3rd Grade Plants Unit Unit Blueprint

Activity	Essential & Unit	Benchmarks	Assessments	Using Assessments to Facilitate and
	Questions	(Bolded sections indicate portion of	(Unless noted as a Summative	Monitor Student Learning
	(for conceptual	benchmark addressed)	Assessment, the assessments are	
	benchmarks)		formative and should be used to	
	/	T	guide teaching and learning.)	
STC Plant	/	Lesson serves as a pre-unit assessment	What We Know about Plants and	Review students' responses on the two
Growth and		of students' general knowledge about	What We Would Like to Know	charts with respect to the unit benchmarks. To what extent do their
<u>Development</u>		plants	about Plants class charts (See	
Lesson 1:			Procedure Steps 3-5 on page 11	comments indicate prior knowledge or
What Do You			in Teacher's Guide.)	preconceptions about the unit benchmarks?
Know about				benchmarks?
Plants?				
Plants:				
Pacing:				
See page 4 in				
Teacher's				
Guide for a				
schedule of				
Lessons.				
Lesson 2:	/	12C(3-5)#3: Keep a notebook that	Activity Sheet 1: Recording	• Do students make descriptive
What is Inside		describes observations made, carefully	Chart for Seed Observations	observations of the seed?
a Seed		distinguishes actual observations from	(See <i>Procedure</i> Steps 4 & 8 on	• Do students use multiple senses? (Are
		ideas and speculations about what was	pages 16 & 17 in Teacher's	they able to describe the texture and
Pacing:		observed, and is understandable weeks	Guide.)	odor?)
See page 4 in		or months later.		• Are students' drawings of the seeds
Teacher's				reasonably accurate?
Guide for a		12D(3-5)#2: Make sketches to aid in		reasonably accurate.
schedule of		[describing observations and]		
Lessons.		explaining procedures or ideas.		

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	Questions (for conceptual benchmarks)	(Bolded sections indicate portion of benchmark addressed)	(Unless noted as a Summative Assessment, the assessments are formative and should be used to guide teaching and learning.)	Monitor Student Learning
Lesson 3:	Why is it important	Related to 1B(3-5)#2: Results of	Class discussion on importance	Class Discussion
Planting the Seeds	to follow directions and keep accurate records of one's	scientific investigations are seldom exactly the same, but if the differences are large, it is important to try to figure	of following directions (See <i>Procedure</i> Step 1 on page 23 in Teacher's Guide.)	• During the class discussion, do students understand the importance of following directions?
Pacing: See page 4 in Teacher's Guide for a schedule of Lessons. Teacher Resources:	work?	out why. One reason for following directions carefully and for keeping records of one's work is to provide information on what might have caused the differences.	Teacher observations of students' ability to follow directions	 Does their understanding extend beyond the concept of "rules" to follow and reflect a scientific understanding of the importance of following set lab procedures to increase consistency in experiment results? <i>Teacher Observations of Students</i> While the benchmark is a conceptual benchmark, the skill of following directions is also important. To what extent are the students able to monitor their work and follow each direction accurately? If students exhibit difficulty, a post-
				planting discussion about the importance of following directions is probably warranted.

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Lesson 3 (Continued)		 12C(3-5)#3: Keep a notebook that describes observations made, carefully distinguishes actual observations from ideas and speculations about what was observed, and is understandable weeks or months later. 12D(3-5)#2: Make sketches to aid in [describing observations and] explaining procedures or ideas. 	guide teaching and learning.) Student journal entries containing written observations and drawings of the plants— ongoing from Day 5 to Day 35 (Use teacher-generated <i>Observation Log</i> sheet.) (Note: Maintaining a month-long journal is not specified in the Teacher's Guide.)	 Written Observations Do the written observations contain true observations (information obtained though the senses)? Are the observations clear enough that they would be understandable weeks and/or months later? To what extent do the students include inferences, opinions, and fictional information in their entries? (Depending on the prevalence of these types of entries, the teacher may need to do some mini-lessons on observing using the senses; help students differentiate between observations, inferences, opinions, and fiction; and model for students how they can write/record their ideas separate from their observations.) Drawings Do the drawings contain labels? Do the drawings clear enough that they would be understandable weeks and/or months later? Do the drawings provide a reasonably accurate representation of the plants?

