



Creating Nature Play

Introduction

In the book ***Nature's Patchwork Quilt***, author Mary Miche introduces children to a variety of habitats, from the forest to the ocean, and the rainforest to the arctic. In this activity children create a three-dimensional diorama of one of the habitats from the book.

Materials Needed

- ◆ copies of black and white habitat pages, 1 per child
- ◆ colored pens
- ◆ adhesive tape
- ◆ modeling clay
- ◆ cardboard shoe boxes, 1 per child
- ◆ scissors
- ◆ the book ***Nature's Patchwork Quilt***

Key Concepts

- A habitat is the specific environment in which plants and animals live.
- Different plants and animals inhabit different habitats and have external features that help them thrive.
- Animals eat plants or other animals for food and may also use plants or even other animals for shelter and nesting.
- Plants and animals within a habitat depend on one another (interdependence).

Procedure

1. Give each child one of the habitat pages making sure that all habitats are represented. Using the book as a reference, have children color their page.
2. Instruct children cut off one of the long sides of the shoebox. Be sure to keep the bottom of the shoebox intact. Have children tape their colored habitat page to the bottom of the shoebox to create a backdrop for their diorama.
3. Using the clay, have children make several animals that live in the habitat, showing how they interact with the plants and other animals.
4. Display the finished dioramas and have children observe and discuss how the animals are interacting in each of the different habitats.

Nature Connections

- ◆ Invite students to write a story about the animals who live in their habitat. One of the animals could become the main character of their story.
- ◆ Have children observe the animals that live around the school. Make a class list of all the animals you find. Remember to notice insects and birds.

Additional Resources

Other children's books about plants and animals in specific habitats:

- ***Around One Cactus*** by Anthony D. Fredericks
- ***Under One Rock*** by Anthony D. Fredericks
- ***In One Tidepool*** by Anthony D. Fredericks
- ***Forest Bright, Forest Night*** by Jennifer Ward



I Spy Animals

Introduction

The book ***Nature's Patchwork Quilt*** by Mary Miche includes many different plants and animals arranged in a quilt pattern. In this activity, students will identify the names of the plants and animals illustrated in each habitat.

Materials Needed

- ◆ Copies of the book ***Nature's Patchwork Quilt***, 1 per group
- ◆ Copies of Patterns, 1 per group
- ◆ Copies of Keys, 1 per student or group

Key Concepts

- A habitat consists of many different plants and animals.
- Accurate identification of species is an important aspect of scientific observation.

Procedure

1. Demonstrate for students how to use a pattern and key to identify the plants and animals they don't know. Using the Pattern for pages 2-3, have students notice that each pattern piece corresponds to a part of the illustration. Then point out that some pattern pieces are numbered 1-21. Using the Key, have students notice that each number has a plant or animal's name next to it. Show children how to use the Pattern and Key to match the picture in the book with the name of the plant or animal.
2. Divide students into groups of three. Give each group a copy of the book, a Pattern for a habitat, and a Key. Have them first identify as many of the animals as they can in the habitat. They can check off each animal's name on the Key.
3. Then have students use the Pattern and the Key to identify one or more animals they don't know but would like to identify by name.

Nature Connections

- ◆ Using an animal identification book for your area, choose three animals that students are likely to see on the school grounds. Go outside and find them.
- ◆ Visit one of the habitats in the book or go to a natural museum that has habitat displays. Look for the animals that are illustrated in ***Nature's Patchwork Quilt***.

Additional Resources

The following books help children help children identify animals:

- ***Blues go Birding Across America***
by Carol L. Malnor and Sandy F. Fuller
- ***Joe MacDonald Saw a Farm***
by Mary Quattlebaum
- ***In the Trees, Honey Bees***
by Lori Mortensen
- ***There's a Babirusa in my Bathtub***
by Maxine Rose Schur

Natures Patchwork Quilt Front Cover Organisms

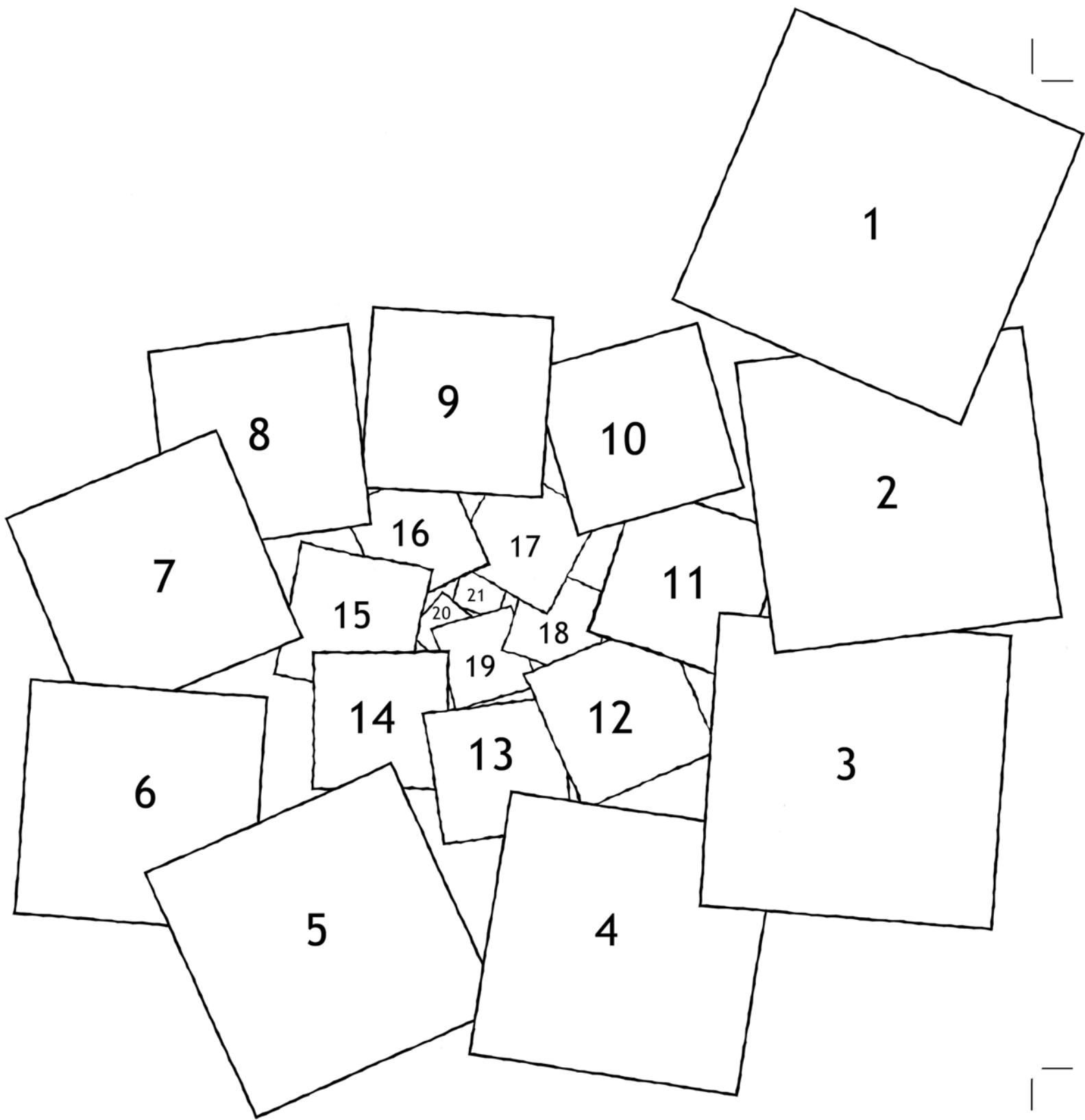
1. Alpine azalea
2. Arctic habitat
3. Ocean habitat
4. Nodding trillium
5. Forest habitat
6. Desert habitat
7. Temperate rainforest habitat
8. Bluebells
9. Prairie habitat
10. Seashore habitat
11. Labrador tea
12. Pond habitat
13. Town
14. Farm and ranch
15. Eastern box turtle

1	2	3	4
14	15		5
13	15		6
12	15		7
11	10	9	8

Nature's Patchwork Quilt

Organism list for pp 2-3

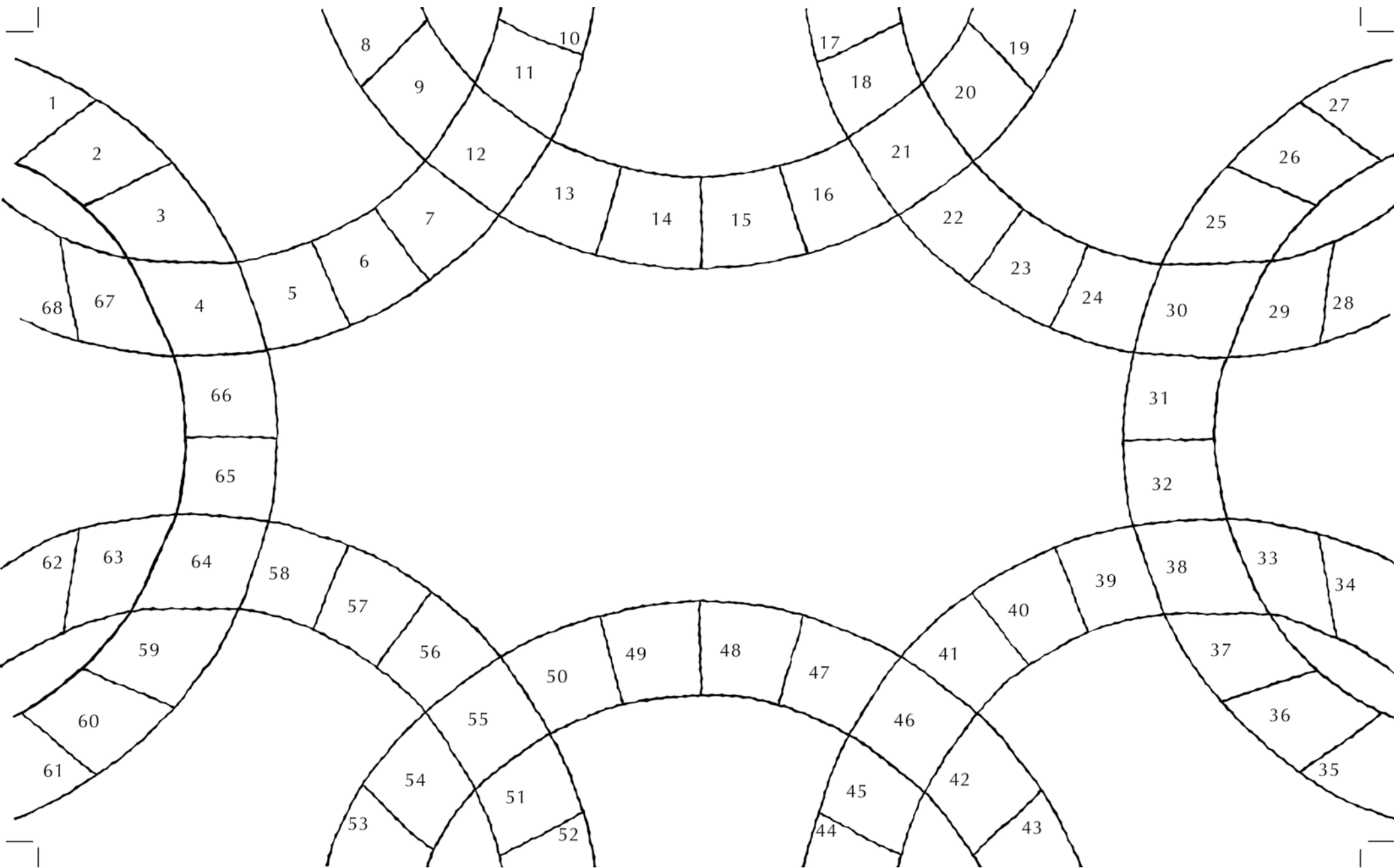
- 1) Calico pennant dragonfly (*Celithemis elisa*)
- 2) Grizzly bears (mother and cub) (*Ursus arctos*)
- 3) Large leaf aster (*Aster macrophyllus*)
- 4) Common Goldeneye ducklings (*Bucephala clangula*)
- 5) Lace lichen (*Ramalia menziesii*)
- 6) Blue Jay (*Cyanocitta cristata*)
- 7) White-lined sphinx moth (*Hyles lineata*)
- 8) Pacific herring (*Clupea harengus*)
- 9) Plains spadefoot toad (*Scaphiopus bombifrons*)
- 10) Giant perennial kelp (*Macrocystis* spp)
- 11) Yellow-billed loon (*Gavia adamsii*)
- 12) Red-bellied snake (*Storeria occipitomaculata*)
- 13) Western spotted skunk (*Spilogale gracilis*)
- 14) Orb web spider (*Neoscona domicilorum*)
- 15) Diamondback terrapin (*Malaclemys terrapin*)
- 16) Thirteen-lined ground squirrel (*Spermophilus tridecemlineatus*)
- 17) Dogday cicada (*Tibicen canicularis*)
- 18) Gambel's quail (*Callipepla gambelii*)
- 19) Cinereus shrew (*Sorex cinereus*)
- 20) Fly agaric mushroom (*Amanita muscaria*)
- 21) Proliferating anemone (*Epiactis prolifera*)



Natures Patchwork Quilt pp 4-5 Organisms

1. Indian paintbrush
2. horned lark
3. big bluestem grass
4. desert cottontail rabbit
5. blacktailed prairie dog
6. purple coneflower
7. nighthawk
8. sideoats grama grass
9. ringneck snake
10. violet
11. spotted salamander
12. coyote
13. yellow-bellied sapsucker
14. wood fern
15. solomon's seal
16. porcupine
17. Bicknell's cranesbill
18. surfur shelf fungus
19. tadpoles
20. raccoon
21. bald eagle
22. painted turtle
23. beaver
24. green frog
25. moose
26. gluegill
27. mosquito larvae
28. oceanic plankton
29. barracuda
30. herring gull
31. spotted octopus
32. purple sea urchin
33. brown rockfish
34. kelp
35. sea sack (tidal algae)
36. goose neck barnacles
37. rock sandpiper
38. sea otter
39. black oystercatcher
40. sea lion
41. hermit crab
42. sculpin
43. snail
44. licorice fern

