

Iowa Test of Basic Skills – Science
Levels 9, 10, 14; Grades 3, 4, 8
Growing in the Garden and Where We Live

Test Question – Content Knowledge	Growing in the Garden (G) and Where We Live (W) Lessons	National Standard (ITBS Content Skills)	Test Question – Thinking Skills (summarizing, synthesizing, inferring, sequencing, analyzing, evaluating, determining importance, visualizing, applying)
Grade 3, Level 9			
#1	W-Rock Bottom; Get Down, Get Dirty	Earth Science – properties of Earth materials (Earth and Space Science- changes in and around earth)	Analyzing, summarizing, sequencing, determining importance, visualizing, applying, synthesizing ,inferring
#2	W-Fuel Up!	Earth Science – Objects in the sky Physical Science – light, heat (Physical Science – energy)	Synthesizing, analyzing, determining importance, visualizing, evaluating, applying, inferring, summarizing
#4	(Washing hands is part of many lessons.) W-Food Safety	Life Science- Organisms and environments Personal and Social Perspectives- personal health (Life science-structures of living things)	Analyzing, sequencing, applying, visualizing, inferring, determining importance
#7	W-Get Down, Get Dirty, Land of the Tall Grass, The Value of Trees	Earth Science – properties of Earth materials (Earth and Space Science- universe)	Analyzing, summarizing, sequencing, determining importance, visualizing, applying, synthesizing ,inferring
#8	G-Life in the Garden, Butterfly Garden, Garden Patrol, Grow a Butterfly Garden W- Planting Food Webs	Life Science- characteristics of organisms (Life Science-structures of living things)	Synthesizing, analyzing, visualizing, applying, sequencing, evaluating, determining importance

#9	G- Water and Light; Sun, Soil, Water, and Air; Sunflower House; Claude Monet; Salad Garden; What's Up With Plants? Grow a Butterfly Garden; Thomas Jefferson; Germination; Photosynthesis; Windowsill Herb Garden; Salsa and Herb Gardens W- Planting Prairies, Corn, and Native Trees; We Depend on One Another; Fuel Up! Planting Food Webs; It's About Survival ;Gardening With a Purpose	Earth and Space Science – Objects in the sky, Changes in earth and sky (Earth and Space –universe)	Summarizing, synthesizing ,inferring, sequencing, analyzing, evaluating, determining importance, visualizing, applying
#14	W- Animals on the Move; Using the Past to Get to the Future; We Depend on One Another	Life Science- Organisms and Environment, Populations and Ecosystems (Life Science-life cycles)	Sequencing, inferring, analyzing, evaluating, applying, determining importance
#15	W- Water Quality	Science and Personal and Social Perspectives (Earth and Space Science-changes in and around Earth)	Synthesizing, applying, visualizing, analyzing, inferring, evaluating, determining importance, sequencing
#18	G-Life in the Garden, Butterfly Garden, Garden Patrol, Grow a Butterfly Garden W- Planting Food Webs	Life Science- characteristics of organisms (Life Science-structures of living things)	Synthesizing, analyzing, visualizing, applying, sequencing, evaluating, determining importance
#20	G- Start With Seeds; Water and Light; Sun, Soil, Water, and Air; Sunflower House; Salad Garden; Grow a Butterfly Garden; Germination; Windowsill Herb Garden; Salsa and Herb Garden	Life Science – characteristics of organisms (Life Science-life cycles)	Evaluating, sequencing, analyzing, applying, inferring, determining importance, visualizing, synthesizing
#21, 22	G- Water and Light; Butterfly Garden; Germination W- You're in my Space	Life Science – life cycles of organisms (Life Science-life cycles)	Visualizing, sequencing, analyzing, inferring
#23	G- What's Up With Plants?	Physical Science – position and motion of objects (Physical Science-mechanics, forces, and motion)	Analyzing, inferring, summarizing, determining importance

