



**Connecticut
Alternate
Science
Assessment**

Grade 5 Performance Tasks

Life Science

Storyline 3: Living Organisms

Storyline 4: Healthy Ecosystems



Connecticut
Alternate
Science
Assessment

Life Science

Storyline 3: Living Organisms

Grade 5 Performance Task



Life Science

**Storyline 3: Living Organisms
Grade 5 Performance Task**

Guiding Questions: What features do plants and animals have that allow them to survive? What life stages do living things go through over time?

Grade 5			
NGSS Learning Progressions	NGSS Standard Performance Expectations	Connecticut Alternate Science Essence Statements	Core Extensions
LS1.A Structure and Function	4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	CTAS-4-LS1-1 Make and support a claim that plants and animals have structures that function to support survival, growth, and behavior.	<ol style="list-style-type: none"> 1. Identify a structure (part) of a plant or an animal that supports survival. (CTAS-4-LS1-1) 2. Match one structure (part) of a plant or an animal to its function (e.g., wings help a bird to fly). (CTAS-4-LS1-1) 3. Identify key stages (i.e., birth, growth, reproduction, death) of a plant or animal's life cycle. (CTAS-3-LS1-1) 4. Compare and contrast the life cycles of two plants or two animals to identify one similarity and one difference. (CTAS-3-LS1-1) 5. Make a claim about a structure that supports the survival or growth of a plant or an animal (e.g., stem of a plant transports water or food/nutrients to the plant; water and nutrients/food allow plant to survive; stem is thick on a sunflower; thick stem allows sunflower to grow tall). (CTAS-4-LS1-1)
LS1.B Growth and Development of Organisms	3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	CTAS-3-LS1-1 Compare simple models to describe the similarities and differences in the life cycle stages (birth, growth, reproduction, and death) of common organisms.	
Appropriate Vocabulary	Structures of common organisms (e.g., leaves, roots, thorns, fur, claws, etc.), common organisms (e.g., seed, egg, pupa, larva, caterpillar, adult, etc.), environment, function, survival		



Life Science
Storyline 3: Living Organisms
Grade 5 Performance Task

General Overview:

Students will complete a series of activities focused on familiar plants and animals. Students will evaluate plant and/or animal characteristics, sometimes considering life cycle stages to better understand the effects on survival, growth, and behaviors.

List of Materials Needed:

Teacher-Provided Resources:

There are no Teacher-Provided Resources that are required for this Performance Task.

Instructions for Preparing Materials:

Teachers must collect all relevant materials prior to the administration of each activity. The Card, Sentence Strip, and Strip Resources will need to be cut out. Resources are listed according to the Resource Identifier, which appears on the back of each Resource. The Resources needed for the administration of each activity are listed according to these Resource Identifiers in the Teacher Notes section of each activity.

List of Resources:

- Activity 1 Resource 1a: Field Mouse Poster
- Activity 1 Resource 1b: Fox Poster
- Activity 1 Resource 2: Cards 2a – 2c
 - Card 2a – ears
 - Card 2b – tail
 - Card 2c – fur
- Activity 2 Resource 1a: Giraffe Poster
- Activity 2 Resource 1b: Giraffe in its Environment Poster
- Activity 2 Resource 2: Cards 2a – 2c
 - Card 2a – large ears
 - Card 2b – long neck
 - Card 2c – brown spots
- Activity 3 Resource 1: Plant Life Cycle Poster
- Activity 3 Resource 2: Cards 2a – 2c
 - Card 2a – Reproduction Stage
 - Card 2b – Sprout Stage
 - Card 2c – Growth Stage
- Activity 4 Resource 1: Life Cycle of a Chicken Poster
- Activity 4 Resource 2: Life Cycle of a Butterfly Poster



- Activity 4 Resource 3: Cards 3a – 3c
 - Card 3a – Larva Stage
 - Card 3b – Egg Stage
 - Card 3c – Pupa Stage
- Activity 4 Resource 4: Cards 4a – 4c
 - Card 4a – Egg Stage
 - Card 4b – Adult Stage
 - Card 4c – Larva Stage
- Activity 5 Resource 1: Statement 1 Poster
- Activity 5 Resource 2: Cards 2a – 2c
 - Card 2a – seeds
 - Card 2b – roots
 - Card 2c – petals
- Activity 5 Resource 3: Statement 2 Poster
- Activity 5 Resource 4: Cards 4a – 4c
 - Card 4a – pollen
 - Card 4b – leaves
 - Card 4c – stems

ACTIVITY 1

Essence Statement: CTAS-4-LS1-1 Make and support a claim that plants and animals have structures that function to support survival, growth, and behavior.

Core Extension 1: Identify a structure (part) of a plant or an animal that supports survival. (CTAS-4-LS1-1)

Teacher Notes:

Collect the following resources for this activity:

- Activity 1 Resource 1a: Field Mouse Poster
- Activity 1 Resource 1b: Fox Poster
- Activity 1 Resource 2: Cards 2a – 2c
 - Card 2a – ears
 - Card 2b – tail
 - Card 2c – fur

Steps to Follow:

1. **SAY** “In this activity, we are going to talk about the parts of a mouse that help the mouse to survive.”

2. Display Resource 1a: Field Mouse Poster for the student.

3. Indicate Resource 1a.

SAY “Here is a mouse that lives in a field. This mouse has big ears (*indicate mouse’s big ears*), thick fur (*indicate mouse’s fur*) and a long tail (*indicate mouse’s tail*).”

4. Display Resource 1b: Fox Poster for the student.

5. Indicate Resource 1b.

SAY “Here is a fox. This fox eats mice.”

6. **ASK** “Which part of the mouse helps the mouse to know when a fox is near?”

7. Provide Resource 2: Cards 2a – 2c to the student. Indicate and read each Card.

a. Indicate Card 2a.

SAY “ears”

b. Indicate Card 2b.

SAY “tail”

c. Indicate Card 2c.

SAY “fur”

8. **ASK** “Which part of the mouse helps the mouse to know when a fox is near?”
AGAIN
9. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.
10. Indicate Card 2a.
- SAY** “The mouse’s ears help the mouse to know when a fox is near.”
11. **ASK** “Which part of the mouse helps the mouse to stay warm?”
12. Provide remaining Resource 2: Card 2b and Card 2c to the student. Indicate and read each remaining Card.
- a. Indicate Card 2b.
- SAY** “tail”
- b. Indicate Card 2c.
- SAY** “fur”
13. **ASK** “Which part of the mouse helps the mouse to stay warm?”
AGAIN
14. Allow student to respond and record response.
15. Indicate Card 2c.
- SAY** “The mouse’s fur helps the mouse to stay warm.”
16. **SAY** “We are now finished with this activity.”

Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, indicate Card 2a.

SAY	“The mouse’s ears help the mouse to know when a fox is near. The mouse can hear the fox coming.”
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2. **ASK** “Which part of the mouse helps the mouse to stay warm?”

3. Provide remaining Resource 2: Card 2b and Card 2c to the student. Indicate and read each remaining Card.

- a. Indicate Card 2b.

SAY	“tail”
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- b. Indicate Card 2c.

SAY	“fur”
------------	-------

4. **ASK AGAIN** “Which part of the mouse helps the mouse to stay warm?”

5. Allow student to respond and record response.

6. Indicate Card 2c.

SAY	“The mouse’s fur helps the mouse to stay warm.”
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7. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. Which part of the mouse helps the mouse to know when a fox is near?
 - a. Card 2a – ears
2. Which part of the mouse helps the mouse to stay warm?
 - a. Card 2c – fur



Content Guidance	Rating	Score
Student... <ul style="list-style-type: none">gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the part of a mouse that helps the mouse know when a fox is near (Card 2a); andis unable to identify the part of a mouse that helps the mouse stay warm (Card 2c).	The student does not demonstrate understanding.	0
Student... <ul style="list-style-type: none">is able to identify the part of a mouse that helps the mouse know when a fox is near (Card 2a); andis unable to identify the part of a mouse that helps the mouse stay warm (Card 2c). <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the part of a mouse that helps the mouse to know when a fox is near (Card 2a); andafter scaffolding, is able to identify the part of a mouse that helps the mouse to stay warm (Card 2c).	The student demonstrates limited understanding typically requiring additional support through scaffolding.	1
Student... <ul style="list-style-type: none">is able to identify the part of a mouse that helps the mouse to know when a fox is near (Card 2a); andis able to identify the part of a mouse that helps the mouse to stay warm (Card 2c).	The student demonstrates understanding independently without scaffolding.	2

ACTIVITY 2

Essence Statement: CTAS-4-LS1-1 Make and support a claim that plants and animals have structures that function to support survival, growth, and behavior.

Core Extension 2: Match one structure (part) of a plant or an animal to its function (e.g., wings help a bird to fly). (CTAS-4-LS1-1)

Teacher Notes:

Collect the following resources for this activity:

- Activity 2 Resource 1a: Giraffe Poster
- Activity 2 Resource 1b: Giraffe in its Environment Poster
- Activity 2 Resource 2: Cards 2a – 2c
 - Card 2a – large ears
 - Card 2b – long neck
 - Card 2c – brown spots

Steps to Follow:

1. **SAY** “In this activity, we are going to talk about the parts of a giraffe. We will talk about how the functions of those parts help the giraffe in its environment.”

2. Display Resource 1a: Giraffe Poster for the student.

3. Indicate Resource 1a.

SAY “This is a giraffe. The giraffe has a long neck (*indicate the giraffe’s neck*), brown spots (*indicate giraffe’s spots*), and large ears (*indicate giraffe’s ears*).”

