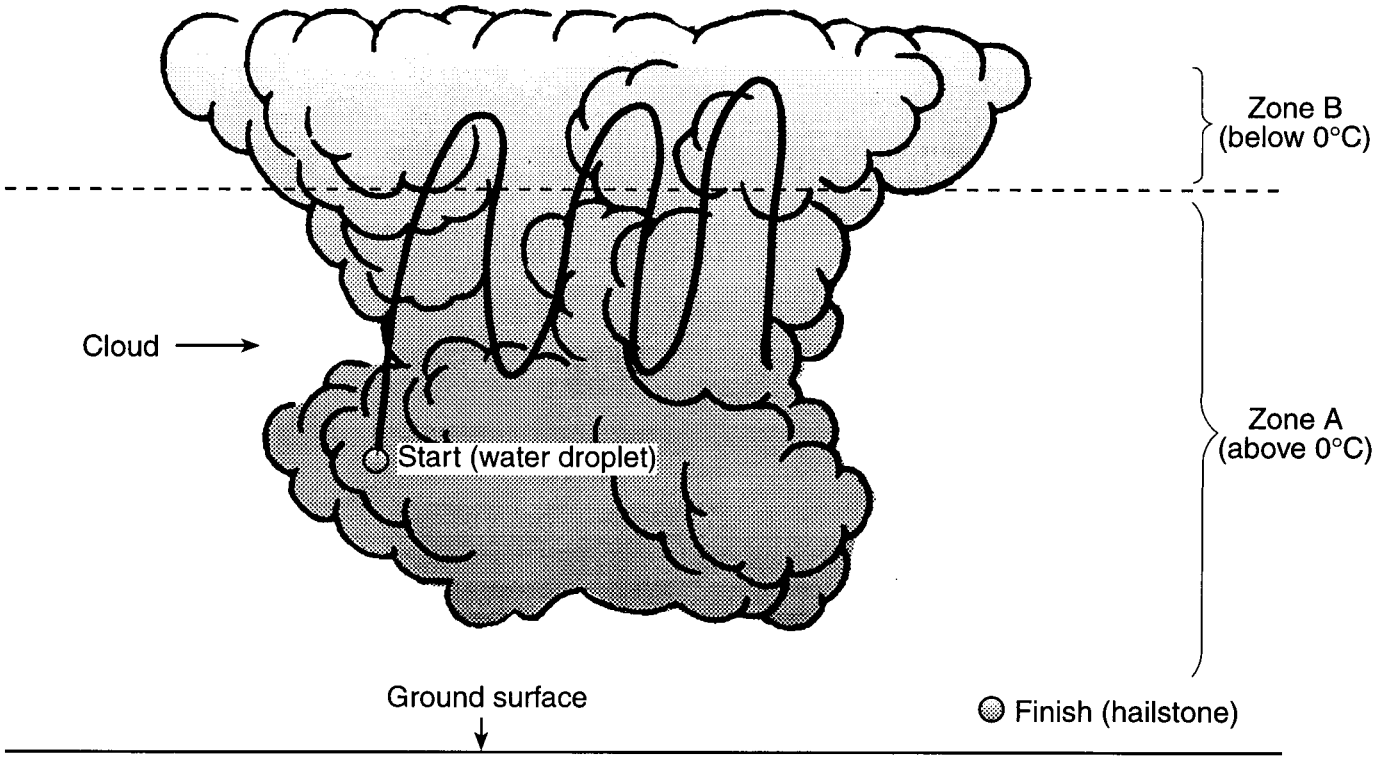
— Waste is building up.
— The graph indicates that a continued decrease should be expected.

