

Dear Families,

We have included several focused activities to help enhance your child's learning about birds. These activities are totally optional.



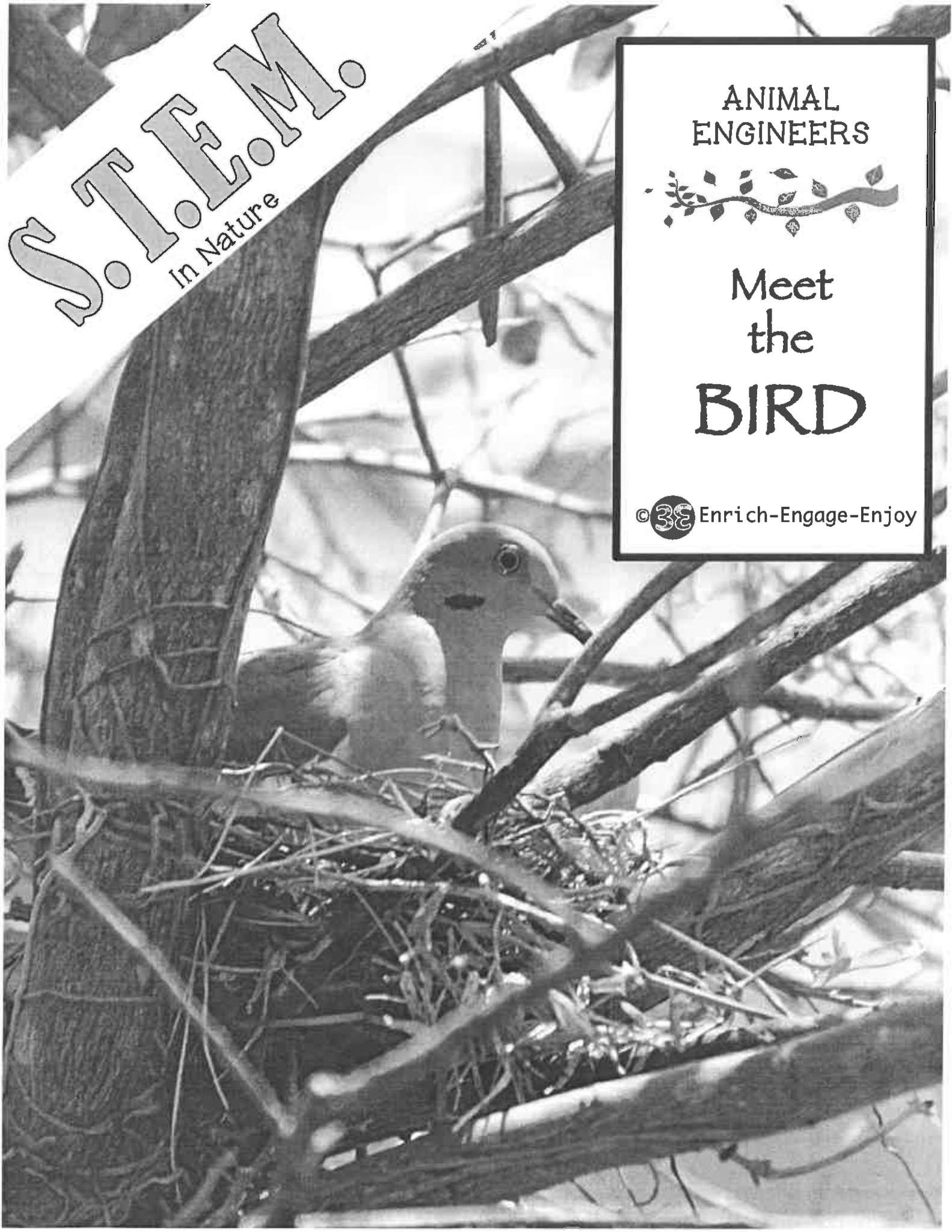
S.T.E.M.
In Nature

ANIMAL
ENGINEERS



Meet
the
BIRD

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Name _____

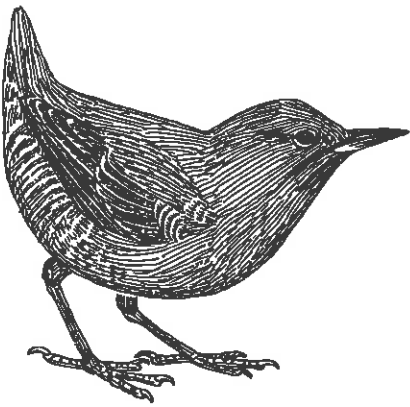
Finding Out About Birds

1. Birds can be found on _____ continents.
2. True or False? All birds build nests. _____
3. Which materials might a bird use to build its nest?
 - ☐ Leaves
 - ☐ Mud
 - ☐ Paper
 - ☐ All of these
4. The smallest bird is the _____.
5. True or False? Most male birds are more colorful than females. _____
6. Which birds below are flightless?
 - ☐ Penguin
 - ☐ Ostrich
 - ☐ Roadrunner
 - ☐ Kiwi
7. Write one interesting fact you learned about birds.