4. Display Resource 1b: Giraffe in its Environment Poster for student.

5. Indicate Resource 1b.

SAY “This is the giraffe in its environment.”

6. **ASK** “What part of the giraffe’s body helps it to reach the leaves on a tall tree?”

7. Provide Resource 2: Cards 2a – 2c to the student. Indicate and read each Card.

a. Indicate Card 2a.

SAY “large ears”

b. Indicate Card 2b.

SAY “long neck”

c. Indicate Card 2c.

SAY “brown spots”

8. **ASK AGAIN** “What part of the giraffe’s body helps it to reach the leaves on a tall tree?”

9. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.
10. Indicate Card 2b.
- | | |
|------------|--|
| SAY | “The giraffe’s long neck helps it to reach the leaves on a tall tree.” |
|------------|--|
11. **ASK** “What part of the giraffe’s body helps it blend into its environment?”
12. Provide remaining Resource 2: Card 2a and Card 2c to the student. Indicate and read each remaining Card.
- a. Indicate Card 2a.
- | | |
|------------|--------------|
| SAY | “large ears” |
|------------|--------------|
- b. Indicate Card 2c.
- | | |
|------------|---------------|
| SAY | “brown spots” |
|------------|---------------|
13. **ASK AGAIN** “What part of the giraffe’s body helps it blend into its environment?”
14. Allow student to respond and record response.
15. Indicate Card 2c.
- | | |
|------------|---|
| SAY | “The giraffe’s brown spots help it to blend in with its environment.” |
|------------|---|
16. **SAY** “We are now finished with this activity.”

Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, indicate Card 2b.

SAY	“The giraffe’s long neck helps it to reach the leaves on a tall tree.”
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2. **ASK** “What part of the giraffe’s body helps it blend into its environment?”

3. Provide remaining Resource 2: Card 2a and Card 2c to the student. Indicate and read each remaining Card.

- a. Indicate Card 2a.

SAY	“large ears”
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- b. Indicate Card 2c.

SAY	“brown spots”
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4. **ASK AGAIN** “What part of the giraffe’s body helps it blend into its environment?”

5. Allow student to respond and record response.

6. Indicate Card 2c.

SAY	“The giraffe’s brown spots help it to blend in with its environment.”
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7. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. What part of the giraffe’s body helps it to reach the leaves on a tall tree?
 - a. Card 2b – long neck
2. What part of the giraffe’s body helps it blend into its environment?
 - a. Card 2c – brown spots



Content Guidance	Rating	Score
<p>Student...</p> <ul style="list-style-type: none">gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the part of the giraffe's body that helps it to reach the leaves on a tall tree (Card 2b); andis unable to identify the part of the giraffe's body that helps it to blend in with its environment (Card 2c).	<p>The student does not demonstrate understanding.</p>	<p>0</p>
<p>Student...</p> <ul style="list-style-type: none">is able to identify the part of the giraffe's body that helps it to reach the leaves on a tall tree (Card 2b); andis unable to identify the part of the giraffe's body that helps it to blend in with its environment (Card 2c). <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the part of the giraffe's body that helps it to reach the leaves on a tall tree (Card 2b); andafter scaffolding, is able to identify the part of the giraffe's body that helps it to blend in with its environment (Card 2c).	<p>The student demonstrates limited understanding typically requiring additional support through scaffolding.</p>	<p>1</p>
<p>Student...</p> <ul style="list-style-type: none">is able to identify the part of the giraffe's body that helps it to reach the leaves on a tall tree (Card 2b); andis able to identify the part of the giraffe's body that helps it to blend in with its environment (Card 2c).	<p>The student demonstrates understanding independently without scaffolding.</p>	<p>2</p>

ACTIVITY 3

Essence Statement: CTAS-3-LS1-1 Compare simple models to describe the similarities and differences in the life cycle stages (birth, growth, reproduction, and death) of common organisms.

Core Extension 3: Identify key stages (i.e., birth, growth, reproduction, death) of a plant or animal’s life cycle. (CTAS-3-LS1-1)

Teacher Notes:

Collect the following resources for this activity:

- Activity 3 Resource 1: Plant Life Cycle Poster
- Activity 3 Resource 2: Cards 2a – 2c
 - Card 2a – Reproduction Stage
 - Card 2b – Sprout Stage
 - Card 2c – Growth Stage

Steps to Follow:

1.

SAY	“In this activity, we are going to talk about the life cycle of a plant.”
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2. Display Resource 1: Plant Life Cycle Poster for the student.
3. Indicate Resource 1.

SAY	“Here is the life cycle of a plant. The plant’s life cycle begins as a seed (<i>indicate Seeds Stage</i>). The seed is planted and watered. Then, the seed sprouts and a root begins to grow (<i>indicate Sprout Stage</i>). Next, the plant begins to grow a stem and leaves (<i>indicate Growth Stage</i>). Then, a flower opens and makes seeds (<i>indicate Reproduction Stage</i>). The seeds fall to the ground (<i>indicate seeds falling</i>), as the flower dies (<i>indicate Death Stage</i>). The seeds will become new plants (<i>indicate Seeds Stage</i>).”
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4.

ASK	“In which stage of the plant life cycle does the plant make seeds?”
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5. Provide Resource 2: Cards 2a – 2c to the student. Indicate and read each Card.
 - a. Indicate Card 2a.

SAY	“Reproduction Stage”
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 - b. Indicate Card 2b.

SAY	“Sprout Stage”
------------	----------------
 - c. Indicate Card 2c.

SAY	“Growth Stage”
------------	----------------
6.

ASK AGAIN	“In which stage of the plant life cycle does the plant make seeds?”
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7. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.
8. Indicate Card 2a.

SAY	“The plant makes seeds during the Reproduction Stage of the plant life cycle.”
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9.

ASK	“In which stage of the plant life cycle does the plant begin to grow roots?”
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10. Provide remaining Resource 2: Card 2b and Card 2c to the student. Indicate and read each remaining Card.
 - a. Indicate Card 2b.

SAY	“Sprout Stage”
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 - b. Indicate Card 2c.

SAY	“Growth Stage”
------------	----------------
11.

ASK AGAIN	“In which stage of the plant life cycle does the plant begin to grow roots?”
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12. Allow student to respond and record response.
13. Indicate Card 2b.

SAY	“The plant begins to grow roots during the Sprout Stage of the plant life cycle.”
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14.

SAY	“We are now finished with this activity.”
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Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, indicate Card 2a.

SAY	“The plant makes seeds during the Reproduction Stage of the plant life cycle.”
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2. **ASK** “In which stage of the plant life cycle does the plant **begin to** grow roots?”

3. Provide remaining Resource 2: Card 2b and Card 2c to the student. Indicate and read each remaining Card.

- a. Indicate Card 2b.

SAY	“Sprout Stage”
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- b. Indicate Card 2c.

SAY	“Growth Stage”
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4. **ASK AGAIN** “In which stage of the plant life cycle does the plant **begin to** grow roots?”

5. Allow student to respond and record response.

6. Indicate Card 2b.

SAY	“The plant begins to grow roots during the Sprout Stage of the plant life cycle.”
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7. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. In which stage of the plant life cycle does the plant make seeds?
 - a. Card 2a – Reproduction Stage
2. In which stage of the plant life cycle does the plant **begin to** grow roots?
 - a. Card 2b – Sprout Stage

Content Guidance	Rating	Score
<p>Student...</p> <ul style="list-style-type: none"> • gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • is unable to identify the stage of the plant life cycle in which the plant makes seeds (Card 2a); and • is unable to identify the stage of the plant life cycle in which the plant begins to grow roots (Card 2b). 	<p>The student does not demonstrate understanding.</p>	<p>0</p>
<p>Student...</p> <ul style="list-style-type: none"> • is able to identify the stage of the plant life cycle in which the plant makes seeds (Card 2a); and • is unable to identify the stage of the plant life cycle in which the plant begins to grow roots (Card 2b). <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • is unable to identify the stage of the plant life cycle in which the plant makes seeds (Card 2a); and • after scaffolding, is able to identify the stage of the plant life cycle in which the plant begins to grow roots (Card 2b). 	<p>The student demonstrates limited understanding typically requiring additional support through scaffolding.</p>	<p>1</p>
<p>Student...</p> <ul style="list-style-type: none"> • is able to identify the stage of the plant life cycle in which the plant makes seeds (Card 2a); and • is able to identify the stage of the plant life cycle in which the plant begins to grow roots (Card 2b). 	<p>The student demonstrates understanding independently without scaffolding.</p>	<p>2</p>

ACTIVITY 4

Essence Statement: CTAS-3-LS1-1 Compare simple models to describe the similarities and differences in the life cycle stages (birth, growth, reproduction, and death) of common organisms.

Core Extension 4: Compare and contrast the life cycles of two plants or two animals to identify one similarity and one difference. (CTAS-3-LS1-1)

Teacher Notes:

Collect the following resources for this activity:

- Activity 4 Resource 1: Life Cycle of a Chicken Poster
- Activity 4 Resource 2: Life Cycle of a Butterfly Poster
- Activity 4 Resource 3: Cards 3a – 3c
 - Card 3a – Larva Stage
 - Card 3b – Egg Stage
 - Card 3c – Pupa Stage
- Activity 4 Resource 4: Cards 4a – 4c
 - Card 4a – Egg Stage
 - Card 4b – Adult Stage
 - Card 4c – Larva Stage

Steps to Follow:

1.

SAY	“In this activity, we are going to compare and contrast the life cycle of a chicken and the life cycle of a butterfly.”
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2. Display Resource 1: Life Cycle of a Chicken Poster for the student.

