THE UNIVERSITY OF THE STATE OF NEW YORK

GRADE 8

INTERMEDIATE-LEVEL TEST

SCIENCE

JUNE 2001

FOR TEACHERS ONLY

RATING GUIDE FOR WRITTEN TEST, PART II

CONVERSION TABLE

ITEM MAP

This rating guide contains detailed directions for rating student responses to Part II of the written test in Intermediate-Level Science. All raters should become familiar with the detailed directions before beginning to rate student responses.

Appendix A provides a chart that translates final scores into four performance levels. The conversion table that is needed to translate a student's raw scores on the written and performance tests to a final score is also provided.

Appendix B provides several charts that link the individual items on the test to the *Intermediate-Level Science Core Curriculum 5-8*. This core curriculum is based on the *New York State Learning Standards in Mathematics, Science, and Technology*.

NOTE: Retain this guide for future use. Do not return it to SED with the performance test materials.

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

Detailed Directions for Rating the Written Test, Part II

This guide contains detailed directions and criteria for scoring student responses to the questions in Part II of the written test. Raters should become familiar with the detailed directions and scoring criteria before beginning to score the student responses.

In rating the student responses, follow the procedure outlined below.

1. Familiarize yourself with the system your school is using for processing the answer papers and recording the test scores. For example, scores may be transferred to each student's scannable answer sheet or to the Class Record Sheet.

2. Have a test booklet on hand. Read each Part II question carefully. Note exactly what is required.

3. Carefully read the criteria provided in this guide for scoring each question. Look at the sample responses for each point value. NOTE: These samples represent actual student responses that have been transcribed.

4. In many cases, **examples** of correct responses are provided. These are just some of the possible correct responses that may be provided by the student. They are examples only. Other responses that convey the same general meaning as those given in this guide should also receive credit. You may find it helpful to discuss questionable student responses with other raters.

5. Discuss with other raters the requirements of each question and the scoring criteria. When you are certain that you clearly understand the requirements and criteria, you are ready to begin scoring the student responses.

6. It is recommended that you score all the student responses to one question before proceeding to the next question. This method helps ensure that the scoring criteria are applied consistently.

7. Students should *not* lose credit for incorrect spelling, grammar, capitalization, or punctuation.

8. In responses to questions where a specific number of answers are required (e.g., identify three materials, give two examples), if the student provides more than the required number of answers, score only the required number, in the order in which they appear.

9. Record the number of credits you allow for each question in the table provided on the back cover of the test booklet. The maximum number of credits for each question appears in the table.

10. When you have finished scoring all the Part II questions, add the credits allowed for each question to obtain the total raw score for Part II.

11. The total raw score for Part II can be transferred to the student's scannable answer sheet. Check to be certain that the student name on the test booklet matches the name on the answer sheet. Scores may also be transferred to the Class Record Sheet if your school uses it.

12. Add the student's raw score for Part II to the raw score for Part I to determine the student's total raw score for the written test. Use the conversion table in Appendix A to convert the written and performance test raw scores to a final score for the student.

36 [1] Allow 1 credit for the answer **Sun**.

37 [1] Allow 1 credit for any animal in the illustration: **fish, deer, rabbit, frog, human**

38 [1] Allow 1 credit for any green plant in the illustration. (Other scientifically correct answers are also acceptable. For example: plants, seaweed)

39 [1] Allow 1 credit for the answer **plant 2**.

40 [1] Allow 1 credit for the answer **17 ± 1**.

41 [1] Allow 1 credit for the answer **plant 1**.

42 [1] Allow 1 credit for the answer **days 15-20**.

43 [1] Allow 1 credit for a scientifically correct answer that addresses multiple specimens or multiple trials.

Correct answers include:
- Keep repeating the experiment until one plant grows the fastest several times.
- Grow more samples of each type of plant.
- Try the experiment two or more times.

44 [2] • Allow 2 credits for any statement that correctly describes a way that both the respiratory and circulatory systems contribute to gas exchange.

Correct answers include:
- The respiratory system brings oxygen into the body and the circulatory system carries oxygen to the cells.
- The circulatory system carries carbon dioxide away from the cells and the respiratory system moves carbon dioxide out of the body.
- The oxygen is brought from the lungs to the other parts of the body by the blood and it picks up CO_2 and you breathe it out.
- The air is pushed through the respiratory system and carried through the blood in the circulatory system.

