twig Science



2.4 A Garden for Life

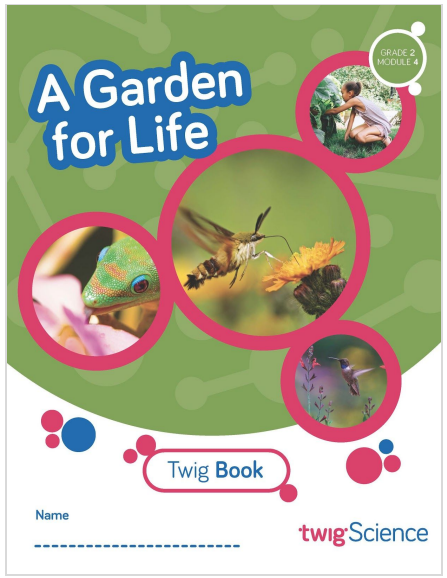
Assessment Overview

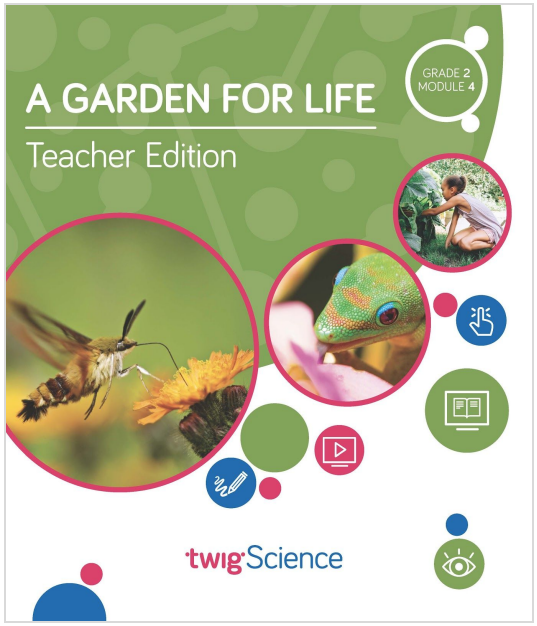
In this module, students design and build pollinator gardens in order to answer the Module Phenomenon: How do living things in an environment depend on one another and what do they need to grow?

Students begin the module by thinking about how the types of living things vary from habitat to habitat. They use an interactive to observe living things in three habitats: a desert, a rainforest, and a farm. Students then carry out a study comparing the biodiversity in two areas of their school.

Students begin the process of designing a garden habitat for plants and animals. They plan and execute experiments to see if plants need water and light to grow, making predictions, drawing conclusions, and sharing their results. Students explore the interdependence of plants and animals (including humans) by investigating pollination. They discover how the structures of plant and pollinator parts are related to their functions and influence their interactions. Students choose a pollinator and construct a model to show how it pollinates plants.

Students draw on their learning from throughout the module to design pollinator gardens. In the final task, they build and present dioramas of their gardens using what they have learned about pollinators, plants, and their habitats.





Pre-Explorations (Diagnostic Pre-Assessment)

Key: Driving Question (DQ) Lesson (L) Teacher Edition (TE) Twig Book (TB)

Reference	Assessment Tool	Description	Type	Misconceptions identified
DQ1L1, Reflect (TE p. 15)	Habitats Progress Tracker	Students read six statements about habitats and decide if they are true or false (or "not sure").	Constructed response *Written (TB p. 5)*	• All habitats are the same. • An animal's home/shelter is its habitat. • An animal can live in any habitat. • All habitats have the same amount of diversity.
DQ1L10, Reflect, (TE p. 86)	Plant Needs Progress Tracker	Students look at an illustration of a plant and add drawings to show all the things that plants need to survive and grow.	Constructed response *Drawn (TB p. 26)*	• Plants eat plant food. • Plants can grow without water or light. • Plants need things other than sunlight and water (and a place to grow).
DQ3L1, Reflect (TE p. 143)	Plants and Animals Progress Tracker	Students read three opinions and decide which one they agree with; look at images and decide which show pollinators; look at images of plants and decide which need pollinators.	Constructed response *Written (TB pp. 48–49)*	• Bees are the only pollinators. • Insects (and other arthropods) are not animals. • All plants have flowers. • All plants need pollinators.

