

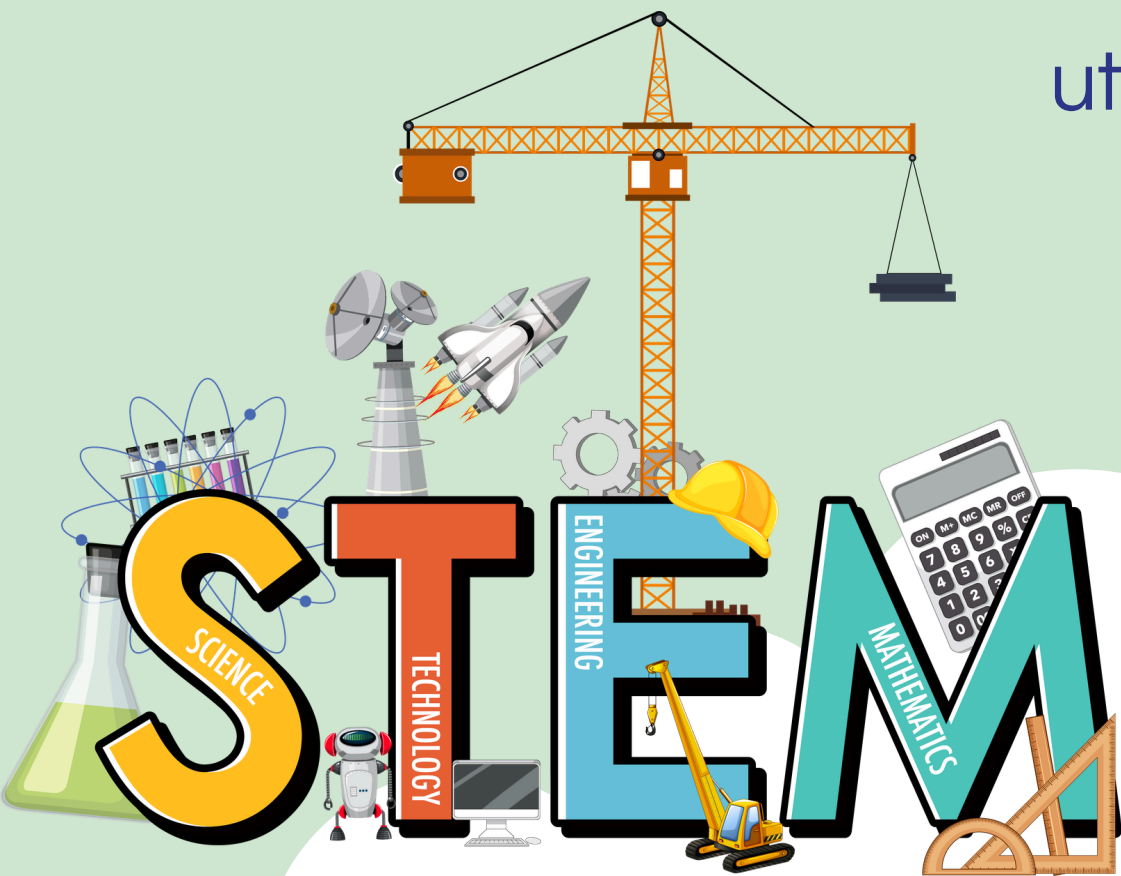
CLUB LEADER RESOURCES

October 8th
Volunteer Training



STEM / STEAM

STEM/STEAM has become a big focus for our County in the last 2 years. STEM stands for Science, Technology, Engineering, and Math. The other acronym that has become more widely utilized in its place is STEAM. This adds an A, which stands for Art.



WHAT
RESOURCES DO
YOU KNOW
ABOUT?



JOCO GROWS JR. EXTENSION AGENT

Parents, teachers, and friends of Johnston County Public Schools, help us share the adventure!