• Allow 1 credit for partially correct answers:
- Oxygen is taken in by the lungs and is changed into RBCs.
- The respiratory system takes oxygen in and puts out carbon dioxide.
- You breathe in oxygen that is carried through the bloodstream to all parts of the body.

45 [1] Allow 1 credit for the answer **100%** (or an equivalent answer).

46 [2] • Allow 1 credit for a Punnett square that is correctly set up as shown below.

	R	r
R		
r		

• Allow 1 credit if the Punnett square is solved correctly. Base your rating on the student's setup, even if it was *incorrect*. If the student's Punnett square was not set up, but was completed correctly, allow 1 credit.

	R	r
R	RR	Rr
r	Rr	rr

or

RR	Rr
Rr	rr

47 [1] Allow 1 credit for the answer **50** (or an equivalent answer).

48 [1] Allow 1 credit for either answer: **sperm**, **male sex cell**
Incorrect answer: semen

49 [1] Allow 1 credit for any of these answers: **egg**, **ovum**, **female sex cell**

50 [1] Allow 1 credit for the answer **fertilization**
Incorrect answer: The sperm enters the egg.

51 [1] Allow 1 credit for any of these answers:
— cell division
— mitosis
— binary fission/fission
— cells splitting
— reproduction of the cells
— cell multiplication
Incorrect answers: duplication; the egg is breaking up; the egg is splitting; egg dividing; egg developing; egg multiplying

52 [1] Allow 1 credit, for an *X* appearing in the location indicated below. If the student uses something other than an *X* to indicate the Sun, such as the word Sun or a drawing of the Sun, allow credit as long as the location is correct.

53 [1] Allow 1 credit for the answer **C**.

54 [1] Allow 1 credit for a correct answer

Correct answers include:
— revolution
— one body orbiting/revolving around another
Incorrect answers: rotation, circular, counterclockwise

55 [1] Allow 1 credit for any scientifically accurate answer.

Correct answers include:
— very close together
— tightly packed
— touching
— close

56 [1] Allow 1 credit for any scientifically accurate answer.

Correct answers include:
— move the students a little farther apart
— tell the students to start wiggling in place
— ask the students to bump into each other

57 [1] Allow 1 credit for any scientifically accurate answer.

Correct answers include:
— moving about the room
— changing their position in the sample
— move a lot further apart
— move around faster than the solid

58 [2] Allow 1 credit for <u>each</u> accurate answer, for a maximum of 2 credits.

Correct answers include:
— destruction of water plants
— injuries from boat propellers
— pollution
— hotels and homes
— lower water levels
— losing their food source
— too many boats
— noise
— overpopulation of people
— changes in the water temperature

59 [1] Allow 1 credit for the answer **manatees eat plant material only** (or other similar answers).

60 [1] Allow 1 credit for a scientifically accurate answer relating to the external features of the manatee.

Correct answers include:
— fins or flippers
— flat tail-like appendage
— streamlined dolphin-like shape
— position of the nostrils
— rubbery skin (or other accurate description of the skin)

<u>Incorrect</u> answers: surface to breathe every 15 minutes, blubber (not an external feature)

61 [2] *a* Allow 1 credit if 8-10 data points are plotted correctly (± 1 °C).
If the student uses something other than an *X* to indicate the data points, allow credit as long as the data points are clearly visible.

b Allow 1 credit if a line connects the data points.
Example:

62 [1] Allow 1 credit for a scientifically appropriate title for the graph**.**
Correct answers include:
— Temperature of a Substance during a Phase Change
— Temperature of a Substance at Various Times
— Temperature of a Solid Being Heated
— Temperature of a Solid under Constant Heat
— Time versus Temperature

63 [1] Allow one credit for a correct answer based on the student's graph (± 1).
For example, based on the graph above, the correct answer is 31 ± 1.

64 [1] Allow one credit for the answer **time**.

65 [1] Allow one credit for a scientifically correct answer that addresses melting; phase change.
Correct answers include:
— that is when the heat was changing it from a solid to a liquid
— it was melting during that time

66 [6] Allow 1 credit for each correct condition up to a maximum of 3 credits and 1 credit for each correctly paired reason, up to a maximum of 3 credits.