---

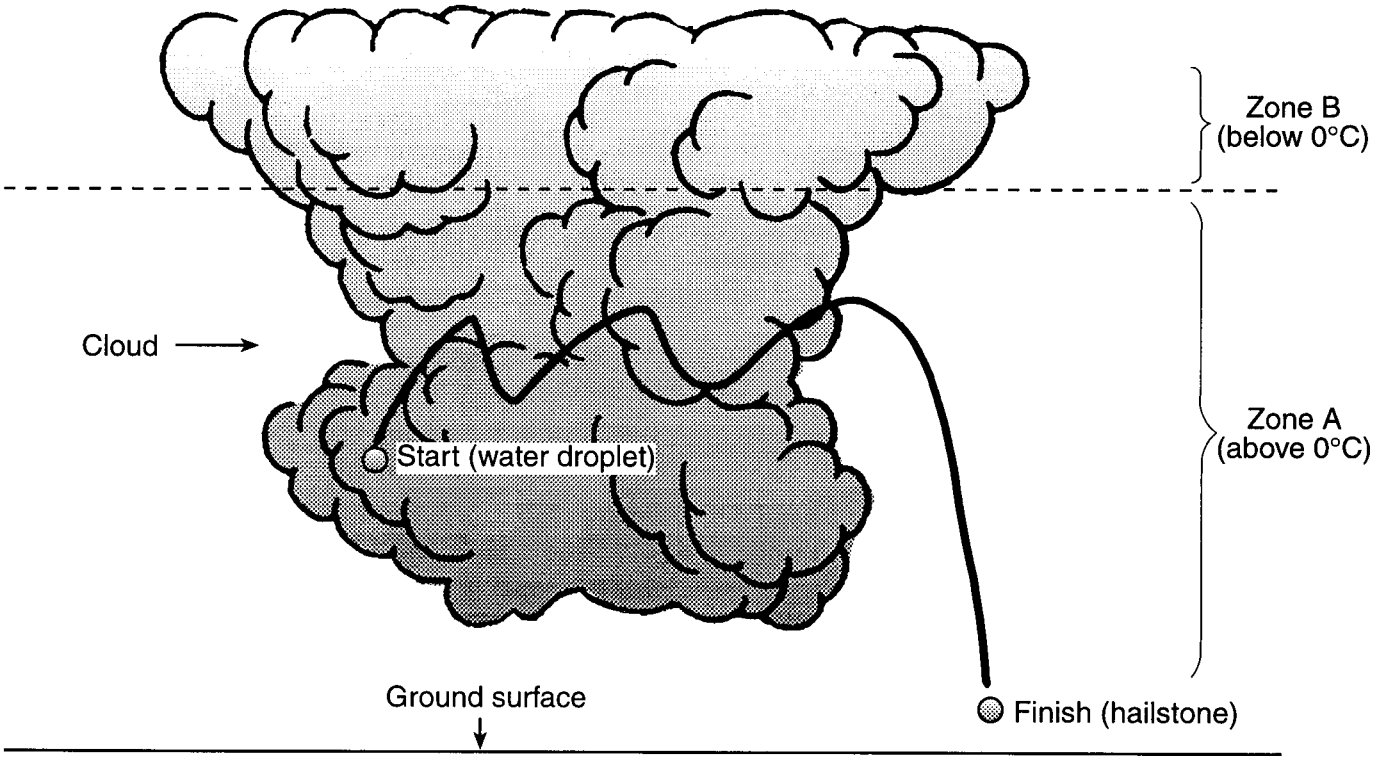
43 [2] Allow 2 credits if the student's answer provides a path drawn from the start point to the finish point and crosses into Zone B three or more times. See example below.



Allow 1 credit if the student's answer provides a path that is not drawn from the start point to the finish point but does cross into Zone B three or more times. See example below.



Allow 0 credits if the student's answer provides a path that is <u>not</u> drawn from the start point to the finish point and does not cross into Zone B at all. <u>OR</u> if the student's answer provides a path that is drawn from the start point to the finish point but does <u>not</u> cross into Zone B. See example below.



44 [3] Allow 1 credit for each of these components in the student's answer:

- the August 12 storm
- the biggest stones were on that date
- stronger updraft (more trips to the freezing zone, able to lift larger stones)

Examples:
3 credits:

— The 8/12 storm must have had the strongest updraft in order for it to lift up bigger stones multiple times.
— 8/12 - strong updrafts are needed to push the hailstones into the freezing zone. To get stones that big, it would have needed to be pushed up many times.
— 8/12 had the largest hailstones and more weight needs a bigger updraft to carry it into the freezing zone.

2 credits:

— 8/12 had the biggest hailstones.
— August 12 had the strongest updrafts and caused the most damage.
— August 12 because the hail weighed the most.

1 credit:

— The storm in August that had the biggest size of hail.
— The one on Labor Day with the biggest balls of hail.
— On August 12 it must have stayed in Zone B for awhile.

0 credits:

— On July 12 when there was less hail.
— The last summer storm was on June 21, 1998.
— Zone A because it is bigger than Zone B.

45 [1] Allow 1 credit for any of these answers: damage to crops, buildings, and vehicles. Other scientifically accurate answers can also be accepted.

New York State
Intermediate-Level Science Test Sampler
Part D, Sample Performance Test
Introduction

This performance test consists of three sample performance assessment stations (X, Y, and Z) that represent the types of tasks that will be used on Part D of the New York State Intermediate-Level Science Examination. The three sample stations represented here are intended to acquaint intermediate-level science teachers and their administrators with the protocols for preparing the equipment, setting up the stations, administering the test, and scoring Part D of the Intermediate-Level Science Examination.

Staff developers may use these sample stations to conduct regional and local in-service and preservice workshops about intermediate level performance assessments in science. Science teachers, in coordination with other members of their staff and administration, may then use each or all of the samplers, at appropriate times, as part of their local assessment program. This will help teachers become familiar with the administration and scoring procedures, and also will help students become accustomed to these testing techniques. Reviewing an individual student's performance on the tasks will provide an indication of the student's strengths and weaknesses. Examining the combined results of all the students in the class(es) will provide teachers and administrators with an indication of the overall science program's strengths and weaknesses.

The chart in Appendix B links the items on the performance test (Stations X, Y, and Z) to the "Intermediate-Level Science Core Curriculum."