The JoCo Grows Junior Extension Agent Program is a FREE, hands on educational experience that introduces 2nd grade students to agriculture, food, nutrition, and 4-H through engaging activities that complement classroom learning.

Registration is now open. Second grade teachers can find program information in their email or through their 2nd grade team lead teacher.

Last school year, students from Pine Level, Cleveland, McGee's, Benson, Polenta, East Clayton, Micro, Corinth Holders, Meadow, and Princeton Elementary Schools, along with several homeschool groups and 4-H clubs, joined the adventure. We hope to welcome even more classrooms this year!

JoCo Grows Facebook Post on August 13th, 2026

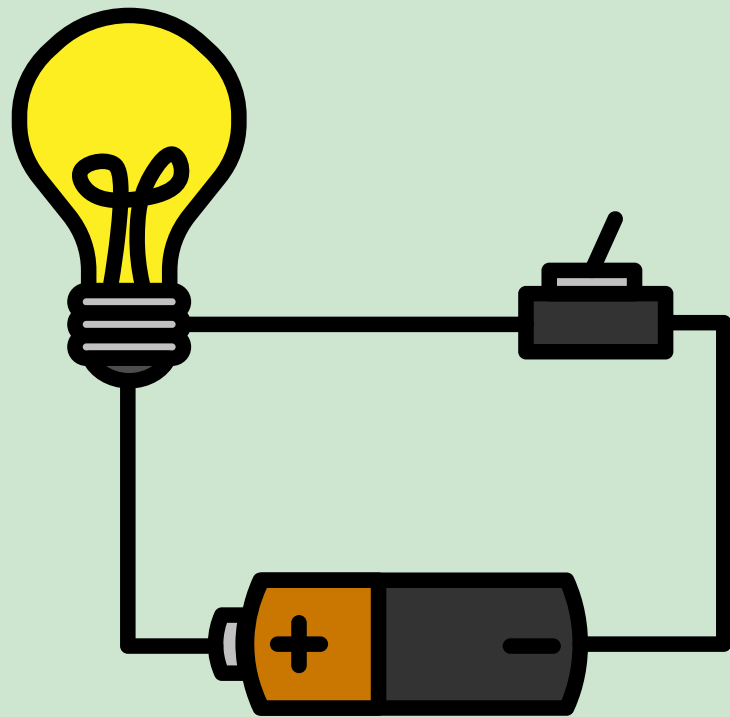


LITTLEBITES CIRCUITS

A littleBits kit is a modular electronic building block system that snaps together with magnets to teach circuits, engineering, and STEAM (Science, Technology, Engineering, Arts, and Math) concepts without requiring soldering or programming.

Don't know anything about circuits?

ME EITHER!

