



SPARK guide

minibeasts



BEEES

IN THE GARDEN

SPIDERS

BEEETLES



what is S.P.A.R.K.?

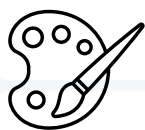
A free project-based curriculum incorporating 5 things we're passionate about:
STEM, Playful projects, Art, Reading, and acts of Kindness



S TEM learning



P layful projects



A rt



R eading



K indness

minibeasts

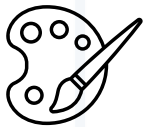
BEEES



Watch the video **Bees, Pollination and a DIY Bee House**



Create a Mason Bee House



Use bubble wrap to make honeycomb patterns in playdough or use with ink to make patterns on paper

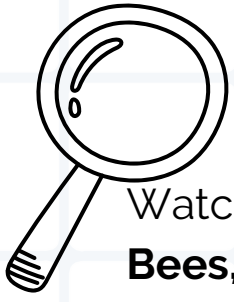


Choose a book about bees to read together



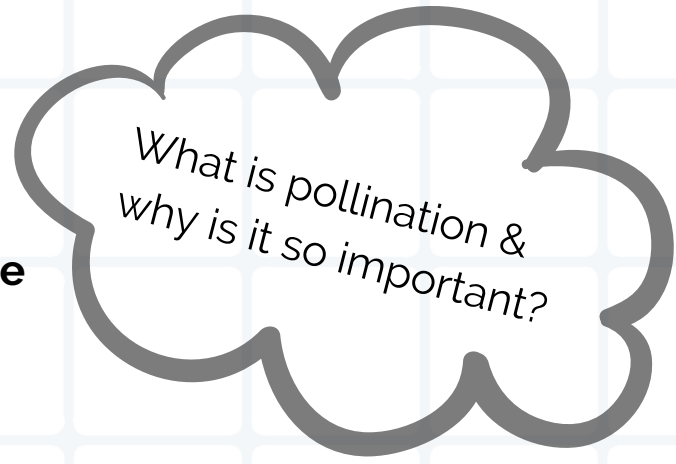
Design a pollinator garden





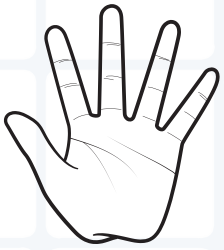
Watch the video

Bees, Pollination and a DIY Bee House



notes





mason bee house

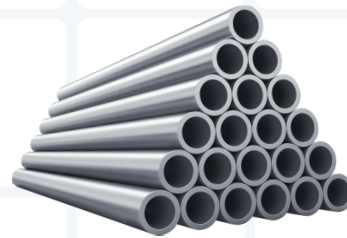
materials

aluminum tin can (empty)

twine

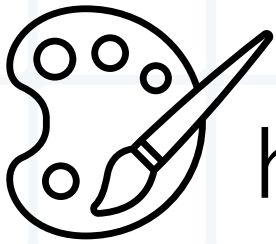
hollow "filler" materials (like bamboo reeds,
newspaper or paper straws)

paint (optional)



directions

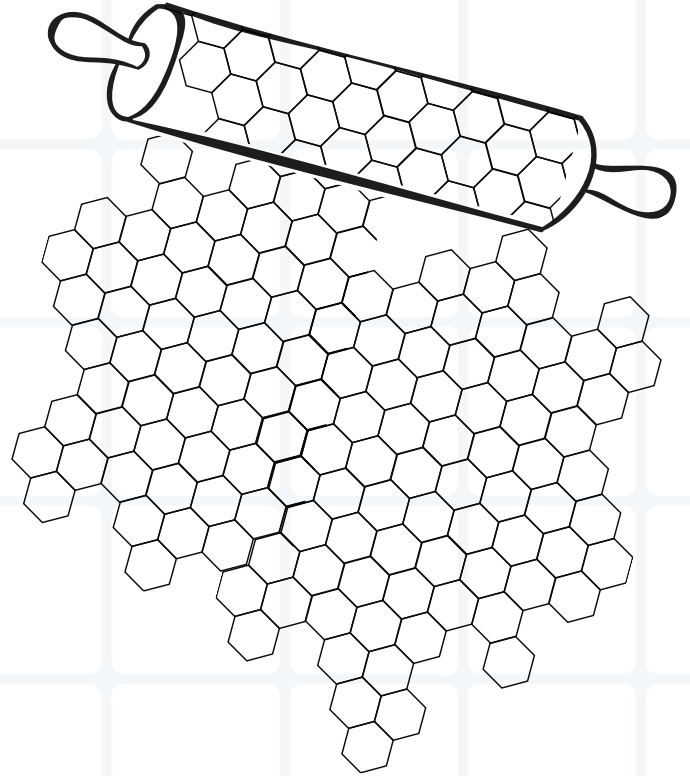
Decorate your tin can (optional). Punch a hole in the bottom near the rim's edge to thread twine through, in order to hang the bee house later. Fill the tin can with tightly packed filler materials. Hang the bee house about 5-8 feet above ground and facing east.