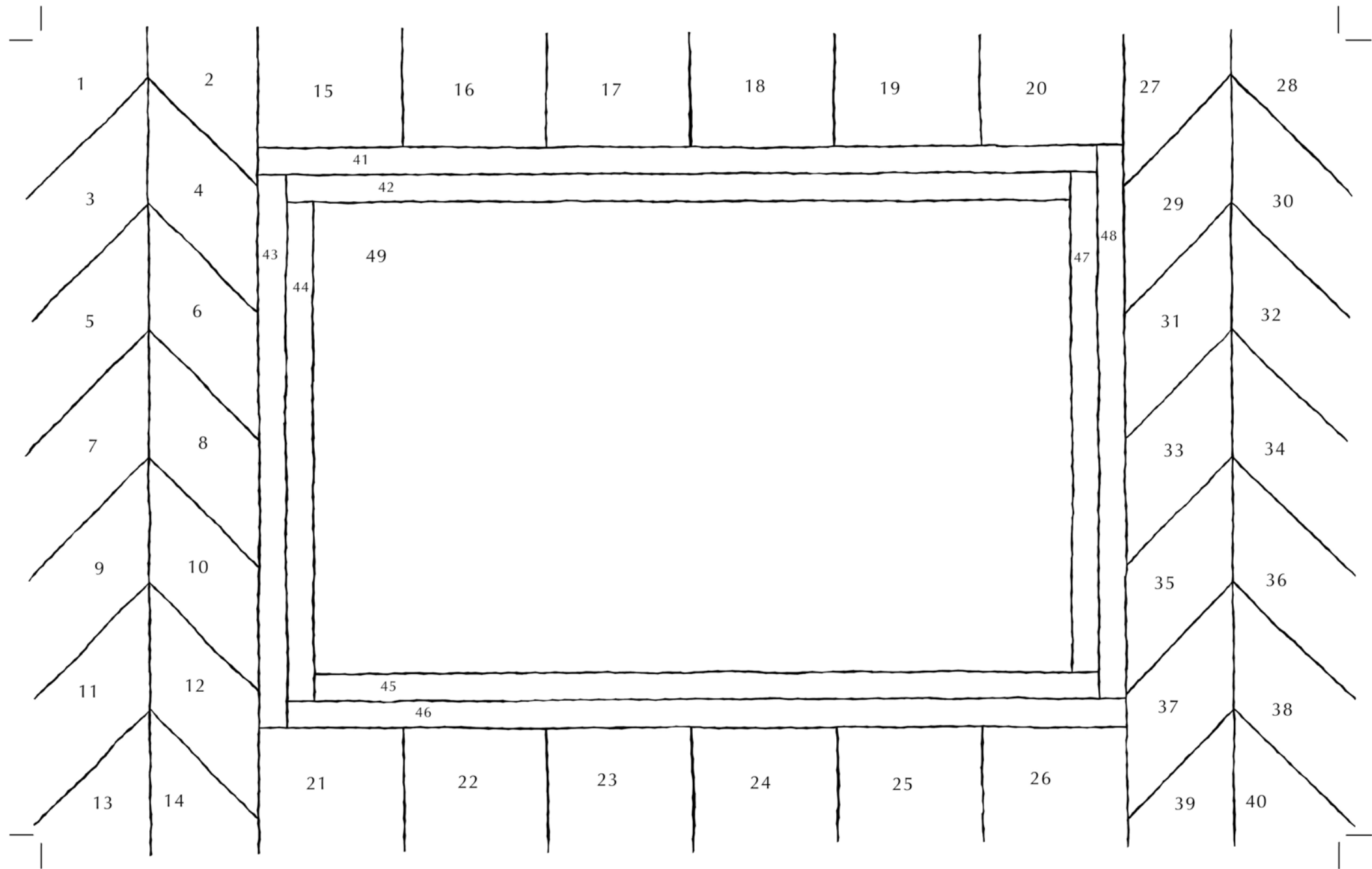
45. banana slug
46. marbled murrelet
47. Townsend's chipmunk
48. pacific tree frog
49. lungwort lichen
50. mink
51. bobcat
52. licorice fern
53. lichen (*Sporastatia testudinea*)
54. blueberry
55. montane shrew
56. short eared owl
57. wolf
58. red-backed vole
59. peregrine falcon
60. northern flying squirrel
61. lichen (*Peltigera malacea*)
62. brittle bush
63. sideblotch lizard
64. mule deer
65. western screech owl
66. prickly pear cactus
67. canyon tree frog
68. velvet mesquite



Natures Patchwork Quilt pp 6-7 Organisms

1. tree-hole mosquito
2. downy blue violets
3. Blackburnian warbler
4. grey squirrel
5. broadwinged hawk
6. raccoon
7. southern red-backed vole
8. wild turkey
9. hairy woodpecker
10. white tailed deer
11. woodland jumping mouse
12. cinereus shrew
13. dog day cicada
14. bunchberry (canada dogwood)
15. American toad
16. grey fox
17. porcupine
18. fisher
19. snowshoe hare
20. red-bellied snake
21. garter snake
22. eastern chipmunk
23. wolf
24. moose
25. black bear
26. red-spotted newt
27. large leaf aster
28. short-tailed ichneumon
29. northern flying squirrel
30. white breasted nuthatch
31. striped skunk
32. ruffed grouse
33. great horned owl
34. wood frog
35. new growth in a nurse stump...
36. blue jan
37. short-tailed weasel
38. deer mouse
39. wintergreen
40. fiery searcher beetle
41. bracken ferns
42. black cherry
43. large flowered trillium
44. red maple seeds

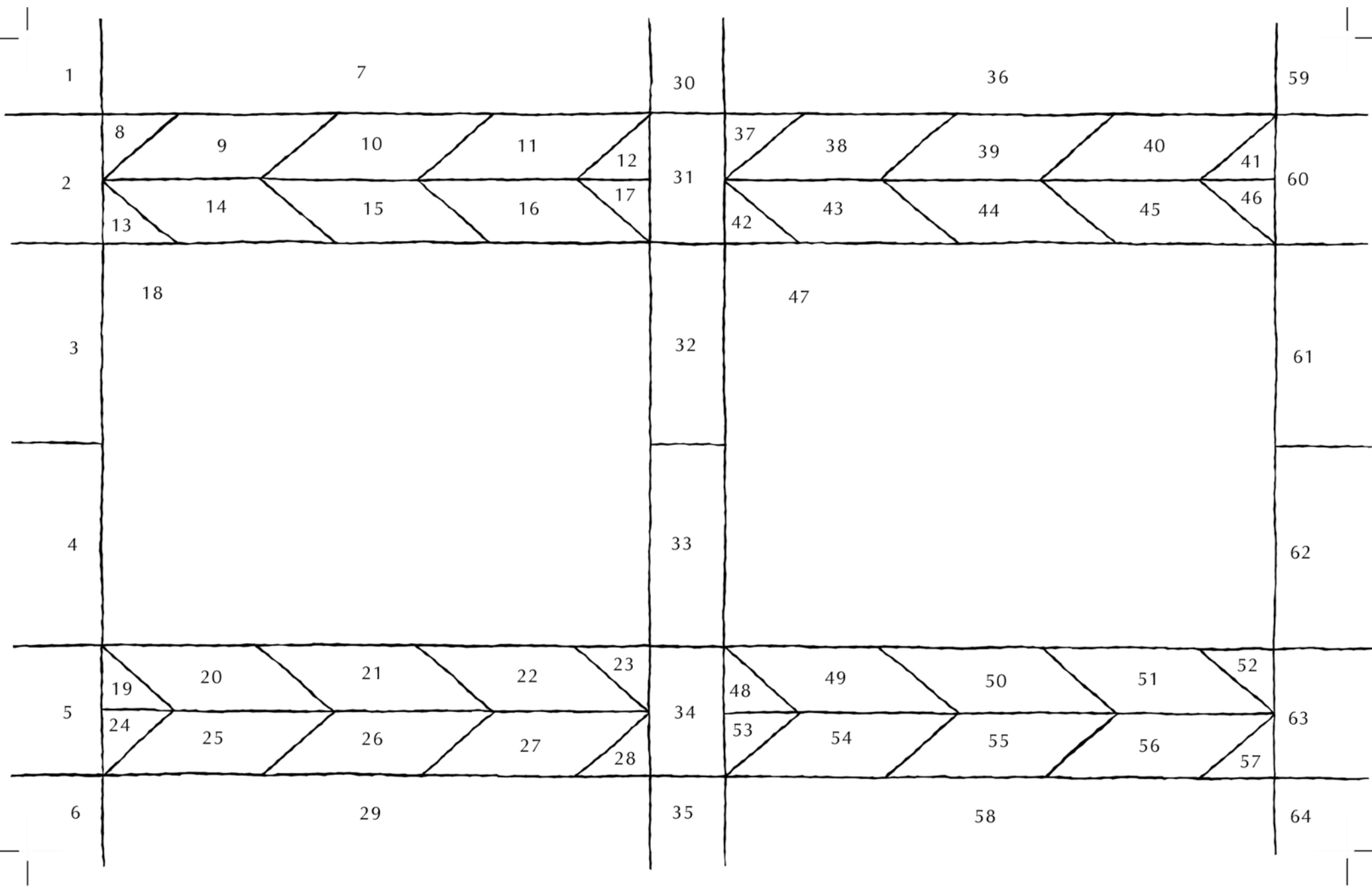
45. cones: balsam fir, white spruce, jack pine, red pine, white pine
46. lichen (*Cladonia fimbriata*)
47. northern red oak leaves
48. false turkeytail fungus (*Stereum ostra*)
49. paper birch, white pines, red maples, balsam fir, black capped chickadee, pileated woodpecker, Canada geese



Natures Patchwork Quilt pp 8-9 Organisms

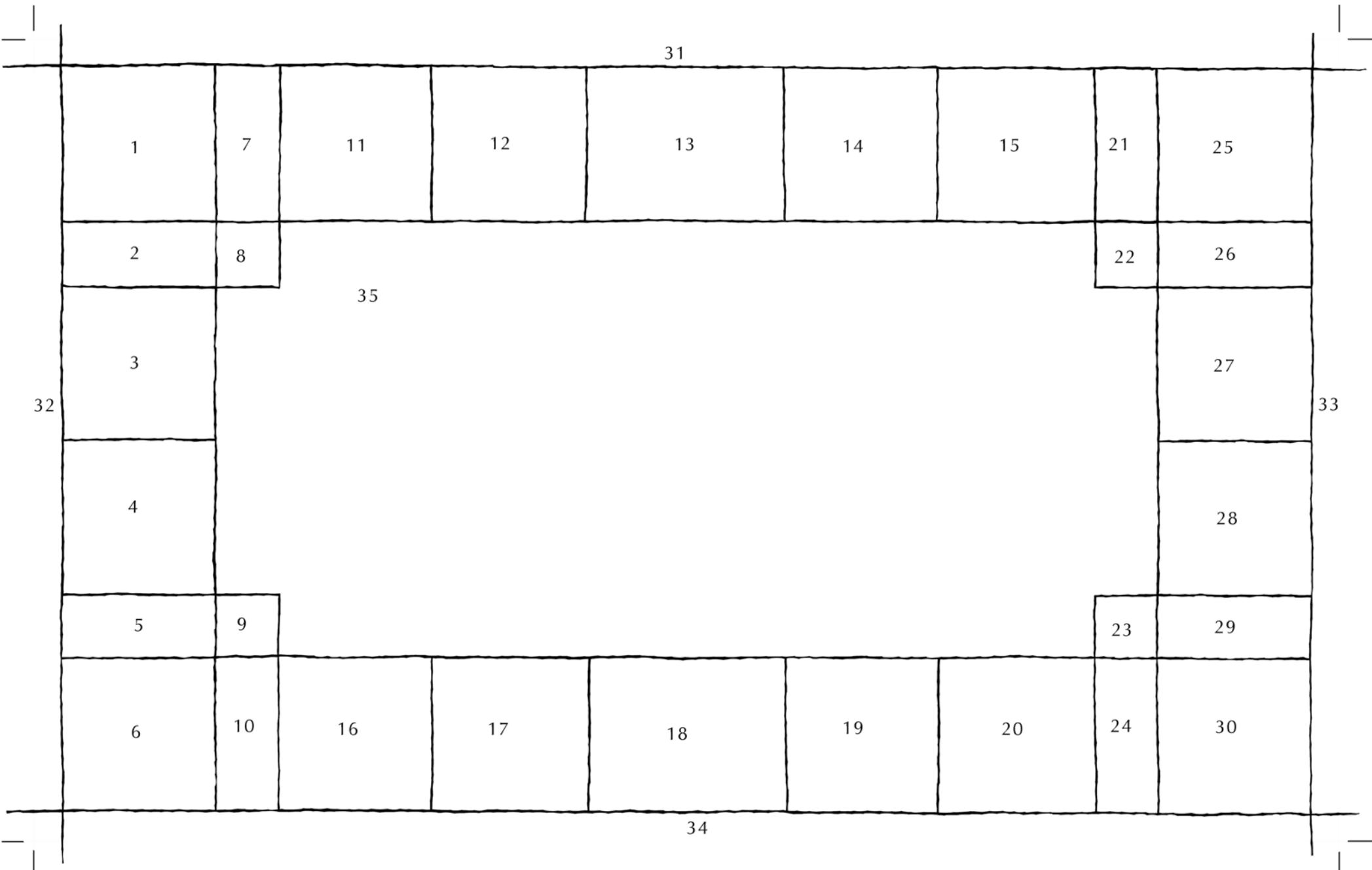
1. pipevine swallowtail butterfly
2. gila woodpecker
3. black-tailed jackrabbit
4. cactus wren
5. desert woodrat
6. desert marigold
7. desert tortoise
8. desert tarantula
9. short-horned lizard
10. coyote
11. western whiptail lizard
12. scorpion
13. tarantula hawk
14. Harris antelope squirrel
15. white-winged dove
16. collared peccary
17. rainbow grasshopper
18. collared lizard, red-tailed hawk, ocotillo, barrel cactus, giant saguaro cactus, teddybear cholla cactus
19. vinegaroon
20. curve-billed thrasher
21. red spotted toad
22. Gambel's quail
23. pleasing fungus beetle
24. centipede
25. white-nosed coati
26. zebra-tailed lizard
27. hooded skunk
28. leaf cutter ant
29. chuckwalla
30. fairy duster
31. foothill yellow paloverde
32. buffel grass
33. white bur sage
34. blue paloverde
35. mormon tea
36. gila monster
37. queen butterfly
38. North American long-nosed bat
39. Couch spadefoot toad
40. ringtail
41. sphinx moth
42. queen caterpillar
43. turkey vulture

44. mule deer
45. desert picket mouse
46. desert stink beetle
47. Merriam's kangaroo rat, hedgehog cactus, saguaro cactus, ocotillo, prickly pear cactus, white bur sage
48. desert kissing bug
49. Say's phoebe
50. sonoran gopher snake
51. Harris's hawk
52. millipede
53. zebra butterfly
54. side-blotched lizard
55. Rio Grande leopard frog
56. kit fox
57. grey bird locust
58. western diamondback rattlesnake
59. jojoba
60. cactus mouse
61. roadrunner
62. desert cottontail
63. elf owl
64. desert hackberry



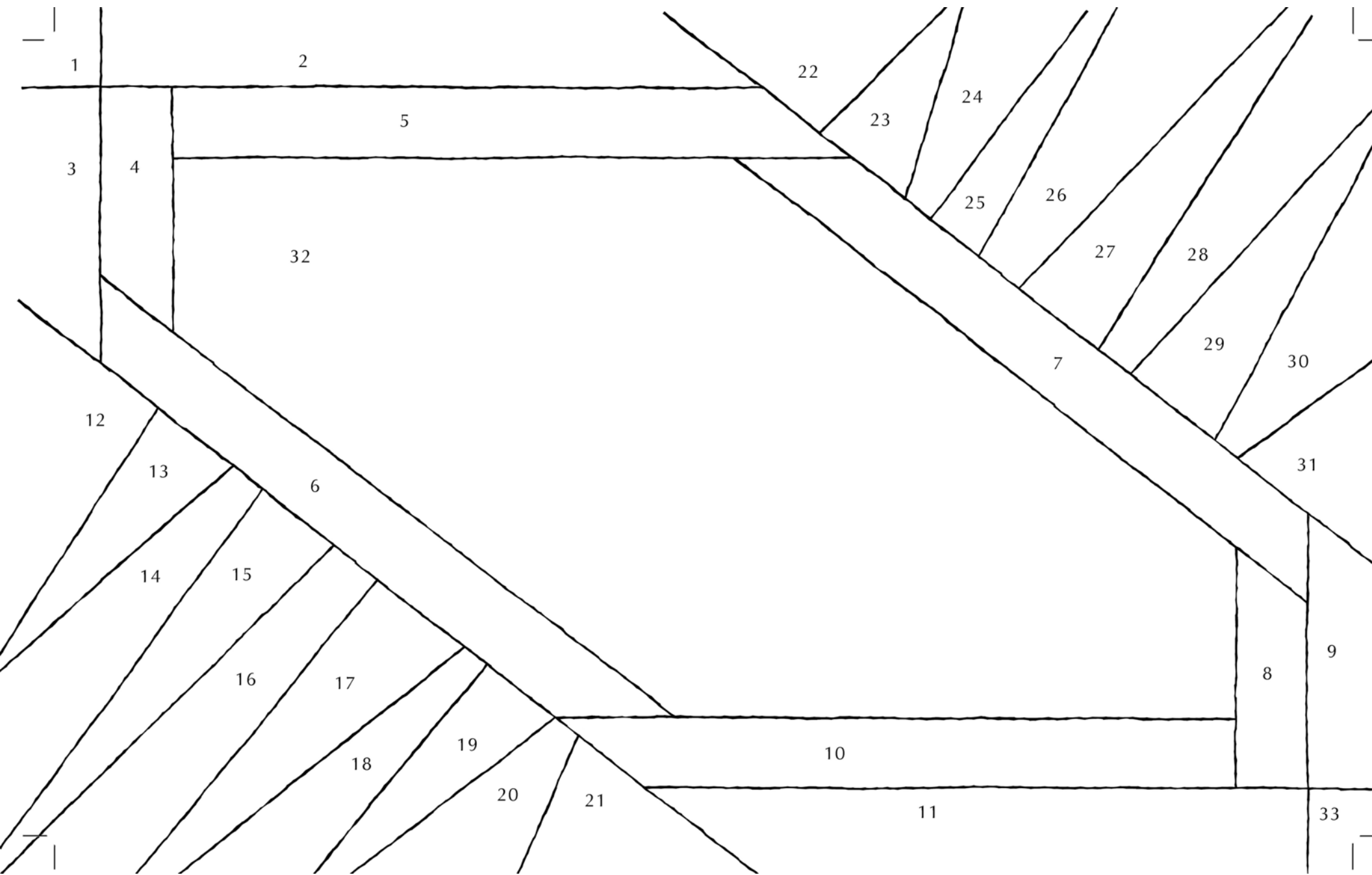
Natures Patchwork Quilt pp 10-11 Organisms