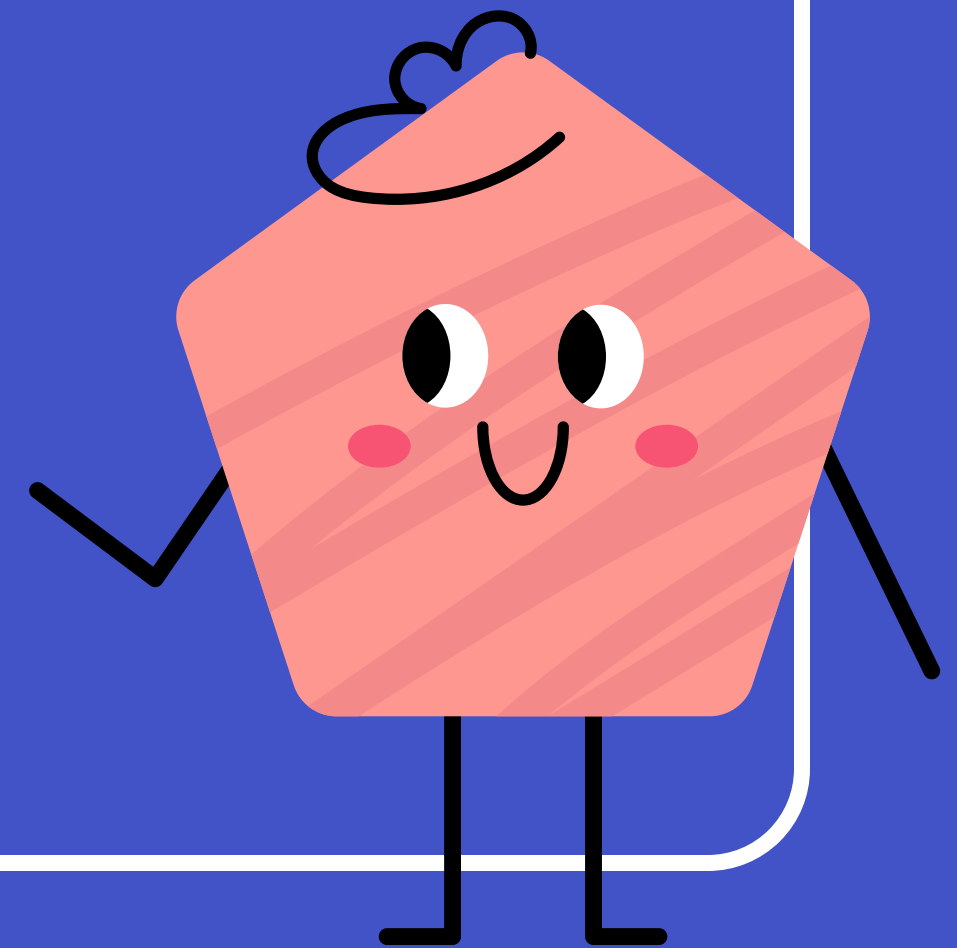


**community.s3.amazonaws.com/uploads/uploaded_file/asset/2067/Bit
Index_poster_1.pdf**



LETS WORK TOGETHER:

- Follow the PDF
- Work through activities
- Let the members experiement
- Best to work in groups
 - Limited Kits



STEM RESOURCES

- 4-H STEM Kits (PowerProtectors, Food for Thought, Discover Box(gardening))
- Dash and Dot Robots
 - Ipads/Laptops needed
- Lego Robotics Kits (we can request)
 - Ipads/Laptops needed
- Dash and Dot (we can request)
 - Ipads/Laptops needed
- Sphero Bolt (we can request)
 - Ipads/Laptops needed



4-H CURRICULUM

- Within the “Club Resources Folder”, there is a “4-H Curriculum” folder. This covers a variety of topics.
 - Bees
 - Healthy Choices
 - Farm to Table
 - Sewing/Clothing
 - Soil
 - Etc.
- <https://shop4-h.org/pages/curriculum>
- <https://4-h.org/resources/professionals/clover-resources/>
 - <https://4-h.org/clover/about/>
 - Online tool with online activities



OTHER RESOURCES

RealityWorks Meatcut Models:

We're thrilled to announce a fantastic new opportunity in Johnston County! We now have beef, pork, and lamb meat cut models available for use! These models are a valuable resource, and we want to ensure they remain in "Brand NEW Shape." Please handle them with care and respect, as this is an incredible hands-on learning opportunity for our county and neighboring counties.

Extension Staff, 4-H volunteers, agriculture teachers, and community organizations are all encouraged to utilize these models.

To request one or more models, please complete the form with your desired usage dates, estimated attendance, and event name. After your event, we ask that you fill out a follow-up form detailing the exact date of use, event name, attendance numbers, location, and the specific model(s) utilized.