honeycomb printmaking

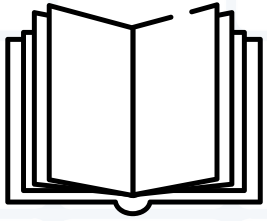
materials

- rolling pin (or cup)
- bubble wrap
- glue
- washable paint
- painting paper



directions

Glue bubble wrap to the rolling pin (or cup). Spread a thin layer of paint on a paper plate and roll the pin around. Press and roll onto a piece of paper to create a honeycomb pattern.



book list

Nature Anatomy or **Farm Anatomy** by Julia Rothman

Bug Hotel by Libby Walden

The Hotel for Bugs by Suzy Senior

Bertie's Bug Hotel by Virginia Forbes

Save the Bees by Bethany Stahl

The Backyard Bug Book for Kids by Lauren Davidson

The Big Book of Bugs by Yuval Zommer

I Am a Bee: A Book About Bees for Kids

by Rebecca McDonald

The Bee Book by Charlotte Milner

Extraor-bee-nary Extraordinary Facts About Bees

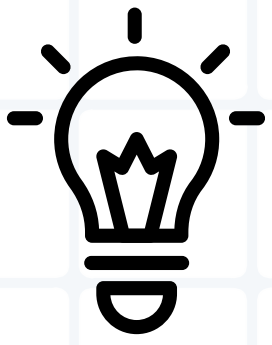
by Seven Puppies Press

The Life and Times of the Honeybee by Charles Micucci

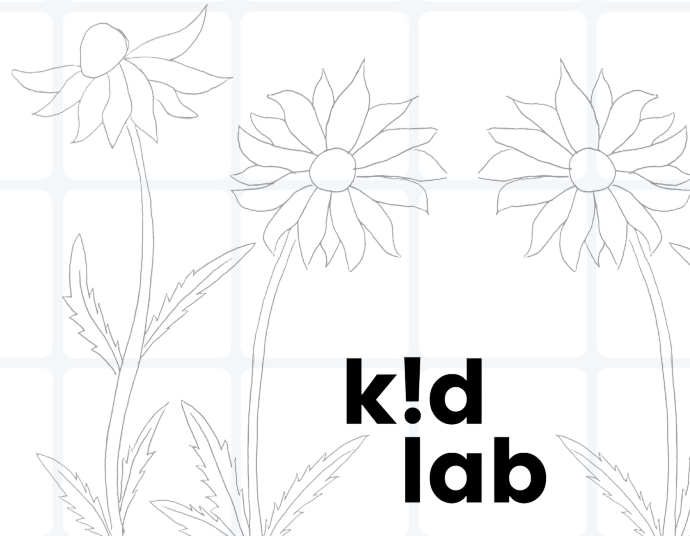
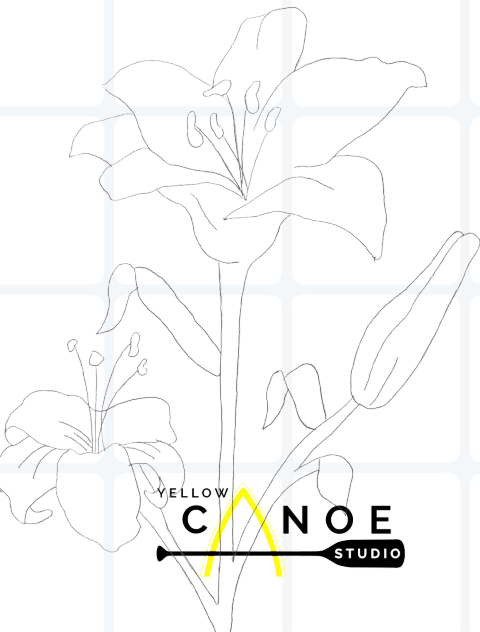
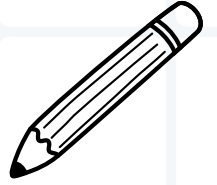
The Magic School Bus Inside a Beehive by Joanna Cole

It Starts with a Bee: Watch a Tiny Bee Bring the

World To Bloom by QED and Jennie Webber



design a pollinator garden



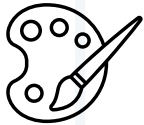
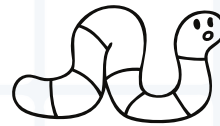
minibeasts IN THE GARDEN



Watch the video **Minibeast Superheroes and DIY Garden Worm Tower**



Build a Worm Compost Tower



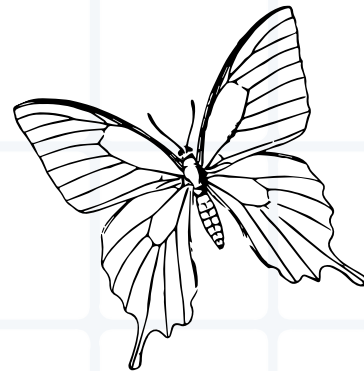
Design a butterfly mobile



Choose a book about pollinators, gardening or composting to read together



Plant a pollinator garden





Watch the video

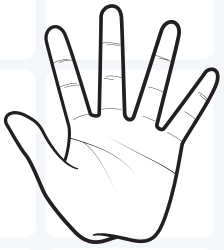
**Minibeast Superheroes and DIY Garden
Worm Tower**



What is a minibeast?
Which garden
superhero is your
favorite?

notes



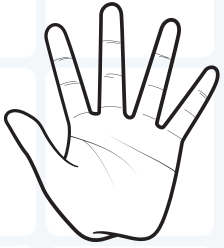


worm compost tower

materials

8' untreated lumber
pencil
electric drill
screws
saw
measuring tape
sandpaper
3/4" or 1" spade bit
red wiggler worms
scrap newspaper + food scraps





worm compost tower (cont.)

directions

Cut lumber into (4) 20" and (1) 10" segments.

