

## The Web of Life

### Big Ideas: Interdependence, Complex Systems

*In ecosystems and communities all of the players, businesses and living species (aka stakeholders) are interconnected in a myriad of ways. This activity brings those often-unseen dynamics into view through a physically interactive and visual construction. Use the Web of Life to explore a natural or social system, or to build understanding around a specific issue.*

#### Essential Questions:

- Who are the stakeholders in this system?
- What dynamics and relationships exist within this system?
- Where are the opportunities for change in this system?

#### You will need:

A ball of yarn  
Post-its or name tags with lanyards or clips  
Markers  
Space for the group to stand in a large, open circle

**Participants:** This activity is best when done in groups of 8 -10.

#### Activity:

1. Identify a specific issue or a particular ecosystem to focus on for this activity.
2. Brainstorm: Who are the stakeholders involved in this issue or ecosystem? (Who is involved in this system? What are the key variables?)
3. Each member of the group takes on the role of one stakeholder and wears a label to indicate his/her role. Use the nametags or post-its for these labels.
4. All of the participants stand in a circle facing the center of the circle.
5. One person describes how his/her variable is related to another variable in the circle.
6. As the first person describes the relationship, that participant holds one end of the yarn and passes the ball of yarn to the person representing the other variable, visually modeling the connection with the yarn. (Ex. *Small mammals provide food for birds of prey*; or *Student interest informs project results*.)
7. Continue identifying as many connections as possible and passing the ball of yarn between the related stakeholders. Don't forget to hold on to a piece of the yarn as the ball gets passed along!

When all of the participants have been connected to the whole system, you can stop or continue on to explore the relationships even further. When you've come to a good, messy stopping point, you will see the relationships in the brightly colored yarn. Place the entire web on the floor where the participants are standing as the people return to their seats.

**Debrief:**

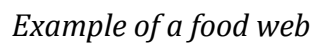
- What did you notice about the relationships in this system?
- What relationships came up that you weren't aware of before?
- Who is not included here that should be?
- Where are there feedback loops in this model?
- Are there any disconnects in this system?
- Where are the opportunities for change?

**Variations:** *This is a very flexible activity. You can use it to explore the relationships in a community, an ecosystem, or a problem.*

- Simplify or add complexity. To keep it simple, make your focus more narrow and specific. For greater complexity, generalize the focus to make room for stakeholders in wider and wider circles of community.
- For younger students, use ready-made pictures of animals or names of people in a familiar community. Alternately, break this activity into two parts. First, name and draw the stakeholders or players. In the second session, adopt stakeholder roles and build the web.
- The classic version of this activity is to build a food web that explores the questions, *Who do I feed?* and *Who feeds me?*
- On an organizational level, you can use this activity to understand a problem or issue (ie., work ethic, pencil supply). In this scenario, all of the variables are factors that impact work ethic or pencil supply within this organization or in the classroom.
- Put a current event topic or a historical moment at the center of the web.

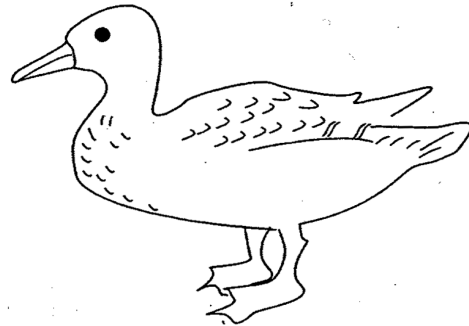
**Next Steps:**

- Find the leveraging points in the system. Where can we make change that has a big effect?
- Explore multiple ideas for positive change.
- Decide on a group action and develop a plan to implement the change
- Identify any self-reinforcing or self-regulating feedback loops in the system and draw graphics of those dynamics.
- If exploring a social dynamic, develop a community resolution, commitment or a set a rules that will create positive change.