Formative Assessment

Key: Driving Question (DQ) Lesson (L) Teacher Edition (TE) Twig Book (TB)

Page	Assessment Tool	Description	Type	What's being assessed?
DQ1L2, Investigate (TE p. 20)	Habitats Progress Tracker	Students use an interactive to explore a desert habitat. They observe and record the types of living things that can be found there.	Constructed response *Filling in a chart and written answer to one question (TB pp. 6–7)*	Students' ability to understand that habitats have a variety of inhabitants (LS4.D).
DQ1L3, Reflect (TE p. 31)	Habitats Progress Tracker	Students read four statements about habitats and check the ones that they agree with.	Constructed response *Written (TB p. 9)*	Students' ability to understand that habitats have a variety of inhabitants (LS4.D).
DQ1L4, Reflect (TE p. 39)	Habitats Progress Tracker	Students complete a sentence, comparing a farm habitat to another of their choice.	Constructed response *Written (TB p. 12)*	Students' ability to recognize that there are different kinds of habitats, and that different habitats have different living things (LS4.D).
DQ1L5, Reflect (TE p. 47)	Habitats Progress Tracker	Students read three statements and decide which ones they agree with, then draw two labeled diagrams to explain their answer.	Constructed response *Written and drawn (TB pp. 14–15)*	Student ability to recognize that there are different kinds of habitats, and different habitats have different living things (LS4.D).
DQ1L8, Reflect (TE p. 69)	Habitats Progress Tracker	Students plan an investigation into how much biodiversity there is in different parts of the school, then revise their plans based on a class discussion.	Constructed response *Written (TB pp. 21–22)*	Students' ability to plan an investigation in order to answer a question (SEP-3).

DQ1L9, Investigate (TE p. 76)	Habitats Progress Tracker	Students go outdoors to explore two areas in the same habitat and observe, then record the livings things they find there.	Constructed response *Fill in a data table (TB p. 23)*	Students' ability to make observations and record data as part of an investigation (SEP-3).
DQ2L2, Reflect (TE p. 105)	Plant Needs Progress Tracker	Students plan an investigation to find out whether plants need both light and water to grow, then observe illustrations and draw conclusions.	Constructed response *Fill in an investigation plan (TB pp. 33–34) and fill in a chart (TB pp. 35–36)*	Students' understanding of the importance of carefully planning investigations in order to answer questions (SEP-3).
DQ2L4, Reflect (TE p. 119)	Plant Needs Progress Tracker	Students observe and measure their plants and record results, complete cause-and-effect graphic organizers, then answer a question about their pollinator gardens.	Constructed response *Filling in a graphic organizer (TB p. 39) and written answer to one question (TB p. 40)*	Students' ability to collect data to help answer questions about plant growth, identify cause-and-effect relationships, and explain that plants depend on water and light to grow (SEP-4, CCC-2, LS2.A).
DQ2L5, Reflect (TE p. 125)	Plant Needs Progress Tracker	Students write a claim about what the plants in their garden will need. They support their claims with evidence from the plant investigation.	Constructed response *Filling in a chart and written answer (TB p. 41)*	Students' ability to support an argument about plant needs using evidence (SEP-7).
DQ3L3, Investigate (TE p. 155)	Plants and Animals Progress Tracker	Students watch a video about pollinators and take notes in a graphic organizer.	Constructed response *Filling in a graphic organizer (TB p. 51)*	Students' understanding that pollinators and flowers have special shapes, colors, and textures that support different functions, and students' ability to explain how plants depend on animals for pollination (CCC-6, LS2.A).

DQ3L4, Investigate (TE p. 163)	Plants and Animals Progress Tracker	Students observe and match images of plants and pollinators. They look for specific plant characteristics to figure out which pollinator would visit each plant.	Constructed response *Written (TB p. 53) and written answer to one question (TB p. 54)*	Students' ability to explain how plants depend on animals for pollination (LS2.A).
DQ3L5, Reflect (TE p. 169)	Teacher Observation	Students talk to a partner and share something new they learned about pollinators.	Self-reflect and discussion	Students' understanding of pollinators.
DQ3L8, Reflect (TE p. 191)	Plants and Animals Progress Tracker	Students build pollination models and complete two sentences to reflect on these.	Hands-on and self reflect *Written answer to two sentence starters (TB p. 72)*	Students' ability to use models to show structure and function and to explain how pollination works (SEP-2, ETS1.B, CCC-6).
DQ3L9, Reflect (TE p. 196)	Twig Book	Students review their pollination model reports and complete a self-assessment checklist.	Self-assessment *Written (TB p. 75)*	Students' ability to apply their understanding of the pollination process and of the concept of structure and function in their writing.
DQ3L10, Investigate (TE p. 200)	Teacher Observation and Twig Book	Students listen to their classmates' presentations, ask the presenters questions about their models, and then write down one good thing about each team's model.	Peer and discussion *Written (TB p. 76)*	Students' ability to communicate knowledge of the pollination process.
DQ4L2, Reflect (TE p. 241)	Teacher Observation and Twig Book	Students revise or add to their garden sketches based on what	Discussion and constructed response	Students' ability to revise their garden designs based on new information.

		they learned from a reading and from other students' ideas.	*Written and drawn (TB p. 90)*	
DQ4L4, Reflect (TE p. 241)	Twig Book	Students fill in a checklist to determine if they have included everything their diorama needs.	Self-assessment *Written (TB p. 93)*	Students' ability to apply principles about habitats, biodiversity, pollination, and plant growth to a garden design.