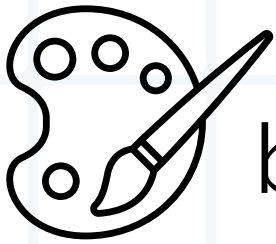
About $\frac{2}{3}$ way down on each 20" board, drill holes for worms to move in and out of tower. Use sandpaper to smooth any sharp edges.

Use screws to attach 4 sides together to create the tower.

Dig hole in a desired location, deep enough for holes to be under soil level.

Fill $\frac{1}{2}$ full with damp paper scraps, sawdust and/ or small bits of food scraps. Moisten everything with water. Add red wiggler worms.

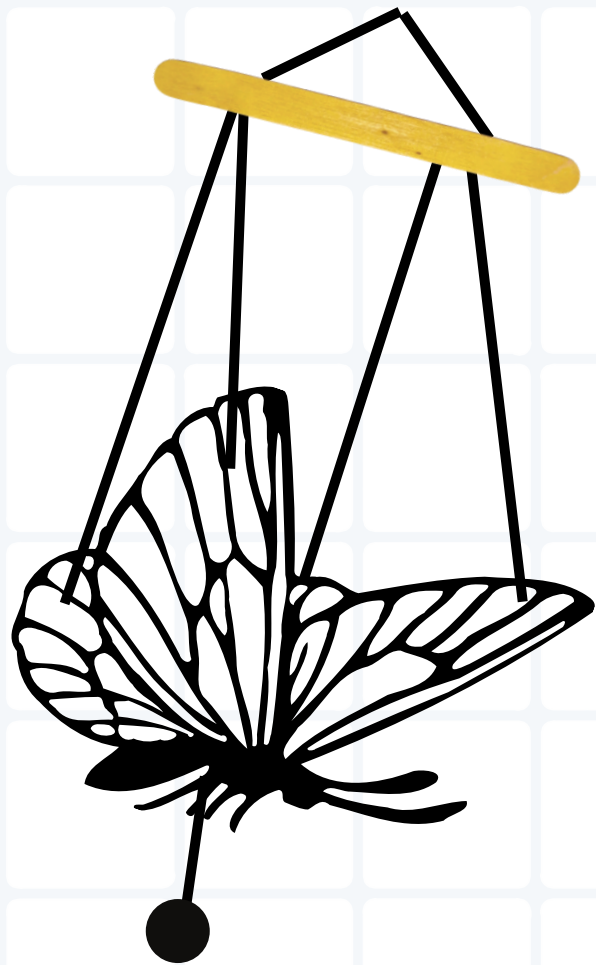
Place lid on top. Check the tower often and add water, and brown / green scraps every few days to keep your worms happy!

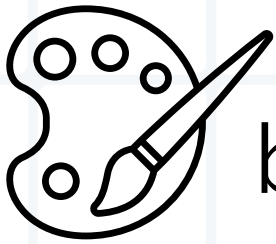


butterfly mobile

materials

butterfly mobile template
cardboard
pencil
scissors
twine
8" dowel rod (optional)
wooden bead (optional)
paint or paint sticks





butterfly mobile (cont.)

directions

Cut out the template. Trace onto cardboard and mark where holes will go.