- [Beef](#)
- [Pork](#)
- [Lamb](#)

Attention Educators



Available

Models are stored at the JoCo Ag Center
2736 NC 210 HWY, Suite A Smithfield, NC 27577



**Butcher Pork
Cut Model**



**Butcher
Lamb/Goat
Cut Model**



Free to utilize by:

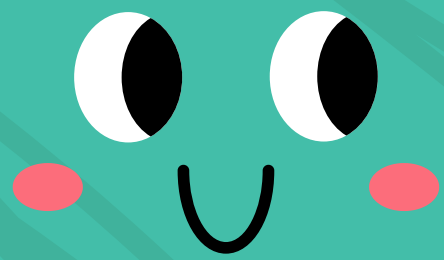
**Teachers
4-H Programs
Livestock Programs
Homeschools
Educators of any kind**



**Butcher Beef
Cut Model**



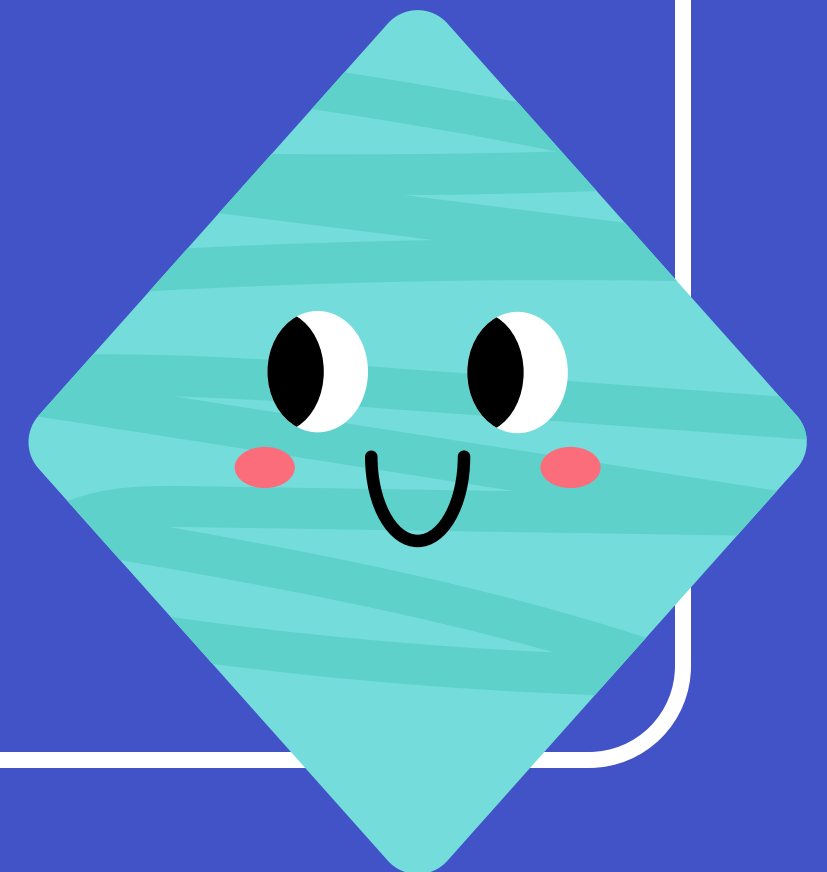
Request Form: <https://go.ncsu.edu/jocorealityworksmodelrequest>
Follow-Up form: <https://go.ncsu.edu/jocorealityworksmodelfollowup>



AG IN THE CLASSROOM:



- NC Ag in the Classroom
 - <https://www.ncfb.org/ag-in-the-classroom/>
- National Ag in the Classroom
 - <https://agclassroom.org/>
- USDA Ag in the Classroom Info.
 - <https://www.nifa.usda.gov/grants/programs/k-12-higher-education-programs/agriculture-classroom-aitc-program>



DIVISION 109: 4-H ENTOMOLOGY, INSECT COLLECTION

PREMIUMS

1st - \$50 2nd - \$20 3rd - \$10 4th-5th - \$5

Note: Cloverbuds receive Ribbons **ONLY**, no premiums

- CLASS**
- 01 - Insect Collection - Cloverbud *Ages 5-7*
 - 02 - Insect Collection - Junior *Ages 8-13*
 - 03 - Insect Collection - Senior *Ages 14-18*