Examples (2 credits for each correct condition and corresponding reason):

a **Condition to be Held Constant**	*b* **Reason**
The containers should be the same size.	A larger container might not cool as fast.
The containers should be made of the same material.	Some materials absorb heat better than others do.
The containers should have the same shape.	The surface area will affect the cooling rate.
The containers should be placed in the same spot in the freezer.	It might be colder at the sides of the freezer.
The containers should be left in the freezer for the same amount of time.	The time could be the reason for the freezing rather than the temperature.
The containers should both be covered or not covered.	If the container is covered, it might not cool as fast as one that is not covered.
The containers should both have the same water/water from the same source.	Tap water might cool at a different rate than water with no impurities in it.
The containers should be set on the same surface in the freezer.	One surface material might conduct heat better than another might, so cooling would be different.

NOTE: Do not allow credit for column *a* if the student lists conditions already provided in the setup – equal masses, same freezer. In this case, 1 credit can be given for a correct reason in column *b*.

67 [1] Allow 1 credit for the answer **decrease.**

68 [1] Allow 1 credit for the answer **increase**.

69 [1] Allow 1 credit for the answer **decrease**.

70 [1] Allow 1 credit for any accurate similarity.

Correct answers include:
— begins with producers/plants
— energy flows in one direction
— transfer of matter from one organism to another
— show what eats what
— Sun is the energy source

71 [1] Allow 1 credit for any accurate difference.

Correct answers include:
— The energy pyramid shows that the amount of energy changes between levels.
— The energy pyramid shows that energy is lost between stages.
— The energy pyramid shows relative population sizes.
— The food chain does not show energy lost between stages.
— The energy pyramid shows that energy is released into the environment.

72 [1] Allow 1 credit, for a maximum of 2 credits, for <u>each</u> of these components:

a A correct reason for increased usage is provided, along with specific examples, such as increased use of technology and increased population.

b Correctly describes a method of conserving fossil fuels.

Correct conservation measures include:
— lowering thermostats
— replacing windows
— using a wood stove
— educational campaign about lowering electricity use
— use alternative energy sources
— use public transportation/car pool
— turning off lights
— using energy efficient appliances

Appendix A

New York State Grade 8 Intermediate-Level Science Test
June 2001

Performance Levels Chart

Conversion Table for Determining a Student's Final Test Score
(NOTE: Use for June 2001 test only.)

The chart on the next page defines the four performance levels for this test. The state-designated level of performance for this test is a final score of 65 or higher (level 3 and 4). Students scoring below 65 (levels 1 and 2) must be provided with academic intervention services according to section 100.2(ee)(i) of the Regulations of the Commissioner of Education. The chart provides the score intervals and a brief description of student abilities at each level.

The conversion table is presented on the four pages following the performance levels chart. Be sure to use the correct portion of the table. To determine the student's final test score, locate the student's raw score for the performance test across the top of the table and the student's raw score for the written test down the left side of the table. The point where those two scores intersect is the student's final test score. For example, a student receiving a performance test raw score of 32 and a written test raw score of 61 would receive a final test score of 80.

Performance Levels
Grade 8 Intermediate-Level Science Test

Level	Score Range	Description of Student Performance
4	85 – 100	**Meeting the Standards with Distinction** • Student demonstrates superior understanding of the intermediate-level science content and concepts for each of the learning standards and key ideas assessed. • Student demonstrates superior intermediate-level science skills related to each of the learning standards and key ideas assessed. • Student demonstrates superior understanding of the intermediate-level science content, concepts, and skills required for a secondary academic environment.
3	65 – 84	**Meeting the Standards** • Student demonstrates understanding of the intermediate-level science content and concepts for each of the learning standards and key ideas assessed. • Student demonstrates the science skills required for intermediate-level achievement in each of the learning standards and key ideas assessed. • Student demonstrates understanding of the intermediate-level science content, concepts, and skills required for a secondary academic environment.
2	44 – 64	**Not Fully Meeting the Standards** • Student demonstrates only minimal proficiency in intermediate-level science content and concepts in most of learning standards and key ideas assessed. • Student demonstrates only minimal proficiency in the skills required for intermediate-level achievement in most of the learning standards and key ideas assessed. • Student demonstrates marginal understanding of the science content, concepts, and skills required for a secondary academic environment.
1	0 – 43	**Not Meeting the Standards** • Student is *unable* to demonstrate understanding of the intermediate-level science content and concepts in most of the learning standards and key ideas assessed. • Student is *unable* to demonstrate the science skills required for intermediate-level achievement in most of the learning standards and key ideas assessed. • Student is *unable* to demonstrate evidence of the basic science knowledge and skills required for a secondary academic environment.

