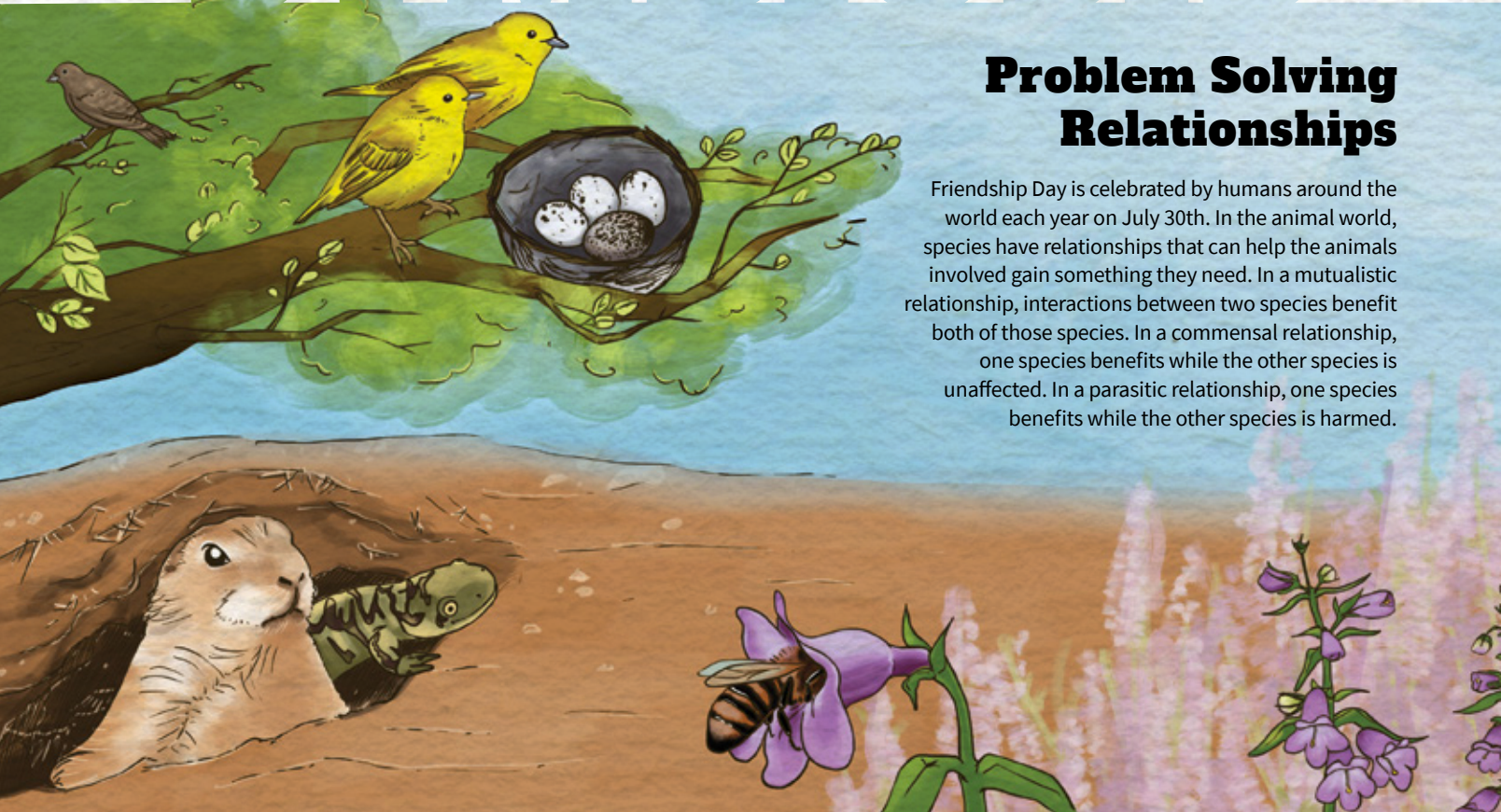


SYMBIOSIS



Problem Solving Relationships

Friendship Day is celebrated by humans around the world each year on July 30th. In the animal world, species have relationships that can help the animals involved gain something they need. In a mutualistic relationship, interactions between two species benefit both of those species. In a commensal relationship, one species benefits while the other species is unaffected. In a parasitic relationship, one species benefits while the other species is harmed.

1

Mutualistic

RELATIONSHIP

Flowering plants need pollinators, like native bees, to help them reproduce. Bees need flowering plants for food. When bees land on the flower to eat, plant pollen sticks to them. Then, when the bee moves to a different plant to eat, they transfer this pollen, enabling the plants to reproduce. Native Wyoming penstemon plants have lines on their flowers which guide bees to their nectar; some penstemons even have stamens that are shaped to ensure that pollen is perfectly placed on the bee to transfer to the next plant!

2

Commensal

RELATIONSHIP

Prairie dogs dig underground burrows to live in, and sometimes, tiger salamanders move in too! Tiger salamanders benefit from having a moist area to live in during harsh weather. It is also thought that prairie dog scat attracts the bugs that salamanders love to eat. The prairie dogs are neither harmed nor helped by having a tiger salamander roommate.

3

Parasitic

RELATIONSHIP

Brown-headed cowbirds are nest parasites. They lay their eggs in other birds' nests, like yellow warblers, forcing those birds to raise their eggs! This benefits the brown-headed cowbird, who historically followed bison herds across the plains. This nomadic lifestyle means they cannot stay in one area long enough to raise their own young. However, this relationship harms the yellow warblers, because they aren't able to raise their own young.