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	Questions	(Bolded sections indicate portion of	(Unless noted as a Summative	Monitor Student Learning
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	benchmarks)		formative and should be used to	
			guide teaching and learning.)	
Lesson 4:	/	No benchmarks, but lesson is	/	
Thinning and		necessary to teach		
Transplanting				
Pacing:				
See page 4 in				
Teacher's				
Guide for a				
schedule of				
Lessons.				
Teacher				
Resources:				
a a				

Activity	Essential & Unit	Benchmarks	Assessments	Using Assessments to Facilitate and
	Questions (for conceptual	(Bolded sections indicate portion of benchmark addressed)	(Unless noted as a Summative Assessment, the assessments are	Monitor Student Learning
	benchmarks)		formative and should be used to guide teaching and learning.)	
Lesson 5: How Does Your Plant Grow? Pacing: See page 4 in Teacher's Guide for a schedule of	What is the pattern of growth of your plants?	11B(3-5)#2: Geometric figures, number sequences, graphs , diagrams, sketches, number lines, maps, and stories can be used to represent objects, events and processes in the real world, although such representations can never be exact in every detail.	 Students measure and graph the plant growth (Use teacher- generated graph paper in place of the graph paper in the Teacher's Guide. See <i>Procedure</i> Steps 1-5 on pages 36 & 37 in Teacher's Guide.) Students write statements describing the data displayed 	 Measuring and Graphing Are students able to accurately measure the height of their plant? Are their measurement skills improving over time? Are students able to graph the height of the plant? Are their graphing skills improving over time?
Lessons. Teacher Resources:		 12D(3-5)#3: Use numerical data in describing and comparing objects and events. 11C(3-5)#2: Things change in steady, repetitive, or irregular ways—or sometimes in more than one way at the same time. Often the best way to tell which kinds of changes are happening is to make a table or graph of measurements. 	 in their graph. (This is not listed in the Teacher's Guide. See "Tips" under "Teacher Resources" on the electronic curriculum.) Class discussions about the importance of graphs and the information that can be learned from their graphs. 	 Summarizing Graphs & Class Discussions Are students able to use the graphs to describe the plant growth? Do students see patterns in the plant growth? (from day-to-day and between groups)

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	Questions	(Bolded sections indicate portion of	(Unless noted as a Summative	Monitor Student Learning
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	benchmarks)		formative and should be used to	
			guide teaching and learning.)	
Lesson 6:	What is the life	11C(3-5)#2: Things change in steady,	Class discussion about a plant's	• Do students see patterns in the plant
Observing	cycle of plants?	repetitive, or irregular ways—or	life cycle (See Final Activities	growth? (from day-to-day and
Leaves and		sometimes in more than one way at	on page 41 in the Teacher's	between groups)
Flower Buds		the same time. Often the best way to	Guide.)	• Do students understand the plant's
		tell which kinds of change are		life cycle is a predictable pattern of
Pacing:		happening is to make a table or graph		growth?
See page 4 in		of the measurements.		
Teacher's	/	12C(3-5)#3: Keep a notebook that	On-going student observations	Written Observations
Guide for a		describes observations made, carefully	of plants in Observation Log	• Do the written observations contain
schedule of		distinguishes actual observations from	(See Procedures Steps 1 & 2 on	true observations (information
Lessons.		ideas and speculations about what was	page 41 in Teacher's Guide.)	obtained through the senses and not
		observed, and is understandable weeks		inferences, opinions, or fictional
Teacher		or months later.		information)?
Resources:				• Are students' observations improving
		12D(3-5)#2: Make sketches to aid in		in clarity, accuracy, and description?
1		[describing observations and]		• Are the observations clear enough
		explaining procedures or ideas.		that they would be understandable
		explaining procedures of liceus.		weeks and/or months later?
				weeks and/or months later?
				Drawings
				• Do the drawings contain labels?
				• Do the drawings contain most of the details of the plant?
				• Is the drawing clear enough that it would be understandable weeks
				and/or months later?
				(Also see Evaluation on page 42 in
				Teacher's Guide.)