Appendix B

New York State Grade 8 Intermediate-Level Science Test

Reference to *Intermediate-Level Science Core Curriculum Grades 5-8*

Reference to Process Skills in core curriculum, pages 10-11

Reference to Core Curriculum for Individual Test Questions

(Note: core curriculum is based on *NYS Learning Standards for Mathematics, Science, and Technology*)

Reference to *Intermediate-Level Science Core Curriculum Grades 5-8*

NYS Learning Standards for Mathematics, Science, and Technology Standard/Area	*NYS Learning Standards for Mathematics, Science, and Technology* Key Idea	Performance Test Form A Item Number			June 2001 Written Test Item Number
		Station 1	Station 2	Station 3	
Standard 1 Scientific Inquiry Key Idea 1 The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process.	**1.1** Formulate questions independently with the aid of references appropriate for guiding the search for explanations of everyday observations.	2 3			
	1.2 Construct explanations independently for natural phenomena, especially by proposing preliminary visual models of phenomena.		8	4	
	1.3 Represent, present, and defend their proposed explanations of everyday observations so that they can be understood and assessed by others.		7 8	5 7	
	1.4 Seek to clarify, to assess critically, and to reconcile with their own thinking the ideas presented by others, including peers, teachers, authors, and scientists.		7		
Standard 1 Scientific Inquiry Key Idea 2 Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.	**2.1** Use conventional techniques and those of their own design to make further observations and refine their explanations, guided by a need for more information.	3 4 5 6		1 2	52, 53, 54, 55, 56, 57, 66
	2.2 Develop, present, and defend formal research proposals for testing their own explanations of common phenomena, including ways of obtaining needed observations and ways of conducting simple controlled experiments.	2 3 4			64
	2.3 Carry out their research proposals, recording observations and measurements (e.g., lab notes, audiotape, computer disk, videotape) to help assess the explanation.	1 3 4	1 2 3	1 2 4	
Standard 1 Scientific Inquiry Key Idea 3 The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena.	**3.1** Design charts, tables, graphs and other representations of observations in conventional and creative ways to help them address their research question or hypothesis.	1 3 5	2 8		1 61 62
	3.2 Interpret the organized data to answer the research question or hypothesis and to gain insight into the problem.	1	4 5 6	4, 5, 6, 7, 8	39, 40, 41, 42, 43, 63
	3.3 Modify their personal understanding of phenomena based on evaluation of their hypothesis.			5	
Standard 1 Mathematical Analysis	**1** Abstraction and symbolic representation are used to communicate mathematically.		3 8		
	2 Deductive and inductive reasoning are used to reach mathematical conclusions.		4, 5, 6, 7		63
	3 Critical thinking skills are used in the solution of mathematical problems.				

NYS Learning Standards for Mathematics, Science, and Technology Standard/Area	*NYS Learning Standards for Mathematics, Science, and Technology* Key Idea	Performance Test Form A Item Number			June 2001 Written Test Item Number
		Station 1	Station 2	Station 3	
Standard 1 Engineering Design	1.1- 1.5				
Standard 2 Information Systems	1.1 - 1.5				
	2.1 - 2.3				
	3.1 - 3.3				
Standard 4 Physical Setting	1 Earth and celestial phenomena can be described by principles of relative motion and perspective.				17, 18, 19, 52, 53, 54
	2 Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land.				20, 21, 22, 33, 34
	3 Matter is made tip of particles whose properties determine the observable characteristics of matter and its reactivity.				23, 26, 27, 35, 55, 56, 57, 66
	4 Energy exists in many forms, and when these forms change energy is conserved.				10, 24, 25, 28, 30, 31, 56, 62, 65, 66, 72
	5 Energy and matter interact through forces that result in changes in motion.				29, 32
Standard 4 Living Environment	1 Living things are both similar to and different from each other and from nonliving things.				2, 3, 4, 7, 16, 39, 40, 41, 42, 43, 44
	2 Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring.				8, 45, 46, 47
	3 Individual organisms and species change over time.				5, 11, 58, 60
	4 The continuity of life is sustained through reproduction and development.				6, 12, 15, 48, 49, 50, 51
	5 Organisms maintain a dynamic equilibrium that sustains life.				13, 14, 16, 37, 59, 60
	6 Plants and animals depend on each other and their physical environment.				5, 36, 37, 38, 67, 68, 69, 70, 71
	7 Human decisions and activities have had a profound impact on the physical and living environment.				9, 10, 58, 67, 68, 69, 72