1. pronghorn
2. prairie smoke
3. thirteen-lined ground squirrel
4. prairie falcon
5. Indian blanket
6. coyote
7. grey-headed coneflower
8. prairie vole
9. plains spadefoot toad
10. cylindrical blazing star
11. badger
12. lark bunting
13. bull snake
14. burrowing owl
15. swift fox
16. bison
17. prairie chicken
18. central plains milksnake
19. western meadowlark
20. black-footed ferret
21. Indian paintbrush
22. bobolink
23. plains pocket gopher
24. compass plant
25. black-tailed jackrabbit
26. prairie rose gentian
27. killdeer
28. western box turtle
29. wild bergamot
30. mule deer
31. spiders on vegetation
32. grasses in flower
33. grasses in seed
34. grasshoppers and crickets on vegetation
35. Swainson's hawk, blacktailed prairie dog, prairie rattlesnake, purple coneflower, brown-eyed susan, fairy ring mushroom, buffalo grass



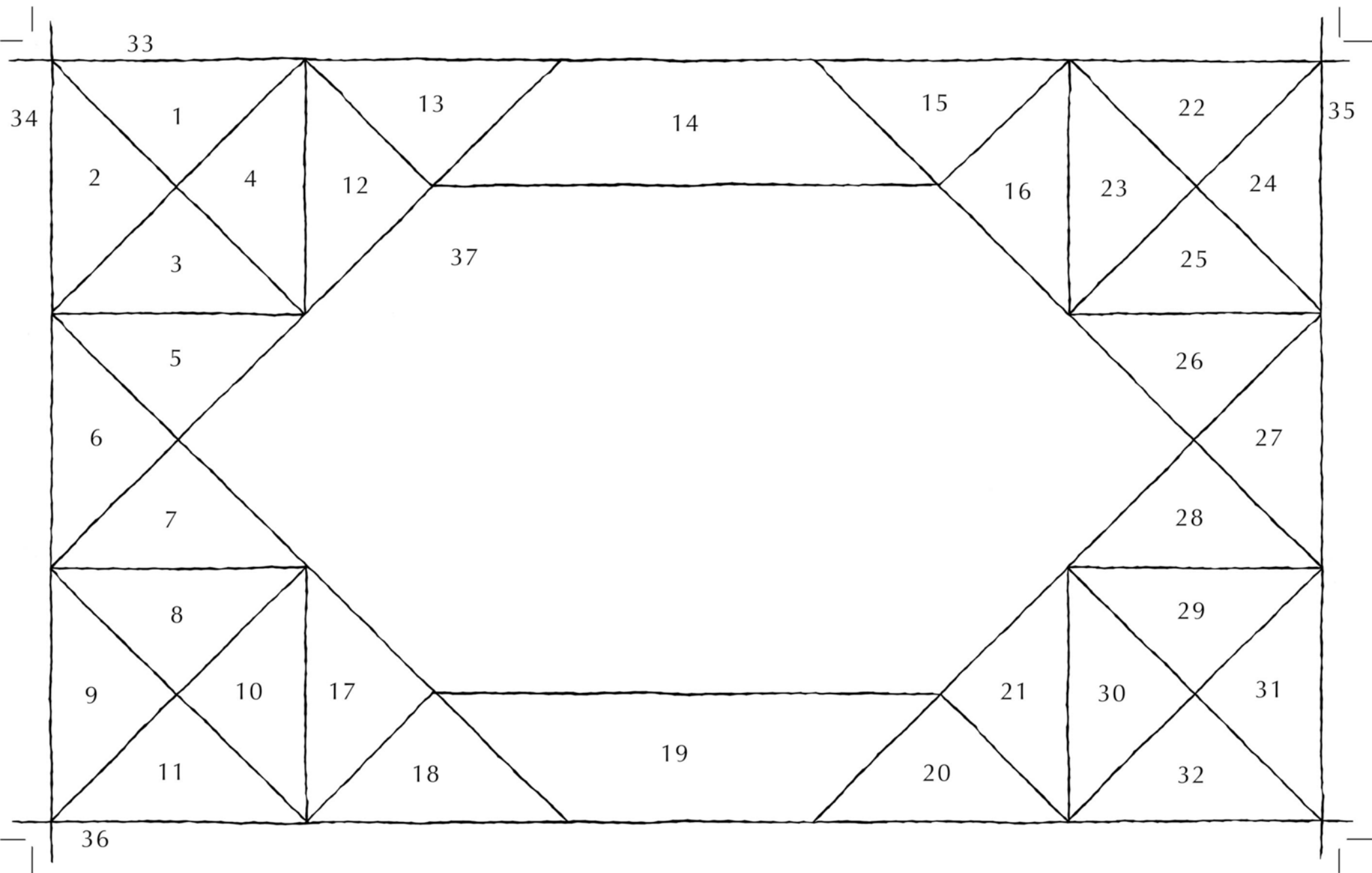
Natures Patchwork Quilt pp 12-13 Organisms

1. diatoms
2. zooplankton
3. phytoplankton
4. humpback whale
5. sea gooseberries and moon jellies (jellyfish)
6. iridescent seaweed
7. giant perennial kelp
8. orca
9. mixed plankton
10. two-spotted octopus
11. mixed plankton
12. wolf eel
13. rainbow seaperch
14. rock lobster
15. northern anchovies
16. striped dolphin
17. leopard shark
18. quillback rockfish
19. blue and gold nudibranch
20. red rock crab
21. starry flounder
22. red abalone
23. brown rockfish
24. opalescent squid
25. leafy paddle worm
26. California sheephead
27. yellowfin tuna
28. frilled anemone
29. bat ray
30. boy snorkeling
31. panama brittle star
32. Pacific harbor seal, Chinook salmon, pacific herring, krill, zooplankton and phytoplankton
33. diatoms



Natures Patchwork Quilt pp 14-15 Organisms

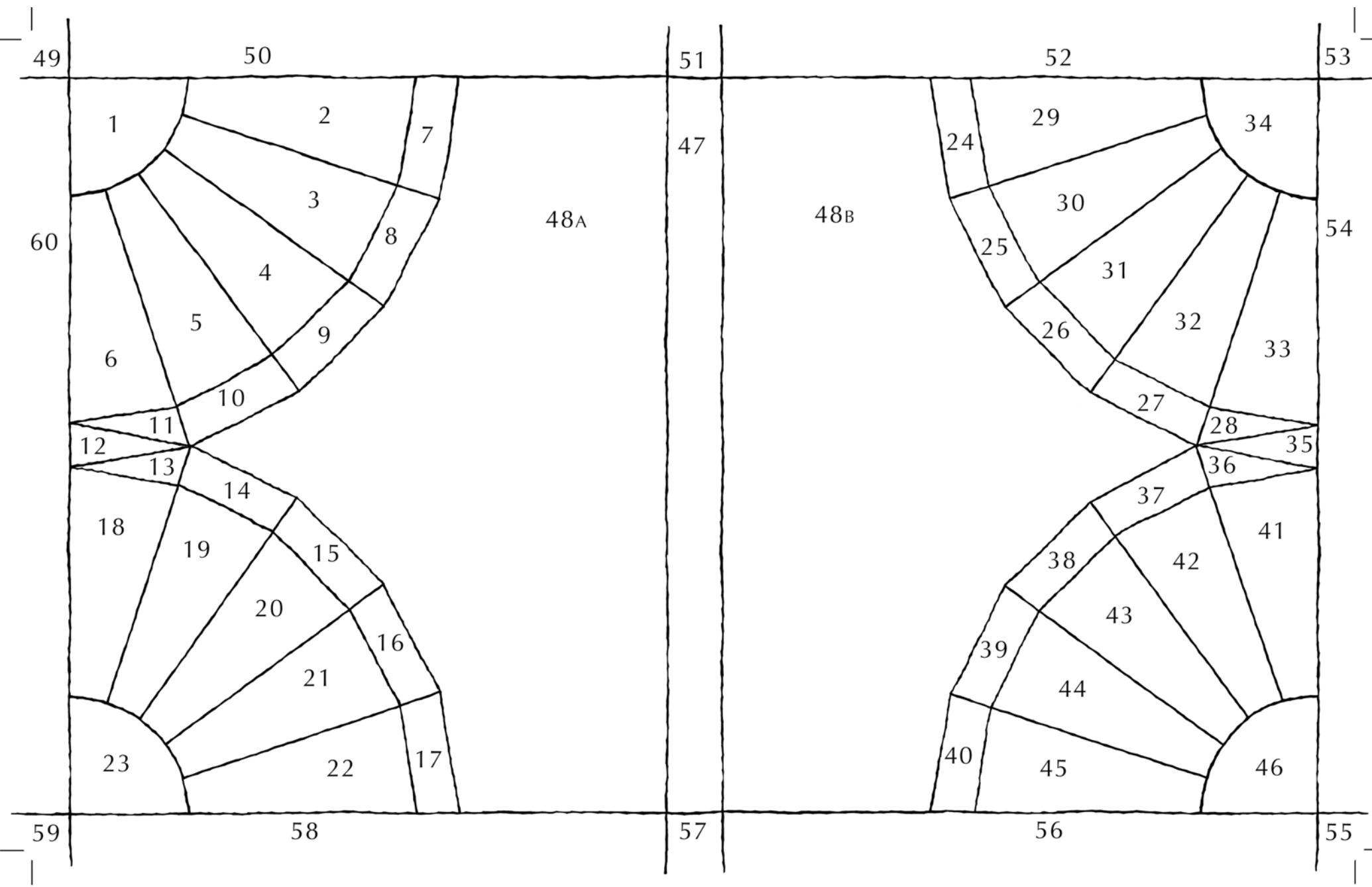
1. ghost crab
2. six-line racerunner lizard
3. coquinas (*Donax variabilis*)
4. American beach grass
5. laughing gull
6. mole crab
7. semipalmated sandpiper
8. purple shore crab
9. black oystercatcher
10. rockweed
11. sinistral spiral tube worms (*Spirorbis borealis*)
12. least tern chick and egg
13. sanderling
14. spartina grass and ribbed mussels
15. diamondback terrapin
16. clapper rail
17. blue-banded hermit crab
18. dire whelk (*Searlesia dira*)
19. kelp
20. purple sea urchin
21. kelp crab
22. fiddler crab
23. marsh periwinkle snail
24. raccoon
25. horseshoe crab
26. osprey
27. juvenile atlantic croaker
28. starfish
29. tidepool sculpin
30. coralline algae
31. proliferating anemone (*Epiactis prolifera*)
32. goose-necked barnacle
33. seaside goldenrod
34. sea lavender
35. little striped barnacles
36. great keyhole limpets
37. brown pelican, western gulls, double crested cormorants



Natures Patchwork Quilt pp 16-17 Organisms

1. mink
2. green frog
3. juvenile bluegill
4. crayfish
5. muskrat
6. hatchling painted turtle
7. boreal bluet damselfly
8. fairy shrimp
9. grey treefrog tadpole
10. cattails
11. snails
12. (color only)
13. mosquito larvae
14. black flies
15. wood frog eggs
16. minnows
17. mosquitoes
18. young bass
19. spring peeper
20. mudpuppy
21. northern water snake
22. calico pennant dragonfly
23. great blue heron
24. minnow
25. algae
26. darner dragonfly nymph
27. stoneflies
28. common burrower mayfly nymph
29. waterboatmen
30. whirligig beetles
31. American toad tadpole
32. leopard frog
33. water shrew
34. bullfrog
35. (color only)
36. aquatic worms
37. algae
38. leeches
39. skimmer dragonfly nymph
40. crappie
41. goldeneye ducklings
42. snails
43. red spotted newt
44. curly pondweed

45. kids fishing
46. snapping turtle
47. green algae
48. a: bladderworts, elodea, larval copepod, rotifer, mosquito larva, yellow perch, northern casemaker caddisfly larva
b: volvox, rotifer, closterium, predacious diving beetle pursuing phantom midge larva, flathead mayfly larva, darner dragonfly nymph, blue spotted salamander larva
49. (color only)
50. fragrant water lily
51. (color only)
52. watershield
53. (color only)
54. arrowhead plant
55. (color only)
56. yellow pond lily
57. (color only)
58. featherfoil
59. (color only)
60. burreed



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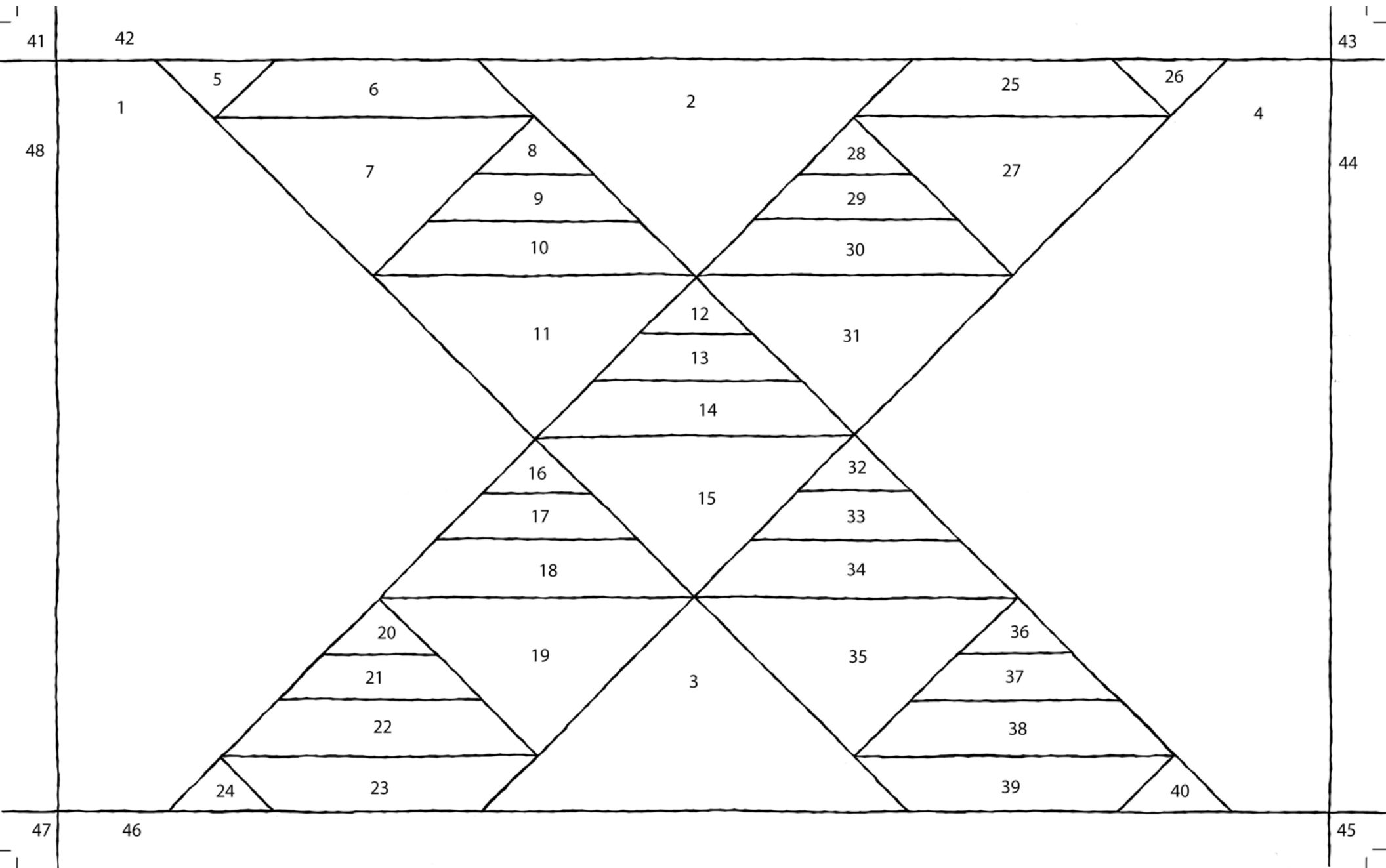
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Natures Patchwork Quilt pp 18-19 Organisms