Birds

Many types of birds build nests. But did you know that different birds use different materials? Some of the materials might include twigs, leaves, hair, spider web silk, mud, stones or even litter!

Examine the building supplies that your teacher has provided. Discuss the attributes of each material and how it could be useful for nest building. Then select **four** materials to build with. You may choose any four materials, and you may use as much of those materials as you need. However, just like a bird that is readying its nest for eggs, you do have limited time! You have _____ minutes to build a nest that will safely and securely hold two eggs.



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Materials Needed

(Each group may choose 4)

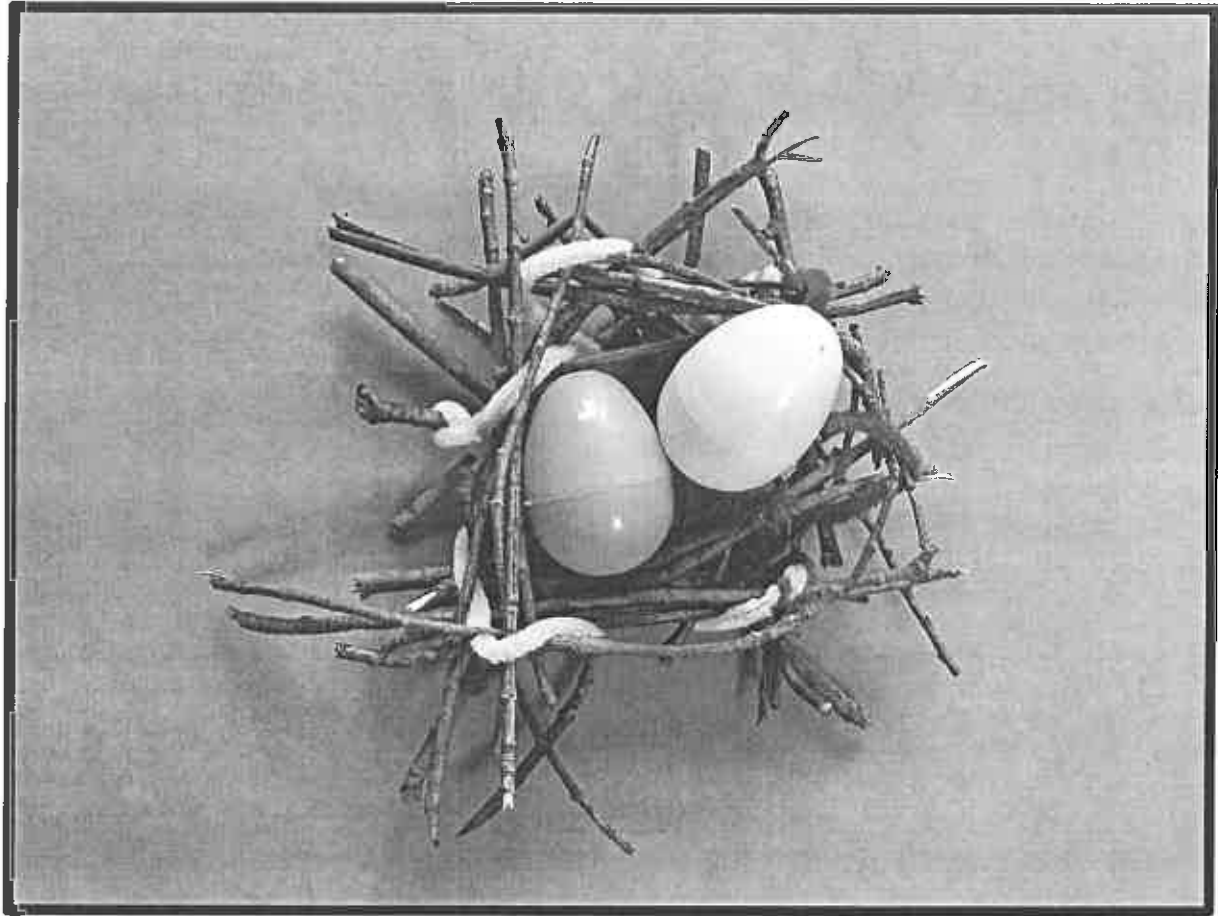
- Twine or yarn
- Small sticks (gathered from outside)
- Pipe cleaners
- Strips of newspaper
- Tissues
- Floral wire or twist ties
- Plastic straws
- Wood craft sticks
- Feathers
- Pine needles (if available)
- Leaves (if available)

