

BOOMbox at Home

Slime

Opossums, slugs, hyenas, hagfish—all sorts of wild animals use slime to defend themselves or mark their territories. Even humans use slimy mucus as part of our immune system. We also use slime for fun! Take inspiration from the great outdoors and make homemade slime.



Supplies

- 1 cup liquid school glue
- saline solution
- 1 teaspoon baking soda
- air-tight container
- food coloring (optional)
- glitter (optional)

Instructions

- Pour all of the glue into your container. If you'd like to make your slime colorful, stir in food coloring a few drops at a time until you reach the desired color.
- Add the baking soda to the glue, and stir until smooth.
- Gradually add saline solution, stirring, until the slime begins to form a stringy texture.
- Knead the slime with your hands until it reaches your desired texture.
- Play! When you aren't using the slime, return it to the air-tight container. Your slime should maintain its consistency for a few days.

This is only one type of slime. Experiment with different recipes, and compare your results! What will you learn today?



BOOMbox at Home

For Budding Builders

It's *almost* as if Iggy Peck was born with a T square in his hands. From the Great Sphinx to the St. Louis Arch, Iggy's passion for building is contagious. He inspired his 16 classmates to save the day with some creative problem solving. What do you think of Iggy's sculptures and buildings? Which ones do you like the most and why? Did Iggy inspire you, too? Read on for ideas on how to build a sculpture of your own!



Supplies

- print-out of template
- markers, crayons, colored pencils, or other art supplies

Instructions

- Print the template on the following page.
- Sketch out your idea for a sculpture using a pencil.
- Then, add color to your drawing with markers, crayons, colored pencils, or other art supplies.
- Share your sensational sculpture with your friends and family.

What will you create?



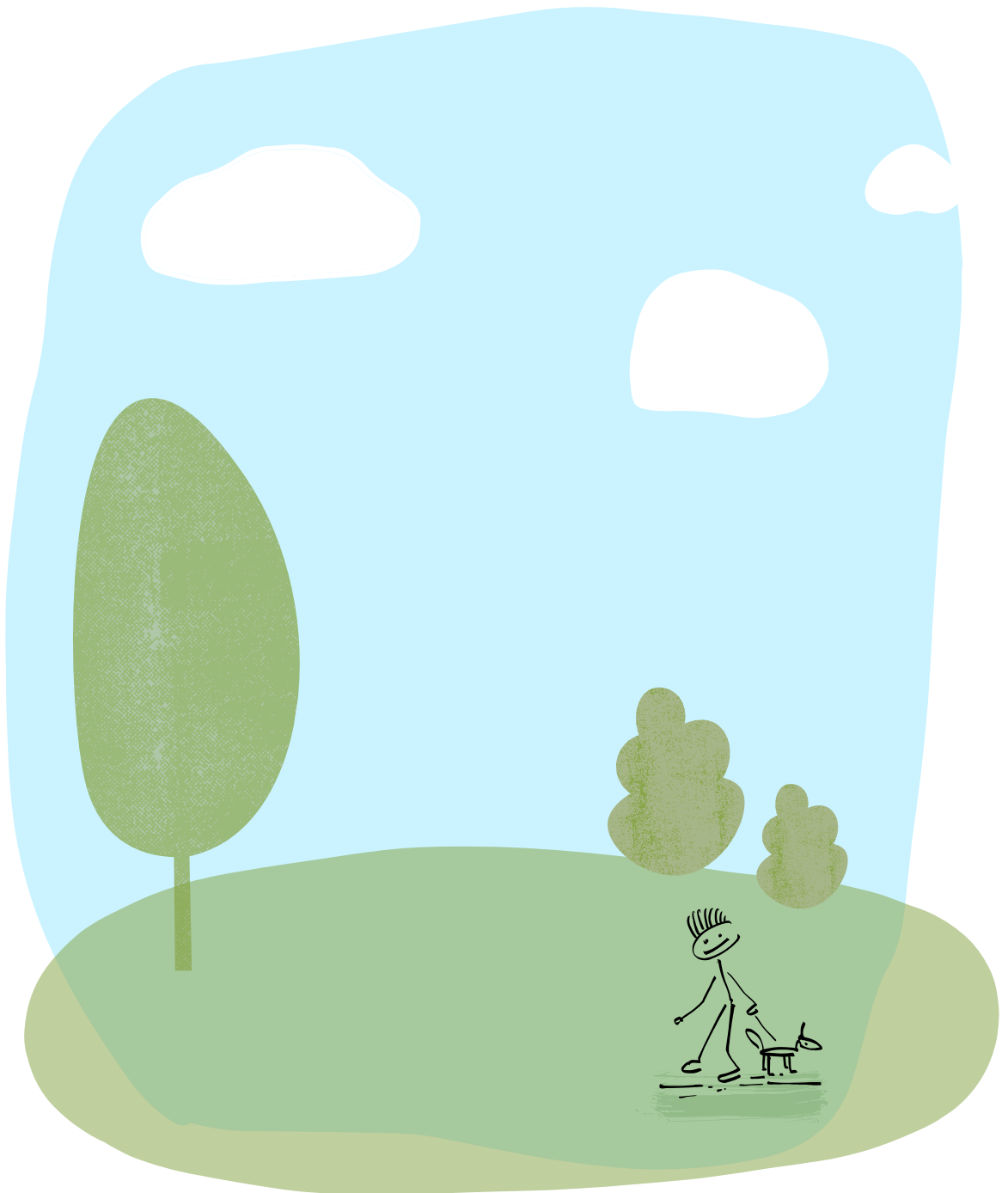
Want to explore more?