1. caribou
2. gyrfalcon
3. lapland longspur
4. caribou
5. yellow-billed loon
6. ringed seal
7. polar bear
8. alaska poppy
9. arctic hares
10. alpine bearberry
11. rock ptarmigan
12. black-eye lichen (*Tephromela atra*)
13. berry picking
14. grey crowned rosy finches
15. arctic fox
16. alpine forget-me-not
17. fox sparrow
18. collared lemming
19. dall sheep
20. singing vole
21. labrador tea
22. northern wheatear
23. arctic wolf
24. common redpoll
25. snowy owl
26. raven
27. musk ox
28. glaucous gentian
29. snow geese
30. alpine arnica
31. wolverine
32. dwarf fireweed
33. white crowned sparrow
34. ermine
35. grizzly bear
36. arctic ground squirrel
37. cotton grass
38. red necked phalarope
39. lynx
40. northern red-backed vole
41. mosquito
42. green starburst lichen (*Parmeliopsis ambigua*)
43. mosquito
44. rippled ring lichen (*Arctoparmelia separata*)

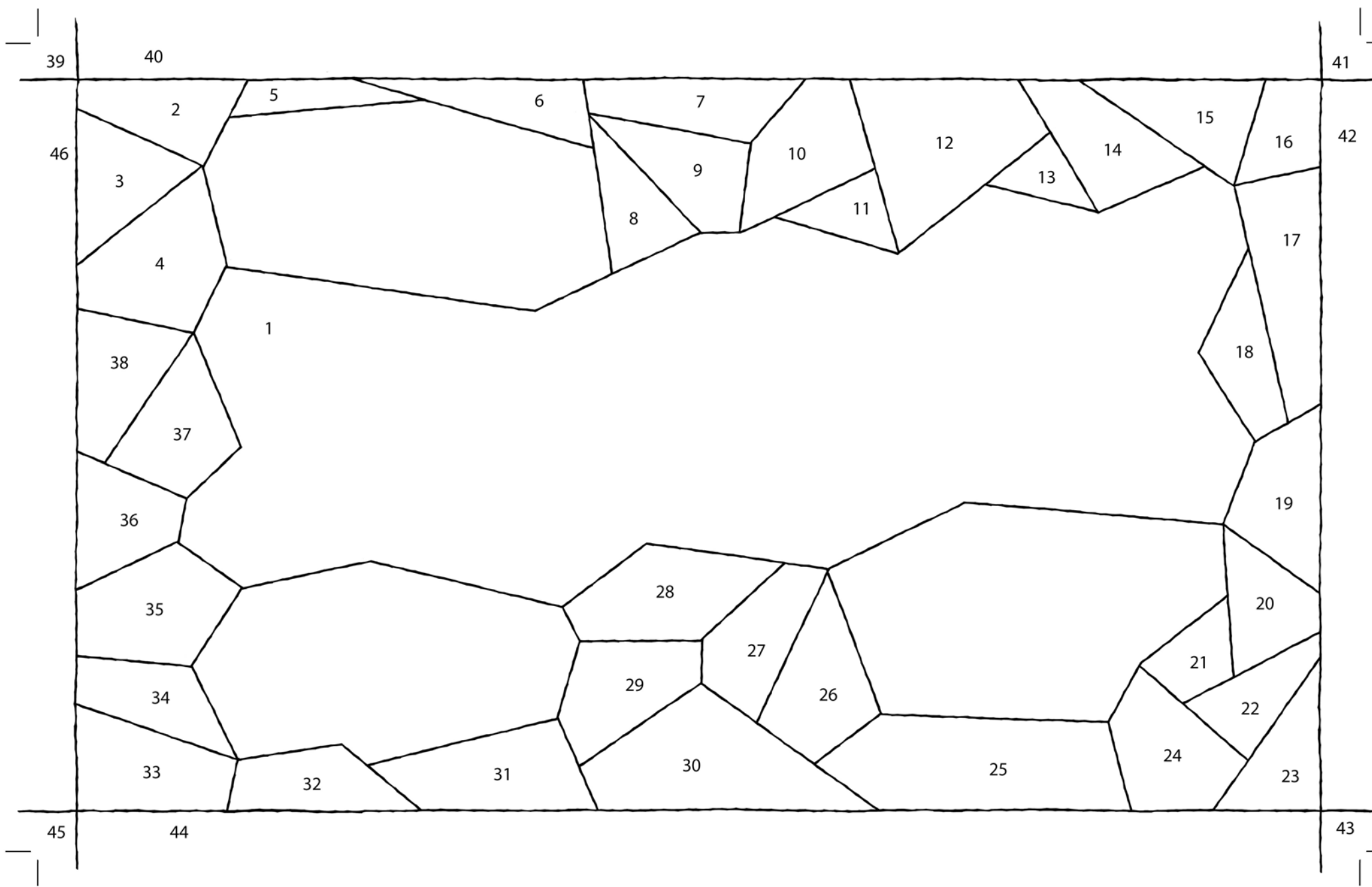
45. mosquito
46. reindeer lichen (*Cladina* spp)
47. mosquito
48. rock grubs lichen (*Allantoparmelia alpicola*)



Natures Patchwork Quilt pp 20-21 Organisms

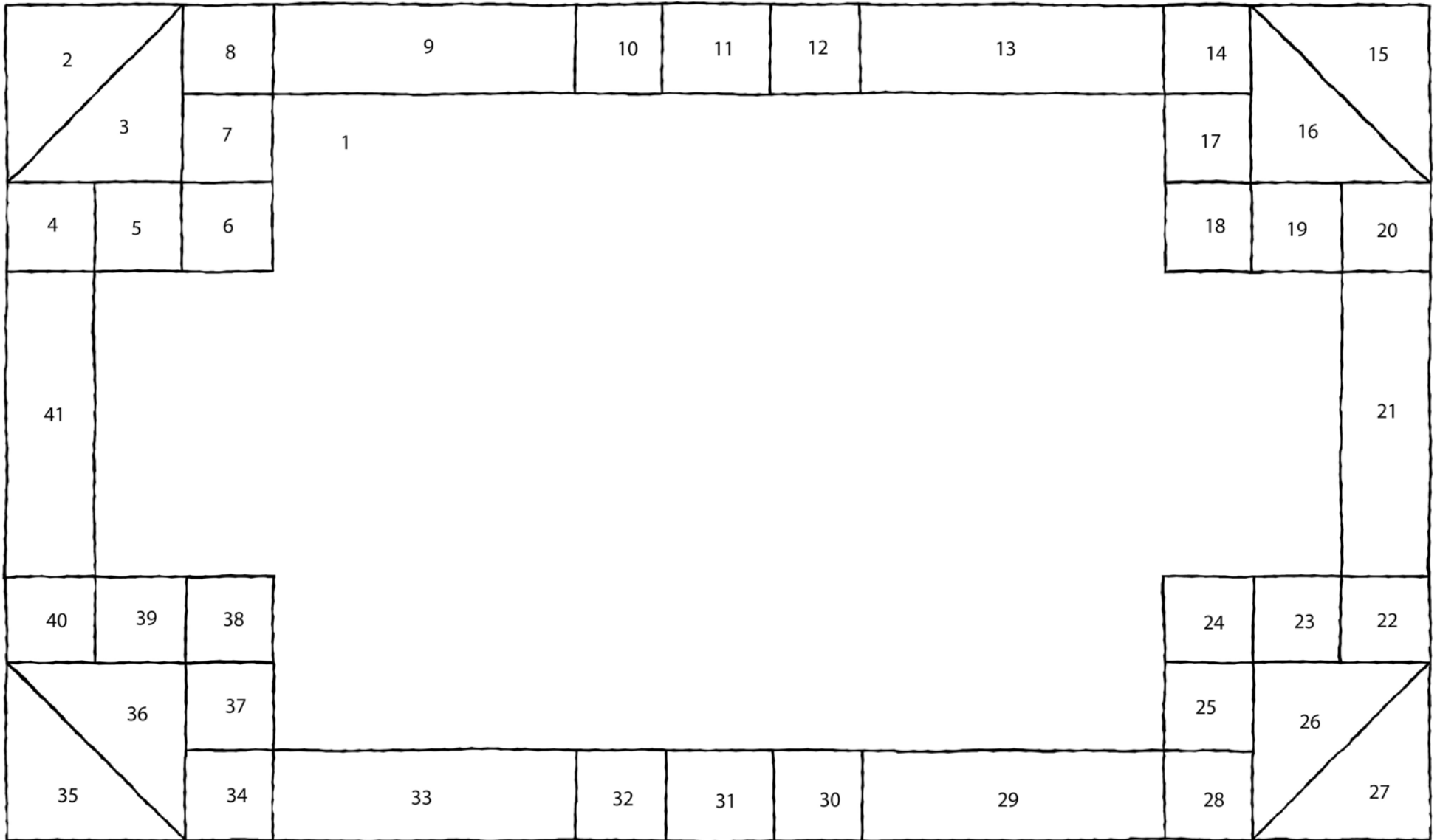
1. red breasted sapsucker, longtailed weasel, roosevelt elk, big leaf maple, sword fern, oxalis, Sitka spruce, western hemlock
2. Yuma myotis
3. Huckleberries
4. Northern pygmy owl
5. Olympic torrent salamander
6. Golden buprestid beetle
7. Western terrestrial garter snake
8. Fairy slipper orchid
9. Centipede
10. Varied thrush
11. banded forest snail
12. black bears
13. Trowbridge's shrew
14. blue grouse
15. deer mouse
16. witches hair lichen (*Alectoria sarmentosa*)
17. Indian pipe
18. Pacific tree frog
19. cougar
20. winter wren
21. long-toed salamander
22. carnivorous ground beetle
23. hiker
24. spotted skunk
25. coho salmon
26. pacific jumping mouse
27. western toad
28. olympic chipmunk
29. salmonberry
30. red alder
31. northwest salamander
32. banana slug
33. lungwort (*Lobaria oregana*)
34. Townsend's mole
35. Cascades frog
36. Twinflower
37. Snowshoe hare
38. Douglas squirrel
39. Subterranean Termite
40. Yellow specklebelly lichen (*Pseudocypheliaria crocata*)
41. Ant
42. Lace lichen (*Ramalia menziesii*)
43. Subterranean termite

44. Treeflute lichen (*Menegazzia terebrata*)
45. Ant
46. Elf-ear lichen (*Normandina pulchella*)



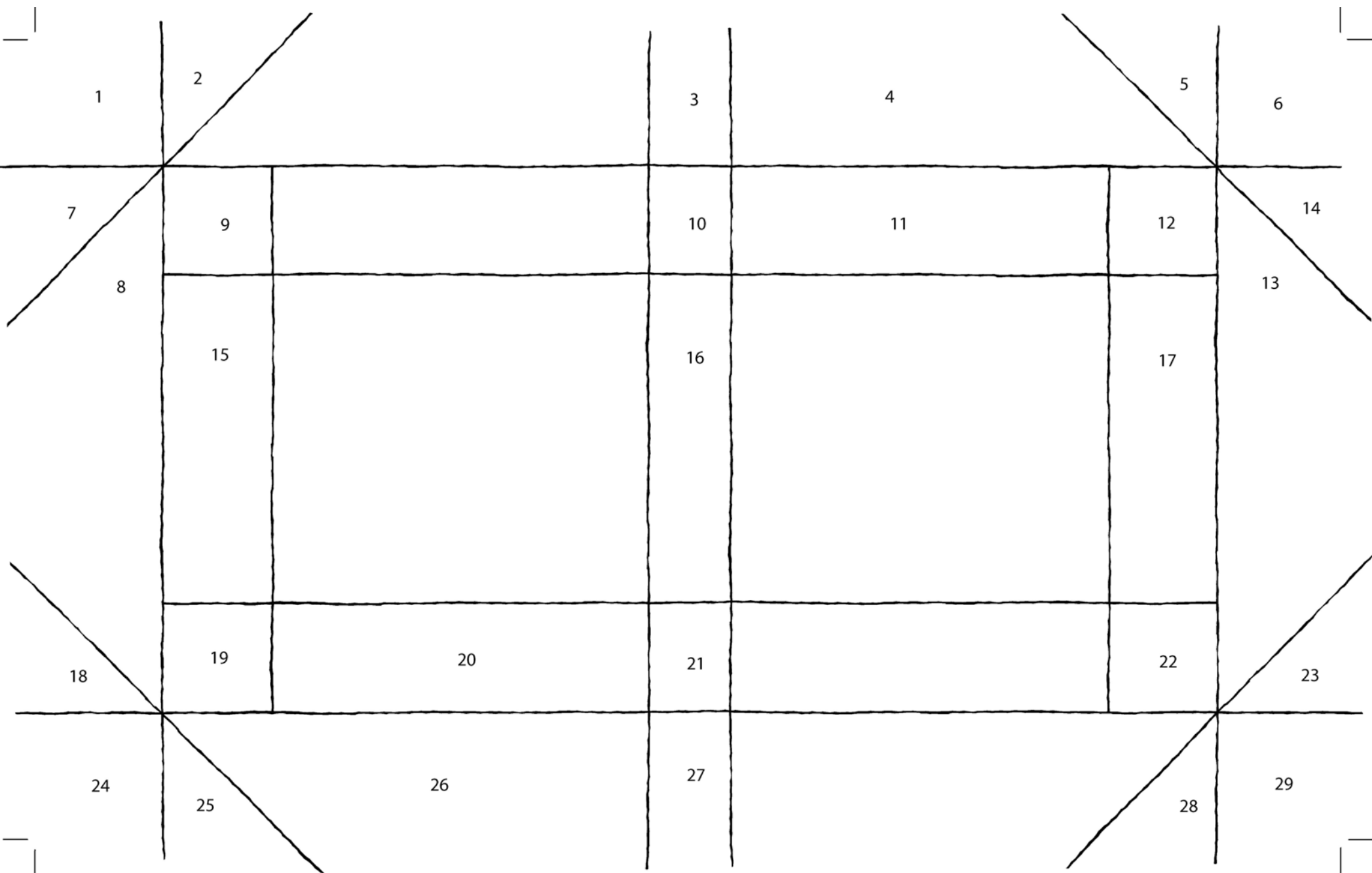
Natures Patchwork Quilt pp 22-23 Organisms

1. downtown Ely MN
2. Moses (black and tan coonhound)
3. 3 generations
4. chickadee at the feeder
5. soccer ball
6. starling
7. Zion (tabby cat)
8. Garden spider
9. Window box
10. Garden snail
11. Hostas
12. cobweb spider
13. fence and gate
14. house fly
15. fire hydrant
16. Ebbie (Cataloula dog)
17. Zuni (spotted kitty)
18. Pigeon
19. Grey squirrel
20. Robin
21. swinging
22. house mouse
23. mailbox
24. cockroach
25. Innes the guide dog
26. Ice cream...yum
27. Winston the elderly cat
28. Watering can
29. Sandbox
30. Parakeets
31. Hostas
32. Trio the guinea pig
33. Lawn mower
34. Hose
35. Gish (stripey kitty)
36. Hot dogs for lunch
37. Terrier
38. English sparrow
39. Bird house
40. Houseplant
41. Skateboarding
42. dandelions



