## Questions & Cues Learning Experience Plan

**Subject:** Biology Grade level: 8

**Unit:** Species Diversity Theme: Fear

**Topic:** Animal Behavior and their Defense Mechanisms

Content Standards:

Standard 4: Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development in ideas in science.

Literacy Standards *(Grade Levels 6-8):*

**R2.** Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

**R4.** Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6– 8 texts and topics*.

**R9.** Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

**W4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**W7.** Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

**W9.** Draw evidence from informational texts to support analysis, reflection, and research.

**Theme Description/Relevance to 8th Graders:**

Everyone experiences fear. Fear of whatever or whoever it may be is expressed in many ways. This theme explores the different effects fear has on the body, both physically and psychologically. On a day-to-day basis we experience anxiety due to exposure to stressors.  Fear tends to lead to irrational thinking, or not being able to think or act at all as well as anxiety. At the end of this theme students will be expected to answer: How can we gain control over our fear(s)? This particular lesson is designed to teach students about animals and their behavior in order for them to gain a better understanding and hopefully an appreciation of the other forms of life around them as well as an interest to learn about ecosystems near and far. Fear is integrated in this biology lesson by learning about animal behavior and their defense mechanisms, which will be connected to the human flight-or-fight response. Students will also use this lesson’s information to become more aware of conflicts in ecology. This lesson is also meant to pre-conclude the integrated learning theme on fear. After this lesson, the students will be instructed to conduct a group research project. However, before they can prepare to do so, it is important that they reflect on their lives, and more specifically, their fears, which will be done in the independent assignment as homework. By discussing fear and its expression in the brain, students will have a better understanding on why they feel scared at certain times or from certain things, people, or places. This lesson allows them to understand that fear is a universal emotion felt by most, if not all, creatures as it is in itself a survival mechanism. This will hopefully give them confidence and knowledge to tackle their fears and develop into stronger minded people and become fear*less* (yet cautious and inquisitive) of the world around them.

**This Lesson’s Connection with *Some* of the 21st Century Skills Middle Schoolers are Learning:**

* *Collaborate with others; use teamwork*:
  + Students can bounce ideas off of each other during a possible class discussion. Disrespect towards others during class will not be tolerated. Students may also work together in answering the “Do-Now.”
* *Think critically*:
  + Students will be developing critical thinking skills by making connections between learned material, the information in today’s lesson and their own lives to reflect on the importance and evolution of the emotion of fear.
* *Be autonomous*:
  + Students will work independently on their reflections.
* *Ask questions (be inquisitive)*:
  + Students will be encouraged to ask questions relevant to the material by participating in or initiating class discussions before, during, and after the direct instruction part of the lesson.
* *Welcome change; be willing to adapt:*
  + In the independent assignment, students will show that they are willing to adapt based on what they have learned by reflecting on how they can and will overcome their fears. By doing so, they welcome change in their lives as stronger individuals who may possible face whatever they are afraid of not let it inhibit them any longer. This is also an excellent chance for students to hopefully open up to their teacher about any fears in school, with others (bullying?) or at home.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Learning Experience Outcomes**  Students will:   * Identify at least four different behavioral mechanisms of at least two animals. * Compare between at least two to four different behavioral mechanisms of two animals. * Relate behavioral defense mechanisms of animals to the “flight-or-fight” response in humans. * Reflect on the importance of fear as a survival mechanism in living things. * Recognize how fear is a survival mechanism and how it leads to survival mechanisms in animals. | | | **Learning Experience Assessments**   * Minimum one page reflection to be done for homework expected the following class | |
| **Differentiation –** | | | | |
| **Approaching** | | **On-level** | | **Beyond** |
| **Curriculum Integration:**  Psychology, ELA | | | | |
| **Materials/Resources/Timing** | **Procedures/Strategies** | | | |
| -Chalk/WhiteBoard  3 minutes  2 minutes  5 minutes  5 minutes  Homework | Sponge Activity (activity that will be done as students enter the room to get them into the mindset of the concept to be learned)  *1. What does a squirrel usually do when you approach it?*  *2. Explain why the squirrel behaves this way.*  Anticipatory Set (focus question/s that will be used to get students thinking about the day’s lesson)  **Student-Elicited Possible Aims:**  *How do animals respond to fear?*  *How do animals behave in the presence of fear?*  *How is animal behavior similar to human behavior?*  *How can we understand the different mechanisms that animals use to respond to/combat fear?*  *How do animals cope with the flight-or-fight response?*  Activating Prior Knowledge (what information will be shared with/among students to connect to prior knowledge/experience)  *Do-Now: Explain the flight-or-fight response.*  Q: When the squirrel runs away when you get to close to it, did the squirrel create a flight-or-fight response?  A: Yes, because it ran away.  Q: How do we know if/when an animal fears us?  A: It runs away; it hides.  Direct Instruction (input, modeling, check for understanding)  ***Important Vocabulary:***  **Behavior**: anything an animal does involving action or response to stimulation  **Camouflage**: tactic that organisms use to disguise their appearance, usually to blend in with their surroundings.  Speed – Gazelle vs. Cheetah  Animals to be Studied:  Chameleon, rattlesnake,  Guided Practice (how students will demonstrate their grasp of new learning)  Closure (action/statement by teacher designed to bring lesson presentation to an appropriate close)  *Using several sentences, answer the aim in your notebooks.*  Independent Practice (what students will do to reinforce learning of the lesson)  *1. How does fear facilitate survival? Is there a balance in this emotion? Is there a time when one should not fear? Can fear normally be present every day of our lives? Explain your answers. Do not hesitate to look back in your notes.*  *2. What are some of your most challenging fears? How will you overcome them based on what we have learned so far?*  This is an assessment that tests students on how much they have learned by allowing them to be reflective of their own lives by connecting them to what was learned in the previous lessons. This assignment should be at least one page written on loose-leaf paper to be submitted the following class. | | | |