Learn more about Iggy Peck in this [read aloud of Iggy Peck Architect](https://bit.ly/35qgPvO) (https://bit.ly/35qgPvO).

What will you learn today?

Design Your Own Sculpture!

Add an original sculpture to the park below. Feel free to cut out and use the pieces on the left, or draw from your imagination!



BOOMbox at Home

Far Out Dreams

Mae Jemison, the first Black woman in space, had big dreams and persisted despite facing barriers along the way. Does Mae's story inspire you to think about your own dreams? What kinds of interests and hobbies do you see yourself having in the future?



Supplies

- Print-out of template
- Markers, crayons, colored pencils, or other art supplies

Instructions

- Print the template on the following page.
- Customize the image of the person to represent you.
- Then, add symbols that represent your dreams in the thought bubble. Consider your hobbies, values, and interests.
- Share your dreams with your friends and family.

How will you reach your goals?



Want to explore more?

Learn more about Mae Jemison in this read aloud of Mae Among the Stars:

<https://bit.ly/2Z0oz5k>

What will you learn today?



BOOMbox at Home

Know When to Grow Zine



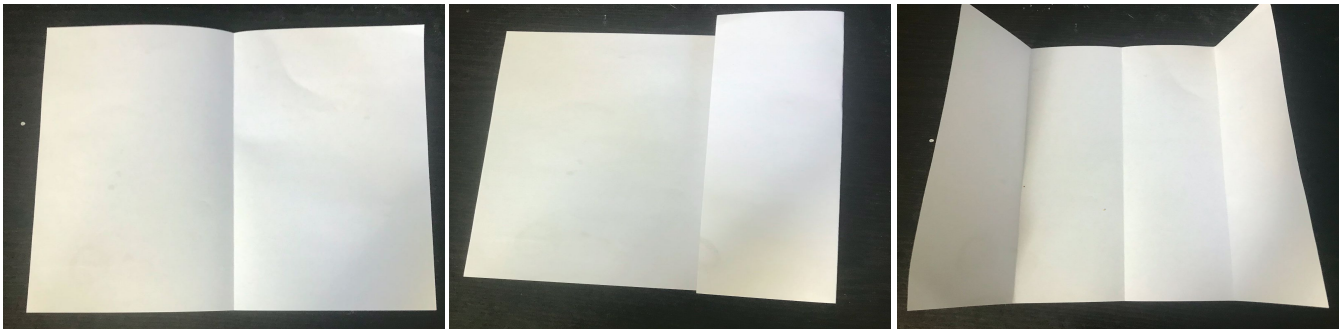
Getting started with gardening can be intimidating. Depending on the types of plants you'd like to grow, there may be a lot to learn about how to care for your plants. Keep growing instructions and your observations all in one place with this simple zine, made with only one sheet of paper.