Natures Patchwork Quilt pp 24-25 Organisms

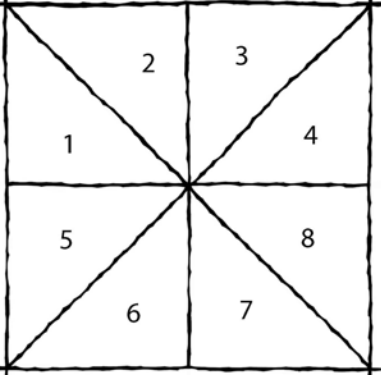
1. goat
2. rhubarb
3. rain
4. domestic geese
5. apple tree
6. rooster
7. baby chick
8. cow and calf
9. horseback riding
10. alfalfa
11. bales of hay
12. pet rabbit
13. sheep and lamb
14. domestic duckling
15. soybeans
16. wheat
17. corn
18. goat kid
19. gardening
20. tractor plowing
21. clover
22. feeding chickens
23. foal
24. tomatoes
25. mule
26. domestic chickens
27. rain
28. pig
29. lettuce



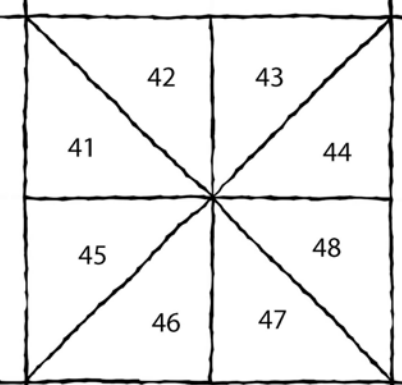
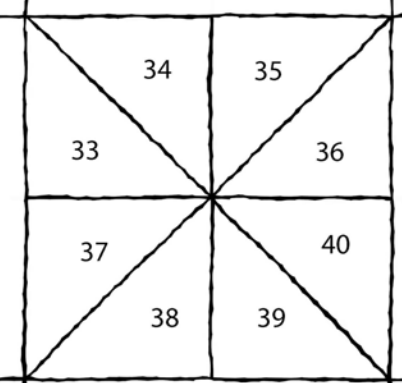
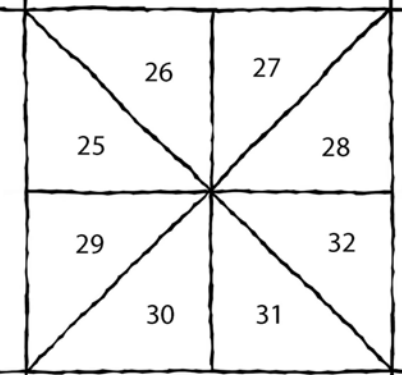
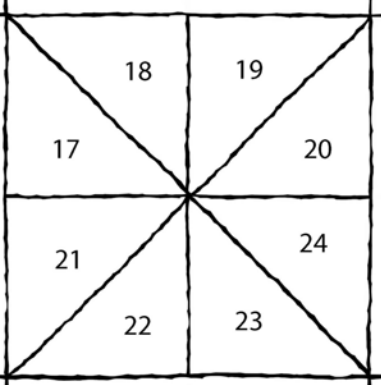
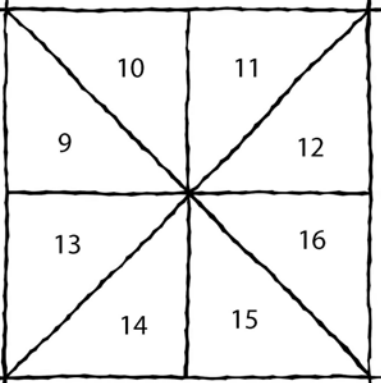
Natures Patchwork Quilt pp 28-29 Organisms

1. piping plover
2. Hatteras National Seashore
3. Giant redwood cone
4. Yosemite National Park
5. Acadia National Park
6. Great black-backed gull
7. Big Bend National Park
8. Desert tortoise
9. Snowshoe Hare
10. Voyageurs National Park
11. Blueberry shrub
12. Denali National Park
13. Shanandoah National Park
14. Red Maple
15. Yellowstone National Park
16. Elk
17. Sage grouse
18. Theodore Roosevelt National Park
19. Roadrunner
20. Saguaro National Park
21. Grand Teton National Park
22. Black-billed magpie
23. Everglades National Park
24. American alligator
25. Yellowstone National Park
26. Bison
27. Olympic National Park
28. Banana slug
29. Grizzly bear
30. Denali National Park
31. Common loon
32. Voyageurs National Park
33. Rocky Mountain National Park
34. Trembling aspen
35. Acadia National Park
36. Red fox
37. Pigmy nuthatch
38. Yosemite National Park
39. Pronghorn
40. Theodore Roosevelt National Park
41. Glacier National Park
42. Grey jay
43. Shanandoah National Park
44. Wild turkey

45. Wood frog
46. Apostle Islands National Lakeshore
47. Coyote
48. Grand Canyon National Park
49. Great Smoky Mountains National Park, turkey vultures, grey squirrel, American toad, stream cruiser dragonfly



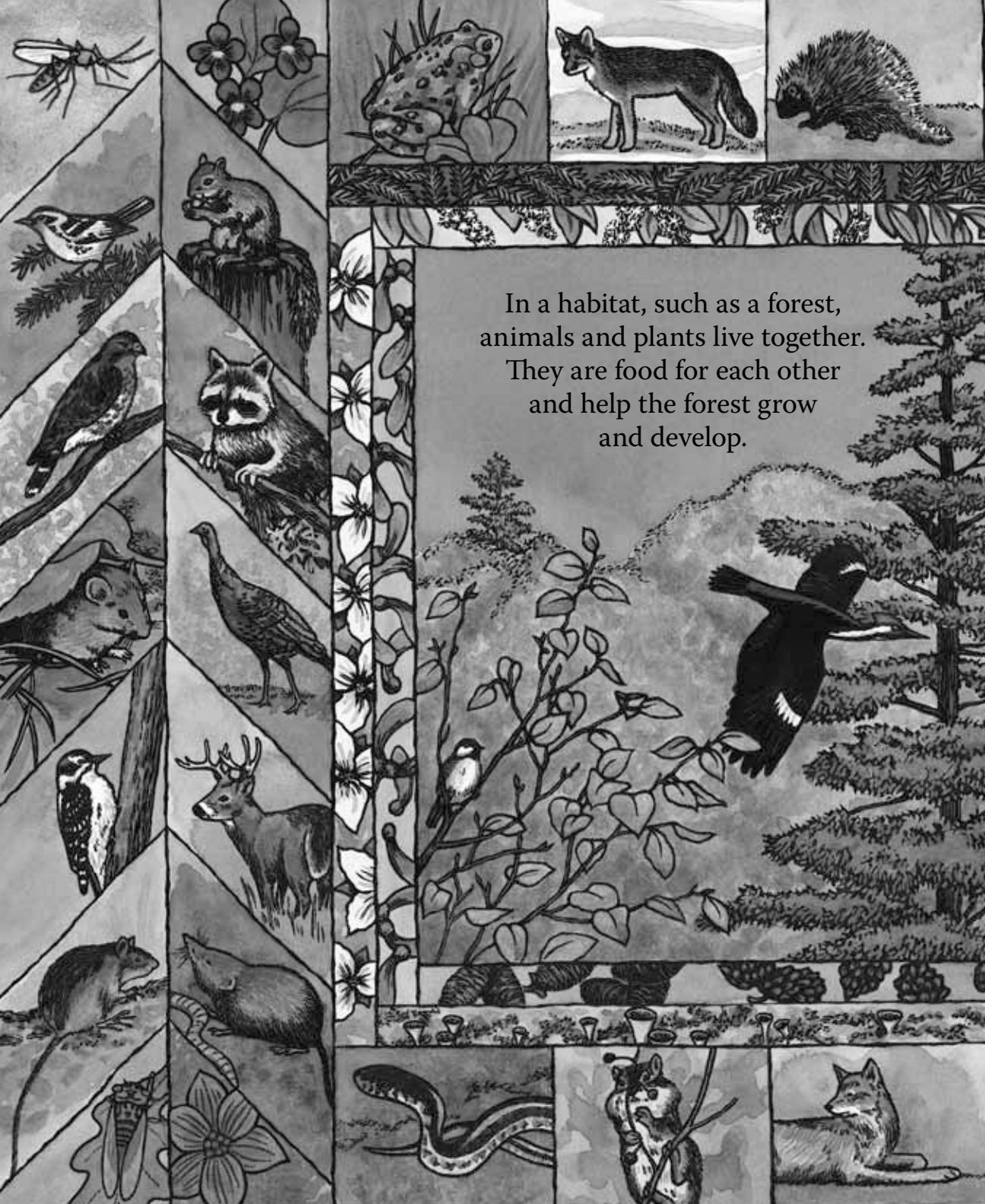
49



Natures Patchwork Quilt Back Cover Organisms

1. Mountain avens
2. Western meadowlark
3. Collared peccary
4. Fiddler crab
5. Black-footed ferret
6. Blazing star
7. Red squirrel
8. Gambel's quail
9. Frilled anemone
10. Short-tailed weasel
11. Marsh periwinkle snail
12. Rock ptarmigan
13. Columbine
14. American toad
15. Gila woodpecker
16. Black bear cub
17. Spring peeper
18. Hedgehog cactus
19. Clapper rail
20. Wolverine
21. Pronghorn
22. Laughing gull
23. Brown rockfish
24. Garter snake
25. Green darner dragonfly, Fringed bindweed

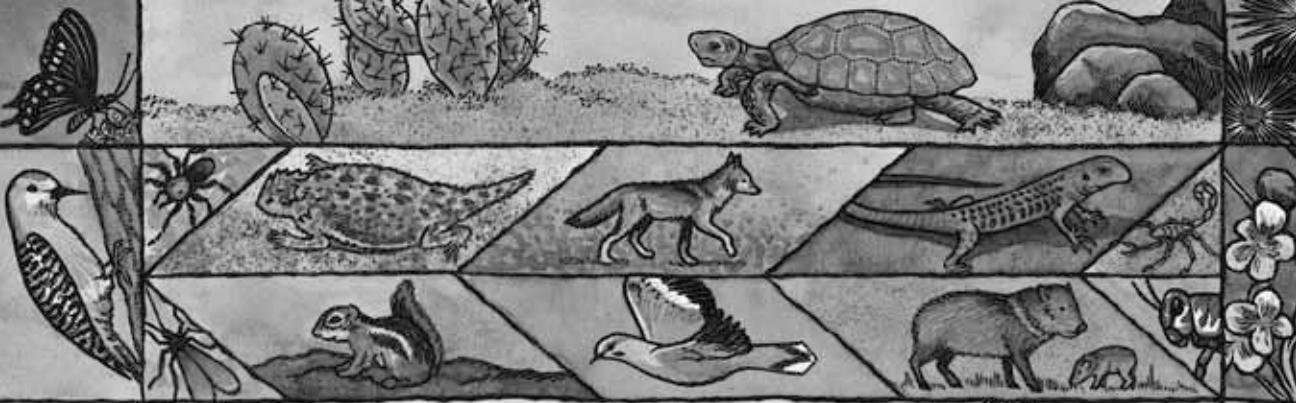
1	2	3	4	5	6
24	25				7
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20					11
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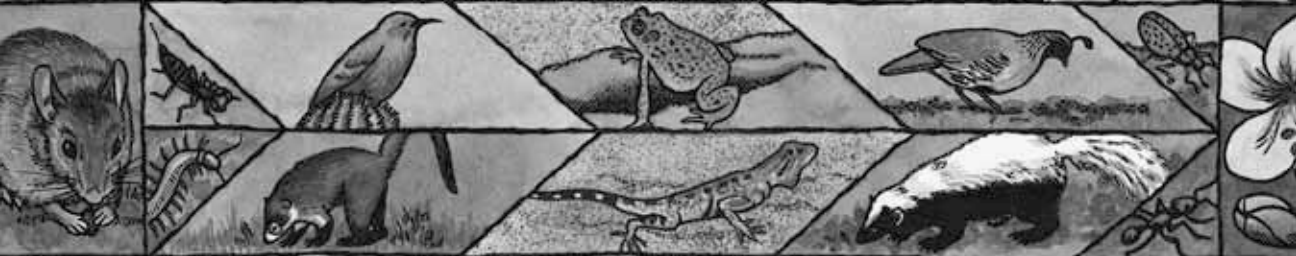
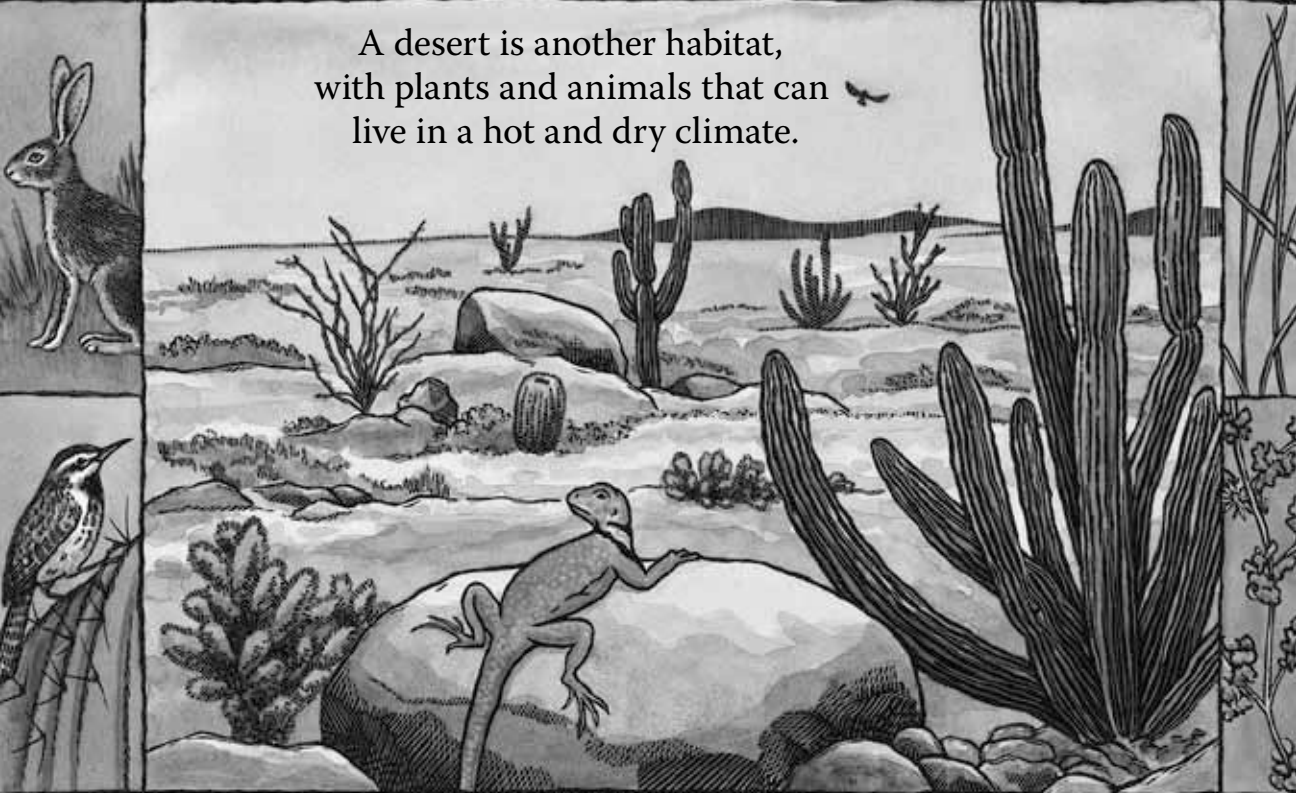
In a habitat, such as a forest,
animals and plants live together.
They are food for each other
and help the forest grow
and develop.