Activity	Essential & Unit Questions (for conceptual benchmarks)	Benchmarks (Bolded sections indicate portion of benchmark addressed)	Assessments (Unless noted as a Summative Assessment, the assessments are formative and should be used to guide teaching and learning.)	Using Assessments to Facilitate and Monitor Student Learning
Lesson 7: Observing the Growth Spurt Pacing: See page 4 in Teacher's Guide for a schedule of Lessons. Teacher Resources:	What is the pattern of growth of your plants?	 11C(3-5)#2: Things change in steady, repetitive, or irregular ways—or sometimes in more than one way at the same time. Often the best way to tell which kinds of change are happening is to make a table or graph of the measurements. 11B(3-5)#2: Geometric figures, number sequences, graphs, diagrams, sketches, number lines, maps, and stories can be used to represent objects, events and processes in the real world, although such representations can never be exact in every detail. 12D(3-5)#3: Use numerical data in describing and comparing objects and events. 12C(3-5)#3: Keep a notebook that describes observations made, carefully distinguishes actual observations from ideas and speculations about what was observed, and is understandable weeks or months later. 	On-going plant observations, measurements, and <i>Plant</i> <i>Growth Graph</i> , which was started in Lesson 5 Class discussion of plant growth data (See <i>Final Activities</i> on page 47 in Teacher's Guide.)	 <i>Measuring Plants</i> Are students able to accurately measure the height of their plant? Are their measurement skills improving over time? Are students able to use the plant height data to make reasonable predictions about future plant growth? Are students making clear, descriptive observations of their plant? Are students dating their entries? <i>Graph</i> Are students able to graph the height of the plant? Are their graphing skills improving over time? (Students should be able to graph data with minimal to no teacher support.) <i>Class Discussion of Data</i> Are students able to use data to support their comments about the time and length of the growth spurt? Do students recognize the value of a graph in illustrating patterns of growth? Are students able to correctly read their graph?

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	Questions	(Bolded sections indicate portion of	(Unless noted as a Summative	Monitor Student Learning
	(for conceptual	benchmark addressed)	Assessment, the assessments are	
	benchmarks)		formative and should be used to	
			guide teaching and learning.)	
Lesson 8: Why	/	Lesson is a pre-requisite to Lesson 9	/	
Are Bees				
Important?		See "Tips" under "Teacher Resources"		
-		on electronic curriculum for		
Pacing:		information regarding portion of lesson		
See page 4 in		to omit.		
Teacher's				
Guide for a				
schedule of				
Lessons.				
Teacher				
Resources:				
and the				

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	Questions (for conceptual benchmarks)	(Bolded sections indicate portion of benchmark addressed)	(Unless noted as a Summative Assessment, the assessments are formative and should be used to guide teaching and learning)	Monitor Student Learning
Lesson 9: Getting a Handle on Your Bee Pacing: See page 4 in Teacher's Guide for a schedule of Lessons. Teacher Resources:	benchmarks) Why is it important to follow directions and keep accurate records of one's work?	Related to 1B(3-5)#2: Results of scientific investigations are seldom exactly the same, but if the differences are large, it is important to try to figure out why. One reason for following directions carefully and for keeping records of one's work is to provide information on what might have caused the differences.	formative and should be used to guide teaching and learning.) Class discussion on importance of following directions Teacher observations of students' ability to follow directions	 <i>Class Discussion</i> During the class discussion, do students understand the importance of following directions? Does their understanding extend beyond the concept of "rules" to follow and reflect a scientific understanding of the importance of following set lab procedures to increase consistency in experiment results? Does their understanding show more sophistication than revealed during Lesson 3? <i>Teacher Observations of Students</i> While the benchmark is a conceptual benchmark, the skill of following directions is also important. To what extent are the students able to monitor their work and follow each direction accurately? (Given the nature of the unit and many opportunities to practice following directions, students should exhibit minimal problems following the