Supplies

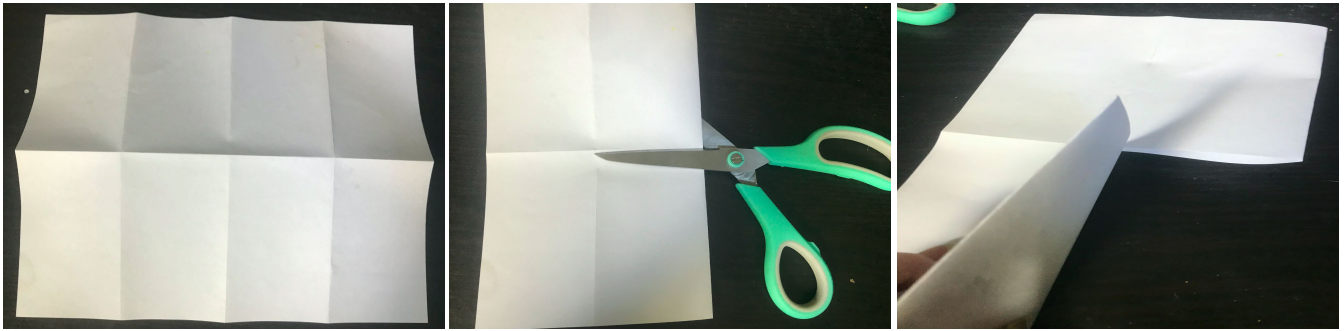
- One sheet of plain copy paper (8.5" x 11")
- Scissors
- Pencils, markers, crayons, or other art supplies to decorate your zine
- A source for the information you'd like to put in your zine

Instructions

- Start with your paper in landscape (horizontal) orientation. Fold the paper in half "hamburger style" by bringing the short edge to the short edge (left to right).
- Unfold. Make another fold by bringing the right edge of the page to the center crease you created with the fold in the previous step. Repeat with the left edge, and unfold. This should leave you with four equal sections.

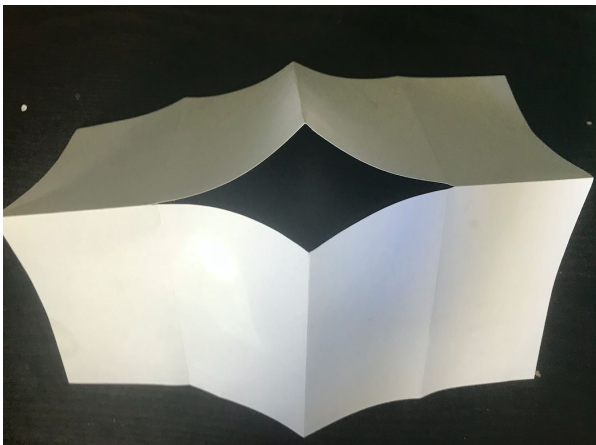


- Fold the entire sheet in half "hot dog style" by bringing the long edge to the long edge (top to bottom). Unfold. This should leave you with eight equally-sized sections.
- Fold the entire sheet in half "hamburger style" as you did in the first step.
- Cut along the horizontal crease in the center of the page until you reach the vertical crease in the center of the page (halfway across). Unfold.