English Language Proficiency Assessment

Key: Driving Question (DQ) Lesson (L) Teacher Edition (TE) Twig Book (TB)

Page	Description	Type	Standards
DQ3L5 Extension TE p. 170	Students read four sentences, and then match the sentences to images.	Oral response	Reading Domain
DQ3L5 Extension TE p. 170	Students answer three questions about a text.	Oral response	Listening Domain
DQ3L5 Extension TE p. 170	Students look at a labeled image and write a brief description of what it shows.	Written constructed response	Writing Domain
DQ3L5 Extension TE p. 170	Teacher records students' use of academic vocabulary and connecting words when answering the three questions in the Listening Domain task.	Oral response	Speaking Domain
DQ4L2 Extension TE p. 231	Students look at images and write a brief description of what each shows.	Written constructed response	Writing Domain
DQ4L2 Extension TE p. 231	Students read the image captions, and then find captions that answer four questions.	Oral response	Reading Domain
DQ4L2 Extension TE p. 231	The teacher records students' use of academic vocabulary and connecting words when answering the five questions in the Listening Domain task.	Oral response	Speaking Domain
DQ4L2 Extension TE p. 231	Students answer five questions about a text.	Oral response	Listening Domain
Leveled Reader Lesson, Chapter 3, Second Read TE p. 257	Students look at a photos and write a brief description of what is happening.	Written constructed response	Writing Domain

Leveled Reader Lesson, Chapter 3, Second Read TE p. 257	Students read aloud three keywords, and then match each to the correct photo or part of a photo.	Oral response	Reading Domain
Leveled Reader Lesson, Chapter 3, Second Read TE p. 257	Students listen to some text, and then answer two questions.	Oral response	Listening Domain
Leveled Reader Lesson, Chapter 3, Second Read TE p. 257	The teacher records students' use of academic vocabulary and ability to summarize the key details when answering the two questions in the Listening Domain task.	Oral response	Speaking Domain

Performance Task

Key: Driving Question (DQ) Lesson (L) Teacher Edition (TE) Twig Book (TB)

Page	Assessment Tool	Description	Type	What's being assessed?
DQ1L9 (TE pp. 70–79)	School Habitat Investigation Rubric	Students investigate two habitat areas and observe and record information about the living things found in a sample square.	Constructed response *Fill in a data table (TB p. 23)*	2-LS4-1, LS4.D, SEP-3, SEP-4
DQ1L10 (TE pp. 80–86)	School Habitat Investigation Rubric	Students interpret their collected data.	Constructed response *Written answer to three questions (TB p. 25)*	2-LS4-1, LS4.D, SEP-7
DQ2L5 (TE pp. 120–125)	Plant Needs Investigation Report Rubric	Students write a claim about what the plants in their garden will need and support it with evidence from the plant investigation.	Constructed response and self-assessment *Filling in a chart and written answer (TB p. 41), and written answer to two questions (TB p.42)*	2-LS2-1, LS2.A, SEP-6, SEP-7, CCC-2
DQ3L7 (TE pp. 178–185)	Pollination Model Rubric	Students design a model of a pollinator and the plant it pollinates.	Constructed response *Drawn (TB p. 70)*	2-LS2-2, 2-LSS2-2, ETS1.B, SEP-2, CCC-6
DQ3L8 (TE pp. 186–191)	Pollination Model Rubric	Students build pollinator and plant models.	Performance Task	
DQ3L9 (TE pp. 192–196)	Pollination Model Rubric	Students plan and write reports about their pollinator and plant models.	Constructed response *Written report (TB pp. 73–74)*	2-LS2-2, LS2.A, ETS1.B, SEP-2, CCC-6
DQ4L1 (TE pp.	Garden Plan Project Rubric	Students design pollinator gardens.	Discussion and constructed response	LS2.A, ETS1.B, SEP-2, SEP-6

216–223)			*Drawn and written (TB p. 81)*	
DQ4L3 (TE pp. 232–237)	Garden Plan Project Rubric	Students revise their designs and build dioramas of their pollinator gardens.	Performance Task and constructed response *Drawn and written (TB p. 91)*	
DQ4L4 (TE pp. 238–244)	Garden Plan Project Rubric	Students finish building dioramas of their pollinator gardens, and present their designs to the class.	Performance Task	