3. Indicate Resource 1.

SAY	“Here is the life cycle of a chicken. In the Egg Stage (<i>indicate Egg Stage</i>), the chicken develops inside an egg. In the Hatchling Stage (<i>indicate Hatchling Stage</i>), a chick hatches from the egg. In the Growth Stage (<i>indicate Growth Stage</i>), the chick grows larger. In the Adult Stage (<i>indicate Adult Stage</i>), the chicken is fully grown and can lay eggs.”
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4. Display Resource 2: Life Cycle of a Butterfly Poster for the student.

5. Indicate Resource 2.

SAY	“Here is the life cycle of a butterfly. In the Egg Stage (<i>indicate Egg Stage</i>), the butterfly starts off as an egg. In the Larva Stage (<i>indicate Larva Stage</i>), a caterpillar, or larva, hatches from the egg. In the Pupa Stage (<i>indicate Pupa Stage</i>), the caterpillar forms a pupa. In the Adult Stage (<i>indicate Adult Stage</i>), a butterfly comes out of the pupa and can fly.”
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6.

ASK	“What is one way that the life cycle of a chicken and the life cycle of a butterfly are alike?”
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7. Provide Resource 3: Cards 3a – 3c to the student. Indicate and describe each Card.

a. Indicate Card 3a.

SAY	“They both have a Larva Stage. ”
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b. Indicate Card 3b.

SAY	“They both have an Egg Stage. ”
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c. Indicate Card 3c.

SAY	“They both have a Pupa Stage. ”
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8. **ASK** “What is one way that the life cycle of a chicken and the life cycle of a butterfly are alike?”
AGAIN

9. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.

10. Indicate Card 3b.

SAY	“They both have an Egg Stage. ”
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11. **ASK** “What is one way that the life cycle of a chicken and the life cycle of a butterfly are different?”

12. Provide Resource 4: Cards 4a – 4c to the student. Indicate and describe each Card.

a. Indicate Card 4a.

SAY	“Only the butterfly life cycle has an Egg Stage. ”
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b. Indicate Card 4b.

SAY	“Only the butterfly life cycle has an Adult Stage. ”
------------	---

c. Indicate Card 4c.

SAY	“Only the butterfly life cycle has a Larva Stage. ”
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13. **ASK** “What is one way that the life cycle of a chicken and the life cycle of a butterfly are different?”
AGAIN

14. Allow student to respond and record response.

15. Indicate Card 4c.

SAY	“Only the life cycle of a butterfly has a Larva Stage. ”
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16. **SAY** “We are now finished with this activity.”

Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, indicate Card 3b.

SAY	“One way that the life cycle of a chicken and the life cycle of a butterfly are alike is that they both start off as an egg. They both have an Egg Stage. ”
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2. **ASK** “What is one way that the life cycle of a chicken and the life cycle of a butterfly are different?”

3. Provide Resource 4: Cards 4a – 4c to the student. Indicate and describe each Card.

a. Indicate Card 4a.

SAY	“Only the butterfly life cycle has an Egg Stage. ”
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b. Indicate Card 4b.

SAY	“Only the butterfly life cycle has an Adult Stage. ”
------------	---

c. Indicate Card 4c.

SAY	“Only the butterfly life cycle has a Larva Stage. ”
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4. **ASK** “What is one way that the life cycle of a chicken and the life cycle of a butterfly are different?”
AGAIN

5. Allow student to respond and record response.

6. Indicate Card 4c.

SAY	“Only the life cycle of a butterfly has a Larva Stage. ”
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7. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. What is one way that the life cycle of a chicken and the life cycle of a butterfly are alike?
 - a. Card 3b – They both have an **Egg Stage.**
2. What is one way that the life cycle of a chicken and the life cycle of a butterfly are different?
 - a. Card 4c – Only the life cycle of a butterfly has a **Larva Stage.**



Content Guidance	Rating	Score
Student... <ul style="list-style-type: none">gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify that the life cycle of a chicken and the life cycle of a butterfly both have an egg stage (Card 3b); andis unable to identify that only the life cycle of a butterfly has a larva stage (Card 4c).	The student does not demonstrate understanding.	0
Student... <ul style="list-style-type: none">is able to identify that the life cycle of a chicken and the life cycle of a butterfly both have an egg stage (Card 3b); andis unable to identify that only the life cycle of a butterfly has a larva stage (Card 4c). <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify that the life cycle of a chicken and the life cycle of a butterfly both have an egg stage (Card 3b); andafter scaffolding, is able to identify that only the life cycle of a butterfly has a larva stage (Card 4c).	The student demonstrates limited understanding typically requiring additional support through scaffolding.	1
Student... <ul style="list-style-type: none">is able to identify that the life cycle of a chicken and the life cycle of a butterfly both have an egg stage (Card 3b); andis able to identify that only the life cycle of a butterfly has a larva stage (Card 4c).	The student demonstrates understanding independently without scaffolding.	2

ACTIVITY 5

Essence Statement: CTAS-4-LS1-1 Make and support a claim that plants and animals have structures that function to support survival, growth, and behavior.

Core Extension 5: Make a claim about a structure that supports the survival or growth of a plant or an animal (e.g., stem of a plant transports water or food/nutrients to the plant; water and nutrients/food allow plant to survive; stem is thick on a sunflower; thick stem allows sunflower to grow tall). (CTAS-4-LS1-1)

Teacher Notes:

Collect the following resources for this activity:

- Activity 5 Resource 1: Statement 1 Poster
- Activity 5 Resource 2: Cards 2a – 2c
 - Card 2a – seeds
 - Card 2b – roots
 - Card 2c – petals
- Activity 5 Resource 3: Statement 2 Poster
- Activity 5 Resource 4: Cards 4a – 4c
 - Card 4a – pollen
 - Card 4b – leaves
 - Card 4c – stems

Steps to Follow:

1.

SAY	“In this activity, we are going to talk about plant structures. Plants have many structures that help them to survive.”
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2. Display Resource 1: Statement 1 Poster for the student.

3. Indicate Resource 1.

SAY	“This is a statement about the function, or job, of a plant structure. The statement needs to be completed: ‘ Statement 1: Plant ‘blank’ are colorful to attract bees to their nectar.’”
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4.

ASK	“Which plant structure completes Statement 1?”
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5. Provide Resource 2: Cards 2a – 2c to the student. Indicate and read each Card.

a. Indicate Card 2a.

SAY	“seeds”
------------	---------

b. Indicate Card 2b.

SAY	“roots”
------------	---------

c. Indicate Card 2c.

SAY	“petals”
------------	----------

6. **ASK AGAIN** “Which plant structure completes Statement 1?”
7. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.
8. Indicate Card 2c.
- SAY** “Plant **petals** are colorful to attract bees to their nectar.”
9. Display Resource 3: Statement 2 Poster for the student.
10. Indicate Resource 3.
- SAY** “This is another statement about the function of a plant structure. The statement needs to be completed: ‘**Statement 2:** Bees spread ‘**blank**’ in order to help plants reproduce.’”
11. **ASK** “Which plant structure completes Statement 2?”
12. Provide Resource 4: Cards 4a – 4c to the student. Indicate and read each Card.
- a. Indicate Card 4a.
- SAY** “pollen”
- b. Indicate Card 4b.
- SAY** “leaves”
- c. Indicate Card 4c.
- SAY** “stems”
13. **ASK AGAIN** “Which plant structure completes Statement 2?”
14. Allow student to respond and record response.
15. Indicate Card 4a.
- SAY** “Bees spread **pollen** in order to help plants reproduce.”
16. **SAY** “We are now finished with this activity.”

Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, indicate Card 2c.

SAY	“Plant petals are colorful to attract bees to their nectar.”
------------	---

2. Display Resource 3: Statement 2 Poster for the student.

3. Indicate Resource 3.

SAY	“This is another statement about the function of a plant structure. The statement needs to be completed: ‘ Statement 2: Bees spread ‘ blank ’ in order to help plants reproduce.’”
------------	--

4. **ASK** “Which plant structure completes Statement 2?”

5. Provide Resource 4: Cards 4a – 4c to the student. Indicate and read each Card.

- a. Indicate Card 4a.

SAY	“pollen”
------------	----------

- b. Indicate Card 4b.

SAY	“leaves”
------------	----------

- c. Indicate Card 4c.

SAY	“stems”
------------	---------

6. **ASK AGAIN** “Which plant structure completes Statement 2?”

7. Allow student to respond and record response.

8. Indicate Card 4a.

SAY	“Bees spread pollen in order to help plants reproduce.”
------------	--

9. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. Which plant structure completes Statement 1?
 - a. Card 2c – petals; **Statement 1:** Plant **petals** are colorful to attract bees to their nectar.
2. Which plant structure completes Statement 2?
 - a. Card 4a – pollen; **Statement 2:** Bees spread **pollen** in order to help plants reproduce.



Content Guidance	Rating	Score
Student... <ul style="list-style-type: none">gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the structure that plant flowers use to attract bees (Card 2c); andis unable to identify the structure that plants and bees use to help plants reproduce (Card 4a).	The student does not demonstrate understanding.	0
Student... <ul style="list-style-type: none">is able to identify the structure that plant flowers use to attract bees (Card 2c); andis unable to identify the structure that plants and bees use to help plants reproduce (Card 4a). <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the structure that plant flowers use to attract bees (Card 2c); andafter scaffolding, is able to identify the structure that plants and bees use to help plants reproduce (Card 4a).	The student demonstrates limited understanding typically requiring additional support through scaffolding.	1
Student... <ul style="list-style-type: none">is able to identify the structure that plant flowers use to attract bees (Card 2c); andis able to identify the structure that plants and bees use to help plants reproduce (Card 4a).	The student demonstrates understanding independently without scaffolding.	2



Connecticut
Alternate
Science
Assessment

Life Science

Storyline 4: Healthy Ecosystems

Grade 5 Performance Task



Life Science

**Storyline 4: Healthy Ecosystems
Grade 5 Performance Task**

Guiding Questions: Where do plants and animals get the matter they need to survive? What causes organisms to thrive or not thrive in an ecosystem? How can humans contribute to a healthier environment?