#24	G- Mud Pies and Soil Ribbons; Be Loyal to the Soil; Keeping Soil Alive W- Get Down, Get Dirty; Iowa's #1 Natural Resource	Earth and Space Science – properties of earth materials (Earth and Space Science - Earth's composition and structure)	Evaluating, analyzing, inferring, sequencing, determining importance, applying, visualizing
#27-30	G- Water and Light; Sunflower House; Salad Garden; Keeping Soil Alive; Grow a Butterfly Garden; Thomas Jefferson; Germination	Science as Inquiry- abilities and understanding about scientific inquiry (#27,28 Scientific Inquiry- processes and skills; #29,30 Scientific Inquiry- analysis and interpretation)	Sequencing, evaluating, applying, visualizing, summarizing, inferring, determining importance, synthesizing
GRADE 4, Level 10			
#1	W- Water Quality	Science and Personal and Social Perspectives (Earth and Space Science- changes in and around earth)	Synthesizing, applying, visualizing, analyzing, inferring, evaluating, determining importance, sequencing
#4	G-Life in the Garden, Butterfly Garden, Garden Patrol, Grow a Butterfly Garden W- Planting Food Webs	Life Science- characteristics of organisms (Life Science-structures of living things)	Synthesizing, analyzing, visualizing, applying, sequencing, evaluating, determining importance
#6	G- Start With Seeds; Water and Light; Sun, Soil, Water, and Air; Sunflower House; Salad Garden; Grow a Butterfly Garden; Germination; Windowsill Herb Garden; Salsa and Herb Garden	Life Science – characteristics of organisms (Life Science-life cycles)	Evaluating, sequencing, analyzing, applying, inferring, determining importance, visualizing, synthesizing
#7, 8	G- Water and Light; Butterfly Garden; Germination W- You're in my Space	Life Science – life cycles of organisms (Life Science-life cycles)	Visualizing, sequencing, analyzing, inferring
#9	G- What's Up With Plants?	Physical Science – position and motion of objects (Physical Science-mechanics, forces, and motion)	Analyzing, inferring, summarizing, determining importance
#10	G- Mud Pies and Soil Ribbons; Be Loyal to the Soil; Keeping Soil Alive W- Get Down, Get Dirty; Iowa's #1 Natural Resource	Earth and Space Science – properties of earth materials (Earth and Space Science-earth's composition and structure)	Evaluating, analyzing, inferring, sequencing, determining importance, applying, visualizing

#13-16	G- Water and Light; Sunflower House; Salad Garden; Keeping Soil Alive; Grow a Butterfly Garden; Thomas Jefferson; Germination	Science as Inquiry- abilities and understanding about scientific inquiry (#13,14 Scientific Inquiry- processes and skills; #15,16 Scientific Inquiry- analysis and interpretation)	Sequencing, evaluating, applying, visualizing, summarizing, inferring, determining importance, synthesizing
#17	G- Butterfly Garden W – Animals on the Move, We Depend on One Another	Life science-organisms and environments (Life Science- interactions and adaptations)	Sequencing, inferring, visualizing, applying
#18	G- Be Loyal to the Soil W- Iowa’s #1 Natural Resource; Land of the Tall Grass; Using the Past to Get to the Future; Life With the Land; Water Quality; It’s About Survival	Earth and Space Science- properties of earth materials (Earth and Space Science- changes in and around earth)	All apply
#20	W- Animals on the Move; Using the Past to Get to the Future; We Depend on One Another	Life Science- organisms and environment, populations and ecosystems (Life Science-life cycles)	Sequencing, inferring, analyzing, evaluating, applying, determining importance
#22	G- Be Loyal to the Soil W- Iowa’s #1 Natural Resource; Water Quality	Earth and Space Science- properties of earth materials (Earth and Space Science – earth’s composition and structure)	Visualizing, analyzing, evaluating, determining importance, inferring
#23-25	G- Germination; Thomas Jefferson W- Something Old, Something New; Planting Food Webs; Gene Pools	Science as Inquiry – abilities and understandings (Science Inquiry - #23 analysis and interpretation, #24,25 processes and skills)	All apply
#30	W- Rock Bottom; Get Down, Get Dirty; Iowa’s #1 Natural Resource	Earth and space science – structure of the earth system (Earth and Space Science – Earth’s composition and structure)	Visualizing, sequencing, analyzing, determining importance, applying
Grade 8, Level 14			