DIVISION 110: 4-H ENTOMOLOGY, SPECIAL STUDY

PREMIUMS

1st - \$50 2nd - \$20 3rd - \$10 4th-5th - \$5

CLASS

- 01 - Junior Special Study *Ages 8-13*
- 02 - Senior Special Study *Ages 14-18*

DIVISION 104: 4-H CLOVERBUD SEWING & NEEDLECRAFT *Ages 5-7*

DIVISION 105: 4-H JUNIOR SEWING & NEEDLECRAFT *Ages 8-13*

DIVISION 106: 4-H SENIOR SEWING & NEEDLECRAFT *Ages 14-18*

CLASS

- 01 - Bags
- 02 - Crocheted or Knitted Articles
- 03 - Clothing *Machine Sewn*
- 04 - Cross-Stitch
- 05 - Hand-Stitched Item *All elements must be sewn by hand*
- 06 - Hand Weaving, Hand Spinning
- 07 - Latch Hook
- 08 - Needlework
- 09 - Pillow
- 10 - Quilted Articles
- 11 - Stuffed Toy
- 12 - Upcycled Item *Materials used must be modified or repurposed, not solely repaired.*

4-H PHOTOGRAPHY CRITERIA FOR JUDGING

I. Storytelling Ability

- *As suggested by the caption.*
- *Contains few or no distracting or unnecessary elements.*
- *All the elements within the picture are arranged to tell the story.*

II. Photographic Quality

- *The photography is clear and sharp and shows detail in areas where appropriate.*

III. Mounting

- *No larger than 10"x13" framed/mounted.*
- *Pictures are mounted neatly and securely.*

IV. Captions

- *Pictures have appropriate captions.*

DIVISION 107: 4-H JUNIOR PHOTOGRAPHY *Ages 8-13*

DIVISION 108: 4-H SENIOR PHOTOGRAPHY *Ages 14-18*

PREMIUMS

1st - \$10 2nd - \$5 3rd - \$3

CLASS

01 - Color - Animal, Birds, or Insects	10 - Black & White - Miscellaneous
02 - Color - Building	11 - Picture Stories - Computer Enhanced Photography <i>Using technology to enhance your photographs</i>
03 - Color - Landscape or Seascape	12 - Picture Stories - Photos of 4-H Projects/Activities <i>Submit a series of 4-6 photographs, with captions, of a 4-H project which tells a story: e.g.: crafts, food, safety, horse, electric, etc.</i>
04 - Color - People, Individual, or Group	
05 - Color - Miscellaneous	
06 - Black & White - Animal, Birds, or Insects	
07 - Black & White - Building	
08 - Black & White - Landscape or Seascape	
09 - Black & White - People, Individual, or Group	

DIVISION 101: 4-H CRAFTS - CLOVERBUD *Ages 5-7*

DIVISION 102: 4-H CRAFTS - JUNIOR *Ages 8-13*

DIVISION 103: 4-H CRAFTS - SENIOR *Ages 14-18*

CLASS

01 - Artwork	16 - Pottery <i>Sculptured Animals</i>
02 - Basketry	17 - Recycled Jewelry
03 - Bead Jewelry	18 - Recycled <i>Anything but Jewelry</i>
04 - Block Stamped Printing	19 - Soap Making
05 - Braided Articles	20 - Stained or Leaded Glass
06 - Candle Making	21 - Stenciling
07 - Digital Art	22 - Tie Dyeing, Batik
08 - Fabric Painting, Original Design	23 - Wired Jewelry
09 - Fabric Painting, Pattern or Kit	24 - Metal <i>Embossed, Tooled, Etched</i>
10 - Leather Articles	25 - Metal <i>Tin Punched</i>
11 - Mechanical Crafts <i>Robots, Rockets</i>	26 - Miscellaneous Crafts
12 - Mosaics <i>Tile with Grout</i>	27 - Natural Material <i>Painted rock, driftwood, etc</i>
13 - Paper Crafts <i>Origami, woven paper baskets, scrapbooking</i>	This project features natural materials that have been carefully selected and preserved to ensure longevity without decomposition
14 - Pottery <i>Coil, Slab, Wheel Thrown</i>	28 - Wood Objects from Kit
15 - Pottery <i>Pre-Formed Mold - Ceramic</i>	29 - Woodworking (Animals, toys, accessories, original sculpture)



Use the State Fair entries as
ACTIVITIES

TRAININGS/RESOURCES/ETC.