NGSS Learning Progressions		Grade 5		
		NGSS Standard Performance Expectations	Connecticut Alternate Science Essence Statements	Core Extensions
LS2.A Interdependent Relationships in Ecosystems	5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	CTAS-5-LS2-1 Use a simple model to describe the movement of matter among plants and animals in the environment.	<ol style="list-style-type: none"> 1. Given several examples, identify which are plants and which are animals. (CTAS-5-LS2-1) 2. Identify two traits that help an organism survive in a given habitat. (CTAS-3-LS4-3) 3. Make and support a claim why some animals would not survive in a given habitat. (CTAS-LS4-3) 4. Describe the role of plants as producers and animals as consumers in the environment. (CTAS-5-LS2-1) 5. Use a simple food chain as a model to show the interactions of plants and animals in cycling matter. (CTAS-5-LS2-1) 6. Make a claim using evidence about two factors affecting the survival of an organism in a given habitat. (CTAS-3-LS4-3) 7. When given an environmental problem, identify a way to help reduce the harmful effects on plants or animals. (CTAS-3-LS4-4) 	
	LS2.C Ecosystem Dynamics, Functioning, and Resilience	CTAS-3-LS4-4 Given evidence, compare possible solutions to a problem that causes changes in an environment affecting the plants and animals that live there.*		
LS4.C Adaptation	3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.*	CTAS-3-LS4-4 Given evidence, compare possible solutions to a problem that causes changes in an environment affecting the plants and animals that live there.*		

Grade 5			
NGSS Learning Progressions	NGSS Standard Performance Expectations	Connecticut Alternate Science Essence Statements	Core Extensions
	3-LS4-3 Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	CTAS-3-LS4-3 Make and support a claim that in a given habitat, some organisms can survive well, some survive less well, and some cannot survive at all.	8. From two possible solutions, compare them and select one that may prevent environmental problems that affect plants or animals. (CTAS-3-LS4-4)
Appropriate Vocabulary	Environment, food chain, ecosystem, solution, habitat, producer, consumer, plant, animal, energy, increase, decrease		

***Indicates a NGSS Standard Performance Expectation or Connecticut Alternate Science Essence Statement that incorporates engineering design.**



Life Science
Storyline 4: Healthy Ecosystems
Grade 5 Performance Task

General Overview:

Students will complete a series of activities focused on a pond ecosystem. Students will consider the variety of plants (producers) and animals (consumers) in food chains, as well as potential problems that might arise in the ecosystem and possible solutions.

List of Materials Needed:

Teacher-Provided Resources:

There are no Teacher-Provided Resources that are required for this Performance Task.

Instructions for Preparing Materials:

Teachers must collect all relevant materials prior to the administration of each activity. The Card, Sentence Strip, and Strip Resources will need to be cut out. Resources are listed according to the Resource Identifier, which appears on the back of each Resource. The Resources needed for the administration of each activity are listed according to these Resource Identifiers in the Teacher Notes section of each activity.

List of Resources:

- Activity 1 Resource 1: Healthy Pond Habitat Poster
- Activity 1 Resource 2: Cards 2a – 2h
 - Card 2a – sun
 - Card 2b – lily pad
 - Card 2c – marsh grass
 - Card 2d – fish
 - Card 2e – beetle
 - Card 2f – frog
 - Card 2g – bird
 - Card 2h – turtle
- Activity 2 Resource 1: Cards 1a – 1d
 - Card 1a – bird
 - Card 1b – wings
 - Card 1c – beak
 - Card 1d – feet
- Activity 2 Resource 2: *Use Activity 1 Resource 1: Healthy Pond Habitat Poster*
- Activity 3 Resource 1: *Use Activity 1 Resource 1: Healthy Pond Habitat Poster*
- Activity 3 Resource 2: Cards 2a – 2c
 - Card 2a – polar bear
 - Card 2b – turtle
 - Card 2c – duck

- Activity 3 Resource 3: Cards 3a – 3c
 - Card 3a – fur
 - Card 3b – nose
 - Card 3c – paws
- Activity 4 Resource 1: Strips 1a – 1d
 - Strip 1a – use energy
 - Strip 1b – eat plants
 - Strip 1c – eat animals
 - Strip 1d – make food
- Activity 5 Resource 1: Food Chain Poster
- Activity 5 Resource 2: *Use Activity 1 Resource 2: Cards 2b – 2h*
 - Card 2b – lily pad
 - Card 2c – marsh grass
 - Card 2d – fish
 - Card 2e – beetle
 - Card 2f – frog
 - Card 2g – bird
 - Card 2h – turtle
- Activity 6 Resource 1: Pond Organisms Data Table Poster
- Activity 6 Resource 2a: Statement 1 Poster
- Activity 6 Resource 2b: Statement 2 Poster
- Activity 6 Resource 3: Cards 3a – 3f
 - Card 3a – increased
 - Card 3b – decreased
 - Card 3c – decrease
 - Card 3d – increase
 - Card 3e – increase
 - Card 3f – decrease
- Activity 7 Resource 1: Healthy Pond Environment Poster
- Activity 7 Resource 2: Unhealthy Pond Environment Poster
- Activity 7 Resource 3: Strips 3a – 3c
 - Strip 3a – too few people
 - Strip 3b – too much trash
 - Strip 3c – too many animals
- Activity 7 Resource 4: Strips 4a – 4c
 - Strip 4a – remove animals
 - Strip 4b – more people
 - Strip 4c – trash bins
- Activity 8 Resource 1: *Use Activity 7 Resource 2: Unhealthy Pond Environment Poster*
- Activity 8 Resource 2: Card 2a and Card 2b
 - Card 2a – trash can
 - Card 2b – rowboat



- Activity 8 Resource 3: Strips 3a – 3c
 - Strip 3a – not move fast
 - Strip 3b – not have motors
 - Strip 3c – not make noise

ACTIVITY 1

Essence Statement: CTAS-5-LS2-1 Use a simple model to describe the movement of matter among plants and animals in the environment.

Core Extension 1: Given several examples, identify which are plants and which are animals. (CTAS-5-LS2-1)

Teacher Notes:

Collect the following resources for this activity:

- Activity 1 Resource 1: Healthy Pond Habitat Poster
- Activity 1 Resource 2: Cards 2a – 2h
 - Card 2a – sun
 - Card 2b – lily pad
 - Card 2c – marsh grass
 - Card 2d – fish
 - Card 2e – beetle
 - Card 2f – frog
 - Card 2g – bird
 - Card 2h – turtle

Steps to Follow:

1. **SAY** “In this activity, we are going to talk about a pond habitat.”

2. Display Resource 1: Healthy Pond Habitat Poster for the student.

3. Indicate Resource 1.

SAY “Here is a healthy pond habitat. There is lots of marsh grass on the bank (*indicate marsh grass on poster*). There are many beetles (*indicate beetles on poster*). There are lots of fish and frogs swimming in clear water (*indicate frogs and fish on poster*). There is a turtle in the water (*indicate turtle on poster*). There is a bird flying in the air and a bird sitting on the bank of the pond (*indicate birds on poster*). Some birds catch fish and frogs to eat.”

4. **ASK** “Which pictures show a plant or a producer? Select all pictures that show a plant or a producer.”

5. Provide Resource 2: Cards 2a – 2h to the student. Indicate and read each Card.

a. Indicate Card 2a.

SAY “sun”

b. Indicate Card 2b.

SAY “lily pad”

c. Indicate Card 2c.

SAY “marsh grass”

d. Indicate Card 2d.

SAY	“fish”
------------	--------

e. Indicate Card 2e.

SAY	“beetle”
------------	----------

f. Indicate Card 2f.

SAY	“frog”
------------	--------

g. Indicate Card 2g.

SAY	“bird”
------------	--------

h. Indicate Card 2h.

SAY	“turtle”
------------	----------

6. **ASK** “Which pictures show a plant or a producer? Select all pictures that show a plant or a producer.”
AGAIN

7. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.

8. If the student chose one or more of the correct answer(s), reiterate the student’s correct answer(s). Set chosen answer Card(s) aside.

9. **ASK** “Which pictures show an animal or a consumer? Select all pictures that show an animal or a consumer.”

10. Provide remaining Resource 2: Cards 2a – 2h to the student. Indicate and read each remaining Card.

a. Indicate Card 2a.

SAY	“sun”
------------	-------

b. Indicate Card 2b.

SAY	“lily pad”
------------	------------

c. Indicate Card 2c.

SAY	“marsh grass”
------------	---------------

d. Indicate Card 2d.

SAY	“fish”
------------	--------

e. Indicate Card 2e.

SAY	“beetle”
------------	----------

f. Indicate Card 2f.

SAY	"frog"
------------	--------

g. Indicate Card 2g.

SAY	"bird"
------------	--------

h. Indicate Card 2h.

SAY	"turtle"
------------	----------

11. **ASK AGAIN** "Which pictures show an animal or a consumer? Select all pictures that show an animal or a consumer."

12. Allow student to respond and record response.

13. If the student chose one or more of the correct answer(s), reiterate the student's correct answer(s). Set chosen answer Card(s) aside.

