BIO 303 – Lesson Plan – Laura Weakland – Lesson Plan REFLECTION

REFLECTIONS TABLE: OBJECTIVES THAT WERE PRE- AND POST-TESTED

Objective	Students will read various statements about animal adaptations and answer if they agree or disagree with the statement (before and after the lesson).
GLCE	**(CODE):**L.EV.05.25, L.EV.05.27 **(WRITTEN):** Describe the attributes of organisms that help them survive. Explain how behavioral characteristics (adaptation, instinct, learning, habit) of animals help them to survive in their environment.
Assessed points	**points possible for this objective ARE:** 2 pts for 10 agree/disagree primary statements and 1 pt for 5 secondary statements – 25 points total

	Pre-test score	Post-test Score	Gains in percentage points
Grace	24/25 = 96%	25/25 = 100%	+4 gain
Lily	22/25 = 88%	21/25 = 84%	-4 loss
Maggie	21/25 = 84%	22/25 = 88%	+4 gain
Aria	21/25 = 84%	25/25 = 100%	+16 gain
Sakinaah	23/25 = 92%	24/25 = 96%	+ 4 gain
Madison	19/25 = 76%	25/25 = 100%	+24 gain
Vinnie	21/25 = 84%	25/25 = 100%	+16 gain
Daniel	22/25 = 88%	25/25 = 100%	+12 gain
Total	173/200 = 87%	192/200 = 96%	+9 gain

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REFLECTIONS TABLE: COGNITIVE OBJECTIVES THAT WERE BASED ON PERFORMANCE RATHER THAN PRE- AND POST-TESTS

Objective	**Students will** complete a bubble map organizer on adaptations, breaking down the concept of adaptation into the categories of: Fitting In, Staying Safe, Getting Food, and Making a New Generation with examples of each.	**Students will** identify what an endangered animal is, why an animal becomes endangered, and describe a selection of endangered animals in Michigan.	**Students will** work in teams to create a new species of animal in a "Design-A-Species" challenge choosing adaptations to suit their animal's environment.	**Students will** collect data about their new species of animal on a "Design-A-Species" worksheet, including a description of the environment, their animal, and the five adaptations they chose.
GLCE	**(CODE):** L.EV.05.25, L.EV.05.27 **(WRITTEN):** Describe the attributes of organisms that help them survive. Explain how behavioral characteristics (adaptation, instinct, learning, habit) of animals help them survive in their environment.	**(CODE):** L.EV.05.25, L.EV.05.27 **(WRITTEN):** Describe the attributes of organisms that help them survive. Explain how behavioral characteristics (adaptation, instinct, learning, habit) of animals help them survive in their environment.	**(CODE):** S.IR.05.11 **(WRITTEN):** Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.	**(CODE):** S.IR.05.02, S.IR.05.11 **(WRITTEN):** Design and conduct scientific investigations. Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.
WHERE IN 5E CYCLE?	**EXPLAIN**	**ELABORATE**	**EXPLORE**	**EXPLORE**

Student Name	**Non-quantitative assessment grade**	**Non-quantitative assessment grade****	**Non-quantitative assessment grade**	**Non-quantitative assessment grade**
Grace	A	n/a	A	A
Lily	A	n/a	A	A
Maggie	A	n/a	A	A
Aria	A	n/a	A	A
Sakinaah	A	n/a	A	A
Madison	A	n/a	A	A
Vinnie	B*	n/a	A	A
Daniel	B*	n/a	A	A

* These students had a hard time paying attention during the EXPLAIN activity and accordingly were way behind in filling out their bubble map.
** Due to time constraints, this activity had to be shortened and I was unable to assess this objective.

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REFLECTIONS TABLE: COGNITIVE OBJECTIVES THAT WERE BASED ON PERFORMANCE RATHER THAN PRE- AND POST-TESTS

Objective	**Students will justify in writing the reasons they chose each of their adaptations for their animal.**	**Students will communicate orally their "Design-A-Species" animal to their peers justifying the adaptations they chose based on their animal's environment.**	**Students will investigate the question: *What happens if an animal cannot adapt to its changing environment?***	**Students will review their peers' "Design-A-Species" animal and evaluate whether or not they think the animal will survive its environment with the adaptations given it.**
GLCE	**(CODE): S.IR.05.08, S.IR.05.11 (WRITTEN): Evaluate the strengths and weaknesses of claims, arguments, and data. Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.**	**(CODE): S.IR.05.11, (WRITTEN): Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.**	**(CODE): S.IR.05.01 (WRITTEN): Generate scientific questions based on observations, investigations, and research.**	**(CODE): S.IR.05.08, S.IR.05.11 (WRITTEN): Evaluate the strengths and weaknesses of claims, argument, and data. Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.**
WHERE IN 5E CYCLE?	**EXPLORE**	**ELABORATE**	**ELABORATE**	**ELABORATE**

Student Name	**Non-quantitative assessment grade**	**Non-quantitative assessment grade**	**Non-quantitative assessment grade**	**Non-quantitative assessment grade****
Grace	A	A	A	n/a
Lily	A	A	A	n/a
Maggie	A	A	A	n/a
Aria	A	A	A	n/a
Sakinaah	A	A	A	n/a
Madison	A	A	A	n/a
Vinnie	A	A	A	n/a
Daniel	A	A	A	n/a

** Due to time constraints, this activity had to be shortened and I was unable to assess this objective.

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REFLECTIONS TABLE: COGNITIVE OBJECTIVES THAT WERE BASED ON PERFORMANCE RATHER THAN PRE- AND POST-TESTS

Objective	**Students, in teams, will brainstorm ideas on what humans can do to help prevent endangered animals from going extinct.**
GLCE	**(CODE): S.IR.05.13** **(WRITTEN): Describe the effect humans and other organisms have on the balance in the natural world.**
WHERE IN 5E CYCLE?	**ELABORATE**

Student Name	Non-quantitative assessment grade**
Grace	n/a
Lily	n/a
Maggie	n/a
Aria	n/a
Sakinaah	n/a
Madison	n/a
Vinnie	n/a
Daniel	n/a

** Due to time constraints, this activity had to be shortened and I was unable to assess this objective.