Each plant or animal depends on others, like a quilt stitched together. We call this **interdependence**.

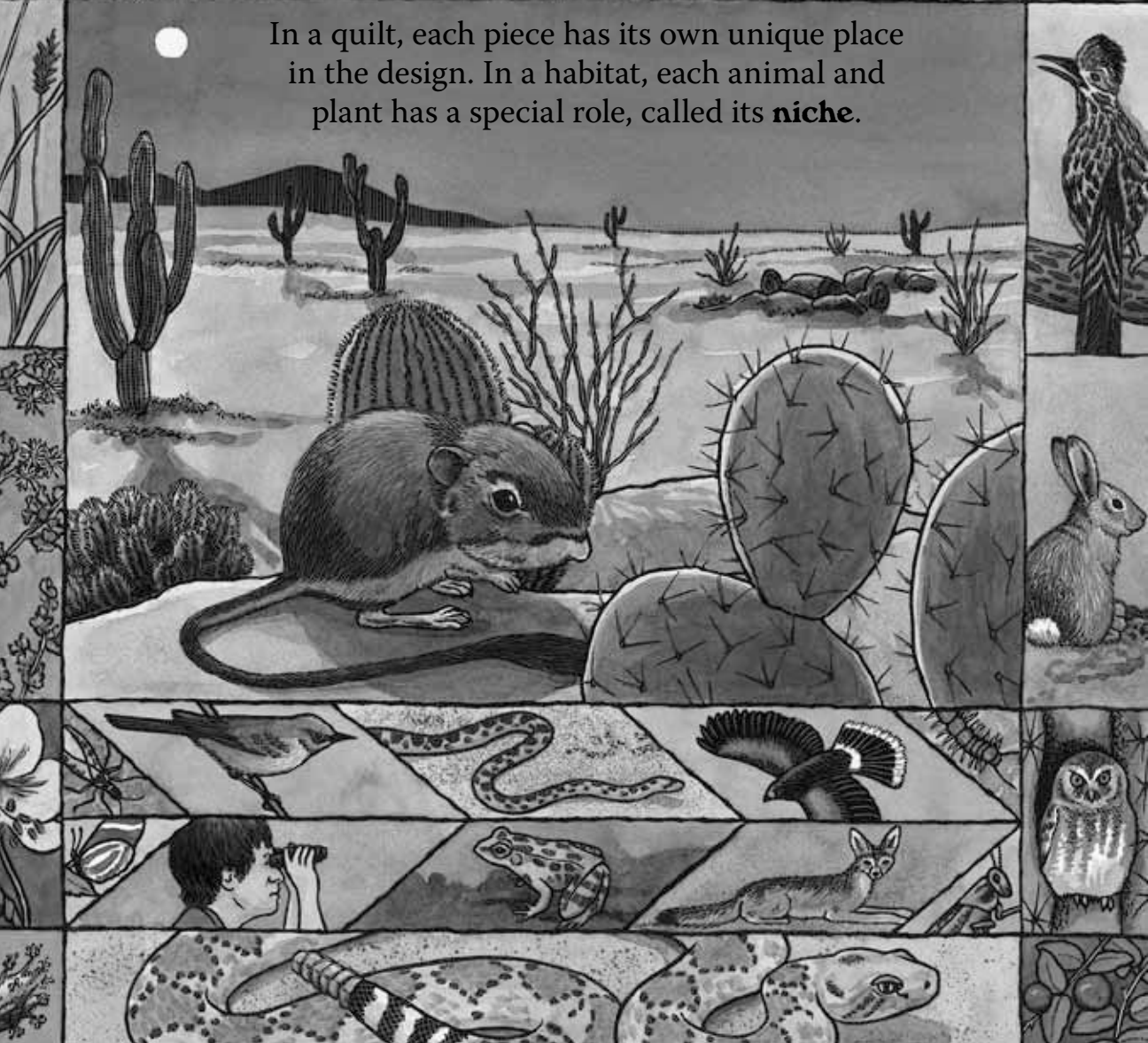


A desert is another habitat,
with plants and animals that can
live in a hot and dry climate.



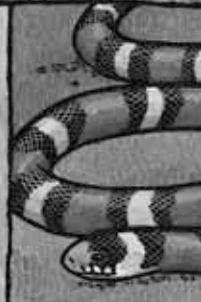


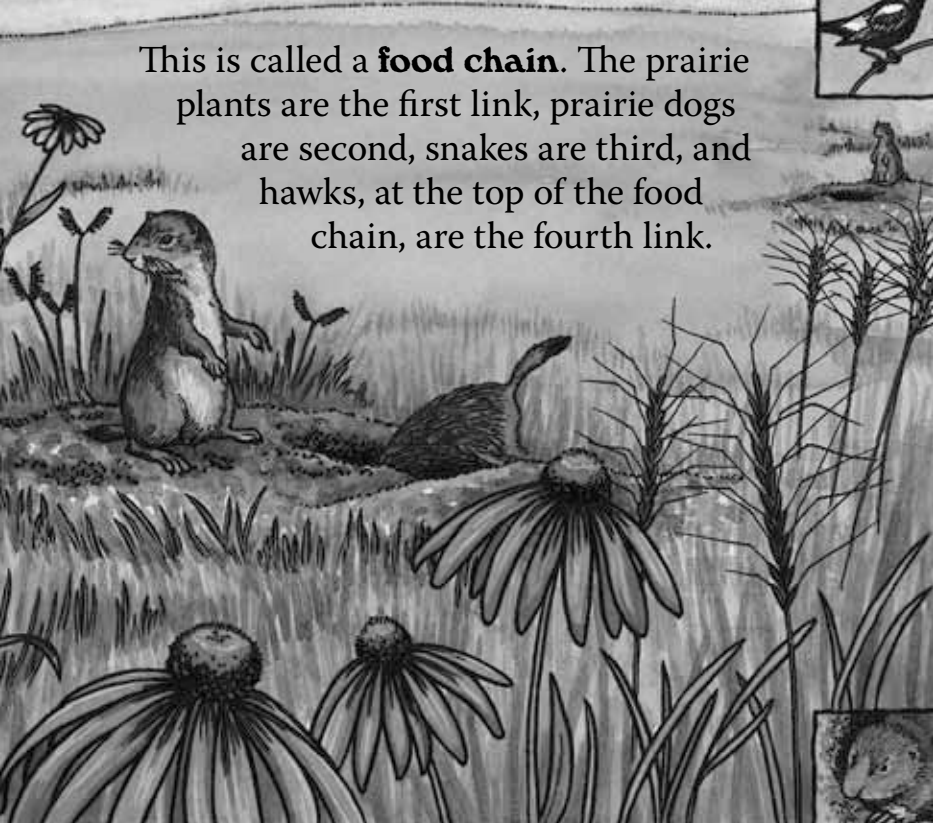
In a quilt, each piece has its own unique place in the design. In a habitat, each animal and plant has a special role, called its **niche**.





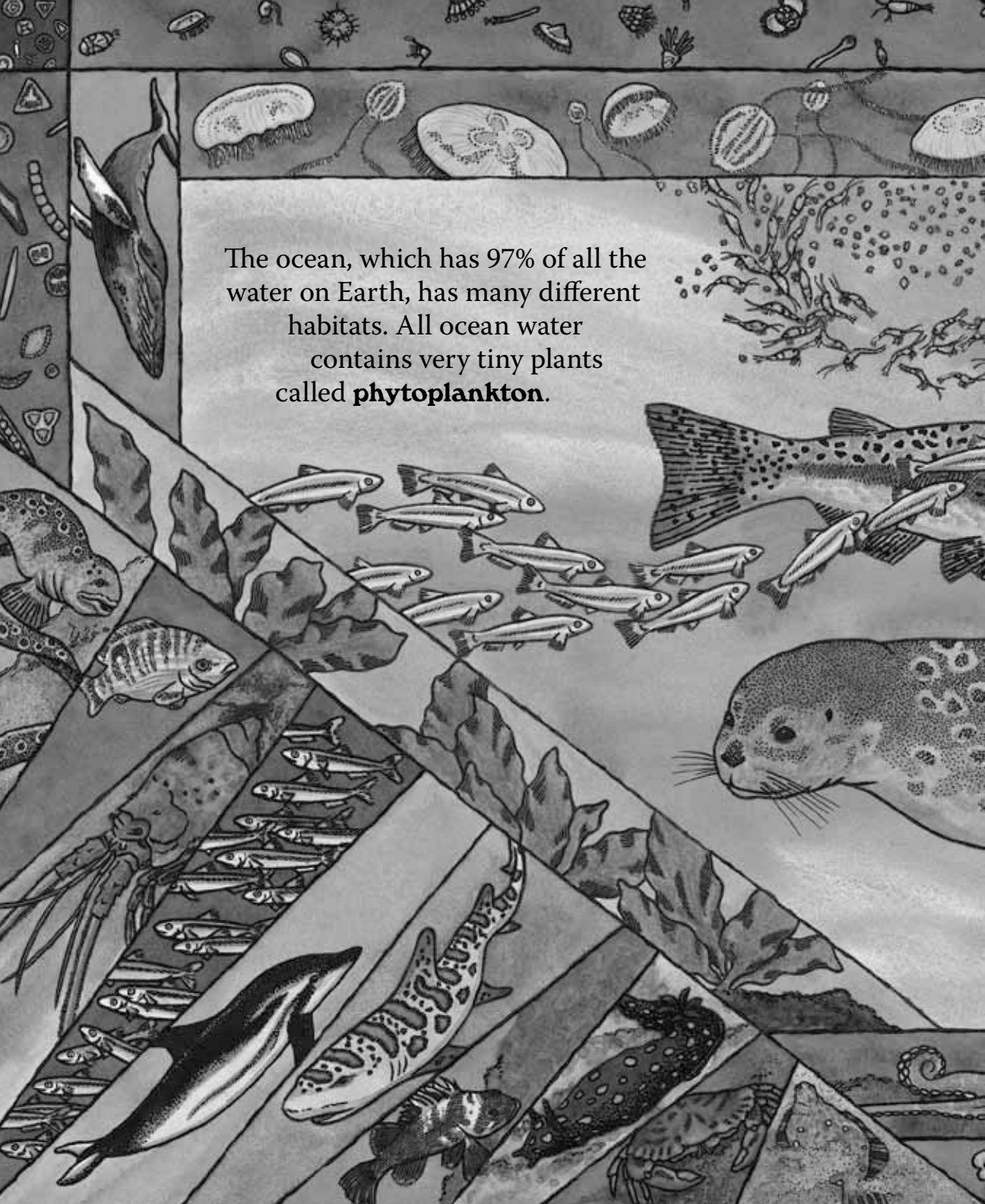
A **prairie** is a grassland habitat. Some prairies have prairie dogs that eat roots and plants. Snakes eat the prairie dogs. Hawks eat the snakes.





This is called a **food chain**. The prairie plants are the first link, prairie dogs are second, snakes are third, and hawks, at the top of the food chain, are the fourth link.

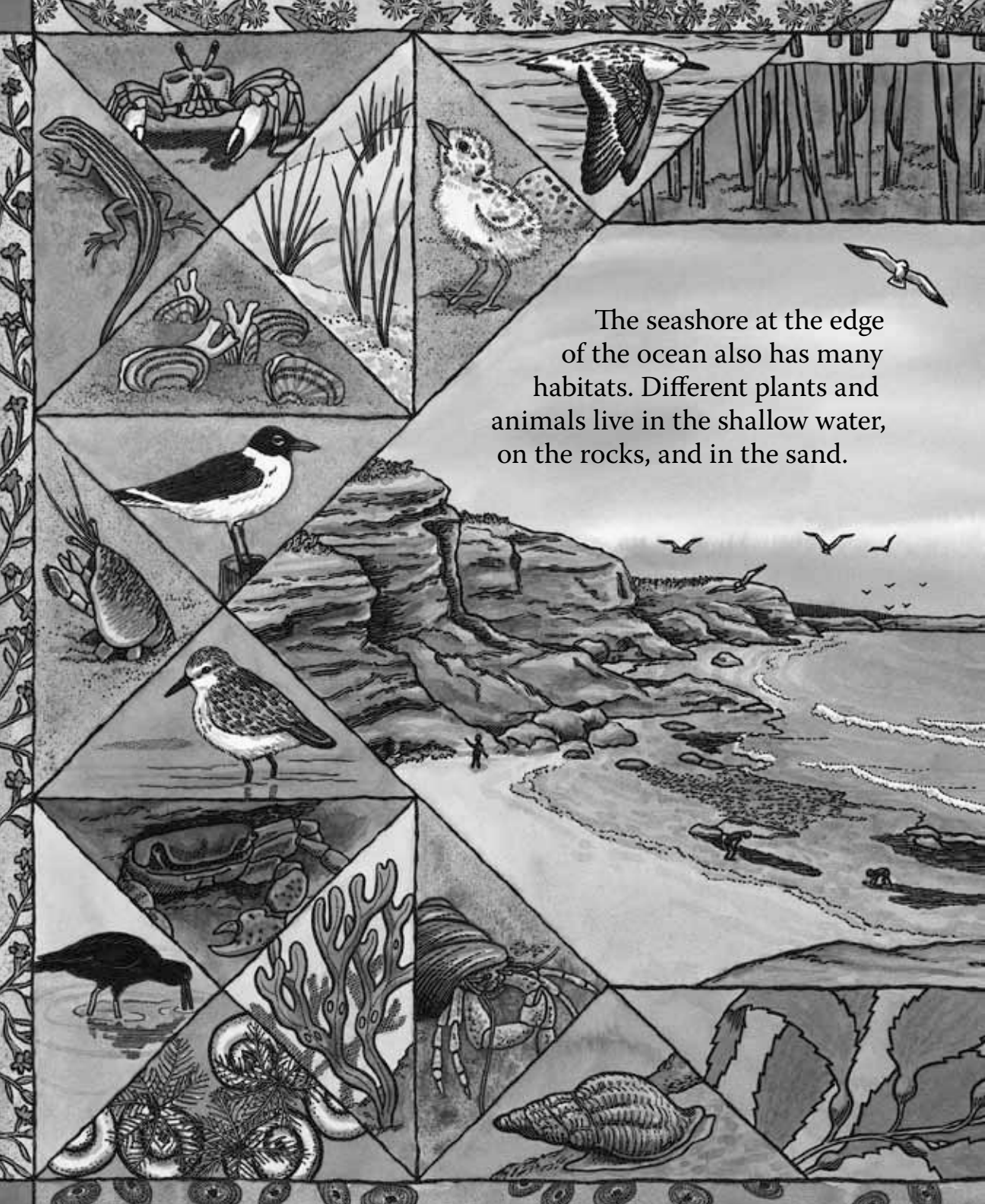





The ocean, which has 97% of all the water on Earth, has many different habitats. All ocean water contains very tiny plants called **phytoplankton**.



Tiny animals called **zooplankton** eat phytoplankton. Tiny shrimp called krill eat zooplankton. Little fish called sardines eat krill. Salmon eat sardines. Sharks or seals eat salmon. This is one **marine food chain**.