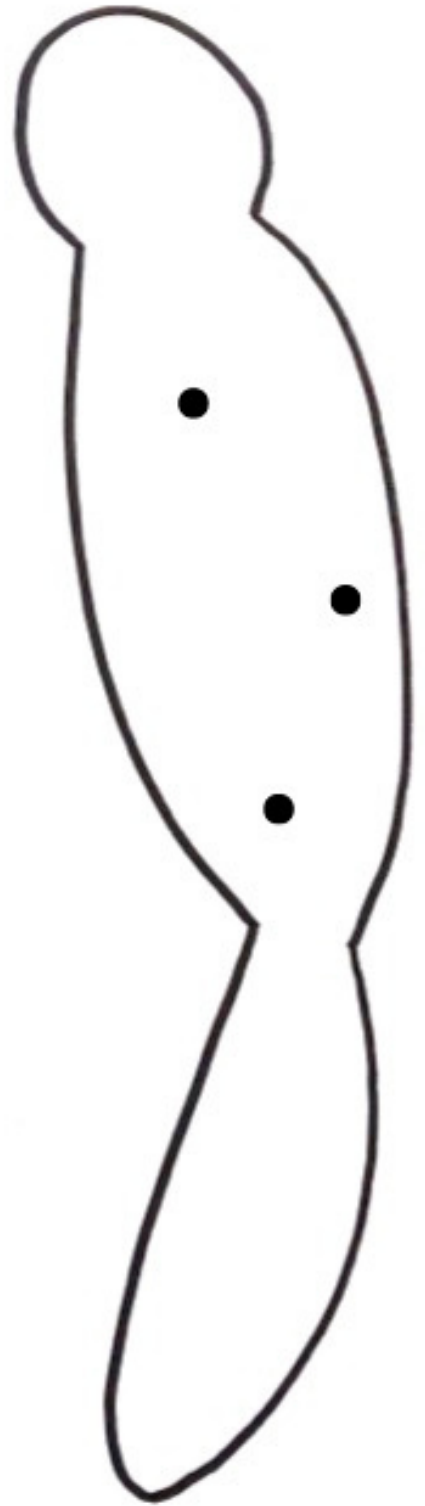
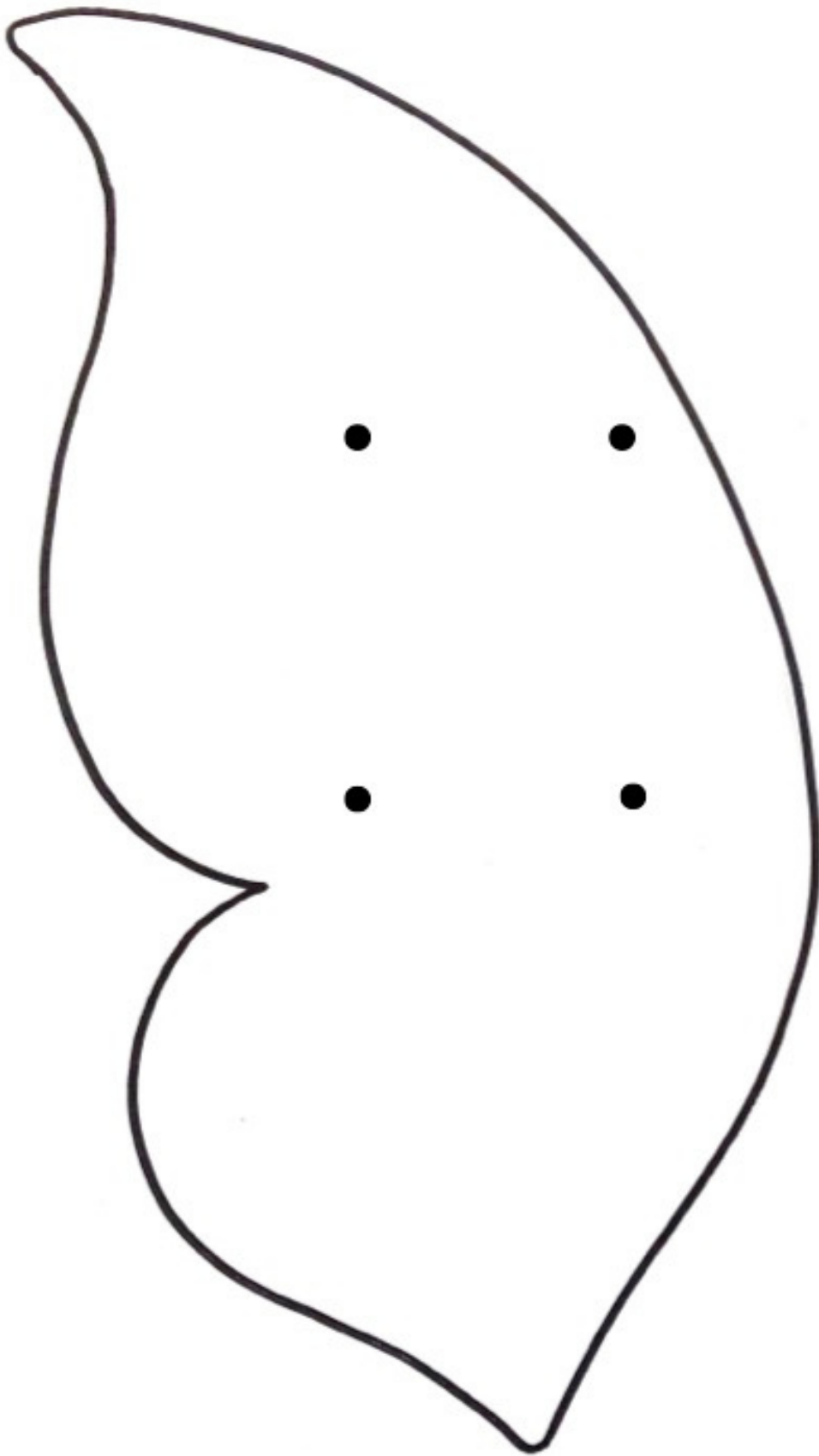
Color the butterfly.