- JoCo Current 4-H Volunteer Training Website
- Use Project Record Book categories as activities
- JoCo 4-H State Fair Information website
- National 4-H has an online learning system called CLOVER
 - <https://4-h.org/clover/about/>
- JoCo 4-H Club Resource Folder
- SE District 4-H Volunteer Leaders Association
 - Facebook Page
- Seed Packet Worksheet (next slides)

Flourish Seeds by me

Light Requirements



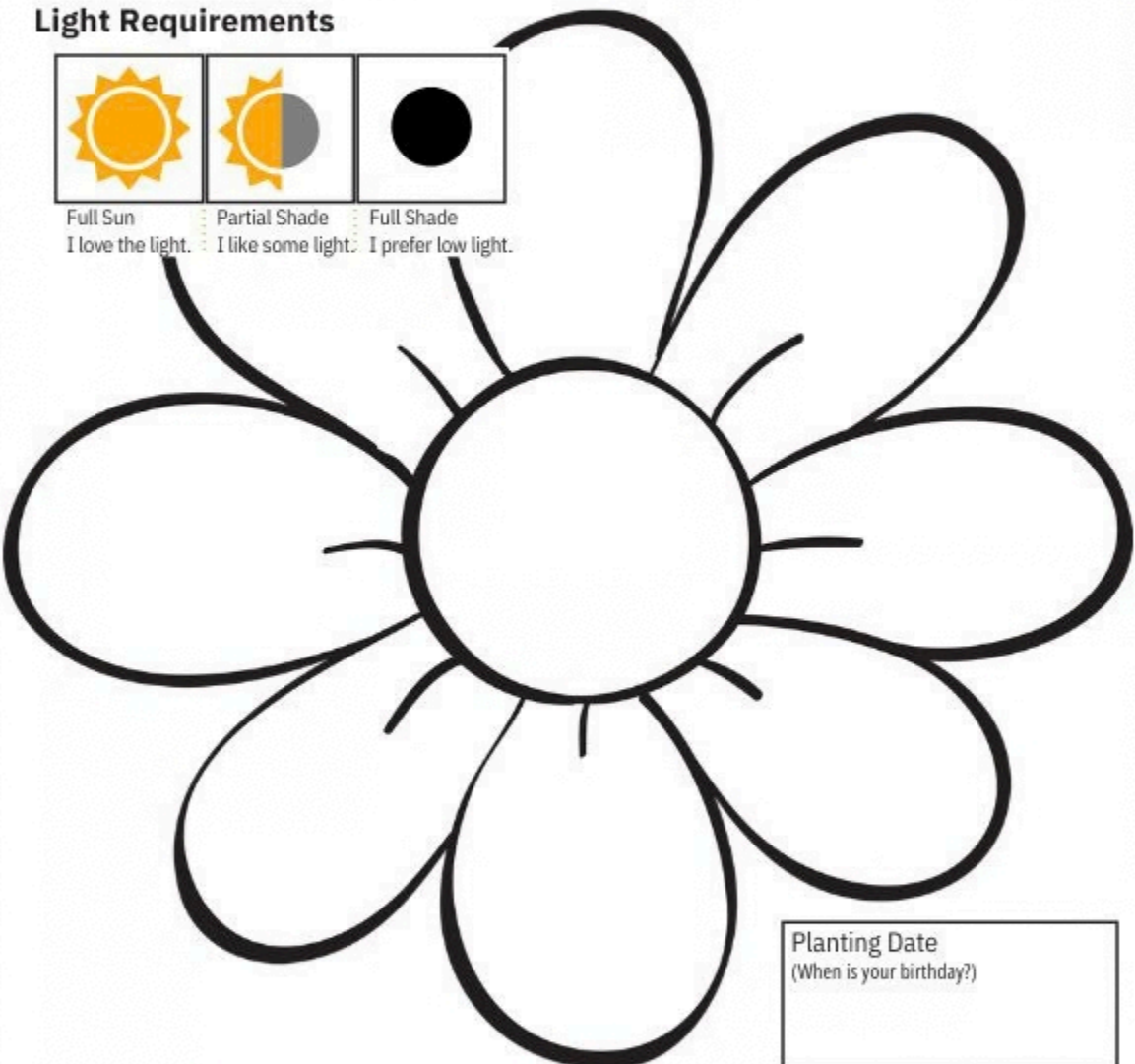
Full Sun
I love the light.