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	Questions	(Bolded sections indicate portion of	(Unless noted as a Summative	Monitor Student Learning
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	benchmarks)		formative and should be used to	
Lesson 10:	/	10C(2.5) #2. Keen a notehool that	guide teaching and learning.) Student-recorded observations	Written Observations
	/	12C(3-5)#3: Keep a notebook that		
Looking at		describes observations made, carefully	and sketches of flowers in on-	• Do the written observations contain
Flowers		distinguishes actual observations from	going Observation Logs (See	true observations (information
		ideas and speculations about what was	<i>Procedure</i> Step 3 on page 60 in	obtained through the senses and not
Pacing:		observed, and is understandable weeks	Teacher's Guide.)	inferences, opinions, or fictional
See page 4 in		or months later.		information)?
Teacher's				• Are students' observations improving
Guide for a		12D(3-5)#2: Make sketches to aid in		in clarity, accuracy, and description?
schedule of		[describing observations and]		• Are the observations clear enough
Lessons.		explaining procedures or ideas.		that they would be understandable
				weeks and/or months later?
				Drawings
				• Do the drawings contain labels?
				• Do the drawings contain most of the
				details of the flower?
				• Are the drawing clear enough that
				they would be understandable weeks
				and/or months later?

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	Questions	(Bolded sections indicate portion of	(Unless noted as a Summative	Monitor Student Learning
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	benchmarks)		formative and should be used to	
			guide teaching and learning.)	
Lesson 11:	What is the	5D(3-5)#3: Organisms interact with	Class discussion about the	• Do students understand the role of
Pollinating	relationship	one another in various ways besides	interaction between bees and	bees in cross-pollination?
Flowers	between flowers	providing food. Many plants depend	flowers (See Procedure Steps 6	• Do students understand how bees
	and bees and why	on animals for carrying their pollen to	& 7 and <i>Extensions</i> Step 2 on	benefit from the plants/flowers?
Pacing:	is it important?	other plants or for dispersing their	page 67 in Teacher's Guide.)	• Do students understand how
See page 4 in	Besides providing	seeds.	Note: The benchmark is not	plants/flowers benefit from the bees?
Teacher's	food, what are		explicitly addressed through the	
Guide for a	some ways		lesson. The lesson focuses	
schedule of	different living		exclusively on the bee-flower	
Lessons.	things work		relationship. The teacher needs	
	together?		to deliberately expand the	
Teacher			discussion to address other	
Resources:			interactions between various	
and the			living things.	

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	(for conceptual benchmarks)	benchmark addressed)	formative and should be used to guide teaching and learning.)	
STC Plant Growth and Development Lesson 12: Observing		12C(3-5)#3: Keep a notebook that describes observations made, carefully distinguishes actual observations from ideas and speculations about what was observed, and is understandable weeks or months later.	On-going observations in student logs	 Written Observations Do the written observations contain true observations (information obtained through the senses and not inferences, opinions, or fictional information)?
Pods Pacing: See page 4 in Teacher's Guide for a				 Are students' observations improving in clarity, accuracy, and description? Are the observations clear enough that they would be understandable weeks and/or months later?
schedule of Lessons. (Continue observations for approximately 17 days along				 Drawings Do the drawings contain labels? Do the drawings contain most of the details of the flower? Are the drawings clear enough that they would be understandable weeks and/or months later?
with the Soil Science lessons.)	What is a life cycle? What is the life cycle of plants?	11C(3-5)#2: Things change in steady, repetitive, or irregular ways—or sometimes in more than one way at the same time. Often the best way to tell which kinds of change are happening is to make a table or graph of the measurements. 5E(3-5)#3: Over the whole earth, organisms are growing, dying, and decaying, and new organisms are being produced by the old ones.	Class discussion about a plant's life cycle (See <i>Final Activities</i> on page 72 in the Teacher's Guide)	 Do students understand the emerging life cycle of the plant? Can students relate their classroom observations of the plant life cycle with other life cycles?