#1-4, 9-13, 22-26, 27-32 Questions about scientific inquiry	W- Planting Prairie, Corn and Native Trees; Something Old, Something New, All Things for You; Gene Pools; We Depend on One Another; Fuel Up!; Food Safety-Food to Table; Planting Food Webs; You're in my space! Iowa's #1 Natural Resource; Water Quality; Animal Care; It's About Survival; Gardening with a Purpose	Science as Inquiry- abilities and understandings (Scientific Inquiry- #1, 2, 9, 10, 22-24 processes and skills, #3, 4, 11-13, 25, 26 analysis and interpretation)	All apply
#16	W- We Depend on One Another; Fuel Up!	Life Science-structure and function in living systems (Life Science-structures of living things)	Visualizing, applying, sequencing, determining importance, analyzing, inferring
#19	W- Gene Pools	Life Science-reproduction and heredity (Life Science-life cycles)	Applying, summarizing, analyzing, inferring, determining importance
#34	W- Rock Bottom; Get Down, Get Dirty; Iowa's #1 Natural Resource; Water Quality; It's About Survival;	Earth and Space science-Earth's history (Earth and Space- changes in and around Earth)	Synthesizing, analyzing, inferring, sequencing, visualizing, determining importance
#36	W- Water Quality	Physical science-properties and changes in matter (Earth and Space- changes in and around Earth)	All apply
#41	W- We Depend on One Another; Fuel Up!	Life Science – structures and functions in living systems (Life Science- structures of living things)	Visualizing, applying, sequencing, determining importance, analyzing, inferring

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Level 9 (Grade 3) Sciences

ITBS question	FLP Lesson	Test Question – Content skills	National Standards	Content/Thinking Skills
1	None			
2	Gift from the Sun	Physical Science: Energy	Physical Science- Light, heat, electricity, and magnetism	Synthesizing Applying
3	None			
4	Germ Busters; To Whom it May Concern; Could it Be Something they ate?	Life Science: Structures of Living Things	Life Science – Organisms and environments	Analyzing Inferring
5	None			
6	None			
7	Perc through the Pores	Earth and Space Science: The Universe	Earth and Space Science – Objects in the sky	Visualizing, Inferring
8	None			
9	Seasons through the year	Earth and Space Science: The Universe	Earth and Space Science – Objects in the sky, -Changes in Earth and sky	Visualizing, Sequencing,
10	Calorie Counting; Till We or Won't We? We're into Pumpkins; Your School Ground through New Eyes	Scientific Inquiry: processes and skills	Science as Inquiry -Abilities necessary to do scientific inquiry	Inferring, Analyzing

11	Calorie Counting; Till We or Won't We? We're into Pumpkins; Your School Ground through New Eyes	Scientific Inquiry: Processes and skills	Science as Inquiry -Abilities necessary to do scientific inquiry; -	Inferring, Analyzing
12	Calorie Counting; Till We or Won't We? We're into Pumpkins; Your School Ground through New Eyes	Scientific Inquiry: Analysis and interpretation	Science as Inquiry -Understanding scientific inquiry	Inferring, Analyzing
13	Calorie Counting; Till We or Won't We? We're into Pumpkins, Your School Ground through New Eyes	Scientific Inquiry: Analysis and interpretation	Science as Inquiry -Understanding scientific inquiry	Inferring, Analyzing
14	None			
15	Don't use it all up! Go,Go H ₂ O	Earth and Space Science: changes in and around Earth	Earth and Space Science- Properties of Earth Materials	Applying Inferring
16	Calorie Counting; Till We or Won't We? We're into Pumpkins; Your School Ground through New Eyes	Scientific Inquiry: Processes and skills	Science as Inquiry -Abilities necessary to do scientific inquiry; -Understanding scientific inquiry	Inferring, Analyzing
17	None			
18	None			
19	None			
20	Fruits and Veggies; We're into Pumpkins; Seed Surprises; Banking on Seeds;	Life Science: Life cycles	Life Science – Characteristics of organisms	Inferring, Evaluating