**Human**



**Duck**



**Prairie Grass**



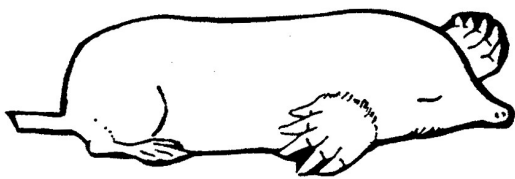
**Deer**



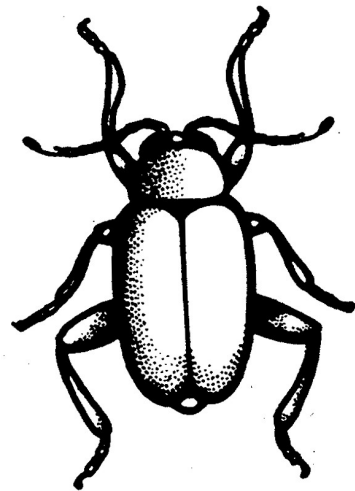
**Owl**



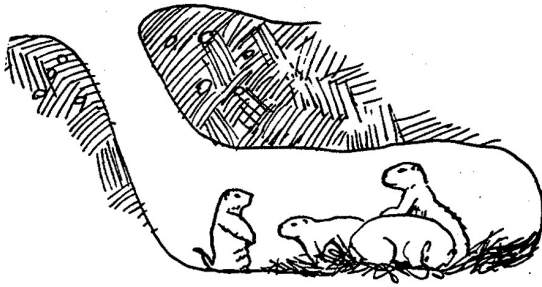
**Bee**



**Mole**



**Beetle**



**Prairie Dogs**



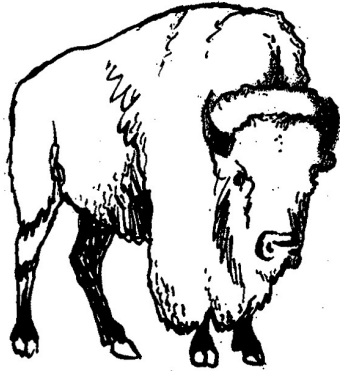
**Sunflower**



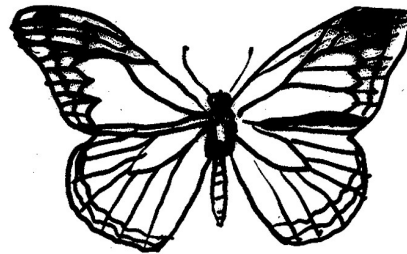
**Meadow lark**



**Quail**



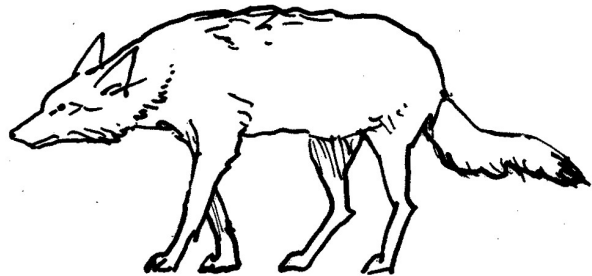