NYS Learning Standards for Mathematics, Science, and Technology Standard/Area	*NYS Learning Standards for Mathematics, Science, and Technology* Key Idea	Performance Test Form A Item Number			June 2001 Written Test Item Number
		Station 1	Station 2	Station 3	
St 6 – Systems Thinking	1.1 – 1.4 Through systems thinking, people can recognize the commonalties that exist among all systems ands how parts of a system interrelate and combine to perform specific functions.				36, 37, 38 (key idea 1.4)
St 6 – Models	2.1 - 2.3 Models are simplified representations of objects, structures, or systems used in analysis, explanation, interpretation, or design.	1 2 3 4	3 8	4	52, 53, 54 (key idea 2.2)
St 6 – Magnitude and Scale	3.1 – 3.2 The grouping of magnitudes of size, time, frequency, and pressure or other units of measurement into a series of relative order provides a useful way to deal with the immense range and the changes in scale that affect the behavior and design of systems.				
St 6 – Equilibrium and Stability	4.1 - 4.2 Equilibrium is a state of stability due either to a lack of change (static equilibrium) or a balance between opposing forces (dynamic equilibrium).				
St 6 – Patterns of Change	5.1 - 5.2 Identifying patterns of change is necessary for making predictions about future behavior and conditions.		3, 4, 5, 6, 7	6, 7	
St 6 – Optimization	6.1 - 6.2 In order to arrive at the best solution that meets criteria within constraints, it is often necessary to make trade-offs.				
Standard 7 Interdisciplinary PS	1.1 – 1.4 Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.				72 (key idea 1.1)

Intermediate-Level Science Core Curriculum Grades 5-8
Reference to Process Skills Based On Standard 4 (see pages 10-11)

	Process Skills	Performance Test Form A			June 2001 Written Test Item Number
		Station 1	Station 2	Station 3	
General Skills	1. follow safety procedures in the classroom and laboratory				
	2. safely and accurately use the following measurement tools: metric ruler, balance, stopwatch, graduated cylinder, thermometer, spring scale, voltmeter		1		
	3. use appropriate units for measured or calculated values			1, 2, 3	
	4. recognize and analyze patterns and trends		7, 8		45, 46
	5. classify objects according to an established scheme and a student-generated scheme				47
	6. develop and use a dichotomous key	1 – 5, 9			
	7. sequence events				48, 49, 50, 51
	8. identify cause-and-effect relationships		4, 5, 6	6, 7, 8	
	9. use indicators and interpret results				
Living Environment Skills	1. manipulate a compound microscope to view microscopic objects	6			
	2. determine the size of a microscopic object, using a compound microscope	7			
	3. prepare a wet mount slide				
	4. use appropriate staining techniques				
	5. design and use a Punnett square or a pedigree chart to predict the probability of certain traits				45, 46, 47
	6. classify living things according to a student-generated scheme and an established scheme				
	7. interpret and/or illustrate the energy flow in a food chain, energy pyramid, or food web				
	8. identify pulse points and pulse rates				
	9. identify structure and function relationships in organisms				
Physical Setting Skills	1. given the latitude and longitude of a location, indicate its position on a map and determine the latitude and longitude of a given location on a map				
	2. using identification tests and a flow chart, identify mineral samples				
	3. use a diagram of the rock cycle to determine geological processes that led to the formation of a specific rock type				
	4. plot the location of recent earthquake and volcanic activity on a map and identify patterns of distribution				
	5. use a magnetic compass to find cardinal directions				
	6. measure the angular elevation of an object, using appropriate instruments				
	7. generate and interpret field maps including topographic and weather maps				
	8. predict the characteristics of an air mass based on the origin of the air mass				
	9. measure weather variables such as wind speed and direction, relative humidity, barometric pressure, etc.				
	10. determine the density of liquids, and regular- and irregular-shaped solids			3	
	11. determine the volume of a regular- and an irregular-shaped solid, using water displacement				
	12. using the periodic table, identify an element as a metal, nonmetal, or noble gas				
	13. determine the identity of an unknown element, using physical and chemical properties				
	14. using appropriate resources, separate the parts of a mixture				
	15. determine the electrical conductivity of a material, using a simple circuit				
	16. determine the speed and acceleration of a moving object				

