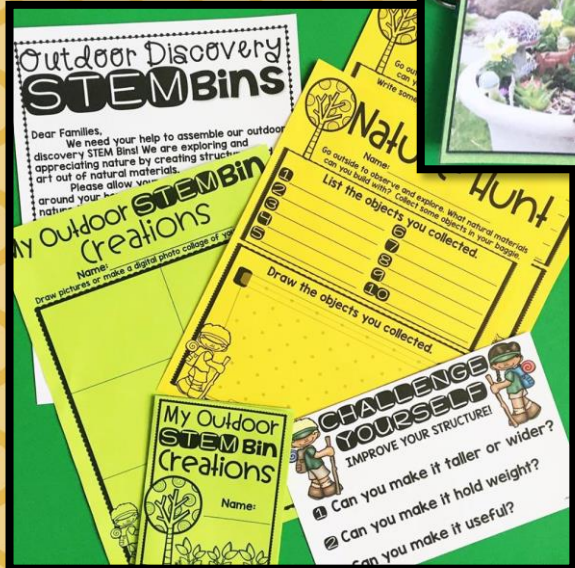
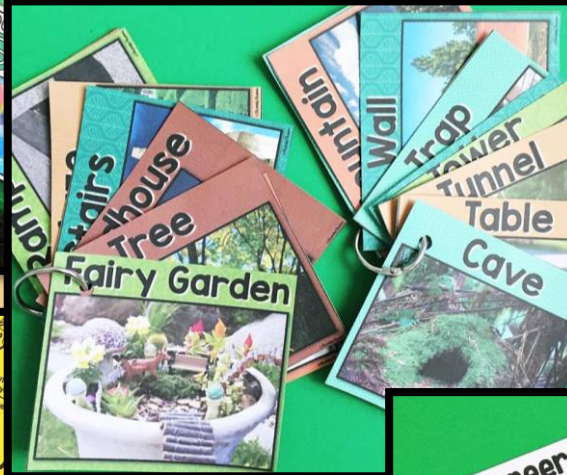


Outdoor Discovery STEM Bins



Created by Brooke Brown

Outdoor Engineering Centers for Elementary Students





BASIC ENGINEERING SKILLS

cornering

bridging

stacking



ramping

supporting

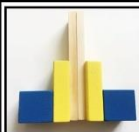
combining parts

BASIC ENGINEERING SKILLS

propping

stepping

lining up



making curves

making lines

making openings



imbricating

making equal parts

making containers



Bridge



Tower



Tree House



Tunnel



Bird Nest



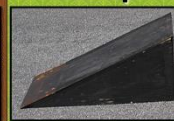
Cave



Tree



Ramp



Wall



Maze



Birdhouse



Fairy Garden



Stairs



Table



Vehicle



Trap



CHALLENGE YOURSELF

IMPROVE YOUR STRUCTURE!

- 1 Can you make it taller or wider?
- 2 Can you make it hold weight?
- 3 Can you make it useful?

Teacher Questions and Prompts



How can you improve your structure?

What can your structure be used for?

What problem could your structure solve?

How is your structure similar to a structure in real life? How is it different?

How can you turn this structure into a different one?

What types of shapes, lines, and angles do you create?

What was challenging about this task? Was it easy?

If you could, which would you choose?

Outdoor Discovery STEM Bins

Dear Families,

We need your help to assemble our outdoor discovery STEM Bins! We are exploring and appreciating nature by creating structures and art out of natural materials.

Please allow your child to explore outdoors around your home and gather objects from nature that might be used for engineering. He or she may bring the items to school in a baggie by

helping to encourage engineering, observation, and appreciation for nature. Please contact me at [blank] with any questions.

Sincerely,



My Outdoor STEM Bin Creations

Name: _____

Draw pictures or make a digital photo collage of your creations.

Nature Hunt

Name: _____

Go outside to observe and explore. What natural materials can you build with? Collect some objects in your baggie.

List the objects you collected.

1	6
2	7
3	8
4	9
5	10

Draw the objects you collected.

Nature Hunt

Name: _____

Go outside to observe and explore. What natural materials can you build with? Collect some objects in your baggie.

Write some properties of the objects you collected. How do they look and feel?

1	6
2	7
3	8
4	9
5	10

Classify (sort) your objects into groups. Draw the groups and label the properties.

Characters and Props

Print, laminate, and cut apart the following cards for students to use for imaginative play, storytelling, and writing. You can also place them inside binder clips or clothespins to stand up.



Characters and Props

Print, laminate, and cut apart the following cards for students to use for imaginative play, storytelling, and writing. You can also place them inside binder clips or clothespins to stand up.



BUILD, DRAW, WRITE

Name: _____

BUILD, DRAW, WRITE

Name: _____

WRITING PROMPTS

- 1 Use your senses to describe how your structure looks and feels. Write about the colors, shapes, and sizes of different parts.
- 2 Write directions to tell someone how to build your structure. Use the words: First, Next, Then, and Last.
- 3 Make up a fantasy or fairy tale story that uses your structure as the setting (place) of the story.