**Bison**



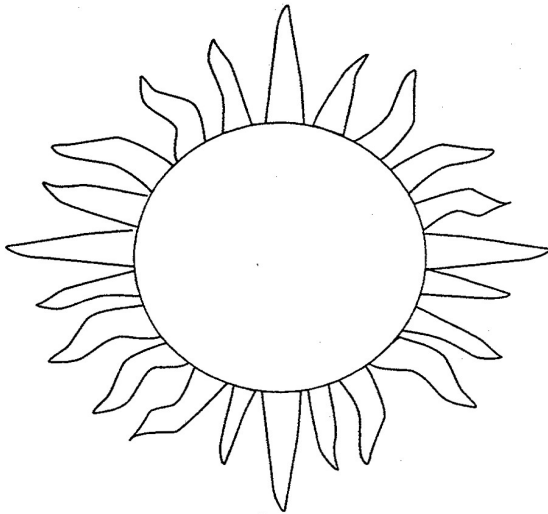
**Butterfly**



**Aster**



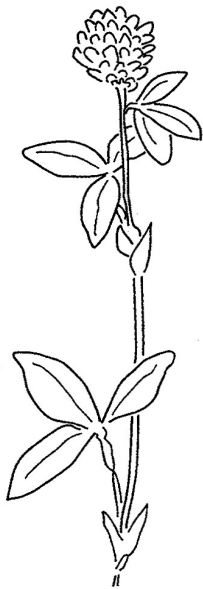
**Coyote**



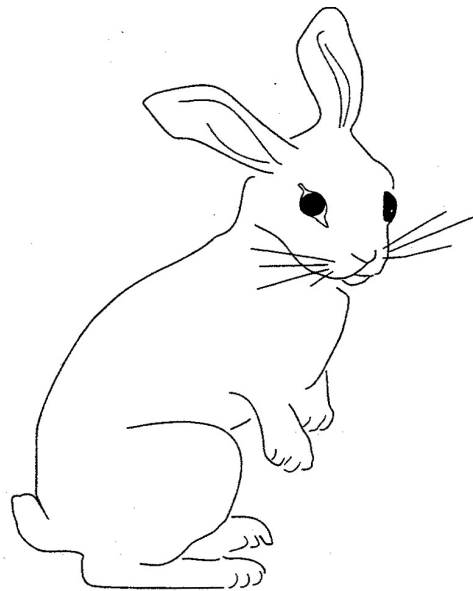
**Sun**



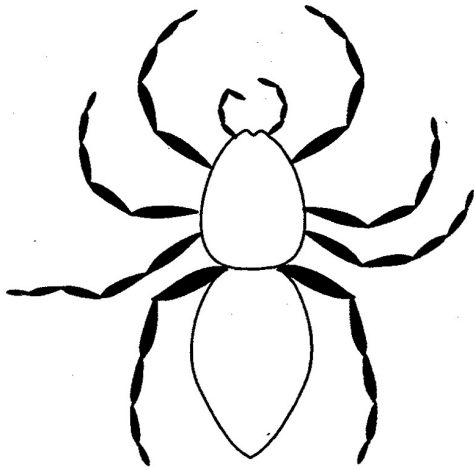
**Orchard grass**



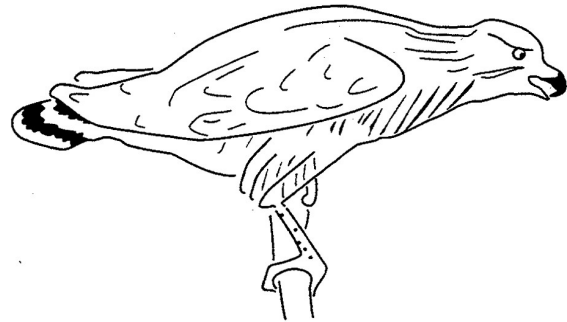
**Clover**



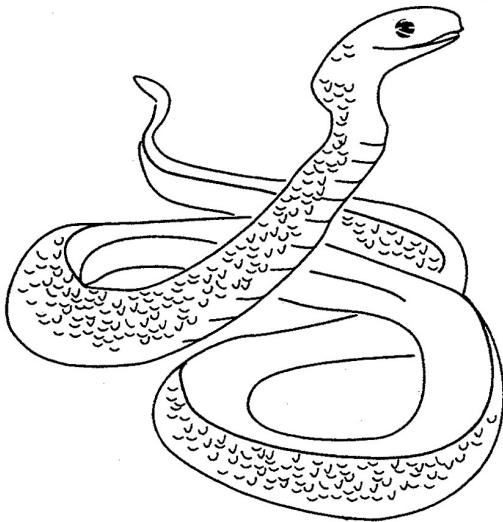
**Rabbit**



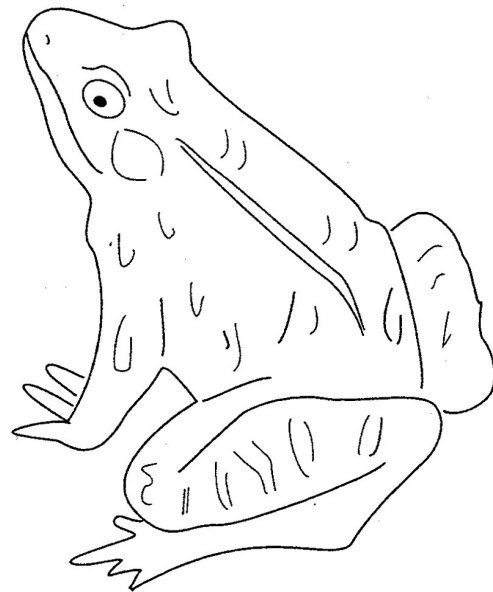