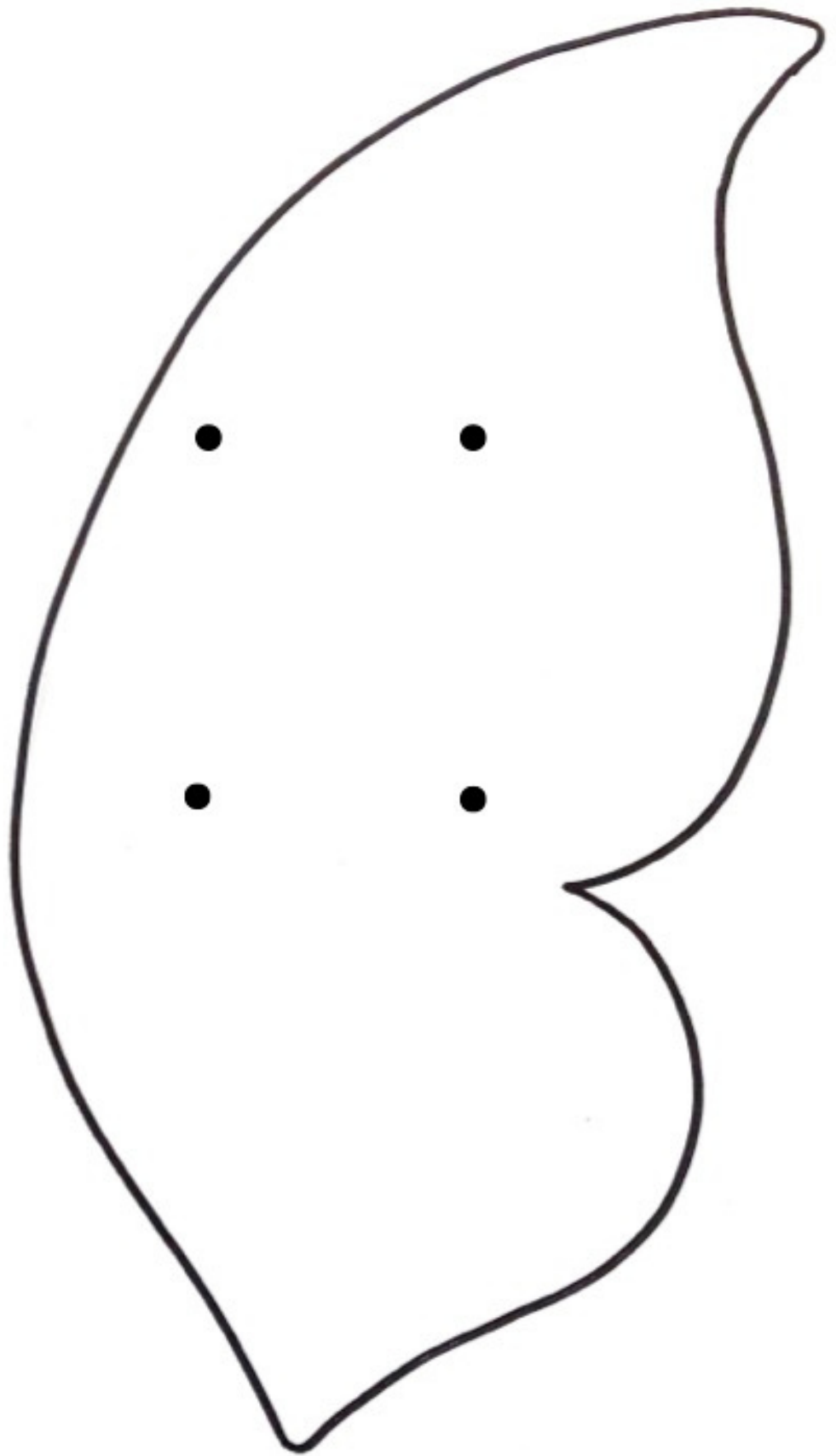
Using an awl or hole punch, punch holes where indicated.

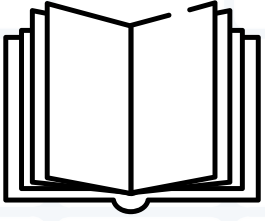
Using twine, attach middle section to both wings. Thread 2 additional pieces through wings, bringing them together at the top. Attach to a small dowel (optional) to give additional stability and a way to hang the piece as a mobile.

Add small segment of twine at bottom of the middle segment. This acts as a pulley to activate the mobile.

Add a wooden bead to bottom (optional).







book list

Compost Stew by Mary McKenna Siddals

Up in the Garden and Down in the Dirt by Kate Messner

Wiggling Worms at Work by Wendy Prefer

Composting: Nature's Recyclers by Robin Koontz

What's Sprouting in My Trash by Esther Porter

One Small Square: Backyard by Donald M Silver

Miss Rumphius by Barbara Cooney

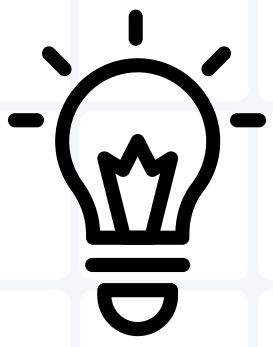
The Gardener by Sarah Stewart

A Seed is Sleepy by Dianna Aston

A Butterfly is Patient by Dianna Aston

Shine a Light: Secrets of the Vegetable Garden

by Carron Brown



plant a pollinator garden



minibeasts

SPIDERS



Watch the video **Spiders, Webs and DIY Geoboard**



Build a Geoboard



Paper plate weaving



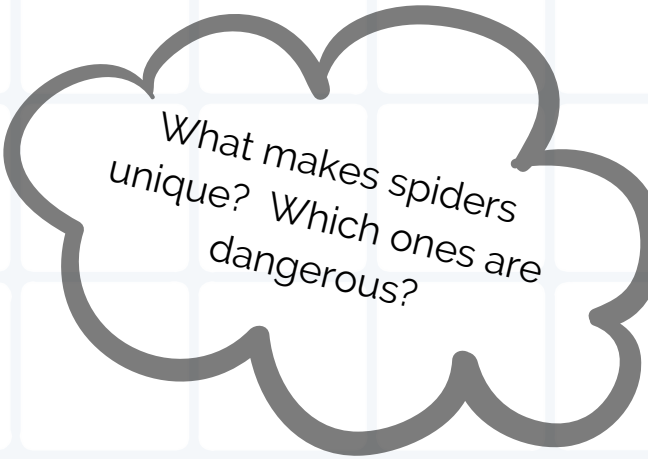
Choose a book about spiders to read together



