Long-Term Learning Gains in Students Using Community Based Learning
Scoring Rubric for Written Response Questions

Question	Points Attributed	Total Points
1. What are the repeating themes of nervous system development? For each, provide a definition and an explanation of this process "in action" at example stages of development.	- 1 point for identifying a theme - 1 point for defining the theme - 1 point for explaining the process in action - 1 point for identifying a stage of development	4 points x total of 7 themes = **28 points**
2. Choose one of the developmental themes from above, and describe how an individual's environment can influence nervous system development on the cellular/synaptic, circuit and behavioral level. Relate your answer to the appropriate critical period of development.	- 1 point for identifying a theme - 1 point for describing the influence - 1 point for explaining the theme on a cellular/synaptic, circuit, and behavioral level - 1 point for relating the theme to a critical period of development	**4 points**
3. How well do you think you are able to convince someone of the importance of research conducted in the basic sciences? Why?	- 1 point for answering well/not well - 1 point for a partial/brief response - 2 points for a full/thoughtful response	**3 points**
4. On a scale of 1-10, with 10 being the highest, how would you rate your ability to evaluate primary literature? (Ability to identify the relevant background, knowledge gap/rationale, primary methodology, major results, interpretation, and implications). Please explain your rationale.	- 1 point for rating 1-10 - 1 point for no response - 2 points for partial/brief response - 3 points for full/thoughtful response	**4 points**
5. For the abstract above, identify the background, knowledge gap/rationale, primary methodology, major results, interpretation, and implications.	- 1 point for identifying the background - 1 point for identifying the knowledge gap - 1 point for identifying the methodology - 1 point for identifying the major results - 1 point for identifying the interpretation - 1 point for identifying the implications	**6 points**
6. Using lay terms, "translate" the above abstract to a young parent with no formal scientific education.	- 1 point for partial or incorrect translation - 2 points for full and accurate translation	**2 points**
7. Should science try to do "more" for the community than what it currently does? Why or why not?	- 1 point for yes/no answer - 1 point for partial/brief response - 2 points for full/thoughtful response	**3 points**
8. In the context of scientific practice, does Catholic Social Tradition bear any relevance?	- 1 point for a response that included key terms associated with Catholic Social Tradition	**1 point**

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Likert Ranking Questions

Content questions: 1, 4R, 17, 18

Literacy questions: 2, 7, 8, 11, 13, 22

Translational questions: 3, 5, 9R, 14, 19, 21

Civic engagement questions: 6, 12, 15, 16R, 20

Ranking Scale

1= Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5= Strongly Agree

Using the 1-5 scale above, please answer following questions. Circle the most appropriate.

1) I am confident in my ability to discuss repeating themes of nervous system development.

1 2 3 4 5

2) When reading primary literature, I can identify the **major** results.

1 2 3 4 5

3) I can talk easily about primary literature to people with no scientific background.

1 2 3 4 5

4) Early life environment has little or no effect on brain development.

1 2 3 4 5

5) I am confident that when I talk about primary literature, the people I'm talking to understand what I'm saying.

1 2 3 4 5

6) I think talking about science to non-scientists is valuable.

1 2 3 4 5

7) When reading primary literature, I can identify the knowledge gap/rationale to understand why a particular experiment(al set) was done.

1 2 3 4 5

8) I think talking about science to a scientist is valuable

1 2 3 4 5

9) Students learn about science best when taught in a lab or classroom.

1 2 3 4 5

10) I can identify repeating themes in nervous system development.

1 2 3 4 5

11) I am confident in my ability to write about science to another scientist.

1 2 3 4 5

12) As someone trained in the sciences, I have a responsibility to talk about science to non-scientists.

1 2 3 4 5

13) When reading primary literature, I can easily understand the interpretation of the data.

1 2 3 4 5

14) I am able to convince someone with no scientific training the importance of research conducted in the basic sciences.

1 2 3 4 5

15) I can learn a lot about science outside of the classroom.

1 2 3 4 5

16) When I meet someone different from myself, I don't think too much about what his or her experience has been.

1 2 3 4 5

17) I can identify critical periods of central nervous system of development.

1 2 3 4 5

18) I can explain different factors that underpin early nervous system patterning

1 2 3 4 5

19) I am confident in my ability to write about science to a non-scientist.

1 2 3 4 5

20) As someone trained in the sciences, I have a responsibility to use what I know to make a difference for the greater good.

1 2 3 4 5

21) I can learn a lot about myself by applying what I know from the classroom to my own real life.

1 2 3 4 5

22) After reading primary literature, I like to discuss the broader implications with others.

1 2 3 4 5