Partial Shade
I like some light.



Full Shade
I prefer low light.



Name:

Planting Date
(When is your birthday?)

**Draw an emoji in the center of the flower above
to show how you are feeling right now.**

NC STATE UNIVERSITY
**Plants for
Human Health**
INSTITUTE

stem.plantsforhumanhealth.ncsu.edu

NC STATE
 EXTENSION

In what conditions do you thrive?

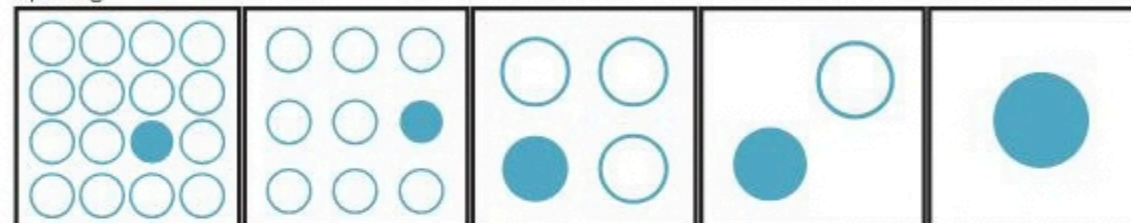
Select the descriptions that match your personality.

Plant Characteristics

List three or more words (adjectives) that describe you.

Planting Instructions

Spacing



I love crowds and make friends easily. I like groups of people I know. I prefer small groups. I do best one on one. I like to be by myself.

Bloom Time

I am most productive in the:
morning midday night



Season to Thrive

Are you a cool season crop or a warm season crop?

Spring Summer Autumn Winter



Care and Maintenance

Fertilizer (Food) Requirements

How often do you need to be fertilized (fed)?



Water Requirements

How much water do you need to drink to feel your best?



Growth Habit

Are you neat and orderly like a row crop, carefree and disorganized like a wildflower meadow, or somewhere in between?



Dormant Period

How many hours of sleep do you need?