***2 plastic eggs for each group

Directions for the Teacher

1. In advance, determine how much time you will allow for the building part of this activity. Fill in the blank on the task card, and make copies.
2. Gather all materials. (If the weather permits, you may wish to allow students to assist in gathering the natural materials from outside.)
3. Ask students to share what they already know about birds' nests. An image search for "different bird nests" will help students to understand that nests vary greatly in size, style, and construction.
4. Explain that the primary function of a bird's nest is to provide a safe place for the eggs and young birds to develop.
5. Distribute the eggs and task cards. Emphasize that each group will need to select only four materials for building.
6. Allow time for building. When completed, invite students to discuss and compare their nests.

SAMPLE



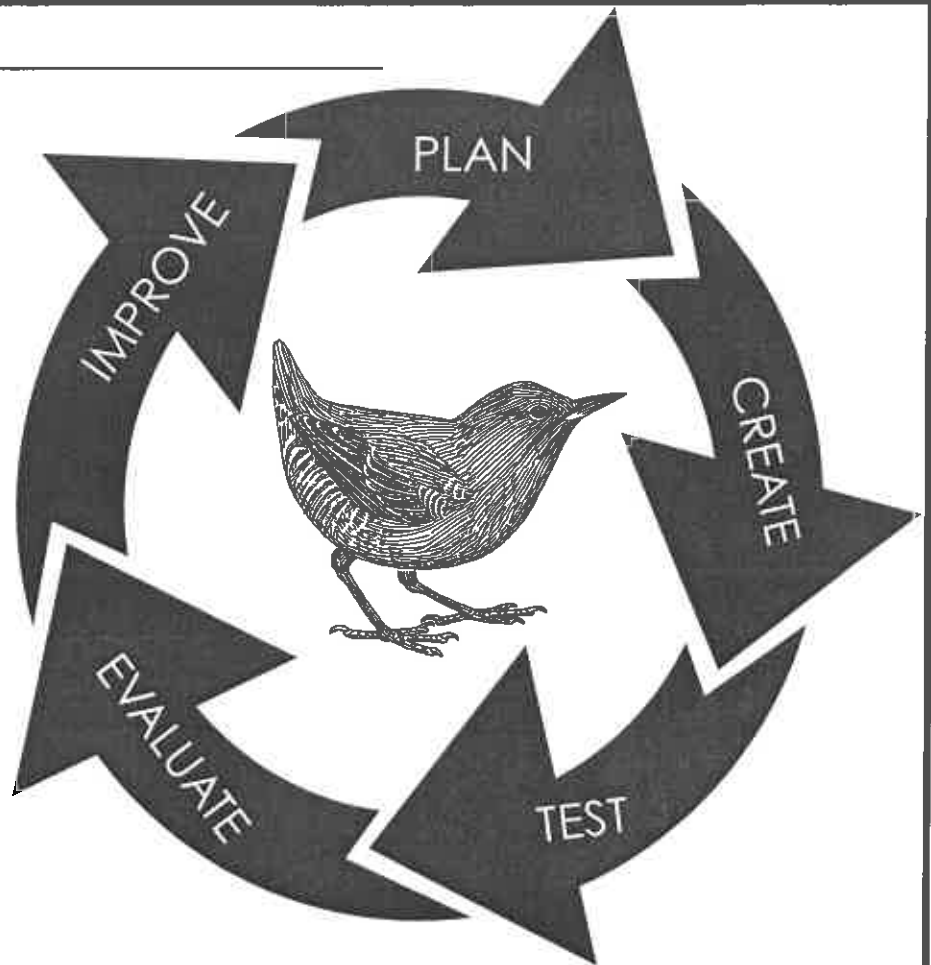
This nest was made with just two materials – sticks and pipe cleaners.
Nest designs will vary depending on the materials students select.

Name _____

As you work through this challenge, remember to think like an engineer!

Use this page to make a plan, draw a sketch, record results, or take notes.

Define the problem.
What are you trying to do?