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Delta Science Module: Soil Science	What makes up soil? Where do the parts come from?	Introduce 4C(3-5)#2: Rock is composed of different combinations of minerals. Smaller rocks come from the breakage and weathering of bedrock		
Activity 1: A First Look at Soil		and larger rocks. Soil is made partly from weathered rock, partly from plant remains—and also contains many living organisms.		
Pacing Suggestions: 1 Day				
Teacher Resources:				

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	(for conceptual	benchmark addressed)	Assessment, the assessments are	
	benchmarks)		formative and should be used to	
			guide teaching and learning.)	
Delta Science	What makes up	4C(3-5)#2: Rock is composed of	Activity Sheet 2 (Students make	Activity Sheet 2
Module: Soil	soil? Where do the	different combinations of minerals.	a Soil Particle Layering drawing	• Does the drawing contain labels?
<u>Science</u>	parts come from?	Smaller rocks come from the breakage	and label the parts.)	• Does the drawing contain most of the
		and weathering of bedrock and larger		details of each layer so that the
Activity 2: Soil		rocks. Soil is made partly from	Class discussion about the	different layers are clearly
Particle		weathered rock, partly from plant	components of soil (See Session	represented in the drawing?
Layering		remains—and also contains many	1, Guiding the Activity, Steps 1-4	• Is the drawing clear enough that it
		living organisms.	on pages 22 & 23 and Session II,	would be understandable weeks
Pacing			Guiding the Activity, Steps 7-8	and/or months later?
Suggestions:		12D(3-5)#2: Make sketches to aid in	on pages 24 & 25 in Teacher's	
Day 1-		[describing observations and]	Guide.)	Class Discussion:
Session 1 on		explaining procedures or ideas.		• Following the observation of the soil,
pages 21- 24 in				do students know that soil is made-up
Teacher's				of broken rocks and plants that were
Guide				once alive?
Day 2-				• Do they know that soil often contains
Session 2 on				many living animals?
pages 24-26 in				
Teacher's				
Guide				
Teacher				
Resources:				
3				

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	Questions	(Bolded sections indicate portion of	(Unless noted as a Summative	Monitor Student Learning
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	benchmarks)		formative and should be used to	
			guide teaching and learning.)	
Delta Science	What makes up	4C(3-5)#2: Rock is composed of	Activity Sheet 3, Part A	Activity Sheet 3, Part A
<u>Module: Soil</u>	soil? Where do the	different combinations of minerals.		• Do students' predictions indicate they
<u>Science</u>	parts come from?	Smaller rocks come from the breakage	Activity Sheet 3, Part B	know soil is made up of many
		and weathering of bedrock and larger	(Sketches should illustrate soil is	different sized pieces of broken rock
Activity 3:		rocks. Soil is made partly from	made of many substances, such	and plant remains?
Comparing		weathered rock, partly from plant	as weathered rock and plant	• Does the drawing contain labels?
Soil Samples		remains—and also contains many	remains.)	• Is the drawing clear enough that it can
		living organisms.		be used later to compare with Part B?
Pacing			Class discussion of activity (See	L L
Suggestions:		12D(3-5)#2: Make sketches to aid in	step 4 Guiding the Activity on	Activity Sheet 3, Part B
Day 1-		[describing observations and]	page 34 in the Teacher's Guide.)	• Does the drawing contain labels?
Session 1 on		explaining procedures or ideas.		• Does the drawing contain most of the
pages 29-32 in				details of each layer so that the
Teacher's				different layers are clearly
Guide				represented in the drawing?
Day 2-				· · ·
Session 2 on				• Is the drawing clear enough that it
pages 33 & 34				would be understandable weeks
in Teacher's				and/or months later?
Guide				
Guide				Class Discussion:
				• Do students recognize that soils differ
				based on the size/amount of broken
				rocks and the types of plant remains?
ł				

