**Grade Level: \_\_\_\_\_\_ Subject: \_\_**

**Unit Number and Title:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ #Days\_\_\_\_\_\_ #SEs\_\_\_\_\_ #PAs\_\_\_\_\_**

**\_\_IFD Planning Guide**

**Science**

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| **IFD Summary**   Interactions of organisms with their environment. observe the way organisms live and survive in their ecosystem by interacting with the living and non-living elements. the effects of changes in ecosystems caused by living organisms, including humans, such as the overpopulation of grazers or the building of highways. |

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| **PA # \_\_\_\_\_\_:**  **Description of PA:** | **Standard:**  **(verb/content)** | **TCD or VAD notes**  **(TCD for High School)** | **STAAR Analysis**  **(released items)** | **Vocab** | **Notes-Resources:**  **Instruction:** |
| Observe a closed habitat for an organism, and describe the living and non-living elements, the flow of energy through the system, and the significance of the carbon dioxide-oxygen cycle to the survival of plants and animals within that system. After the system is established, predict the effects of the overpopulation of one organism.  Standard(s): [**5.2D**](http://www.teksresourcesystem.net/module/standards/0/108613/standard.ashx) , [**5.3C**](http://www.teksresourcesystem.net/module/standards/0/108632/standard.ashx) , [**5.4A**](http://www.teksresourcesystem.net/module/standards/0/108639/standard.ashx) , [**5.9A**](http://www.teksresourcesystem.net/module/standards/0/108702/standard.ashx) , [**5.9B**](http://www.teksresourcesystem.net/module/standards/0/108705/standard.ashx), [**5.9C**](http://www.teksresourcesystem.net/module/standards/0/108708/standard.ashx) , [**5.9D**](http://www.teksresourcesystem.net/module/standards/0/108711/standard.ashx) [**ELPS.c.1E**](http://www.teksresourcesystem.net/module/standards/0/118103/standard.ashx) , [**ELPS.c.5B**](http://www.teksresourcesystem.net/module/standards/0/118138/standard.ashx) , [**ELPS.c.5G**](http://www.teksresourcesystem.net/module/standards/0/118143/standard.ashx) | **5.9A Readiness**  V: Observe  C: How organisms live and survive in their ecosystem: living & non-living | Living: Plants, animals  Non:  **Air** (temp changes, trees losing leaves, animals migrating, hibernating, CO2 O cycle, etc.  **water**  **soil, rocks, minerals**  **sunlight** | Setup to include aspects of living, non, food webs, chains | Living, non-living -with examples  Ecosystem  Interaction  System  Population  Carbon dioxide  Environment | [TX Gateway Lesson](https://www.texasgateway.org/resource/interactions-ecosystems)  [STAAR Analysis 9A](http://files5.teksresourcesystem.net/197230175055095077221020158056165047190249022020/Download.ashx?hash=2.2)  [STAAR Blueprint U9](http://files5.teksresourcesystem.net/187067062069241117000021114163177208142222143230/Download.ashx?hash=2.2) |
| **5.9B Readiness**  V: Describe  C: Flow of energy from Sun to producers to consumers and decomposers; Food chain | **Energy** used by producers to make their own food  **Energy transfer:**  Consumer, decomposers  **Food chain**  **Food web** | Note aspects of interaction in food web, chain | Food chain  Food web  Energy  Consumer, Producer  Decomposer  Nutrients  Predator, prey  Energy arrows | Students will need varying forms of views of the food chain and web. Students may get used to idea of thinking that producers are always at the bottom.  [STAAR analysis 9B](http://files5.teksresourcesystem.net/177241237178248053187046212025180141135155022241/Download.ashx?hash=2.2) |
| **5.9C Supporting**  V: Predict  C: Changes in ecosystems caused by living organisms like humans  Ex: building a highway or overpopulation of a particular species  **5.9D Supporting**  V: Identify  C: CO2 Oxygen cycle importance | **5.9C** Effects of:  Building highways,  Overpopulation of grazers  Effect of changes:  Invasive species  Cutting forests,  Adding pesticides, fertilizers  **5.9D** CO2 O  Plants: taking in CO2 to O2  Animals: taking in O2 to CO2 | Note: wording in questions to understand differences in living and non | Food source  Increase, decrease  Habitats  Competition  Oxygen  Invasive species  Overpopulation  Native species  Resources | Take note of the various charts and graphics used for these questions.  [STAAR analysis 9C](http://files5.teksresourcesystem.net/236056116201103022130123010134248001177230016076/Download.ashx?hash=2.2)  [STAAR analysis 9D](http://files5.teksresourcesystem.net/098004194175126148209226009087184090247044061234/Download.ashx?hash=2.2) |
| **Misconceptions** Students may think energy only flows from the top of the food chain down, with those at the top having the most energy and increasing in number at the expense of those below, rather than understanding that all food chains start with producers (plants that make their own food using the Sun’s energy).  -Students may think humans have very little effect on ecosystems.  -Students may think dead is the same as non-living, rather than understanding that a dead organism was once living.  -Students may think that plants do not use the food they make. | | | | | |
| **PA # \_\_\_\_\_\_:**  **Description of PA:** | **Standard:**  **(verb/content)** | **TCD or VAD notes**  **(TCD for High School)** | **STAAR Analysis**  **(released items)** | **Vocab** | **Notes-Resources:**  **Instruction:** |
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| **Misconceptions:** | | | | | |

Assessment Creator

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| **Unit Blueprint** | | | | |
|  | **Total problems** | **Rate**  **(min/problem)** | **Readiness**  **(Count/ %)** | **Supporting**  **(Count/ %)** |
| **STAAR Assessment** |  |  |  |  |
| **Unit Assessment** |  |  |  |  |

Day-by-Day Outline

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| 1Intro to ecology and how every community becomes a world of interaction  Engage:  [Intro video:](https://www.youtube.com/watch?v=juxLuo-sH6M&feature=related) | 2 Explore:  Students will categorize a series of items however they like. They will then be required to explain their organization. From here, they will observe an image of a community and write what they see. | 3 Explore (cont.)  Students will use the activity found in the TX Gateway to explain interactions. In groups they will record their observations and enter to the Padlet provided | 4 Formative assessment  Students will take a short quiz to go over some of the concepts explored.  They will also participate in a short [Quizlet.live](https://quizlet.com/latest) session with some of the key vocabulary used for this unit. | 5 Explore 2:  Students will organize a series of cards of various objects. They will determine their organization and whether these items are living or non. |
| 8 Explore/explain  [Living non video](https://www.youtube.com/watch?v=p51FiPO2_kQ)  Students will participate in an activity to reinforce their understanding of living and nonliving things | 9 Explain  Students will show their understanding of these concepts by choosing an organism or series of organisms to describe what they need to survive.  They will use an image from the internet to illustrate their understanding | 10 Elaborate  Students will research and choose a particular animal that has been negatively impacted by changes in their environment. They will then describe how this animal has been impacted. Factors, solutions | 11Elaborate  Students will show how the carbon dioxide/oxygen cycle works in a particular community scene of their choosing. | 12Evaluate  In groups, the students will create an ecosystem poster from which they will show how interactions from what has been investigated through the course of this unit.  They will record their work and explanations and turn in to the [Seesaw app](https://web.seesaw.me/) |
| 15 | 16 | 17 | 18 | 19 |
| 22 | 23 | 24 | 25 | 26 |