Grade 8 Intermediate-Level Science Test – June 2001 test
Reference to Core Curriculum for Individual Test Questions

Item #	MST Learning Standard	Area within Standard 4 (PS or LE)	Major Understanding	Other Standards or Understandings	Process Skills Based on Standard 4 (p 10-11)
1	1		S3.1	PS	
2	4	LE	1.1c	LE 1.1h	
3	4	LE	1.1e		
4	4	LE	1.2g		
5	4	LE	3.2a	LE 6.1b	
6	4	LE	4.3d		
7	4	LE	1.2h		
8	4	LE	2.1a	LE 2.1c	
9	4	LE	7.2d		
10	4	LE	7.2d	PS 4.1b	
11	4	LE	3.2d		
12	4	LE	4.4a		
13	4	LE	5.1c		
14	4	LE	5.2a		
15	4	LE	4.3e		
16	4	LE	5.1f	LE 1.2e	
17	4	PS	1.1a		
18	4	PS	1.1h		
19	4	PS	1.1e	PS 1.1h	
20	4	PS	2.1i		
21	4	PS	2.1e		
22	4	PS	2.2g		
23	4	PS	3.1a		
24	4	PS	4.2c		
25	4	PS	4.1a	PS 4.1b	
26	4	PS	3.1a		
27	4	PS	3.2c	PS 3.2a, 3.2e	
28	4	PS	4.4b		
29	4	PS	5.2e	PS 5.2g	
30	4	PS	4.4a		
31	4	PS	4.5b		
32	4	PS	5.1b		
33	4	PS	2.2o		
34	4	PS	2.1b		
35	4	PS	3.3f		
36	4	LE	6.1a	St 6 1.4	
37	4	LE	5.1d	LE 6.1a; St 6 1.4	
38	4	LE	6.2a	LE 6.1a; St 6 1.4	

Grade 8 Intermediate-Level Science Test – June 2001 test
Reference to Core Curriculum for Individual Test Questions

Item #	MST Learning Standard	Area within Standard 4 (PS or LE)	Major Understanding	Other Standards or Understandings	Process Skills Based on Standard 4 (p 10-11)
39	1		S3.2h	St 4 LE 1.1b	
40	1		S3.2h	St 4 LE 1.1b	
41	1		S3.2h	St 4 LE 1.1b	
42	1		S3.2h	St 4 LE 1.1b	
43	1		S3.2g	St 4 LE 1.1b	
44	4	LE	1.2b	LE 1.2d, 1.2f	
45	4	LE	2.2c		GS 4; LE 5
46	4	LE	2.2c		GS 4; LE 5
47	4	LE	2.2c		GS 4; LE 5
48	4	LE	4.2a		GS 7
49	4	LE	4.2a		GS 7
50	4	LE	4.2b		GS 7
51	4	LE	4.3a		GS 7
52	4	PS	1.1g	LE 1.1c; St 6 2.2; St 1 S2.1d	
53	4	PS	1.1g	St 6 2.2; St 1 S2.1d	
54	4	PS	1.1g	St 6 2.2; St 1 S2.1d	
55	4	PS	3.1f	PS 3.1c, St 1 S2.1b	
56	4	PS	4.2b	PS 3.1c; St 1 S1.2b	
57	4	PS	3.1e	PS 3.1c, St 1 S1.2b	
58	4	LE	3.1b	LE 7.1b	
59	4	LE	5.1e		
60	4	LE	3.1b	LE 5.1g	
61	1		S3.1a		
62	4	PS	4.2c	St 1 S3.1a	
63	1		3.2f	M2.1A	
64	1		2.2d		
65	4	PS	4.2c		
66	1		2.1c	St 1 S2.2c, S2.2d; PS 4.2a, 4.2b, 3.1a	
67	4	LE	6.1a	LE 7.1b	
68	4	LE	6.1a	LE 7.1b	
69	4	LE	6.1a	LE 7.1d	
70	4	LE	6.1a		
71	4	LE	6.1a		
72	4	PS	4.1a	PS 4.1b; LE 7.2c, 7.2d; St 7 1.1	