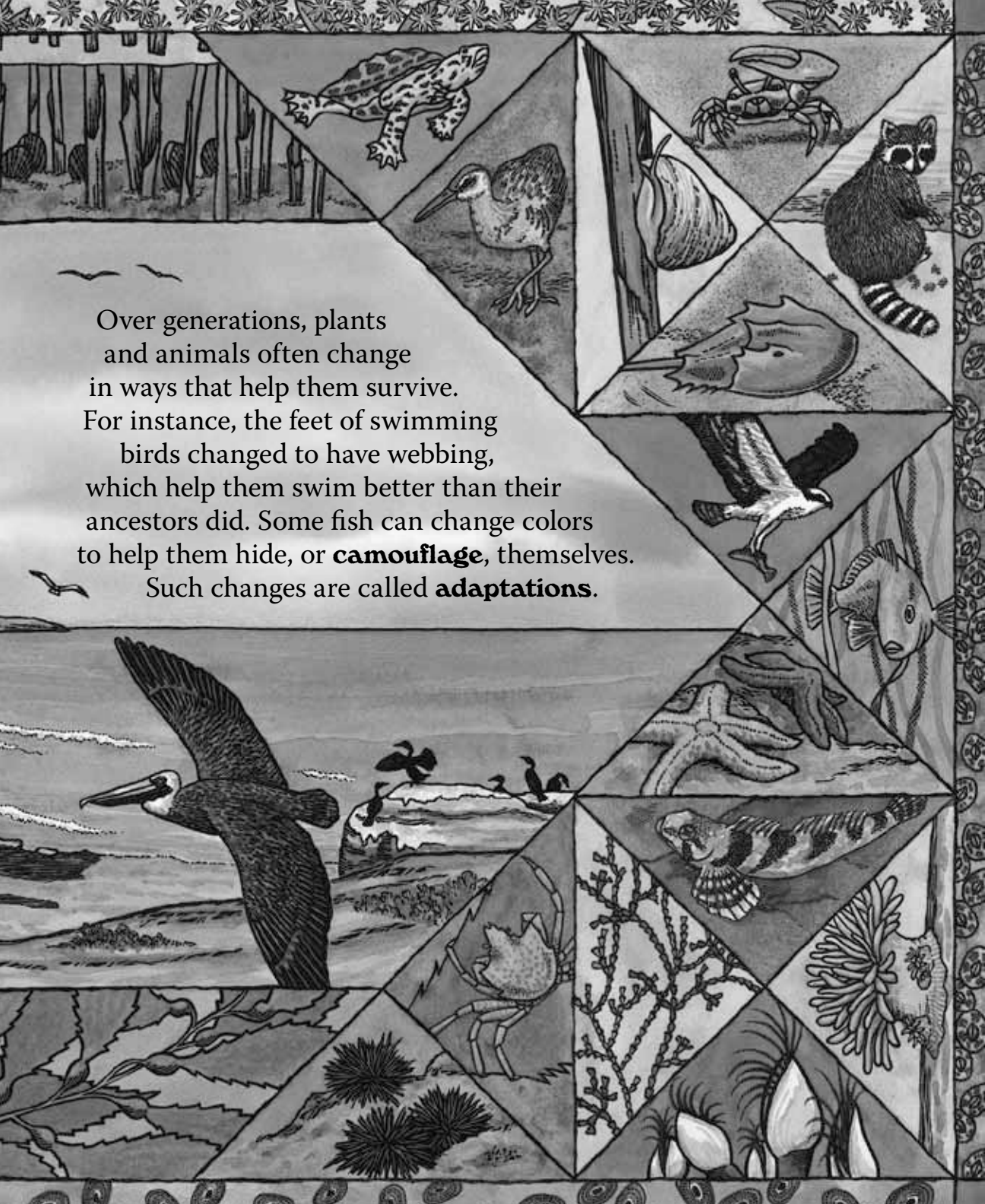


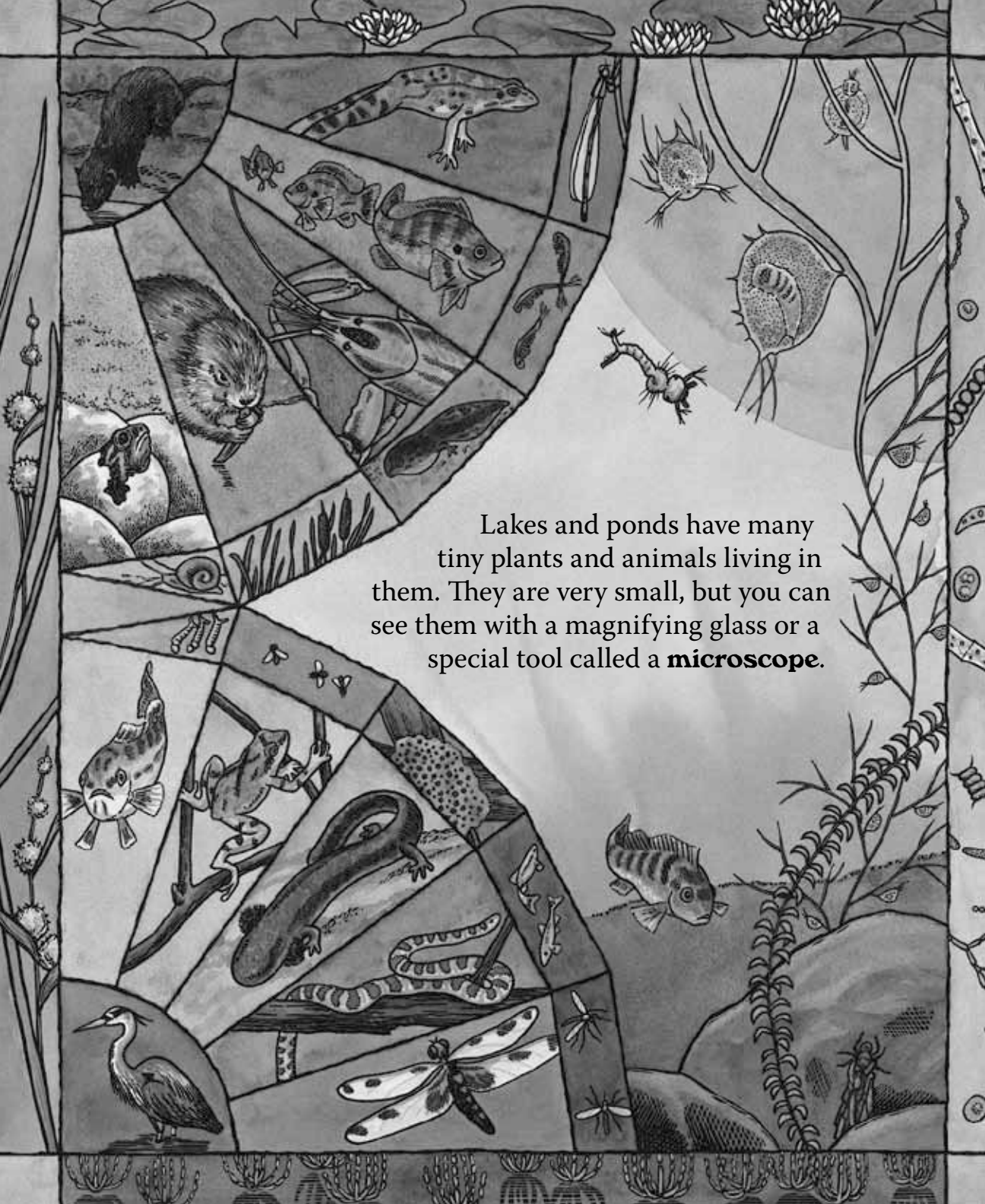
The seashore at the edge of the ocean also has many habitats. Different plants and animals live in the shallow water, on the rocks, and in the sand.



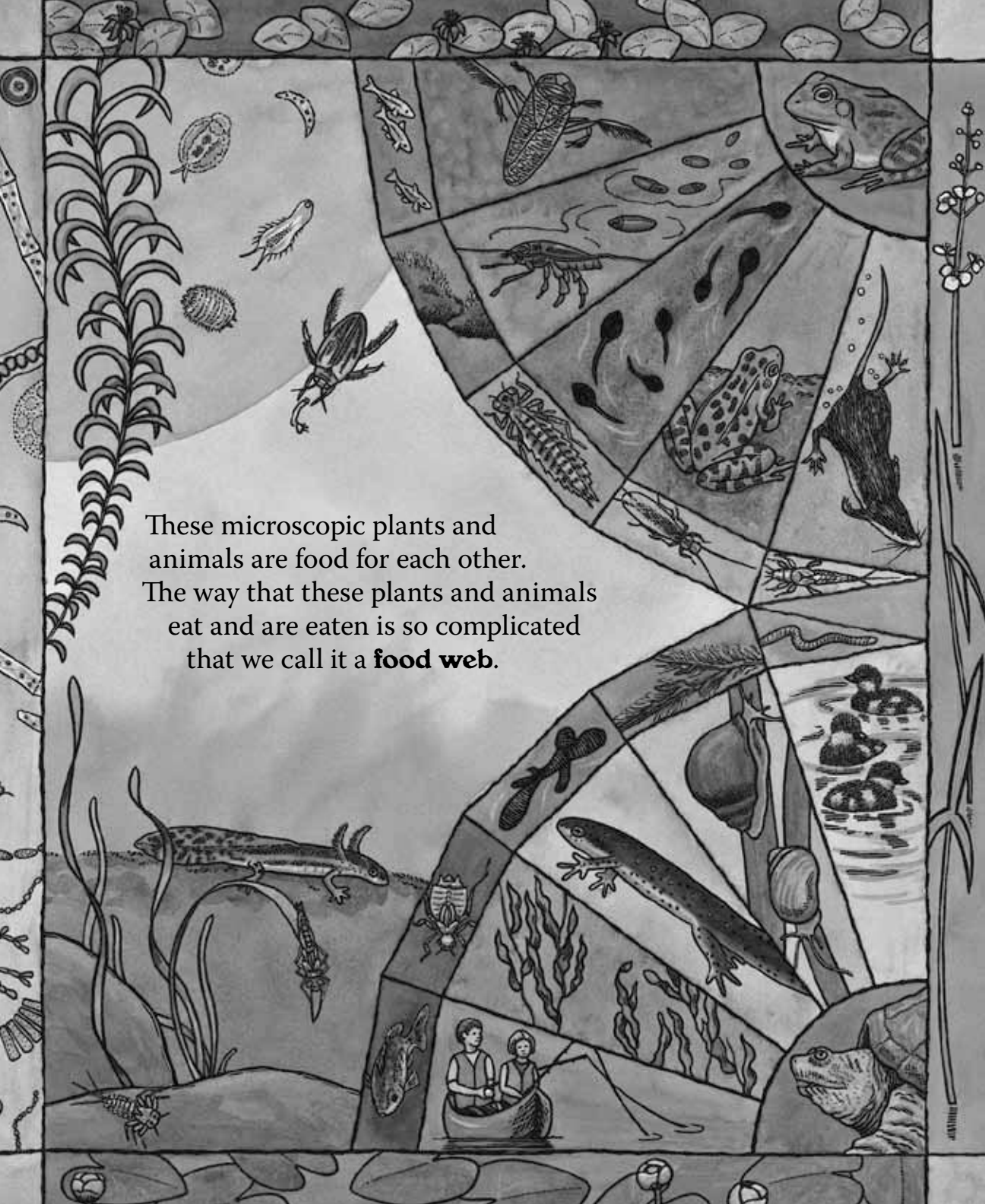
Over generations, plants and animals often change in ways that help them survive. For instance, the feet of swimming birds changed to have webbing, which help them swim better than their ancestors did. Some fish can change colors to help them hide, or **camouflage**, themselves.

Such changes are called **adaptations**.