**Spider**



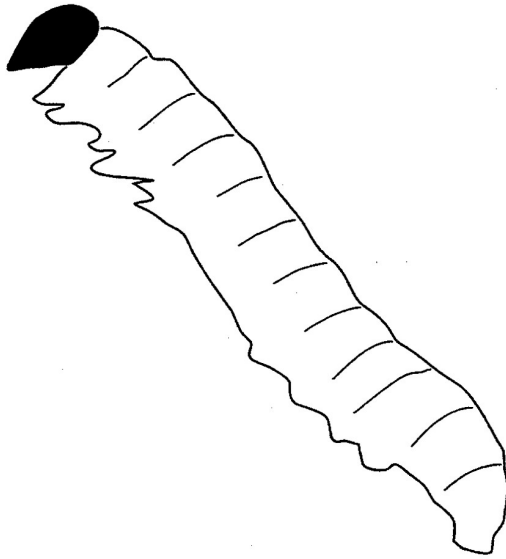
**Hawk**



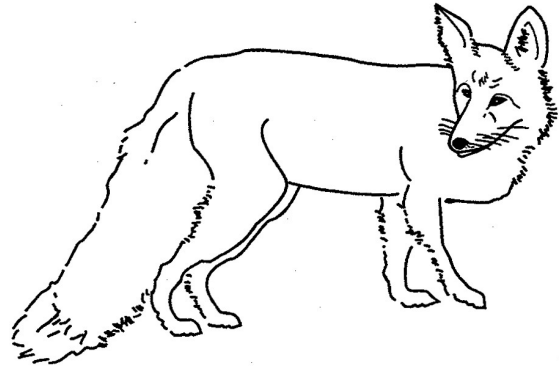
**Snake**



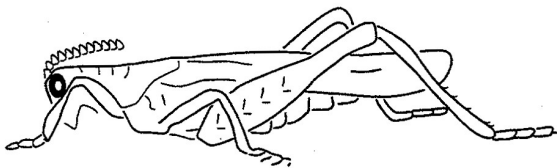
**Frog**



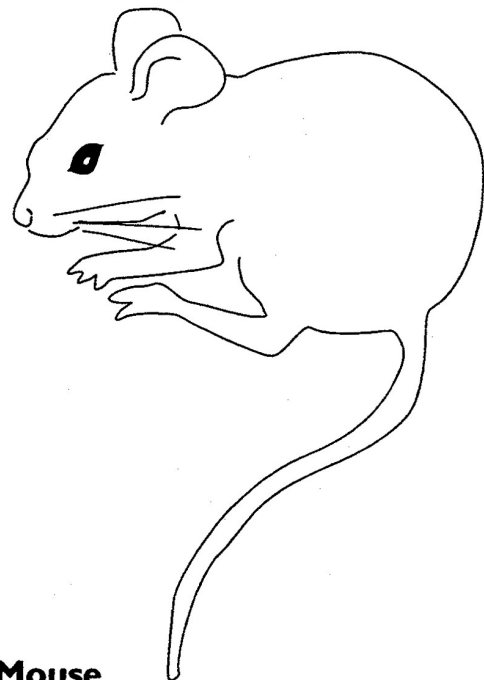
**Caterpillar**



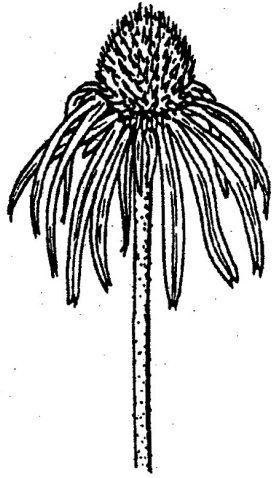
**Fox**



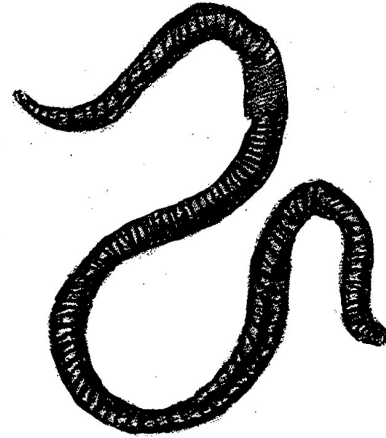
**Grasshopper**



**Mouse**



**Coneflower**



**Worm**



**Raccoon**



**Black-eyed Susan**