21	Investigating Insects; Six Billion and Still Growing; Less Elbow Room; Piecing Together Population Patterns	Life Science: Life cycles	Life Science – Life cycles of organisms	Analyzing, Applying,
22	Investigating Insects; Six Billion and Still Growing; Less Elbow Room; Piecing Together Population Patterns	Life Science: Life cycles	Life Science – Life cycles of organisms	Applying, Synthesizing,
23	None			
24	Perc Through the Pores; From Apple Cores to Healthy Soil; Till We or Won't We; Amazing Grazing; Soil is not Trivial	Earth and Space Science: Earth's composition and structure	Earth and Space Science – Properties of earth materials	Inferring, Applying
25	None			
26	Mighty Macros; Go, Go, H ₂ O;	Life Science: Structures of living things	Life Science – Organisms and environments	Applying, Evaluating
27	Fruits and Veggies; We're into Pumpkins; Seed Surprises; Banking on Seeds;	Scientific Inquiry: processes and skills	Science as Inquiry -Abilities necessary to do scientific inquiry	Inferring Analyzing
28	Fruits and Veggies; We're into Pumpkins; Seed Surprises; Banking on Seeds;	Scientific Inquiry: processes and skills	Science as Inquiry -Abilities necessary to do scientific inquiry	Inferring, Evaluating
29	Fruits and Veggies; We're into Pumpkins; Seed Surprises; Banking on Seeds;	Scientific Inquiry: Analysis and interpretation	Science as Inquiry -Understanding scientific inquiry	Inferring, Evaluating

30	Fruits and Veggies; We're into Pumpkins; Seed Surprises; Banking on Seeds;	Scientific Inquiry: Analysis and interpretation	Science as Inquiry -Understanding scientific inquiry	Inferring, Evaluating
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Level 10 (Grade 4) Sciences

Test Question	Lesson	Test Question – Content Skills	National Standards	Content/Thinking Skills
#1	Don't use it all up! Go,Go H ₂ O	Earth and Space Science: Changes in and around Earth	Earth and Space Science- Changes in Earth and sky	Applying Inferring
#2	Calorie Counting; Till We or Won't We? We're into Pumpkins; Your School Ground through New Eyes	Scientific Inquiry: Processes and skills	Science as Inquiry- Abilities necessary to do scientific inquiry; -Understanding scientific inquiry	Inferring, analyzing
#3	None			
#4	None			
#5	None			
#6	Fruits and Veggies; We're into pumpkins; Seed Surprises; Banking on Seeds;	Life Science: life cycles	Life Science – Characteristics of organisms	Inferring, evaluating
#7	Investigating Insects; Six Billion and Still Growing; Less Elbow Room; Piecing Together Population Patterns	Life Science: life cycles	Life Science – Life cycles of organisms	Applying Synthesizing
#8	Investigating Insects; Six Billion and Still Growing; Less Elbow Room; Piecing Together Population Patterns	Life Science: life cycles	Life Science: life cycles of organisms	Applying Synthesizing
#9	None			

#10	Perc Through the Pores; From Apple Cores to Healthy Soil; Till We or Won't We; Amazing Grazing; Soil is not Trivial	Earth and Space Science: Earth's composition and structure	Earth and Space Science – Properties of earth materials	Inferring Visualizing
#11	None			
#12	Might Macros; Go, Go, H2O;	Life Science: Structures of living things	Life Science – Organisms and environments	Applying Analyzing
#13	Fruits and Veggies; We're into pumpkins; Seed Surprises; Banking on Seeds;	Scientific Inquiry: Processes and skills	Science as Inquiry-Abilities necessary to do scientific inquiry	Inferring Visualizing
#14	Fruits and Veggies; We're into pumpkins; Seed Surprises; Banking on Seeds;	Scientific Inquiry: Processes and skills	Science as Inquiry-Abilities necessary to do scientific inquiry	Inferring, evaluating
#15	Fruits and Veggies; We're into pumpkins; Seed Surprises; Banking on Seeds	Scientific Inquiry: analysis and interpretation	Science as Inquiry-Understanding about scientific inquiry	Inferring Visualizing
#16	Fruits and Veggies; We're into pumpkins; Seed Surprises; Banking on Seeds	Scientific Inquiry: analysis and interpretation	Science as Inquiry-Understanding about scientific inquiry	Inferring Visualizing
#17	Seasons through the Year	Life Science: Environmental Interactions and adaptations	Life Science- Diversity and adaptations of organisms	Sequencing Applying
#18	Root, Root for Life; Till we or Won't We; Perc through the Pores	Earth and Space Science: Changes in and around Earth	Earth and Space Science-changes in Earth and sky	Applying Visualizing
#19	None			
#20	None			
#21	None			
#22	Till We or Won't We	Earth and Space Science: Earth's composition and structure	Earth and Space Science-Properties of earth materials	Visualizing Applying
#23	None			
#24	None			
#25	None			