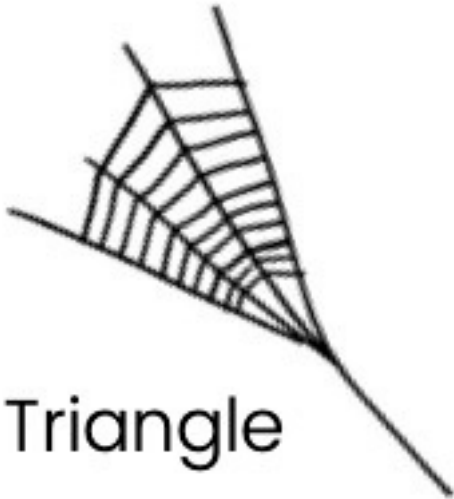
Write a letter to someone in your 'web' of friends



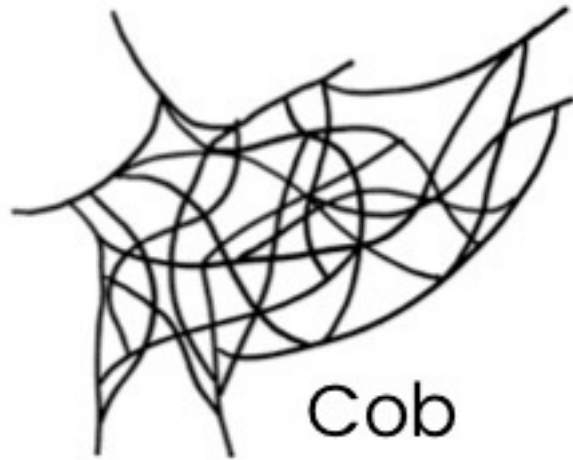
Watch the video
Spiders, Webs and DIY Geoboard



SPIDERWEBS



Triangle



Cob



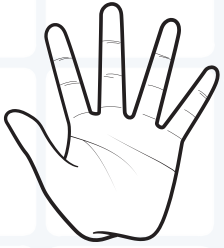
Sheet



Funnel



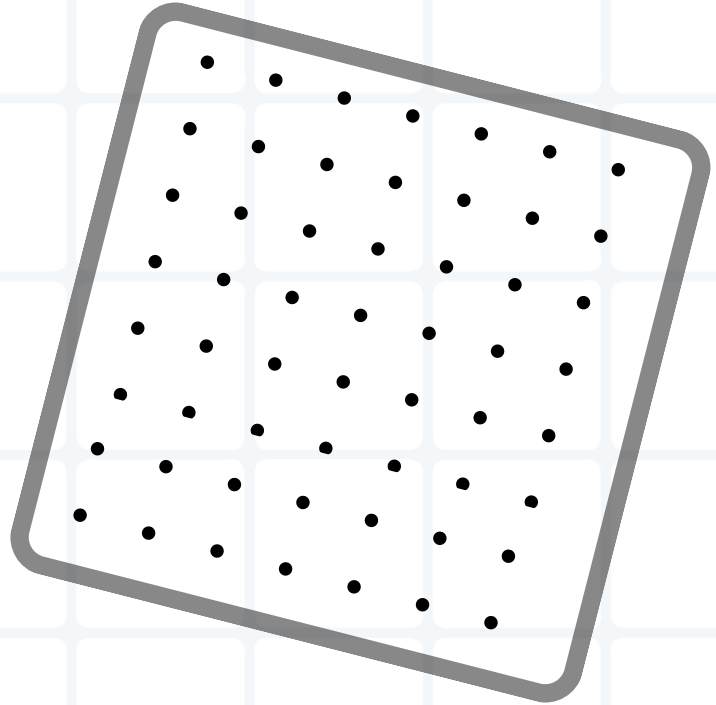
Orb



geoboard

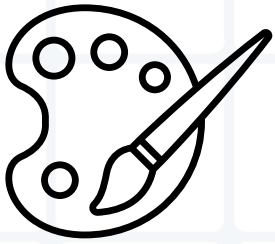
materials

scrap wood
ruler
nails
hammer
pencil
rubber bands



directions

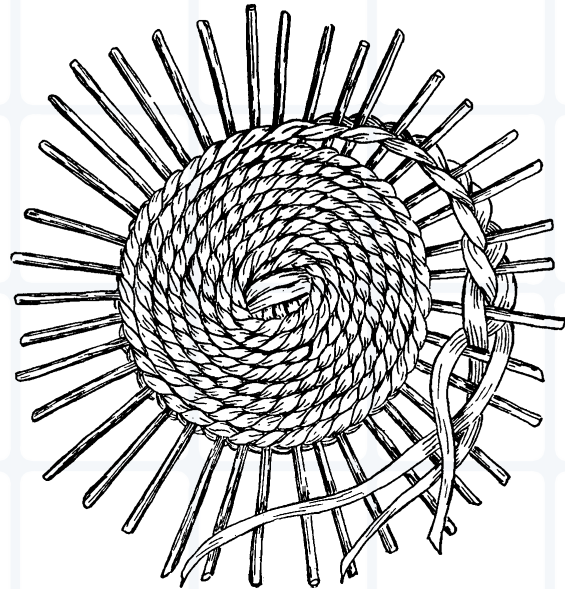
Measure and mark your board in 1" intervals. Hammer nails at each designated mark. Use rubber bands to create designs.