Questions (for conceptual benchmarks)(Bolded sections indicate portion of benchmark addressed)(Unless noted as a Summative Assessment, the assessment, the a	Activity	Essential & Unit	Benchmarks	Assessments	Using Assessments to Facilitate and
Delta Science Module: Soil ScienceWhat makes up soil? Where do the parts come from?4C(3-5)#2: Rock is composed of different combinations of minerals. Smaller rocks come from the breakage and weathering of bedrock and larger rocks. Soil is made partly from weathered rock, partly from plant remains—and also contains many living organisms.Assessment, the assessments are formative and should be used to guide teaching and learning.)Class discussion of lab observations (See Guiding the Session Steps 4-12 on pages 40- 42 in Teacher's Guide.)Class Discussion: of botken rocks and plants that once alive? Note: As a result of lesson, students should have a v clear understanding that plant (a animal) remains are one compor of soilPacing Suggestions: 1 DayWhat makes up soil? Where do the parts come from?4C(3-5)#2: Rock is composed of different combinations of minerals. Smaller rocks come from the breakage and weathering of bedrock and larger rocks. Soil is made partly from weathered rock, partly from plant remains—and also contains many living organisms.Activity Sheet 5, Question 7 (See page 46 in Teacher's Guide, for sample answers.)Activity Sheet 5, Question 7 (See page 46 in Teacher's Guide, or sample answers.)Activity Sheet 5, Question 7 (See gage 49 in Teacher's Guide.)Class discussion of activity (See Guiding the Activity Step 6 on page 49 in Teacher's Guide.)Obstudents understand that the small rocks found in soil are from weathering? Note: Weat can be a difficult concept for children. This is their first introduction to the term. In this introduction to the term. In their first introduction to the term. In their first introduction to the term. In their first introduction to the term.<	·	Questions	(Bolded sections indicate portion of	(Unless noted as a Summative	Monitor Student Learning
Delta Science Module: Soil ScienceWhat makes up soil? Where do the parts come from?C(3-5)#2: Rock is composed of different combinations of minerals. Smaller rocks come from the breakage and weathering of bedrock and larger rocks. Soil is made partly from weathered rock, partly from plant remains—and also contains many living organisms.Class discussion of lab observations (See <i>Guiding the</i> <i>Seession</i> Steps 4-12 on pages 40- 42 in Teacher's Guide.)Class discussion: observations (See <i>Guiding the</i> <i>Activity 5:</i> Suggestions: 1 DayClass discussion of lab observations (See <i>Guiding the</i> <i>Activity Sheet 5,</i> Question 7 (See page 46 in Teacher's Guide.)Class discussion: observations (See <i>Guiding the</i> <i>Activity Sheet 5,</i> Question 7 (See page 46 in Teacher's Guide.)Class discussion: observations (See <i>Guiding the</i> <i>Activity Sheet 5,</i> Question 7 (See page 46 in Teacher's Guide.)Class discussion: observations (See <i>Guiding the</i> <i>Activity Sheet 5,</i> Question 7 (See page 46 in Teacher's Guide.)Class discussion 7 observations of activity (See Guiding the Activity Step 6 on page 49 in Teacher's Guide.)Activity Sheet 5, Question 7: Students should be able to answe question completely and correctly without any teacher support.Pacing Suggestions: 1 DayPacing Suggestions: 1 DayWhat makes up soil? Where do the parts come from?AC(3-5)#2: Rock is composed of different combinations of minerals. Smaller rocks. Soil is made partly from weathered rock, partly from plant remains—and also contains many living organisms.Activity Sheet 5, Question 7 (See page 46 in Teacher's Guide.)Class discussion of activity (See Guiding the Activity Step 6 on page 49 in Teacher's Guide.)<		-	benchmark addressed)		0
Delta Science Module: Soil ScienceWhat makes up soil? Where do the parts come from?4C(3-5)#2: Rock is composed of different combinations of minerals. Smaller rocks. Soil is made partly from weathered rock, partly from living organisms.Class discussion of lab observations (See Guiding the Session Steps 4-12 on pages 40- 42 in Teacher's Guide.)Class Discussion: of broken rocks and plants that once alive? Note: As a result of lesson, students should have a v clear understanding that plant (a animal) remains are one compose of soil.Pacing Suggestions: 1 DayWhat makes up soil? Where do the parts come from?4C(3-5)#2: Rock is composed of different combinations of minerals. soil is made partly from living organisms.Activity Sheet 5, Question 7 (See page 46 in Teacher's Guide.)Class Discussion: of soil.Class Discussion: of soil.Delta Science Module: Soil ScienceWhat makes up soil? Where do the parts come from?4C(3-5)#2: Rock is composed of different combinations of minerals. smaller rocks. Soil is made partly from weathered rock, partly from plant remains—and also contains many living organisms.Activity Sheet 5, Question 7 (See page 46 in Teacher's Guide.)Activity Sheet 5, Question 7 (See page 46 in Teacher's Guide.)Meathering Makes Soil 1 DayWhat meathering of bedrock and larger rocks. Soil is made partly from weathered rock, partly from plant remains—and also contains many living organisms.Activity Sheet 5, Question 7 (See page 46 in Teacher's Guide.)Class Discussion: of soilleClass Discussion: of soilleI DayI DayI DayI DayI DayActivity Sheet 5, Questio		benchmarks)			
Module: Soil Sciencesoil? Where do the parts come from?different combinations of minerals. Smaller rocks come from the breakage and weathering of bedrock and larger rocks. Soil is made partly from living organisms.observations (See Guiding the Session Steps 4-12 on pages 40- 42 in Teacher's Guide.)• Do students know that soil is mate once alive? Note: As a result of lesson, students should have a v clear understanding that plant (a animal) remains are one comport of soil.Pacing Suggestions: 1 DayWhat makes up soil? Where do the parts come from?4C(3-5)#2: Rock is composed of different combinations of minerals. Smaller rocks come from the breakage and weathering of bedrock and larger rocks. Soil is made partly from weathered rock, partly from plant remains—and also contains many living organisms.Activity Sheet 5, Question 7 (See page 46 in Teacher's Guide.)• Do students know that soil is mate once alive? Note: As a result of lesson, students should have a v clear understanding that plant (a animal) remains are one composi- of soil.Pacing Suggestions: 1 DayWhat makes up soil? Where do the parts come from?4C(3-5)#2: Rock is composed of different combinations of minerals. Smaller rocks come from the breakage and weathering of bedrock and larger rocks. Soil is made partly from weathered rock, partly from plant remains—and also contains many living organisms.Activity Sheet 5, Question 7 (See page 46 in Teacher's Guide.)Class discussion of activity (See Guiding the Activity Step 6 on page 49 in Teacher's Guide.)• Do students understand that fi small rocks found in soil are f from weathering? Note: Weat can be a difficult concept for children. This is their first <br< th=""><th></th><th></th><th></th><th></th><th></th></br<>					
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Makes Soilplant remains—and also contains many living organisms.page 49 in Teacher's Guide.)• Do students understand that the small rocks found in soil are for from weathering? Note: Weat can be a difficult concept for children. This is their first introduction to the term. In the	Activity 5:		and larger rocks. Soil is made partly	Class discussion of activity (See	
Pacing Suggestions: 1 Dayliving organisms.small rocks found in soil are f from weathering? Note: Weat can be a difficult concept for children. This is their first introduction to the term. In the	Weathering		from weathered rock, partly from	<i>Guiding the Activity</i> Step 6 on	Class Discussion:
Suggestions: 1 Day can be a difficult concept for children. This is their first introduction to the term. In the	Makes Soil		plant remains—and also contains many	page 49 in Teacher's Guide.)	• Do students understand that the small rocks found in soil are formed
Suggestions: can be a difficult concept for 1 Day children. This is their first introduction to the term. In the	Pacing				from weathering? Note: Weathering
1 Day children. This is their first introduction to the term. In the	Suggestions:				<u> </u>
introduction to the term. In the	88				
	-				introduction to the term. In the
					Earth's Changes unit, students will
study weathering extensively.					
 Do students know that when 					
					weathered rocks, sand/silt, and
					plant/animal remains are mixed,
soil is formed?					· ·