14. **SAY** "We are now finished with this activity."

Scoring Guidance and Scaffolding

Scaffolding:

Note: Optionally, you may ask the student the second question, “Which pictures show an animal or a consumer?”, if the scaffold is applied. However, if you choose to ask the second question and the student answers the second question correctly, the student will still receive one point.

1. After student makes first incorrect attempt, indicate Card 2b.

SAY	“This is a lily pad. A lily pad is a plant.”
------------	--

2.

ASK	“Which other picture shows a plant?”
------------	--------------------------------------

3. Provide remaining Resource 2: Cards 2a – 2h to the student. Indicate and read each remaining Card.

- a. Indicate Card 2a.

SAY	“sun”
------------	-------

- b. Indicate Card 2c.

SAY	“marsh grass”
------------	---------------

- c. Indicate Card 2d.

SAY	“fish”
------------	--------

- d. Indicate Card 2e.

SAY	“beetle”
------------	----------

- e. Indicate Card 2f.

SAY	“frog”
------------	--------

- f. Indicate Card 2g.

SAY	“bird”
------------	--------

- g. Indicate Card 2h.

SAY	“turtle”
------------	----------

4.

ASK AGAIN	“Which other picture shows a plant?”
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5. Allow student to respond and record response.

6. If the student chose one or more of the correct answer(s), reiterate the student’s correct answer(s). Set chosen answer Card(s) aside.

7.

SAY	“We are now finished with this activity.”
------------	---

Correct answers are as follows:

1. Which pictures show a plant or a producer?
 - a. Card 2b – lily pad
 - b. Card 2c – marsh grass
2. Which pictures show an animal or a consumer?
 - a. Card 2d – fish
 - b. Card 2e – beetle
 - c. Card 2f – frog
 - d. Card 2g – bird
 - e. Card 2h – turtle

Content Guidance	Rating	Score
Student... <ul style="list-style-type: none"> • gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • is unable to identify at least one plant (Card 2b or Card 2c); and • is unable to identify at least one animal (Card 2d – Card 2h). 	The student does not demonstrate understanding.	0
Student... <ul style="list-style-type: none"> • is able to identify only one plant (Card 2b or Card 2c); and • is unable to identify at least one animal (Card 2d – Card 2h). <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • is able to identify only one plant (Card 2b or Card 2c); and • is able to identify between one and four animals (Card 2d – Card 2h). <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • is unable to identify at least one plant (Card 2b or Card 2c); and • after scaffolding, is able to identify a plant (Card 2c). 	The student demonstrates limited understanding typically requiring additional support through scaffolding.	1
Student... <ul style="list-style-type: none"> • is able to identify both plants (Card 2b and Card 2c); and • is able to identify all five animals (Card 2d – Card 2h). 	The student demonstrates understanding independently without scaffolding.	2

ACTIVITY 2

Essence Statement: CTAS-3-LS4-3 Make and support a claim that in a given habitat, some organisms can survive well, some survive less well, and some cannot survive at all.

Core Extension 2: Identify two traits that help an organism survive in a given habitat. (CTAS-3-LS4-3)

Teacher Notes:

Collect the following resources for this activity:

- Activity 2 Resource 1: Cards 1a – 1d
 - Card 1a – bird
 - Card 1b – wings
 - Card 1c – beak
 - Card 1d – feet
- Activity 2 Resource 2: *Use Activity 1 Resource 1: Healthy Pond Habitat Poster*

Steps to Follow:

1. **SAY** “In this activity, we are going to talk about one of the birds that lives in the pond habitat.”

2. Display Resource 1: Card 1a for the student.

3. Display Resource 2: Healthy Pond Habitat Poster for the student.

4. Indicate Card 1a and the bird in Resource 2.

SAY “This bird flies around the pond and catches fish or frogs to eat.”

5. Set Card 1a aside.

6. **ASK** “What is the most helpful body part that allows the bird to fly?”

7. Provide Resource 1: Cards 1b – 1d to the student. Indicate and read each Card.

a. Indicate Card 1b.

SAY “wings”

b. Indicate Card 1c.

SAY “beak”

c. Indicate Card 1d.

SAY “feet”

8. **ASK AGAIN** “What is the most helpful body part that allows the bird to fly?”

9. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.

10. Indicate Card 1b.

SAY	“The bird’s wings are the most helpful body part that allows the bird to fly.”
------------	--

11. **ASK** “What is the most helpful body part that allows the bird to eat?”

12. Provide Resource 1: Card 1c and Card 1d to the student. Indicate and read each Card.

a. Indicate Card 1c.

SAY	“beak”
------------	--------

b. Indicate Card 1d.

SAY	“feet”
------------	--------

13. **ASK AGAIN** “What is the most helpful body part that allows the bird to eat?”

14. Allow student to respond and record response.

15. Indicate Card 1c.

SAY	“The bird’s beak is the most helpful body part that allows the bird to eat.”
------------	--

16. **SAY** “We are now finished with this activity.”

Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, indicate Card 1b.

SAY	“The bird’s wings are the most helpful body part that allows the bird to fly.”
------------	--

2. **ASK** “What is the most helpful body part that allows the bird to eat?”

3. Provide Resource 1: Card 1c and Card 1d to the student. Indicate and read each Card.

- a. Indicate Card 1c.

SAY	“beak”
------------	--------

- b. Indicate Card 1d.

SAY	“feet”
------------	--------

4. **ASK** “What is the most helpful body part that allows the bird to eat?”

AGAIN

5. Allow student to respond and record response.

6. Indicate Card 1c.

SAY	“The bird’s beak is the most helpful body part that allows the bird to eat.”
------------	--

7. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. What is the most helpful body part that allows the bird to fly?
 - a. Card 1b – wings
2. What is the most helpful body part that allows the bird to eat?
 - a. Card 1c – beak

For the first question, feathers is also an acceptable answer. For the second question, mouth is also an acceptable answer.



Content Guidance	Rating	Score
Student... <ul style="list-style-type: none">gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the most helpful body part that allows the bird to fly (Card 1b); andis unable to identify the most helpful body part that allows the bird to eat (Card 1c).	The student does not demonstrate understanding.	0
Student... <ul style="list-style-type: none">is able to identify the most helpful body part that allows the bird to fly (Card 1b); andis unable to identify the most helpful body part that allows the bird to eat (Card 1c). <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the most helpful body part that allows the bird to fly (Card 1b); andafter scaffolding, is able to identify the most helpful body part that allows the bird to eat (Card 1c).	The student demonstrates limited understanding typically requiring additional support through scaffolding.	1
Student... <ul style="list-style-type: none">is able to identify the most helpful body part that allows the bird to fly (Card 1b); andis able to identify the most helpful body part that allows the bird to eat (Card 1c).	The student demonstrates understanding independently without scaffolding.	2

ACTIVITY 3

Essence Statement: CTAS-3-LS4-3 Make and support a claim that in a given habitat, some organisms can survive well, some survive less well, and some cannot survive at all.

Core Extension 3: Make and support a claim why some animals would not survive in a given habitat. (CTAS-3-LS4-3)

Teacher Notes:

Collect the following resources for this activity:

- Activity 3 Resource 1: *Use Activity 1 Resource 1: Healthy Pond Habitat Poster*
- Activity 3 Resource 2: Cards 2a – 2c
 - Card 2a – polar bear
 - Card 2b – turtle
 - Card 2c – duck
- Activity 3 Resource 3: Cards 3a – 3c
 - Card 3a – fur
 - Card 3b – nose
 - Card 3c – paws

Steps to Follow:

1.

SAY	“In this activity, we are going to talk about the pond habitat to determine which animals cannot survive in this pond habitat and why.”
------------	---
2. Display Resource 1: Healthy Pond Habitat Poster to the student.
3. Indicate Resource 1.

SAY	“Let’s look at this pond habitat again. This pond is located in an area that has very warm temperatures for most of the year.”
------------	--
4.

ASK	“Which two animals survive well in this pond habitat? Choose two animals that survive well in this pond habitat.”
------------	--
5. Provide Resource 2: Cards 2a – 2c to the student. Indicate and read each Card.
 - a. Indicate Card 2a.

SAY	“polar bear”
------------	--------------
 - b. Indicate Card 2b.

SAY	“turtle”
------------	----------
 - c. Indicate Card 2c.

SAY	“duck”
------------	--------
6.

ASK AGAIN	“Which two animals survive well in this pond habitat? Choose two animals that survive well in this pond habitat.”
------------------	--

7. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.
8. Indicate Card 2b and Card 2c.

SAY	“Both the turtle and the duck survive well in this pond habitat.”
------------	--
9. Set Card 2b and Card 2c aside.
10. Indicate Card 2a.

SAY	“It is difficult for a polar bear to survive in this pond habitat.”
------------	---
11. **ASK** “What makes it difficult for the polar bear to survive in this pond habitat?”
12. Provide Resource 3: Cards 3a – 3c to the student. Indicate and read each Card.
 - a. Indicate Card 3a.

SAY	“The polar bear has thick fur and fat to stay warm all year.”
------------	--
 - b. Indicate Card 3b.

SAY	“The polar bear has a nose to smell other animals.”
------------	--
 - c. Indicate Card 3c.

SAY	“The polar bear has large paws to swim in the water.”
------------	--
13. **ASK AGAIN** “What makes it difficult for the polar bear to survive in this pond habitat?”
14. Allow student to respond and record response.
15. Indicate Card 3a.

SAY	“The polar bear has thick fur and fat to stay warm all year.”
------------	--
16. **SAY** “We are now finished with this activity.”

Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, indicate Card 2b and Card 2c.

