Ravenous Raptors: Language Arts Connections

Vocabulary
Raptor- A bird of prey which seizes its prey with force, using its strong talons
Adaptation- Inherited characteristic that enables an animal to survive
Asymmetrical- not symmetrical; owls have one ear set higher than the other
Diurnal- Active during the day
Nocturnal- Active during the night
Binocular- Focusing both eyes on a single object
Nictating membrane- A clear protective eyelid
Oviparous- Producing eggs which are hatched outside the body
Pellet- A mass of indigestible material such as bones and fur which is regurgitated
Talon- The strong, sharp, curved claw of a raptor

Compare & Contrast
Use a Double Bubble Map graphic organizer or a Venn diagram to compare and contrast the adaptations of a hawk and an owl.

<table>
<thead>
<tr>
<th>HAWK</th>
<th>BOTH</th>
<th>OWL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diurnal</td>
<td>Feathers</td>
<td>Nocturnal</td>
</tr>
<tr>
<td>Fast flight</td>
<td>Camouflage</td>
<td>Silent flight</td>
</tr>
<tr>
<td>Open fields</td>
<td>Hollow bones, wings</td>
<td>Woodlands, swamps</td>
</tr>
<tr>
<td>Ridges over eyes</td>
<td>Carnivore</td>
<td>Flat face like a satellite dish</td>
</tr>
<tr>
<td>Binocular vision</td>
<td>Use talons to seize with force</td>
<td>Large eyes</td>
</tr>
<tr>
<td>Aerodynamic</td>
<td>Nictating membrane</td>
<td>Offset ears (asymmetrical)</td>
</tr>
<tr>
<td>Focus in wind</td>
<td>Cough up pellets</td>
<td>Can rotate head 270 degrees</td>
</tr>
</tbody>
</table>

Bird- Related Idioms
The early bird catches the worm.
Birds of a feather fly together.
A bird in the hand is worth two in the bush.
We had a bird's eye view of the town below.
I spent the afternoon smoothing ruffled feathers.
You could have knocked me over with a feather!
That party was a hoot!
Gambling is for the birds!
She is such a birdbrain.
That business is a fly-by-night operation.
He likes to fly by the seat of his pants.
She plans to wing it.
The boss will take the new employee under his wing.
That would kill two birds with one stone.
She eats like a bird!
I am as free as a bird.
I smell a rat!
Ravenous Raptors

Birds’ scientific names contain Greek and Latin roots. The order name Strigiformes comes from the Greek striges, which means owl. Using the Latin and Greek roots below, translate the scientific name of each owl. Then, match each bird’s scientific name with its common name.

A. Barn Owl   B. Eastern Screech Owl   C. Great Horned Owl   D. Barred Owl

_____ 1. Strix varia means _____________________________.

_____ 2. Otus Asio means _____________________________.

_____ 3. Tyto alba means _____________________________.

_____ 4. Bubo virginianus means _____________________________.

<table>
<thead>
<tr>
<th>Latin Root</th>
<th>Translation</th>
<th>Greek Root</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alba</td>
<td>White</td>
<td>Tyto</td>
<td>Night owl</td>
</tr>
<tr>
<td>Asio</td>
<td>Owl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bubo</td>
<td>Hooting owl</td>
<td></td>
<td></td>
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<tr>
<td>Otus</td>
<td>Horned or eared owl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strix</td>
<td>Variegated plumage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virginianus</td>
<td>From Virginia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varia</td>
<td>Variegated plumage</td>
<td></td>
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</tbody>
</table>

**Populations**
- All of the individuals of a given species in a specific area or region at a certain time; for example, all of the barred owls in South Carolina.
- Members of a population compete for food, water, space, and mates.

**Communities**
All the different populations in a specific area or region at a certain time; for example, all of the barred owls, red-tailed hawks, snakes, turtles, and loblolly pines in Hitchcock Woods are part of the same community.

**Ecosystems**
- One or more communities in an area as well as the abiotic factors, including water, sunlight, oxygen, temperature, and soil.
- Within an ecosystem, organisms have specific places where their needs are met and specific roles within the ecosystem.
**Biomes**
Individual ecosystems grouped together according to the climate and the predominant vegetation and characterized by adaptations of organisms to that particular environment. Examples: desert, forest, tundra, grassland.

**Habitat**
The place where an organism lives in order to obtain its food, water, shelter and other things needed for survival is called its habitat.

**Niche**
The particular role of an organism in its environment including type of food it eats, how it obtains its food and how it interacts with other organisms is called its niche. For example, the niche of a raptor is to control the rodent population as it catches rats and mice for its food.

**Food chains**
The trophic level of an organism indicates the position that the organism occupies in the food chain—what it eats and what eats it.
Level 1: Primary producers (plants convert energy from the Sun to food)
Level 2: Herbivores eat plants, becoming primary or first-order consumers.
Level 3: Predators
Level 4 or 5: Carnivores or Top Carnivores

At every trophic level, decomposers (like bacteria, fungi, moss, lichen) make use of the wastes and remains of dead organisms. They break down organic compounds and use the energy in these decaying remains to fuel their own metabolism.

Food chains can have as few as one link, or as many as six. Very few food chains have more than six links. Why? The food web consists of the transfer of energy from one species to another. Most of the energy transferred is used up by the consumer—only 10% is available for the next animal. By the sixth trophic level, very little energy remains to be consumed.

The animal at the top trophic level of a food chain faces no predators, but these species often face the greatest chance of extinction, since they depend on so many other species below them on the food chain.

Example: SUN – PLANT – INSECT – FROG – OWL - HAWK

**Energy pyramids**
Energy pyramids show the amount of energy that moves from one trophic level to another in a food chain. The most energy is available at the producer level of the pyramid; energy availability decreases as it moves up the energy pyramid.