

## Enhancement Activities/Strategies for Gifted/High Ability Learners: Sample SCIENCE Learning Plan

### Big Idea/ Topic

Interdependence of Organisms, Relationships in Ecosystems, Cycling of Matter and Energy, Biomes

### Standard Alignment

**S7L4. Obtain, evaluate, and communicate information to examine the interdependence of organisms with one another and their environments.**

- a. Construct an explanation for the patterns of interactions observed in different ecosystems in terms of the relationships among and between organisms and abiotic components of the ecosystem.
- b. Develop a model to describe the cycling of matter and the flow of energy among biotic and abiotic components of an ecosystem.
- c. Analyze and interpret data to provide evidence for how resource availability, disease, climate and human activity affect individual organisms, populations, communities, and ecosystems.
- d. Ask questions to gather and synthesize information from multiple sources to differentiate between Earth's major terrestrial biomes and aquatic ecosystems.

Connection to other content:

ELAGSE7W1, W2, W7, W8

MGSE7.SP.1, SP. 8

### Advanced Research

#### **My Family – The Ecosystem of our home**

A **biome** is an ecological concept closely related to an **ecosystem**. It typically refers to a large-scale community of organisms shaped by common environmental conditions, such as patterns of climate and geology. **Ecosystems** can be large or small in **terms** of the amount of geographic area and populations.

Family dynamics are much like Ecosystem/Biome balance. Use your biome charts with completed characteristics to think about how each member of your family might share certain characteristics/traits.

### Communication

#### **My Family – The Ecosystem of our home**

Family dynamics are much like Ecosystem/Biome balance. Use the members of your family (don't forget

about the pets in your home as well) and make connections of each “organism”, interaction, contributions, environment, finding/sharing resources, food chain and impact of each “member”.

Points to consider in building a relationship to each ecosystem type:

- Impact/Contributions to the family
- Personal Qualities: Behaviors/ attitudes
- strengths/weaknesses

### **Critical Thinking and Critical Problem-Solving Skills**

If change is a natural part of life, how would your family dynamics adapt if there is a major disruption of the ecosystem/biome balance? How are family decisions affected/influenced by other surrounding systems? How are they affected by climate or environmental change?

Document on Graphic Organizer (pages 3-4) Multiple copies can be made for the responses to the various sections.

### **Creative Thinking and Creative Problem-Solving Skills**

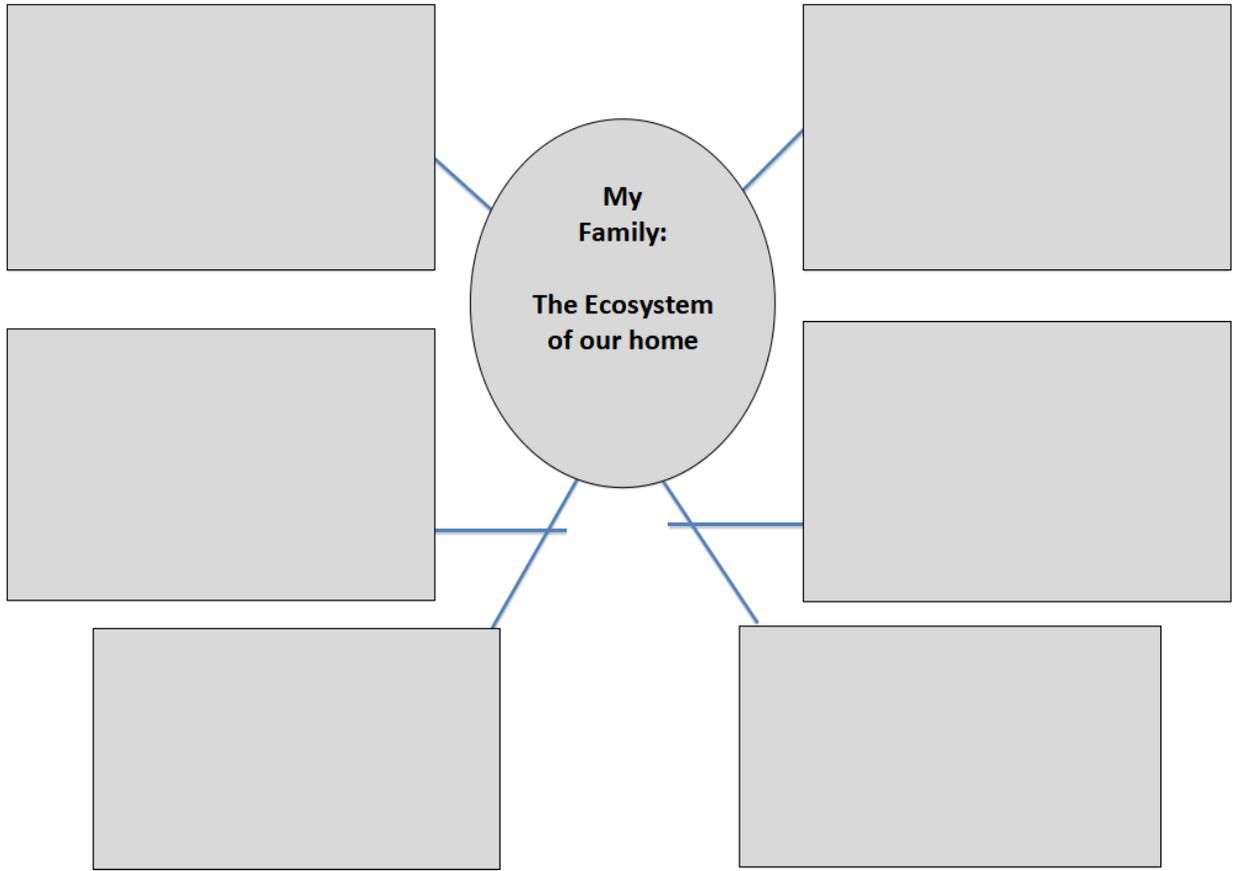
Planning ahead is an important life skill... Think of this like an “emergency fire escape plan”. What could each member do to help ease the transition if there was a life disruption? (change of work situation, medical emergency, big brother/sis going to college, etc...)

Document on Graphic Organizer (pages 3-4)

### **Awareness of Self—Student’s Well-being**

Being part of a family may not always be easy but having a strong family unit is just as critically important as a strong and healthy environment! What could you do to ensure that you are positively contributing to your family’s needs and maintaining balance? What roles/responsibilities could you take on that would benefit the overall positivity?

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