SAY	“Both the turtle and the duck survive well in this pond habitat.”
------------	--

2. Set Card 2b and Card 2c aside.

3. Indicate Card 2a.

SAY	“It is difficult for a polar bear to survive in this pond habitat.”
------------	---

4. **ASK** “What makes it difficult for the polar bear to survive in this pond habitat?”

5. Provide Resource 3: Cards 3a – 3c to the student. Indicate and read each Card.

- a. Indicate Card 3a.

SAY	“The polar bear has thick fur and fat to stay warm all year.”
------------	--

- b. Indicate Card 3b.

SAY	“The polar bear has a nose to smell other animals.”
------------	--

- c. Indicate Card 3c.

SAY	“The polar bear has large paws to swim in the water.”
------------	--

6. **ASK AGAIN** “What makes it difficult for the polar bear to survive in this pond habitat?”

7. Allow student to respond and record response.

8. Indicate Card 3a.

SAY	“The polar bear has thick fur and fat to stay warm all year.”
------------	--

9. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. Which two animals **survive well** in this pond habitat? Choose two animals that survive well in this pond habitat.
 - a. Card 2b – turtle
 - b. Card 2c – duck
2. What makes it difficult for the polar bear to survive in this pond habitat?
 - a. Card 3a – thick fur



Content Guidance	Rating	Score
<p>Student...</p> <ul style="list-style-type: none">gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify that the turtle and the duck can survive well in this pond habitat (Card 2b and Card 2c); andis unable to identify that it is difficult for the polar bear to survive in this pond habitat because it has thick fur (Card 3a).	The student does not demonstrate understanding.	0
<p>Student...</p> <ul style="list-style-type: none">is able to identify that the turtle and the duck can survive well in this pond habitat (Card 2b and Card 2c); andis unable to identify that it is difficult for the polar bear to survive in this pond habitat because it has thick fur (Card 3a). <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify that the turtle and the duck can survive well in this pond habitat (Card 2b and Card 2c); andafter scaffolding, is able to identify that it is difficult for the polar bear to survive in this pond habitat because it has thick fur (Card 3a).	The student demonstrates limited understanding typically requiring additional support through scaffolding.	1
<p>Student...</p> <ul style="list-style-type: none">is able to identify that the turtle and the duck can survive well in this pond habitat (Card 2b and Card 2c); andis able to identify that it is difficult for the polar bear to survive in this pond habitat because it has thick fur (Card 3a).	The student demonstrates understanding independently without scaffolding.	2

ACTIVITY 4

Essence Statement: CTAS-5-LS2-1 Use a simple model to describe the movement of matter among plants and animals in the environment.

Core Extension 4: Describe the role of plants as producers and animals as consumers in the environment. (CTAS-5-LS2-1)

Teacher Notes:

Collect the following resources for this activity:

- Activity 4 Resource 1: Strips 1a – 1d
 - Strip 1a – use energy
 - Strip 1b – eat plants
 - Strip 1c – eat animals
 - Strip 1d – make food

Steps to Follow:

1.

SAY	“In this activity, we are going to talk about what plants and animals do. All plants and animals need food to survive. Producers are plants. Consumers are animals. Producers and consumers get their food in different ways.”
------------	--

2.

ASK	“What is one description of what a producer does?”
------------	---
3. Provide Resource 1: Strips 1a – 1d. Indicate and read each Strip.
 - a. Indicate Strip 1a.

SAY	“use energy from the sun”
------------	---------------------------
 - b. Indicate Strip 1b.

SAY	“eat plants”
------------	--------------
 - c. Indicate Strip 1c.

SAY	“eat animals”
------------	---------------
 - d. Indicate Strip 1d.

SAY	“make their own food”
------------	-----------------------

4.

ASK AGAIN	“What is one description of what a producer does?”
------------------	---

5.

ALLOW	Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.
--------------	---

6. If the student chose the correct answer, reiterate the student’s correct answer. Set chosen answer Strip aside.

7.

ASK	“What is one description of what a consumer does?”
------------	---
8. Provide remaining Resource 1: Strips 1a – 1d to the student. Indicate and read each remaining Strip.
- a. Indicate Strip 1a.
- | | |
|------------|---------------------------|
| SAY | “use energy from the sun” |
|------------|---------------------------|
- b. Indicate Strip 1b.
- | | |
|------------|--------------|
| SAY | “eat plants” |
|------------|--------------|
- c. Indicate Strip 1c.
- | | |
|------------|---------------|
| SAY | “eat animals” |
|------------|---------------|
- d. Indicate Strip 1d.
- | | |
|------------|-----------------------|
| SAY | “make their own food” |
|------------|-----------------------|
9.

ASK AGAIN	“What is one description of what a consumer does?”
----------------------	---
10.

Allow student to respond and record response.

11. If the student chose the correct answer, reiterate the student’s correct answer. Set chosen answer Strip aside.
12.

SAY	“We are now finished with this activity.”
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Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, indicate Strip 1a.

SAY	“Plants use energy from the sun. This describes a producer.”
------------	--

2. **ASK** “What is **one** description of what a consumer does?”

3. Provide remaining Resource 1: Strips 1b – 1d to the student. Indicate and read each remaining Strip.

- a. Indicate Strip 1b.

SAY	“eat plants”
------------	--------------

- b. Indicate Strip 1c.

SAY	“eat animals”
------------	---------------

- c. Indicate Strip 1d.

SAY	“make their own food”
------------	-----------------------

4. **ASK AGAIN** “What is **one** description of what a consumer does?”

5. Allow student to respond and record response.

6. If the student chose the correct answer, reiterate the student’s correct answer. Set chosen answer Strip aside.

7. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. What is **one** description of what a producer does?
 - a. Strip 1a – use energy from the sun

OR

 - b. Strip 1d – make their own food
2. What is **one** description of what a consumer does?
 - a. Strip 1b – eat plants

OR

 - b. Strip 1c – eat animals



Content Guidance	Rating	Score
<p>Student...</p> <ul style="list-style-type: none">gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify one description of what a producer does (Strip 1a or Strip 1d); andis unable to identify one description of what a consumer does (Strip 1b or Strip 1c).	<p>The student does not demonstrate understanding.</p>	<p>0</p>
<p>Student...</p> <ul style="list-style-type: none">is able to identify one description of what a producer does (Strip 1a or Strip 1d); andis unable to identify one description of what a consumer does (Strip 1b or Strip 1c). <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify one description of what a producer does (Strip 1a or Strip 1d); andafter scaffolding, is able to identify one description of what a consumer does (Strip 1b or Strip 1c).	<p>The student demonstrates limited understanding typically requiring additional support through scaffolding.</p>	<p>1</p>
<p>Student...</p> <ul style="list-style-type: none">is able to identify one description of what a producer does (Strip 1a or Strip 1d); andis able to identify one description of what a consumer does (Strip 1b or Strip 1c).	<p>The student demonstrates understanding independently without scaffolding.</p>	<p>2</p>

ACTIVITY 5

Essence Statement: CTAS-5-LS2-1 Use a simple model to describe the movement of matter among plants and animals in the environment.

Core Extension 5: Use a simple food chain as a model to show the interactions of plants and animals in cycling matter. (CTAS-5-LS2-1)

Teacher Notes:

Collect the following resources for this activity:

- Activity 5 Resource 1: Food Chain Poster
- Activity 5 Resource 2: *Use Activity 1 Resource 2: Cards 2b – 2h*
 - Card 2b – lily pad
 - Card 2c – marsh grass
 - Card 2d – fish
 - Card 2e – beetle
 - Card 2f – frog
 - Card 2g – bird
 - Card 2h – turtle

Steps to Follow:

1. **SAY** “In this activity, we are going to use a food chain to show the feeding relationships between living things in an environment. Plants get energy from the sun. Some animals eat plants. Large animals eat smaller animals.”

2. Display the Resource 1: Food Chain Poster for the student.

3. Indicate Resource 1.

SAY “Here is a blank food chain. The food chain starts with energy from the sun (*indicate the first box of the food chain with the sun*). This food chain should be completed with *at least* one plant and two animals in the pond environment.”

4. **SAY** “Let’s place these Cards on the food chain.”

ASK “After the sun, which organism might go next in the food chain?”

5. Provide Resource 2: Cards 2b – 2h to the student. Indicate and read each Card.

a. Indicate Card 2b.

SAY “lily pad”

b. Indicate Card 2c.

SAY “marsh grass”

c. Indicate Card 2d.

SAY “fish”

d. Indicate Card 2e.

SAY	“beetle”
------------	----------

e. Indicate Card 2f.

SAY	“frog”
------------	--------

f. Indicate Card 2g.

SAY	“bird”
------------	--------

g. Indicate Card 2h.

SAY	“turtle”
------------	----------

6. **SAY** “Let’s place these Cards on the food chain.”

AGAIN

ASK

AGAIN

“After the sun, which organism might go next in the food chain?”

7. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.

8. If the student chose the correct answer(s), reiterate the student’s correct answer(s). Set chosen answer Cards(s) on the food chain to complete the food chain. Read the completed food chain to the student.

9. **SAY** “Let’s place more Cards on the food chain.”

ASK

“Which organisms might go next in the food chain?”

10. Provide remaining Resource 2: Cards 2b – 2h to the student. Indicate and read each remaining Card.

a. Indicate Card 2b.

SAY	“lily pad”
------------	------------

b. Indicate Card 2c.

SAY	“marsh grass”
------------	---------------

c. Indicate Card 2d.

SAY	“fish”
------------	--------

d. Indicate Card 2e.

SAY	“beetle”
------------	----------

e. Indicate Card 2f.