Activity	Essential & Unit	Benchmarks	Assessments	Using Assessments to Facilitate and
	Questions	(Bolded sections indicate portion of	(Unless noted as a Summative	Monitor Student Learning
	(for conceptual	benchmark addressed)	Assessment, the assessments are formative and should be used to	
	benchmarks)		guide teaching and learning.)	
Delta Science	What makes up	4C(3-5)#2: Rock is composed of	Class discussion of weathering	Class Discussion:
Module: Soil	soil? Where do the	different combinations of minerals.	and soil formation (See Guiding	• Do students have a <u>basic</u>
Science	parts come from?	Smaller rocks come from the	the Activity Step 10 on page 56	understanding of weathering?
		breakage and weathering of bedrock	in the Teacher's Guide) Key	• Do students understand that the
Activity 6:		and larger rocks. Soil is made partly	Questions:	weathered rocks combine with
Models of		from weathered rock, partly from	1. What happens to all the	plant/animal remains to form soil?
Weathering		plant remains—and also contains many	small particles created	• Do students understand that if rocks
		living organisms.	by weathering?	never broke down or weathered,
Pacing			2. What do you think	there would be no soil? (Rather,
Suggestions:		12D(3-5)#2: Make sketches to aid in	would happen if there	there would only be humus—plant
Day 1-		[describing observations and]	were no weathering?	and animal remains.)
Session 1 on		explaining procedures or ideas.		
pages 51-54				Student Drawings:
Day 2 Session 2 on				• Do the drawings contain labels?
pages 54-56				• Do the drawings contain details of the soaked beans
				• Are the drawing clear enough that
				they would be understandable weeks
				and/or months later?
				Note: At this point, students'
				drawings should be improving in
				neatness, detail, and accuracy.
				Student should also be labeling the
				drawings with minimal reminders
				from the teacher.
Lessons 13-15		SKIP Lessons		
		Lessons do not align with any		
		benchmarks and do not build science		
		literacy.		

