Partners for a Species Lab

Name _____
Date _____
Period _____

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Do Now This is a drawer in a natural history museum in Sweden. It holds hummingbirds that died many years ago. Each one has a paper tag tied to its leg. 2 minutes, before you open the lab

A. What do you think is written on each tag?

☐ What the bird is, and where and when it was found ☐ The price of the bird ☐ The bird's name, like a pet

B. How could a drawer of dead birds help living birds?

_____

☐ I can name the four jobs that museums and preserves do.

☐ I can use a model to show why protecting adults matters.

☐ I can use real data to explain how partners work together to sustain biodiversity.

Part 1. Meet the partners (Tab 1)

SEP 8 Obtaining, Evaluating and Communicating Information · CCC Systems

Tap all 8 photos. Read each card, tick every job it does, and press **Check my jobs**. Copy each one from **Your partner log**.

1. Your partner log. Put a check in each job the partner does.

Partner	Protect habitat	Raise and release	Study and collect	Teach and involve
Buffalo Museum of Science				
Tifft Nature Preserve				
Reinstein Woods				
Peggy Notebaert Nature Museum				
Smithsonian's National Zoo				
International Crane Foundation				
Laguna Atascosa Refuge				
Everglades National Park				

2. Count the checks. Protect _____ Raise _____ Study _____ Teach _____ The job all 8 partners do: _____

3. In the 1970s, the land at Tifft was a ☐ farm ☐ trash dump ☐ forest
Now it does two jobs. Tick both. ☐ protect habitat ☐ raise and release ☐ study and collect ☐ teach and involve

READ FIRST. In the lab, find the green **Learn It** box and read it. Then answer 4 and 5.

4. Match each word to what it means. Write the letter. Clue: the Learn It has each word in bold.

_____ preserve — **A.** everyday people collecting data for scientists
_____ specimen — **B.** breeding animals in a zoo or center
_____ captive breeding — **C.** land kept safe for nature
_____ citizen science — **D.** studying living things by watching, not experiments
_____ natural history — **E.** a real plant or animal saved with a label

5. No partner does all four jobs. Fill in the blanks. Word bank: protects · studies · teaches · system
Tifft _____ the marsh. The museum _____ and _____. They work together as one _____.

Part 2. Save a Blanding's turtle (Tab 2)

SEP 2 Developing and Using Models · SEP 5 Mathematics · CCC Systems

Run all six choices: no fence or fence, with 0, 25 or 50 eggs a year. Copy each one from **Your run log**.

6. Your run log. Adult females, starting from 50.

Fence?	Eggs a year	Year 10	Year 50
No fence	0		
No fence	25		
No fence	50		
Fence	0		
Fence	25		
Fence	50		

7. Look at Year 10. With no fence, the runs with 0, 25 and 50 eggs had
☐ the same number of adults ☐ very different numbers

Example. 40 fish drop to 30. Lost: 40 − 30 = 10. Percent: 10 ÷ 40 × 100 = 25%. Not your numbers.

8. With the road and no help, the group went from 50 to _____.
Adults lost: _____ Percent lost: _____ ÷ 50 × 100 = _____%

READ FIRST. In the lab, find the green **Learn It** box and read it. Then answer 9 to 11.

9. The town can pay for only one job. Which one leaves more adults at Year 50? Tick one, then copy the numbers.

☐ the fence, no head-start ☐ 50 eggs a year, no fence

Fence, no head-start: _____ adults. 50 eggs, no fence: _____ adults.

10. Model check. What does each part of the model stand for in the real world? Tick one box in each row.

In the model	In the real world
The fence and tunnel	☐ protect habitat ☐ raise and release ☐ a threat from people
The head-start eggs	☐ protect habitat ☐ raise and release ☐ a threat from people
The road	☐ protect habitat ☐ raise and release ☐ a threat from people

Tick one thing about real turtles that this model leaves out.

☐ eggs ☐ bad luck, like a dry year or a disease ☐ adult turtles

11. Head-starting takes more than 10 years to add adults, because a baby turtle needs about _____ years to grow up.

Part 3. The crane comeback (Tab 3)

SEP 4 Analyzing and Interpreting Data · SEP 5 Mathematics · CCC Systems

Pick all 9 winters. Copy each one from **Your crane log**. Read the dashed lines on the graph.

12. Wild whooping cranes, counted each winter.

Winter	1941	1950	1960	1970	1980	1990	2000	2010	2025
Wild cranes									

13. 2025 count ÷ 1941 count: _____ ÷ _____ = about _____ times as many cranes. The first partner on the graph, in 1937, did the job _____.

READ FIRST. In the lab, find the green **Learn It** box and read it. Then answer 14 and 15.

14. A friend says, "A zoo saved the whooping crane all by itself." ☐ I agree ☐ I disagree

One job: _____ (example: a refuge protected the marsh). Another job: _____

One number: the flock grew from _____ to _____ cranes.

Wrap it up

SEP 8 Communicating Information · CCC Systems and System Models

15. A museum is making a whooping crane exhibit. Finish its caption.

In 1941, only _____ wild whooping cranes were left. Partners like _____ helped by _____. By 2025, there were _____ wild cranes. But they are still endangered, because _____.

NYSSLS: building toward HS-ESS3-3 and HS-LS2-7 (DCI ESS3.C, LS4.D). Environmental Science, Special Feature 2: Partners in Sustainability, Nature Museums and Preserves (pp. 196-205). SEP = Science and Engineering Practice, CCC = Crosscutting Concept. Data: Congdon, Dunham and van Loben Sels 1993 (Blanding's turtles); International Crane Foundation and U.S. Fish and Wildlife Service (whooping crane counts).