#26	Treemendous!	Physical Science: Properties and Changes in Matter	Physical Science-Properties of objects and materials	Analyzing Summarizing
#27	Lunchtime Favorites	Life Science: Structure of living things	Life Science- characteristics of organisms	Visualizing Summarizing
#28	None			
#29	None			
#30	None			
#31	None			
#32	None			
#33	None			
#34	None			

Food, Land and People Correlation Project

Level 14 (Grade 8) Sciences

Test Question	Lesson	Test Question – Content/Knowledge	National Standards	Content/Thinking Skills
1	Germ Busters, Mighty Macros, Could It Be Something They Ate?	Scientific Inquiry: Processes and skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing
2	Germ Busters, Mighty Macros, Could It Be Something They Ate?	Scientific Inquiry: Processes and skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing
3	Germ Busters, Mighty Macros, Could It Be Something They Ate?	Scientific Inquiry: Analysis and Interpretation (ITBS)	Science as Inquiry- Understanding about scientific inquiry	Inferring Synthesizing
4	Germ Busters, Mighty Macros, Could It Be Something They Ate?	Scientific Inquiry: Analysis and Interpretation (ITBS)	Science as Inquiry- Understanding about scientific inquiry	Inferring Synthesizing
5	None			
6	None			
7	None			
8	None			
9	From Apple Cores to Healthy Soil	Scientific Inquiry: Processes and skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Evaluating
10	From Apple Cores to Healthy Soil	Scientific Inquiry: Processes and skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Evaluating

11	Mighty Macros, Germ Busters	Scientific Inquiry: Analysis and Interpretation (ITBS)	Science as Inquiry- Understanding about scientific inquiry	Analyzing Evaluating
12	Mighty Macros, Germ Busters	Scientific Inquiry: Analysis and Interpretation (ITBS)	Science as Inquiry- Understanding about scientific inquiry	Analyzing Evaluating
13	Mighty Macros, Germ Busters	Scientific Inquiry: Analysis and Interpretation (ITBS)	Science as Inquiry- Understanding about scientific inquiry	Analyzing Evaluating
14	None			
15	None			
16	Gifts from the Sun	Life Science: Structures of Living things (ITBS)	Structure and function in living things	Synthesizing Applying
17	None			
18	None			
19	Banking on Seeds	Life Sciences: Life cycles (ITBS)	Reproduction and heredity	Inferring Evaluating
20	None			
21	Could it Be Something They Ate?	Life Sciences: Structures of living things (ITBS)	Structure and function in living systems	Analyzing Applying
22	Germ Busters; Mighty Macros; Could It Be Something They Ate; Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Processes and Skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing
23	Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Processes and Skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing
24	Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Processes and Skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing
25	Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Processes and Skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing

26	Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Processes and Skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing
27	Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Processes and Skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing
28	Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Processes and Skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing
29	Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Analysis and Interpretation(ITBS)	Science as Inquiry- Understanding about scientific inquiry	Inferring Synthesizing
30	Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Processes and Skills (ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing
31	Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Analysis and Interpretation(ITBS)	Science as Inquiry- Understanding about scientific inquiry	Inferring Synthesizing
32	Germ Busters; Mighty Macros; From Apple Core to Healthy Soil	Scientific Inquiry: Analysis and Interpretation(ITBS)	Science as Inquiry- Abilities necessary to do scientific inquiry	Inferring Synthesizing
33	None			
34	Soil is Not Trivia; Till We or Won't We	Earth and Space Science: Changes in and around Earth (ITBS)	Earth and Space Science- Earth's History	Analyzing Evaluating
35	None			
36	Go, Go H2O	Physical Science: Energy(ITBS)	Physical Science- Transfer of Energy	Applying Inferring
37	Could it be Something They Ate?; Germ Busters	Life Science: Environmental Interactions and Adaptations	Life Science-Diversity and Adaptations of organisms	Inferring Synthesizing
38	Managing Pests	Life Science: Environmental Interactions and Adaptations	Life Science-Diversity and Adaptations of organisms	Synthesizing Analyzing
39	None			
40	None			

41	Mighty Macros, Gifts from the Sun	Life Science: Structure of Living Things	Structure and function of living systems	Applying Synthesizing
42	Go Go H2O	Earth and Space Science: Changes in and around Earth (ITBS)	Earth and Space Science- Structure of the Earth system	Applying Inferring
43	None			