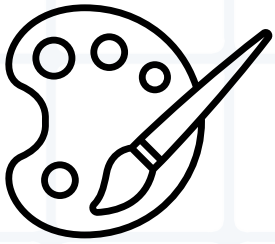


paper plate weaving

materials

sturdy paper plate
pencil
ruler (optional)
scissors
colored pencils
yarn
tape





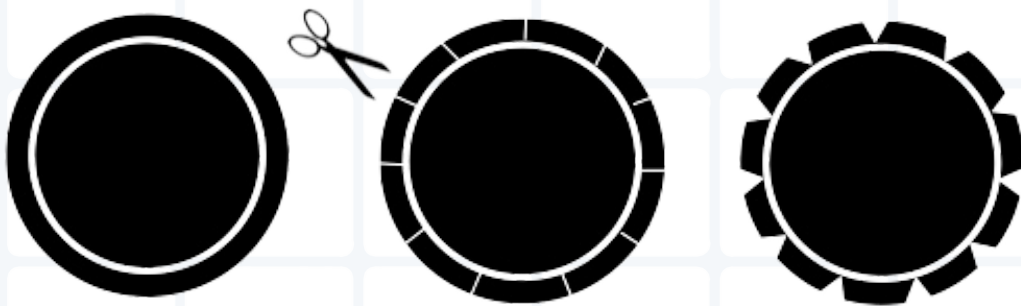
paper plate weaving (cont.)

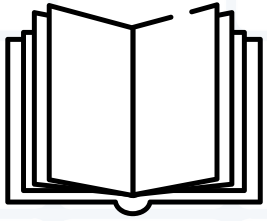
directions

Measure and mark 11 equidistant marks around the outer edge of the plate.

Cut slits. Tape one end of yarn to backside of plate. Then stretch to front side and put it through slit on opposite side. Continue until all sides are complete. This is the warp.

Now weave yarn under and over the warp to create the weft.





book list

Big Book of Bugs by Yuval Zommer

Our Amazing World: Spiders by Kay de Silva

Spiders by Gail Gibbons

The Very Busy Spider by Eric Carle

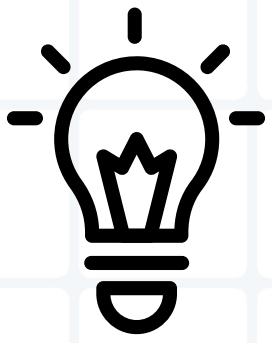
**Bugs: A Stunning Pop-up Look At Insects, Spiders
and Other Creepy Crawlies** by George McGavin

I'm Trying to Love Spiders by Bethany Barton

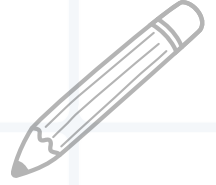
Are You A Spider by Judy Allen

Spiders and Their Webs by Darlene A Murawski

Walter's Wonderful Web by Tim Hopgood



write a letter to someone
in your 'web' of friends



minibeasts

BEEETLES



Watch the video **Beetle Buddies + Build A Bug Project**



Build a Beetle



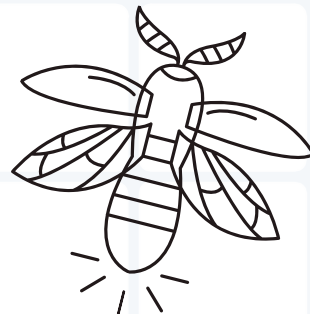
Beetle collage



Choose a book about beetles to read together



Raise ladybugs and release in your garden

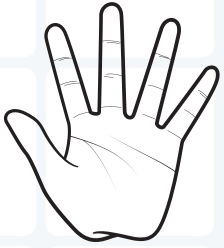




Watch the video
Beetle Buddies + Build A Bug Project



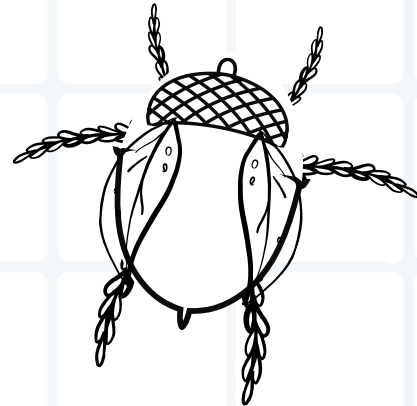
notes



build a beetle

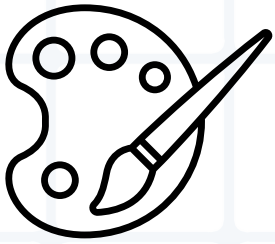
materials

nature finds (leaves, seed pods, bark, etc)
white paper or cardboard
shadow box frame
glue



directions

Collect an assortment of natural items. Assemble together to create beetles or bug shapes as you'd like. Use glue to tack pieces into place.