SAY	"frog"
------------	--------

f. Indicate Card 2g.

SAY	"bird"
------------	--------

g. Indicate Card 2h.

SAY	"turtle"
------------	----------

- | | | |
|-----|--------------|--|
| 11. | SAY | "Let's place more Cards on the food chain." |
| | AGAIN | |
| | ASK | "Which organisms might go next in the food chain?" |
| | AGAIN | |

12. Allow student to respond and record response.

13. If the student chose the correct answer(s), reiterate the student's correct answer(s). Set chosen answer Cards(s) on the food chain to complete the food chain. Read the completed food chain to the student.

14. **SAY** "We are now finished with this activity."

Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, place Card 2c in the second link of the food chain.

SAY	“The marsh grass gets its energy from the sun.”
------------	---

2. **ASK** “What gets its energy from the marsh grass?”

3. Provide remaining Resource 2: Cards 2b – 2h to the student. Indicate and read each Card.

- a. Indicate Card 2b.

SAY	“lily pad”
------------	------------

- b. Indicate Card 2d.

SAY	“fish”
------------	--------

- c. Indicate Card 2e.

SAY	“beetle”
------------	----------

- d. Indicate Card 2f.

SAY	“frog”
------------	--------

- e. Indicate Card 2g.

SAY	“bird”
------------	--------

- f. Indicate Card 2h.

SAY	“turtle”
------------	----------

4. **ASK AGAIN** “What gets its energy from the marsh grass?”

5. Allow student to respond and record response.

6. If the student chose the correct answer(s), reiterate the student’s correct answer(s). Set chosen answer Cards(s) on the food chain to complete the food chain. Read the completed food chain to the student.

7. **SAY** “We are now finished with this activity.”

Correct answers for food chains in the pond environment include, but are not limited to, the following examples:

sun → lily pad → fish → bird

sun → lily pad → turtle

sun → marsh grass → beetle → frog

sun → marsh grass → beetle → fish

sun → marsh grass → turtle

sun → marsh grass → turtle → bird

Content Guidance	Rating	Score
Student... <ul style="list-style-type: none"> • gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • is unable to complete any of the links in the food chain. 	The student does not demonstrate understanding.	0
Student... <ul style="list-style-type: none"> • with or without scaffolding, is able to place at least one link in the food chain. 	The student demonstrates limited understanding typically requiring additional support through scaffolding.	1
Student... <ul style="list-style-type: none"> • is able to complete a food chain with at least one plant and at least one animal. 	The student demonstrates understanding independently without scaffolding.	2

ACTIVITY 6

Essence Statement: CTAS-3-LS4-3 Make and support a claim that in a given habitat, some organisms can survive well, some survive less well, and some cannot survive at all.

Core Extension 6: Make a claim using evidence about two factors affecting the survival of an organism in a given habitat. (CTAS-3-LS4-3)

Teacher Notes:

Collect the following resources for this activity:

- Activity 6 Resource 1: Pond Organisms Data Table Poster
- Activity 6 Resource 2a: Statement 1 Poster
- Activity 6 Resource 2b: Statement 2 Poster
- Activity 6 Resource 3: Cards 3a – 3f
 - Card 3a – increased
 - Card 3b – decreased
 - Card 3c – decrease
 - Card 3d – increase
 - Card 3e – increase
 - Card 3f – decrease

Steps to Follow:

1. **SAY** “In this activity, we are going to talk about how the water level in a pond can affect the frogs and insects who live in and around the pond.”

2. Display Resource 1: Pond Organisms Data Table Poster for the student.

3. Indicate Resource 1.

SAY “Let’s look at this data table. This data table shows the water level in the pond over a three-year period. Also shown are the number of insects and frogs in the pond over the same three years. Frogs eat insects to stay alive.”

4. Display Resource 2a: Statement 1 Poster for the student.

5. Provide Resource 3: Cards 3a – 3d to the student.

6. Indicate Resource 1 and Resource 2a.

SAY “We will use the data table (*indicate Resource 1*) to complete Statement 1 (*indicate Resource 2a*) using increase and decrease Cards. Statement 1 says ‘From Year 1 to Year 2, the water level in the pond **‘blank’**. This caused the number of insects in the pond to **‘blank’**.’”

7. **SAY** “Let’s use the increase(d) or decrease(d) Cards to fill in the blanks of Statement 1.”

8. Provide Resource 3: Cards 3a – 3d to the student. Indicate and read each Card.

a. Indicate Card 3a.

SAY	"increased"
------------	-------------

b. Indicate Card 3b.

SAY	"decreased"
------------	-------------

c. Indicate Card 3c.

SAY	"decrease"
------------	------------

d. Indicate Card 3d.

SAY	"increase"
------------	------------

9. **SAY AGAIN** "Let's use the increase(d) or decrease(d) Cards to fill in the blanks of Statement 1."

10. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.

11. If the student chose the correct answer, place the chosen answer Cards in the blanks.

12. **SAY** "From Year 1 to Year 2, the water level in the pond **decreased**. This caused the number of insects in the pond to **decrease**."

13. Display Resource 2b: Statement 2 Poster for the student.

14. Provide Resource 3: Cards 3e – 3f to the student.

15. Indicate Resource 1, Resource 2b, and Resource 3.

SAY	"We will use the data on pond organisms to complete Statement 2 using the increase and decrease Cards."
------------	---

16. **SAY** "In year 3, there was a lot of rain that filled the pond to 9 feet (*indicate year 3 on data table*). The number of insects in the pond increased. Statement 2 says, 'In Year 3, the increase in the number of insects in the pond caused the number of frogs in the pond to **blank**.'"

17. **SAY** "Let's use an increase or decrease Card to fill in the blank in Statement 2."

18. Provide Resource 3: Cards 3e and Card 3f to the student. Indicate and read each Card.

a. Indicate Card 3e.

SAY	"increase"
------------	------------

b. Indicate Card 3f.

SAY	“decrease”
------------	------------

19. **SAY AGAIN** “Let’s use an increase or decrease Card to fill in the blank of Statement 2.”

20. Allow student to respond and record response.

21. If the student chose the correct answer, place the chosen answer Card in the blank.

22. **SAY** “In Year 3, the increase in the number of insects in the pond caused the number of frogs in the pond to **increase**.”

23. **SAY** “We are now finished with this activity.”

Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, complete Statement 1 using the decrease(d) Cards (Card 3b and Card 3c).

2. **SAY** “From Year 1 to Year 2, the water level in the pond **decreased**. This caused the number of insects in the pond to **decrease**.”

3. Display Resource 2b: Statement 2 Poster for the student.

4. Provide Resource 3: Cards 3e – 3f to the student.

5. Indicate Resource 1, Resource 2b, and Resource 3.

SAY “We will use the data on pond organisms to complete Statement 2 using the increase and decrease Cards.”

6. **SAY** “In year 3, there was a lot of rain that filled the pond to 9 feet (*indicate year 3 on data table*). The number of insects in the pond increased. Statement 2 says, ‘In Year 3, the increase in the number of insects in the pond caused the number of frogs in the pond to **‘blank’**.”

7. **SAY** “Let’s use an increase or decrease Card to fill in the blank in Statement 2.”

8. Provide Resource 3: Cards 3e and Card 3f to the student. Indicate and read each Card.

a. Indicate Card 3e.

SAY “increase”

b. Indicate Card 3f.

SAY	“decrease”
------------	------------

9. **SAY AGAIN** “Let’s use an increase or decrease Card to fill in the blank of Statement 2.”

10. Allow student to respond and record response.

11. If the student chose the correct answer, place the chosen answer Card in the blank.

12. **SAY** “In Year 3, the increase in the number of insects in the pond caused the number of frogs in the pond to **increase**.”

13. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. Let’s use the increase or decrease Cards to fill in the blanks of Statement 1.
 - a. decreased (Card 3b), decrease (Card 3c)
2. Let’s use an increase or decrease Card to fill in the blank in Statement 2.
 - a. increase (Card 3e)

Content Guidance	Rating	Score
Student... <ul style="list-style-type: none"> • gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • is unable to complete Statement 1 using the decrease(d) Cards (Card 3b and Card 3c); and • is unable to complete Statement 2 using an increase Card (Card 3e). 	The student does not demonstrate understanding.	0
Student... <ul style="list-style-type: none"> • is able to complete Statement 1 using the decrease(d) Cards (Card 3b and Card 3c); and • is unable to complete Statement 2 using an increase Card (Card 3e). <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • is unable to complete Statement 1 using the decrease(d) Cards (Card 3b and Card 3c); and • after scaffolding, is able to complete Statement 2 using an increase Card (Card 3e). 	The student demonstrates limited understanding typically requiring additional support through scaffolding.	1
Student... <ul style="list-style-type: none"> • is able to complete Statement 1 using the decrease(d) Cards (Card 3b and Card 3c); and • is able to complete Statement 2 using an increase Card (Card 3e). 	The student demonstrates understanding independently without scaffolding.	2

ACTIVITY 7

Essence Statement: CTAS-3-LS4-4 Given evidence, compare possible solutions to a problem that causes changes in an environment affecting the plants and animals that live there.*

Core Extension 7: When given an environmental problem, identify a way to help reduce the harmful effects on plants or animals. (CTAS-3-LS4-4)

Teacher Notes:

Collect the following resources for this activity:

- Activity 7 Resource 1: Healthy Pond Environment Poster
- Activity 7 Resource 2: Unhealthy Pond Environment Poster
- Activity 7 Resource 3: Strips 3a – 3c
 - Strip 3a – too few people
 - Strip 3b – too much trash
 - Strip 3c – too many animals
- Activity 7 Resource 4: Strips 4a – 4c
 - Strip 4a – remove animals
 - Strip 4b – more people
 - Strip 4c – trash bins

Steps to Follow:

1.