Make a Bird Bath

Encourage your kids to get to know and love nature by making a simple clay bird bath. Set it up in your yard and watch animals large and small venture in for a sip of water or a bite of food. Combining creativity, art, and science, this fun activity makes a fantastic weekend project that you and your kids can enjoy all year long. Best of all, the whole thing will only cost you about \$20!

What You Need:

- 3 clay pots, sized 8", 10", and 12"
- 14" clay saucer
- Tempera paints
- Clear acrylic sealer spray
- Silicone adhesive
- Paint brushes and/or sponges
- Damp rag
- Bird seed
- Water
- Notepad
- Pen or pencil
- Newspaper
- Children's binoculars (optional)



What You Do:

1. Wipe the clay pots and saucer down with a damp rag to remove any debris and let them dry completely.
2. Ask your child to think about what he will paint on the pots. Cover your work area with newspaper, then encourage him to paint his design with the paint brushes, sponges and tempera paints. Let his creativity shine.
3. While the paint dries, select a location in your yard for the birdbath.
4. Grab a notepad and pen, kid friendly binoculars, and embark on a backyard safari. Ask your child to observe what birds or other animals are currently visiting your yard, and predict what might happen after the birdbath is put up.
5. Write his observations and predictions on the notepad.
6. Once the paint is dry, apply several coats of clear acrylic sealer spray to waterproof the birdbath. Send kids inside for this step!
7. Once the pots are completely dry, turn them upside down. Stack the 10" pot upside-down on top of the 12" pot, and place the 8" pot on the very top.
8. Use a silicone adhesive to secure the bottom of the clay saucer to the bottom of the 8" pot and let dry.
9. Now the experiment begins! Fill the bird bath with water and observe. What animals does your child think will visit the birdbath? Encourage him to get descriptive by asking, "What color is that bird?" or "How do you think the squirrel's fur feels?" etc.
10. In a few days, empty the water and fill with bird seed, and observe what happens this time. Encourage your child to make a prediction about the animals that will visit the bird feeder now.
11. After observing the animals that come, have him compare and contrast the animals that visited the first time, when there was water in the bird bath, with those that visited the second time when there was bird feed inside. Document his findings on the notepad.
12. Keep the bird bath outside and watch the animals come and go as the seasons change.

If you live in a climate where winter brings freezing temperatures, store your birdbath in a temperature controlled environment to avoid cracking.

Stacking the clay pots gives the birdbath its height. If you want a taller birdbath, use 12", 14", and 16" pots in place of the 8", 10", and 12" ones. Although it's not necessary, you may choose to use the silicone adhesive to secure the pots to one another as you stack them. Just a small amount of adhesive will offer added security.

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Build a Pine Cone Bird Feeder!

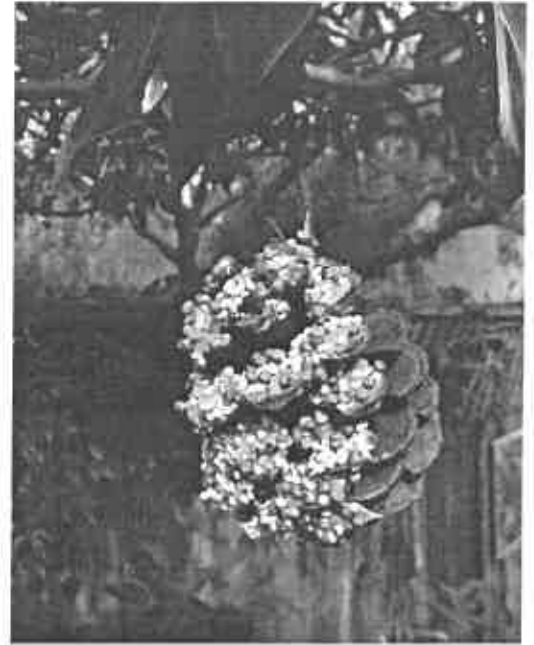
For kindergarteners, the natural world can be a dynamic and wonderful classroom, filled with opportunities to learn, just about any season of the year. Explore nature science with your child and build a bird feeder with only a few things from around the house (and yard). Here's a kindergarten science craft that brings birds to your yard—and a smile to your child's face!

What You Need:

- Bird seed for birds in your area
- Flat baking tray
- A good-sized pine cone (best if it's 5" or larger, with plenty of space between bristles)
- Smooth peanut butter
- Blunt table knife
- Table covering—this activity can get messy!