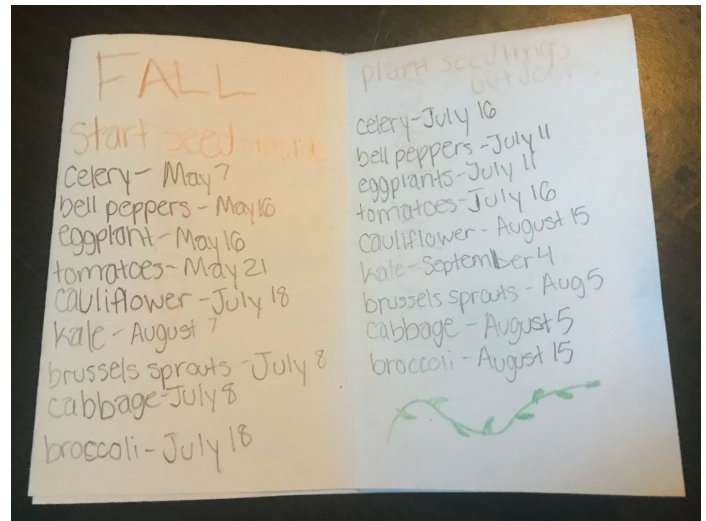
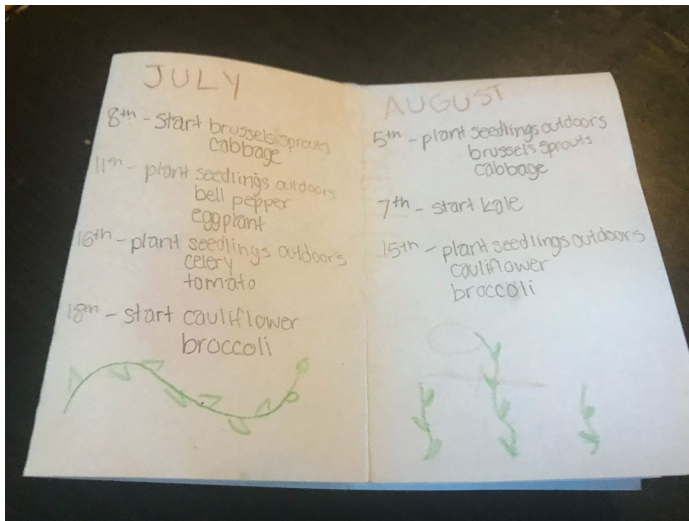


Be careful not to cut all the way across! In order to fold the paper into a zine, you need one sheet with a slit in the middle, not two sheets.

- Fold the sheet in half "hot dog style." Grab the left and right edges, and push toward the center. The slit you cut in the previous step should cause the center sections to fan out into a + shape.
- Fold the left and bottom points of the + to the right. This will create the spine of your zine. You should now have a small booklet with a front cover, six pages, and a back cover.



- Fill in the pages of your zine. The format is up to you. You can take a look at the example on the next page for some inspiration.
- Because this zine is made from a single sheet of paper, it can also be unfolded into a poster. If you'd like, you can unfold your zine, turn to the other side, and decorate.



This format works well for any topic. What else could you make a zine about?

Explore More

[This online almanac](#) is a great resource for planting calendars and other information about gardening.

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Eating Insects: Chocolate Chirp Cookies



Chances are, if you've grown up in the United States, eating insects sounds like a prank. But, believe it or not, in many parts of the world, eating insects, or entomophagy, is actually very common. Some experts speculate that in the future, people everywhere will be consuming creepy-crawlies.

Why? Well, there are a few reasons. Insects are a great source of protein. Farming insects, when done at a large scale, is inexpensive and less resource-intensive than raising beef or poultry. Some people also consider consuming insects more ethical than consuming mammals, both because they are less intelligent and because it is more feasible to raise them in environments similar to their natural environment.

That said, the arguments for entomophagy aren't black and white. You're unlikely to find crickets on most grocery store shelves. Because entomophagy is still somewhat taboo here, food grade insects are a speciality product that may be hard to find or expensive. There are also safety concerns for some people: if you have a shellfish allergy, you may also be allergic to insects. Although insects are often relatively more protein-dense, because they are so small, it takes thousands of crickets to produce the same amount of protein as a single cow. For some people, this complicates the ethical component. And of course, the obvious concern... TASTE.

Explore the issue of taste by testing 4 different cookie recipes.

Chocolate Chip Cookies vs Chocolate Chirp Cookies

First up, the classic chocolate chip cookie. Chocolate chip cookies made with cricket flour, a.k.a. chocolate chirp cookies, are often recommended as a gateway into entomophagy since, supposedly, the flavors compliment one another well. Try out [this cookie recipe from Tasty](#). For the control cookies, follow the instructions as written. For the modified version, replace around $\frac{1}{3}$ of the flour with cricket powder.



Gluten-free Peanut Butter Chocolate Chip Cookies vs Gluten-free Peanut Butter Chocolate Chirp Cookies

Since the cricket powder replaces some of the flour in the previous recipe, it may interfere with the structure of the cookie. To counterbalance that, try out [this peanut butter chocolate chip cookie recipe](#).