SAY	“In this activity, we are going to talk about how we can make a pond environment healthy.”
------------	--
2. Display Resource 1: Healthy Pond Habitat Poster for the student.
3. Indicate Resource 1.

SAY	“This is a healthy pond environment with many plants and animals living there.”
------------	---
4. Display Resource 2: Unhealthy Pond Environment Poster for the student.
5. Indicate Resource 2.

SAY	“This is the same pond a few years later. The pond is now an unhealthy environment. There is trash on the banks and in the water (<i>indicate trash on poster</i>). For example, plastic rings from soda cans can harm animals such as frogs. There are only a few animals in and around the pond.”
------------	---
6.

ASK	“What is one problem that made the pond environment unhealthy?”
------------	---
7. Provide Resource 3: Strips 3a – 3c to the student. Indicate and read each Strip.
 - a. Indicate Strip 3a.

SAY	“too few people near the pond”
------------	--------------------------------

b. Indicate Strip 3b.

SAY	“too much trash in the pond”
------------	------------------------------

c. Indicate Strip 3c.

SAY	“too many animals in the pond”
------------	--------------------------------

8. **ASK AGAIN** “What is one problem that made the pond environment unhealthy?”

9. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.

10. Indicate Strip 3b.

SAY	“One problem that made the pond environment unhealthy is that there is too much trash in the pond.”
------------	---

11. **ASK** “How can we make the pond environment healthy again?”

12. Provide Resource 4: Strips 4a – 4c to the student. Indicate and read each Strip.

a. Indicate Strip 4a.

SAY	“remove animals from the pond”
------------	--------------------------------

b. Indicate Strip 4b.

SAY	“invite more people to the pond”
------------	----------------------------------

c. Indicate Strip 4c.

SAY	“place the trash from the pond in trash bins”
------------	---

13. **ASK AGAIN** “How can we make the pond environment healthy again?”

14. Allow student to respond and record response.

15. Indicate Strip 4c.

SAY	“One way that we make the pond environment healthy again is to place the trash from the pond in trash bins.”
------------	--

16. **SAY** “We are now finished with this activity.”

Scoring Guidance and Scaffolding

Scaffolding:

1. After student makes first incorrect attempt, indicate Strip 3b.

SAY	“One problem that made the pond environment unhealthy is that there is too much trash in the pond.”
------------	---

2. **ASK** “How can we make the pond environment healthy again?”

3. Provide Resource 4: Strips 4a – 4c to the student. Indicate and read each Strip.

- a. Indicate Strip 4a.

SAY	“remove animals from the pond”
------------	--------------------------------

- b. Indicate Strip 4b.

SAY	“invite more people to the pond”
------------	----------------------------------

- c. Indicate Strip 4c.

SAY	“place the trash from the pond in trash bins”
------------	---

4. **ASK AGAIN** “How can we make the pond environment healthy again?”

5. Allow student to respond and record response.

6. Indicate Strip 4c.

SAY	“One way that we make the pond environment healthy again is to place the trash from the pond in trash bins.”
------------	--

7. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. What is one problem that made the pond environment unhealthy?
 - a. Strip 3b – too much trash in the pond
2. How can we make the pond environment healthy again?
 - a. Strip 4c – place the trash from the pond in trash bins



Content Guidance	Rating	Score
<p>Student...</p> <ul style="list-style-type: none">gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the environmental problem (Strip 3b); andis unable to identify a way to reduce the harmful effects on the pond environment (Strip 4c).	The student does not demonstrate understanding.	0
<p>Student...</p> <ul style="list-style-type: none">is able to identify the environmental problem in the pond (Strip 3b); andis unable to identify a way to reduce the harmful effects on the pond environment (Strip 4c). <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the environmental problem (Strip 3b); andafter scaffolding, is able to identify a way to reduce the harmful effects on the pond environment (Strip 4c).	The student demonstrates limited understanding typically requiring additional support through scaffolding.	1
<p>Student...</p> <ul style="list-style-type: none">is able to identify the environmental problem in the pond (Strip 3b); andis able to identify a way to reduce the harmful effects on the pond environment (Strip 4c).	The student demonstrates understanding independently without scaffolding.	2

ACTIVITY 8

Essence Statement: CTAS-3-LS4-4 Given evidence, compare possible solutions to a problem that causes changes in an environment affecting the plants and animals that live there.*

Core Extension 8: From two possible solutions, compare them and select one that may prevent environmental problems that affect plants or animals. (CTAS-3-LS4-4)

Teacher Notes:

Collect the following resources for this activity:

- Activity 8 Resource 1: *Use Activity 7 Resource 2: Unhealthy Pond Environment Poster*
- Activity 8 Resource 2: Card 2a and Card 2b
 - Card 2a – trash can
 - Card 2b – rowboat
- Activity 8 Resource 3: Strips 3a – 3c
 - Strip 3a – not move fast
 - Strip 3b – not have motors
 - Strip 3c – not make noise

Steps to Follow:

1. **SAY** “In this activity, we are going to talk about an unhealthy pond environment.”

2. Display Resource 1: Unhealthy Pond Environment Poster for the student.

3. Indicate Resource 1.

SAY “This is an unhealthy pond environment. There is a motorboat on the pond. There is oil floating on top of the pond water. The motorboat spilled oil from the engine. The oil from the engine made the pond water unhealthy. The water is dirty. Few fish live there. There are not many birds. The grass around the pond is brown.”

4. **SAY** “Let’s look at two possible solutions to help the pond become healthy again. Place trash cans near the pond or only use rowboats in the pond.”

5. **ASK** “What is the best solution that would help the pond to become healthy again?”

6. Provide Resource 2: Card 2a and Card 2b to the student. Indicate and describe each Card.

a. Indicate Card 2a.

SAY “place trash cans near the pond”

b. Indicate Card 2b.

SAY “only use rowboats in the pond”

7. **ASK AGAIN** “What is the best solution that would help the pond to become healthy again?”
8. Allow student to respond and record response. If no response or if incorrect response, proceed to scaffolding instructions.
9. Indicate Card 2b.
- SAY** “Using only rowboats in the pond is the best solution that would help the pond to become healthy again.”
10. **ASK** “Why would using only rowboats in the pond help the pond to become healthy?”
11. Provide Resource 3: Strips 3a – 3c to the student. Indicate and describe each Strip.
- a. Indicate Strip 3a.
- SAY** “because rowboats do **not move fast** in the water”
- b. Indicate Strip 3b.
- SAY** “because rowboats do **not have motors** that use oil”
- c. Indicate Strip 3c.
- SAY** “because rowboats do **not make** a lot of **noise**”
12. **ASK AGAIN** “Why would using only rowboats in the pond help the pond to become healthy?”
13. Allow student to respond and record response.
14. Indicate Strip 3b.
- SAY** “Using only rowboats in the pond would help the pond to become healthy because rowboats do **not have motors** that use oil.”
15. **SAY** “We are now finished with this activity.”

Scoring Guidance and Scaffolding

Scaffolding:

1. Indicate Card 2b.

SAY	“Using only rowboats in the pond is the best solution that would help the pond to become healthy again.”
------------	--

2. **ASK** “Why would using only rowboats in the pond help the pond to become healthy?”

3. Provide Resource 3: Strips 3a – 3c to the student. Indicate and describe each Strip.

- a. Indicate Strip 3a.

SAY	“because rowboats do not move fast in the water”
------------	---

- b. Indicate Strip 3b.

SAY	“because rowboats do not have motors that use oil”
------------	---

- c. Indicate Strip 3c.

SAY	“because rowboats do not make a lot of noise ”
------------	--

4. **ASK AGAIN** “Why would using only rowboats in the pond help the pond to become healthy?”

5. Allow student to respond and record response.

6. Indicate Strip 3b.

SAY	“Using only rowboats in the pond would help the pond to become healthy because rowboats do not have motors that use oil.”
------------	--

7. **SAY** “We are now finished with this activity.”

Correct answers are as follows:

1. What is the best solution that would help the pond to become healthy again?
 - a. Card 2b – only use rowboats in the pond
2. Why would using only rowboats in the pond help the pond to become healthy?
 - a. Strip 3b – because rowboats do **not have motors** that use oil



Content Guidance	Rating	Score
<p>Student...</p> <ul style="list-style-type: none">gives NO response. <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the best solution that would help the pond to become healthy again (Card 2b); andis unable to identify why only using the rowboats in the pond would fix the problem of the unhealthy pond environment (Strip 3b).	<p>The student does not demonstrate understanding.</p>	0
<p>Student...</p> <ul style="list-style-type: none">is able to identify the best solution that would help the pond to become healthy again (Card 2b); andis unable to identify why only using the rowboats in the pond would fix the problem of the unhealthy pond environment (Strip 3b). <p style="text-align: center;">OR</p> <ul style="list-style-type: none">is unable to identify the best solution that would help the pond to become healthy again (Card 2b); andafter scaffolding, is able to identify why only using the rowboats in the pond would fix the problem of the unhealthy pond water (Strip 3b).	<p>The student demonstrates limited understanding typically requiring additional support through scaffolding.</p>	1
<p>Student...</p> <ul style="list-style-type: none">is able to identify the best solution that would help the pond to become healthy again (Card 2b); andis able to identify why only using the rowboats in the pond would fix the problem of the unhealthy pond water (Strip 3b).	<p>The student demonstrates understanding independently without scaffolding.</p>	2