What You Do:

1. Find an area that you don't mind messing up a bit—a backyard porch table is ideal. Cover your work surface with newspaper or plastic. Pour some bird seed into your baking tray and set it in the middle of the table for later.
2. Help your kindergartener use the blunt knife to spread peanut butter into all the nooks and crannies of the pine cone. Have her smear it all over.
3. Then help him roll it firmly in the dish of bird seed so that the pine cone is covered as much as possible with the seeds.
4. Tie a piece of string (at least a foot long) to the top of the pine cone and hang it from a nearby tree. Birds usually take a few days to locate new food...but when they find it, it will be a bird bonanza out there! Keep a bird book handy. Who are your new guests? Can you and your child identify what kinds of birds are visiting the bird feeder? How do they get along? Are there any squirrels crashing the party?
5. When this pine cone is pecked clean, make another! You can be sure that birds will be delighted to enjoy many more gourmet feasts at your kindergartener's little Bird Restaurant.



Make Like a Bird and Nest

This is a great project that encourages kids to really think as animals do, and in the process, make something interesting. Ask your child how they think a bird makes its nest and see what she says. Then tell her you are going to be like birds today and make your own nests!

While exploring your own backyard, or a neighborhood park, help your kid gather the items she thinks a bird would need to make a nest. These nests may not look pretty, but kids will understand how hard it is to create something out of what nature has to offer. If she asks for glue, don't give in. This is a nature only project!

What You Need:

- Sticks
- Grass
- Leaves
- Pine needles
- Newspaper
- Paper
- Pen or pencil

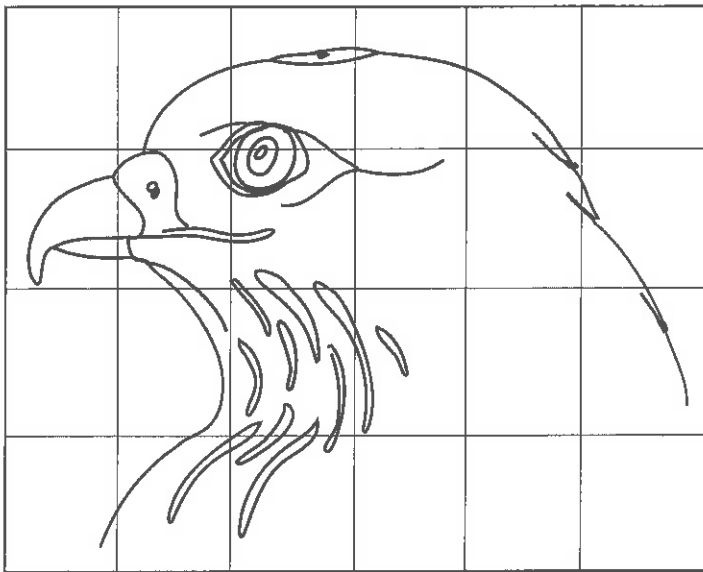
What You Do:

1. Ask your kid what she thinks goes into making a bird's nest. Write the items down on a piece of paper. Encourage her to think outside the box. If she suggests gum wrappers, for example, go with it.
2. Take her outside, either in the backyard or a neighborhood park, and start scavenging for the items that she mentioned. Encourage her to think about what in nature is pliable, what it is sturdy, and what a bird has access to out in the wild.
3. Bring the items inside and place them on a newspaper (or, weather permitting, set up outdoors). Have your child try to manipulate the grass and twigs and other items into a bird's nest shape. Tell her not to worry if doesn't look like a nest. The idea is to get her thinking about what kinds of things would make a nest hold its shape.
4. Encourage her to weave items together, like the pine needles and grass. See if she can just use her two fingers, mimicking a bird's beak, to get items to stick together.
5. To take this activity a step further, check out some books at your local library about birds native to your area. See what kinds of things they use to build a nest and how they put them together. Talk about why they build them high up in a tree and whether that is a key element to keeping the nest together.
6. Have your child display her nest outside in a tree. You never know, you might make a family of birds very happy to visit!



Harris Hawk

Use the grid below to draw the Harris Hawk



Fun Facts

- The Harris hawk was named after Edward Harris.
- The Harris hawk is chocolate brown with chestnut colored shoulders.
- The Harris hawk used to be called the Bay-winged hawk.
- The Harris hawk is not afraid of people.
- Two or three Harris hawks hunt together to make finding food easier.
- The Harris hawk builds its nests in trees 30 to 40 feet above the ground.
- Harris hawks are common in Mexico, southern Texas and Arizona.