Activity	Essential & Unit	Benchmarks	Assessments	Using Assessments to Facilitate and
	Questions	(Bolded sections indicate portion of	(Unless noted as a Summative	Monitor Student Learning
	(for conceptual	benchmark addressed)	Assessment, the assessments are	
	benchmarks)		formative and should be used to guide teaching and learning.)	
Lesson 16:	What is a life	5D(3-5)#3: Organisms interact with	Class discussion comparing the	Class discussion:
Harvesting	cycle?	one another in various ways besides	non-pollinated plants (set aside	• Do students understand the
and Threshing	What is the	providing food. Many plants depend	after Lesson 4) to the students'	interdependence of flowers and bees?
the Seeds	relationship between flowers	on animals for carrying their pollen to other plants or for dispersing their	plants	• Do students understand the life cycle of the plant?
Pacing:	and bees and why	seeds.	Class discussion about the life	• Can students relate their classroom
See page 4 in	is it important?	5E(3-5)#3: Over the whole earth,	cycle of plants and the life cycle	observations of the plant life cycle
Teacher's	Besides providing	organisms are growing, dying, and	of organisms in general.	with other life cycles?
Guide for a	food, what are	decaying, and new organisms are being		
schedule of	some ways	produced by the old ones.	Summative Assessment: End-	Summative Assessment:
Lessons.	different living	4C(3-5)#2: Rock is composed of	of-Unit Assessment (Sheet	See Answer Key under "Teacher
	things work	different combinations of minerals.	available on electronic	Resources."
Teacher	together?	Smaller rocks come from the	curriculum. Also, see Teacher	
Resources:	What makes up	breakage and weathering of bedrock	Tips.)	
	soil? Where do the	and larger rocks. Soil is made partly		
	parts come from?	from weathered rock, partly from		
		plant remains—and also contains		
		many living organisms.		