This recipe is designed to be gluten-free, so it doesn't rely on the gluten networks made from flour for its structural integrity. Plus, peanut butter might be a fun twist on the taste! For the control cookies, follow the instructions as written. For the modified version, add $\frac{1}{4}$ cup of cricket powder for a half-batch or $\frac{1}{2}$ cup for a full batch.



Want to explore more?

Check out these resources to learn more about entomophagy.

- [You should start eating bugs. Here's how.](#) - a *Popular Science* article giving an overview of some of the arguments for entomophagy
- [Should we eat bugs? - Emma Bryce](#) - a short TedEd video giving an overview of some of the arguments for entomophagy
- [The Joy of Cooking \(With Bugs!\)](#) - Emily Graslie from Chicago's Field Museum discusses why eating insects is uncommon in the US and tries out several dishes incorporating insects.
- [Will We All Eat Bugs in the Future?](#) - The host of "It's Okay to Be Smart" shares a feast of edible insects with entomophagy experts and science educators.

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Bee Watering Station

Bees need water to survive just like any other living creature! Bees will learn about this fresh water source and make it part of their route when working. It is important to make sure you have enough marbles and a thin covering of water to make sure they don't accidentally fall in!

Supplies

- dish
- marbles or rocks
- water
- sugar (optional)

Instructions

- First, clean both the dish and the objects you will be putting into the water. If you plan to use sugar water, prepare the solution.
- Pour marbles or rocks into the bottom of the dish.
- Pour water (or sugar water) over the objects. Make sure to only partially submerge the objects so that the bees will have a place to sit when they drink.
- Place the dish outside in a sunny place for bees to enjoy!
- Change or refill the water as needed.



What will you learn today?

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Backyard Glamping Recipes

Backyard glamping means not only eating outside, but cooking outside as well. You'll be surprised at how easy it can be to construct a [solar oven \(https://go.nasa.gov/33G4TGK\)](https://go.nasa.gov/33G4TGK) or even a [terracotta pot grill \(https://bit.ly/2GNUeA1\)](https://bit.ly/2GNUeA1).



Sunshine Eggs

For each egg you will need a thin black sock (cotton or nylon) or black nylons/tights and a glass container.

- Set up your solar oven in a sunny area.
- Carefully wrap each egg in a sock. If you're using the foot of a pair of nylons, wrap the egg several times, until you can't see any white.
- Put the egg in the center of a preheated solar oven, and cover with a small glass dish. If it is a bright day, your egg will take about 2 hours to cook, or longer on a less sunny day.
- Remove the egg using a potholder. Peel off the shell, to reveal a solar-cooked egg.

Sun Tea

Make flavorful tea using the sun's heat! All it takes is a glass jar with a lid. No lid? Just use plastic wrap and a rubber band.

- Wrap a strip of black paper around the jar, and use clear tape to hold in place.
- Fill the jar with water.
- Add 2 tea bags (mint, black, or green teas work well), and put the lid on the jar, making sure not to screw it too tightly. If your jar doesn't have a lid, put a piece of plastic wrap over the top and secure it with a rubber band.
- Set the jar out in the morning, and bring it inside in the evening.
- Serve tea with ice, sweetener, or lemon to taste. Any leftover tea can be stored in your refrigerator for several days.

S'more Cones

For a safer alternative to traditional s'mores, make s'mores in a waffle cone. Cones can be assembled and wrapped in foil for later. You can use traditional ingredients like chocolate chips, mini marshmallows, graham cracker pieces, or you can mix things up with M&Ms, mini peanut butter cups, or any candies you like. Chunks of banana, strawberry slices, peanut butter, M&Ms, butterscotch chips...the fillings are only limited by your imagination!

Peanut Butter Cookies

To make these easy (and yummy!) cookies you will need a small oven-proof plate, or a mini muffin tin.

- Combine 1 egg, 1 cup of smooth peanut butter, and 2/3 cup sugar in a bowl, and stir until just mixed.
- Put heaping teaspoons of dough onto the plate or tin. If you use a plate, press down gently on the dough with a fork, making a criss cross pattern.
- Put the cookies into the solar oven.
- Check on the cookies every half hour. The dough will not brown, but the cookies will become done after approximately 45 minutes in full sun.