beetle collage

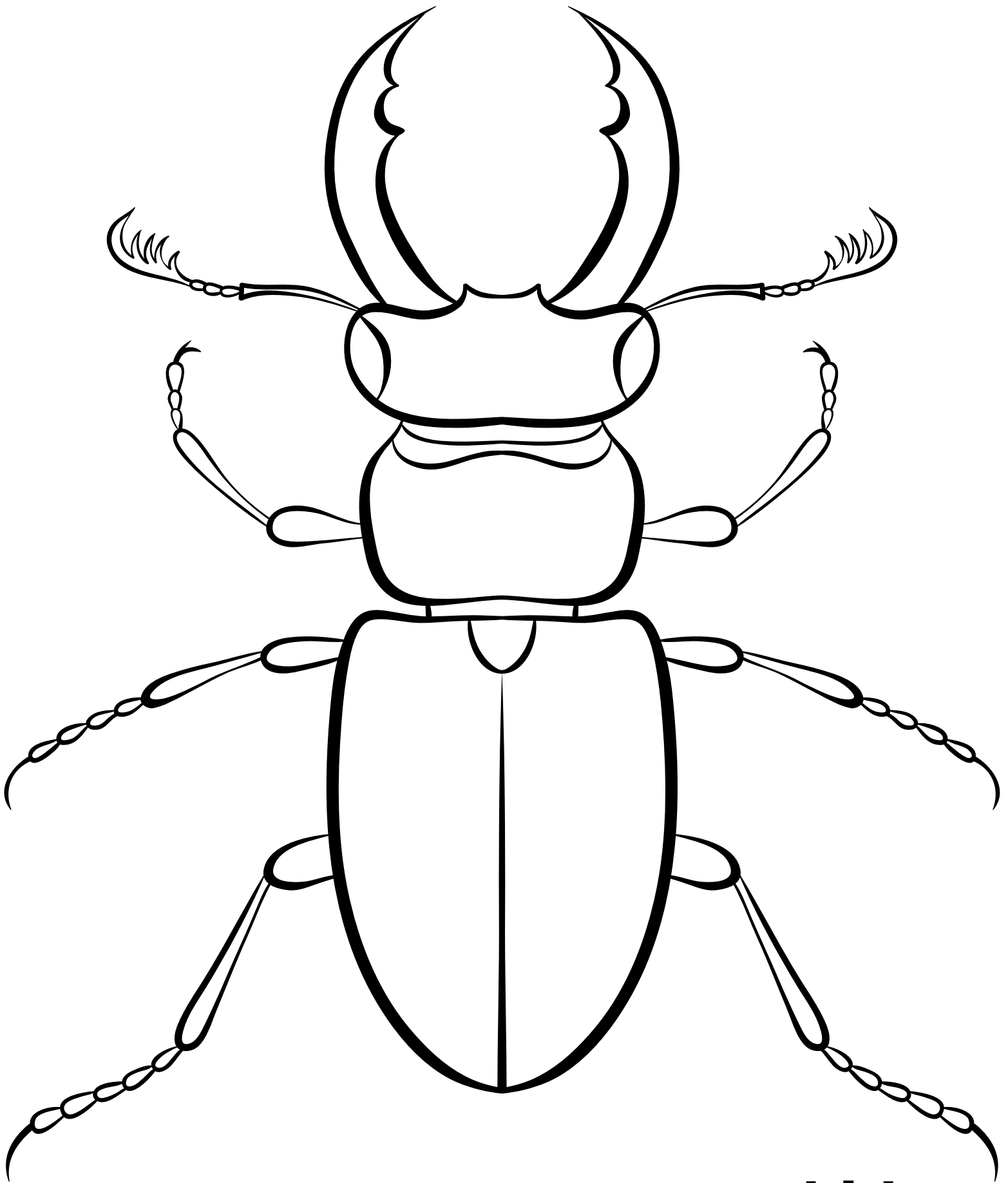
materials

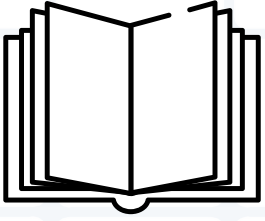
assorted patterned papers
beetle template
scissors
glue

directions

Print beetle template. Cut assorted papers to fit inside main segments of the beetle on the template. Glue pieces into place.







book list

Natural World by AJ Wood

A Beetle is Shy by Dianna Aston

The Grouchy Ladybug by Eric Carle

The Very Lonely Firefly by Eric Carle

The Very Clumsy Click Beetle by Eric Carle

Ladybugs by Gail Gibbons

Are you a Ladybug by Deborah J Short

Sam and the Firefly by PD Eastman

Firefly Home by Jane Clarke

Fireflies Light the Night by Miranda Rose Wommer



raise ladybugs (and release
in your garden)*

notes

*Live beetles and larvae kits are available for purchase online (we recommend Insect Lore or Amazon). Follow instructions carefully to ensure your ladybugs remain healthy and release in your garden to keep aphids at bay.