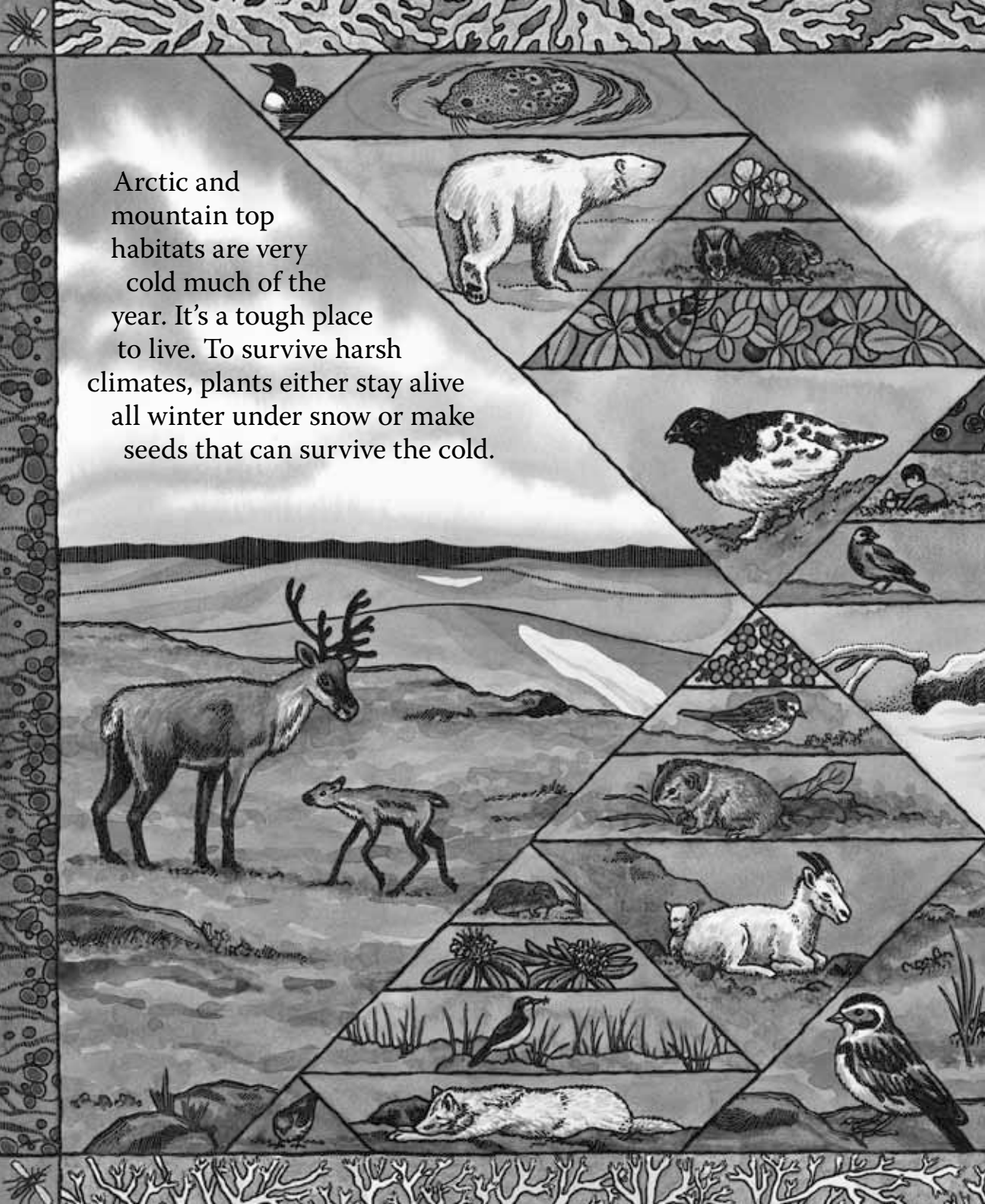


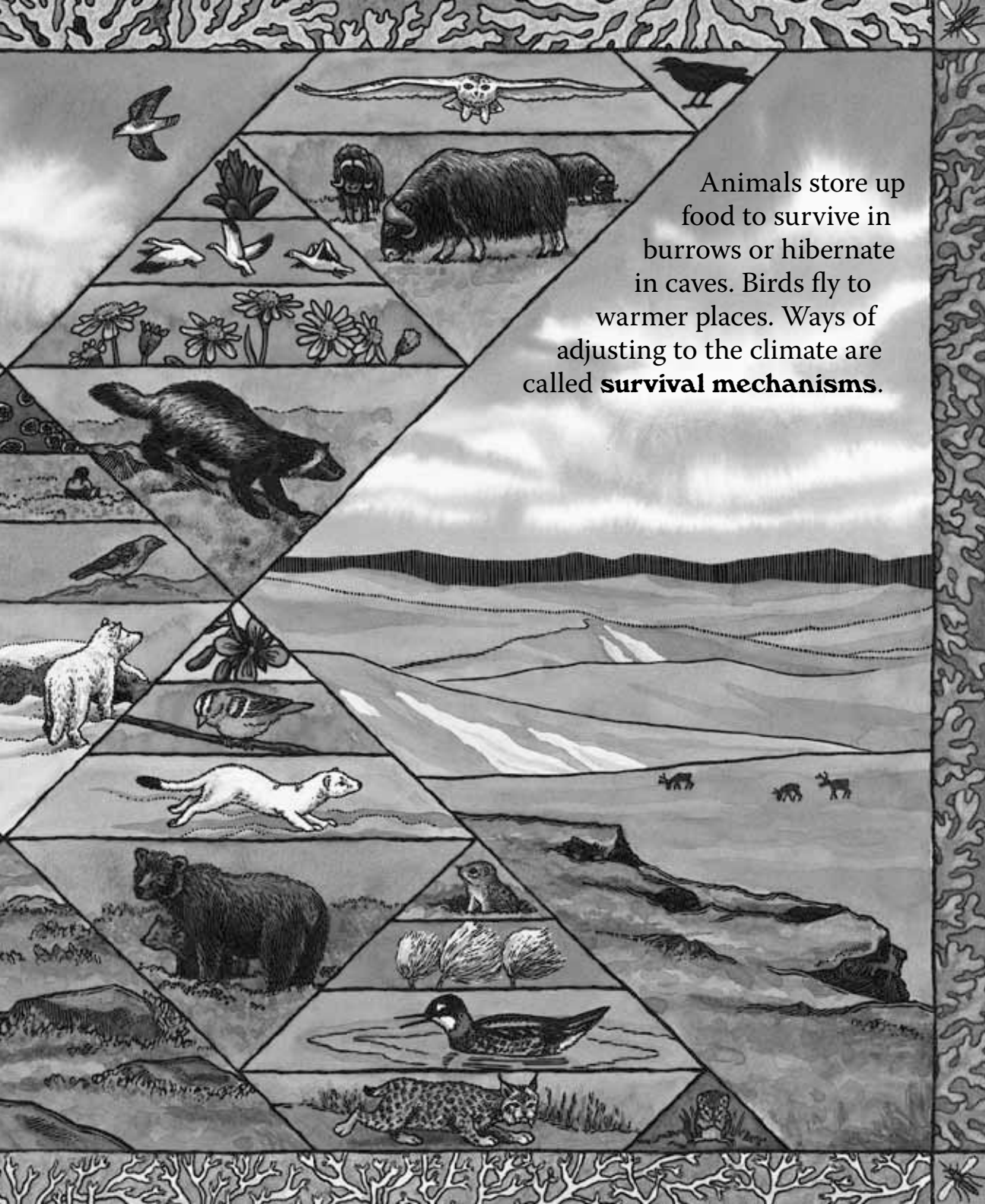
Lakes and ponds have many tiny plants and animals living in them. They are very small, but you can see them with a magnifying glass or a special tool called a **microscope**.



These microscopic plants and animals are food for each other. The way that these plants and animals eat and are eaten is so complicated that we call it a **food web**.

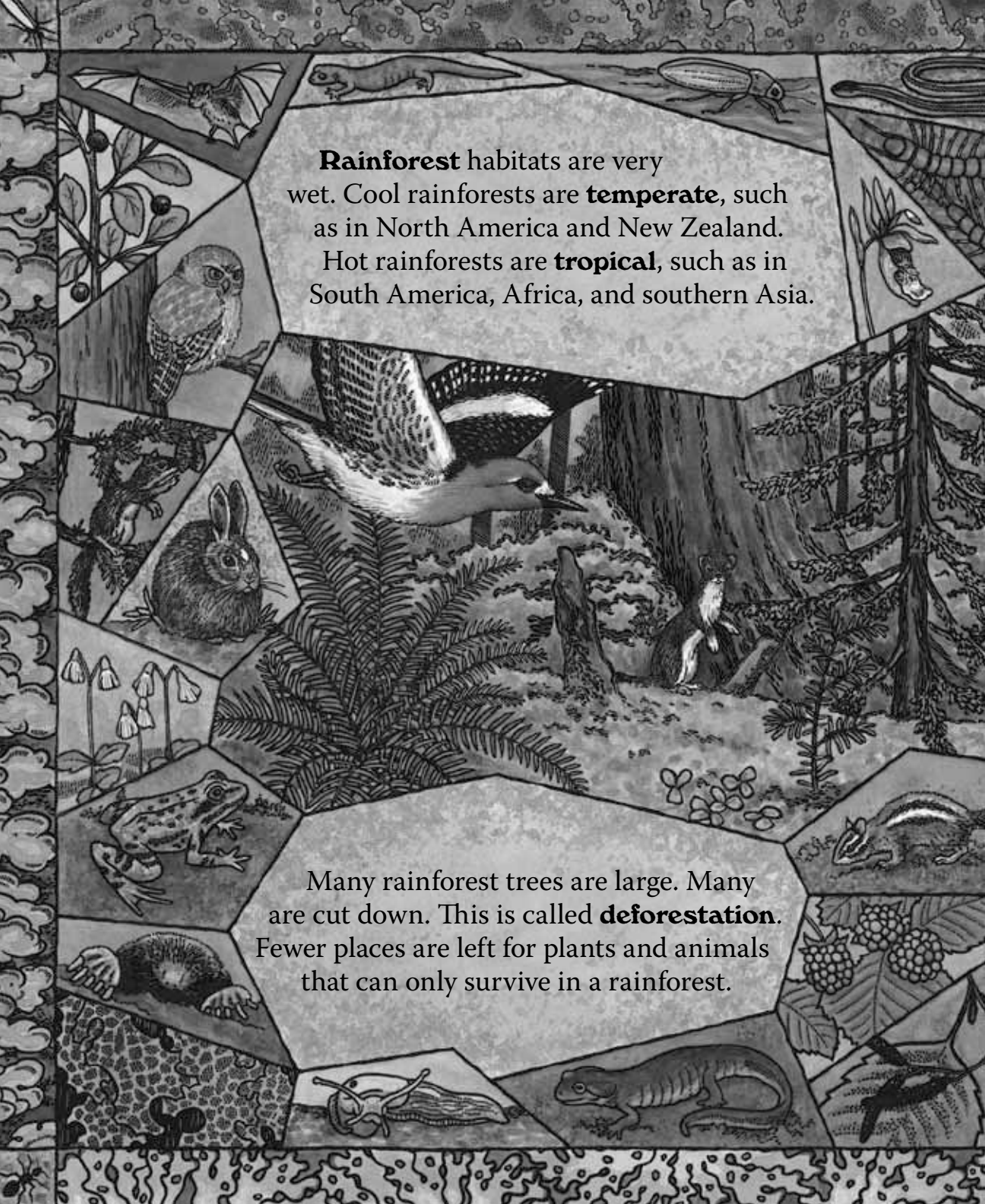
Arctic and mountain top habitats are very cold much of the year. It's a tough place to live. To survive harsh climates, plants either stay alive all winter under snow or make seeds that can survive the cold.





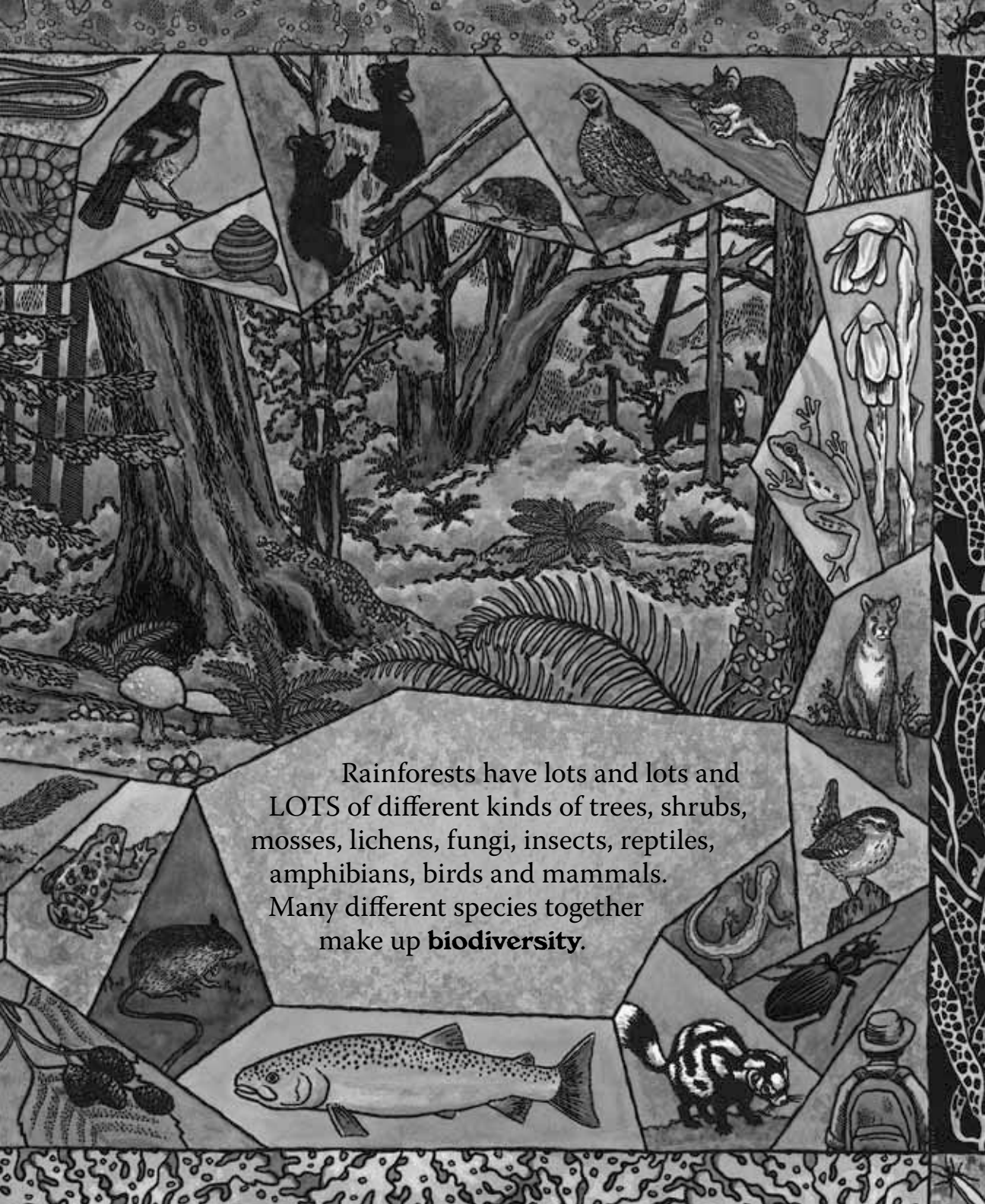
Animals store up food to survive in burrows or hibernate in caves. Birds fly to warmer places. Ways of adjusting to the climate are called **survival mechanisms**.





Rainforest habitats are very wet. Cool rainforests are **temperate**, such as in North America and New Zealand. Hot rainforests are **tropical**, such as in South America, Africa, and southern Asia.

Many rainforest trees are large. Many are cut down. This is called **deforestation**. Fewer places are left for plants and animals that can only survive in a rainforest.



Rainforests have lots and lots and
LOTS of different kinds of trees, shrubs,
mosses, lichens, fungi, insects, reptiles,
amphibians, birds and mammals.
Many different species together
make up **biodiversity**.



Where's the Wilderness Kid?

Introduction

Consie Powell, the illustrator for *Nature's Patchwork Quilt*, has hidden images of kids interacting with nature in some of the patchwork quilt pieces of the book. In this activity, children will find the hidden kids and discuss human activities that can be done in each habitat.

Materials Needed

- ◆ The book, *Nature's Patchwork Quilt*, 1 per group
- ◆ Post-It Notes, 1 pad per group

Key Concepts

- ◆ The environment provides humans with places for recreation and renewal.
- ◆ Humans make both positive and negative impacts on the environment.

Procedure

1. Brainstorm with the class some of the activities they like to do in nature. Then have them identify the habitat where the activities are done. For example, snorkeling (activity) in the ocean (habitat).
2. Divide the class into small groups and give each group a book and a pad of Post-Its. Have children put a Post-It on any pages where they find an illustration of a kid doing something in nature. Explain that some pages have more than one quilt piece that includes a kid. They should use a separate Post-It for each quilt piece.
3. When all groups are finished, go through the book with the whole class to identify all of the kids and their activities. Discuss how each activity relates to the habitat. Ask if they can be done in any other habitats.

Nature Connections

- ◆ Do a habitat survey of your school grounds, identifying the plants and animals. Invite a local naturalist to help you.
- ◆ Explore a habitat by playing one of the games from *Sharing Nature with Children* by Joseph Cornell such as Meet a Tree, Scavenger Hunt, Webbing, Predator-Prey, or Duplication.

Additional Resources

Many people who have dedicated their lives to helping the environment first learned to love nature through their childhood activities and experiences. You can read about some of these naturalists in the following books:

- ***Earth Heroes: Champions of the Wilderness***
by Bruce and Carol L. Malnor
- ***Earth Heroes: Champions of Wild Animals***
by Carol L. and Bruce Malnor
- ***Earth Heroes: Champions of the Ocean***
by Fran Hodgkins



Wonderful Wild Words

Introduction

Nature's Patchwork Quilt by Mary Miche introduces children to science vocabulary terms, such as interdependence and adaptation. In this activity, students match the terms to the correct definitions.

Materials Needed

- ◆ The book, *Nature's Patchwork Quilt*
- ◆ Copies of the Definitions handout (printed on card stock and cut apart to make a set), 1 set per group
- ◆ 1 copy of the Vocabulary Terms handout (printed on card stock and cut apart to make a set)

Key Concepts

- Different plants and animals inhabit different kinds of environments and have external features that help them thrive in different kinds of places.
- Living organisms depend on one another and on their environment for survival.
- Human behavior can either help or hurt a habitat.

Procedure

1. Read *Nature's Patchwork Quilt* to the class.
2. Divide students into groups and give each group a set of Definitions. Have them spread out the definitions so that they easily read them. Introduce the "Wonderful Wild Words" game by explaining that the object of the game is to choose the definition that correctly matches the vocabulary term you read. Groups earn one point for each correct definition they choose.
3. Draw one of the cards from your set of Vocabulary Terms, and read it aloud. Tape it to the board. Give students a predetermined amount of time to find the definition from their set of cards.
4. When time is up, ask for a volunteer to read the correct definition. Record points for groups who make the correct matches. Provide additional explanations or examples to make sure that children understand the term.

Nature Connections

- ◆ Walk around your school grounds to find concrete examples of the terms, such as camouflage, adaptation, or survival mechanism. Back in the classroom, identify the vocabulary terms that you couldn't find around the school, such as zooplankton or phytoplankton.

Additional Resources

Other children's picture books about interconnectedness:

- ***Around One Log*** by **Anthony D. Fredericks**
- ***Saguaro Moon*** by **Kristin Joy Pratt-Serafini**
- ***Web at Dragonfly Pond*** by **Brian "Fox" Ellis**
- ***Pass the Energy, Please!*** by **Barbara Shaw McKinney**

habitat	interdependence	niche
phytoplankton	zooplankton	marine food chain
adaptations	microscope	food chain
survival mechanisms	temperate rainforest	tropical rainforest
biodiversity	generations	ancestors
extinct	environmentalists	preserving
hibernate	deforestation	domestication
camouflage	food web	rainforest

plants and animals living together	plants and animals depending on one another	a special role in a habitat
tiny plants that live on the surface of the ocean	tiny animals in the ocean who eat phytoplankton	a chain that links who eats who in the ocean
changes that help animals survive	a tool to see tiny objects	a chain that link who eats who
ways animals adjust to survive	a cold rain forest	a hot rain forest
lots of different kinds of living things	parents and their children, and their children, and their children	the old ones who have gone before
when all of a species are dead	people who help preserve nature	helping plants and animals survive
go to sleep for the winter	when a forest is cut down	when plants and animals are changed by people
change colors in order to hide	a complex network of who eats who	a place where there is lots of rain



Nature's Patchwork Quilt

By Mary Miche'
Illustrated by Consie Powell



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