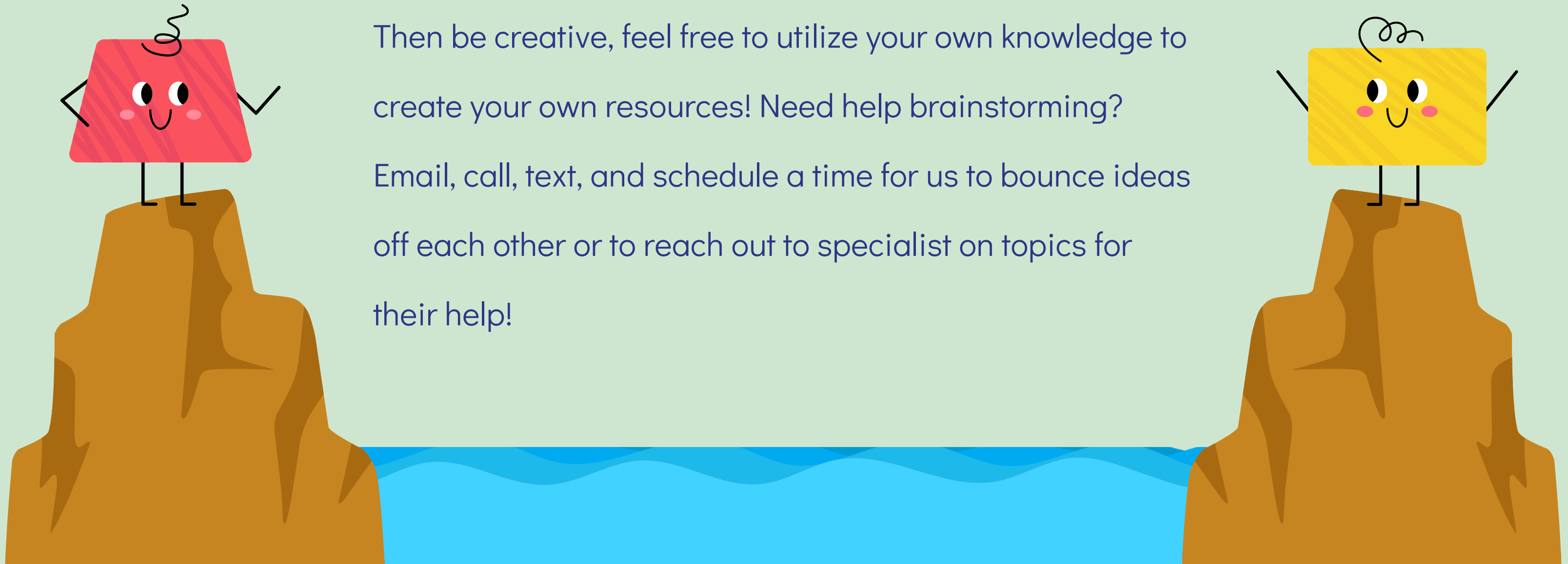
Companion Planting

Who or what is your companion plant?
Who or what comforts you when you are feeling anxious?

BE CREATIVE!

None of this fit what you are looking for?

Then be creative, feel free to utilize your own knowledge to create your own resources! Need help brainstorming? Email, call, text, and schedule a time for us to bounce ideas off each other or to reach out to specialist on topics for their help!



RESOURCE REVIEW

Resources we have covered an some Etc.

JoCo Grows Jr. Extension Agent

Meat Cut Models

Littlebits Circuits Kits

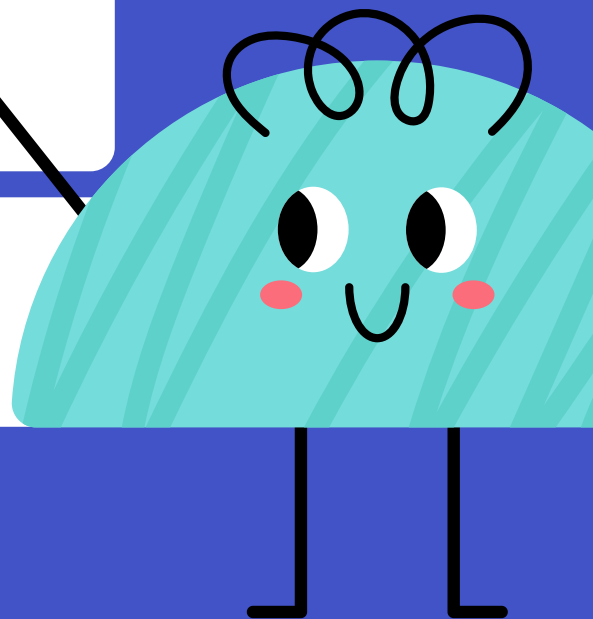
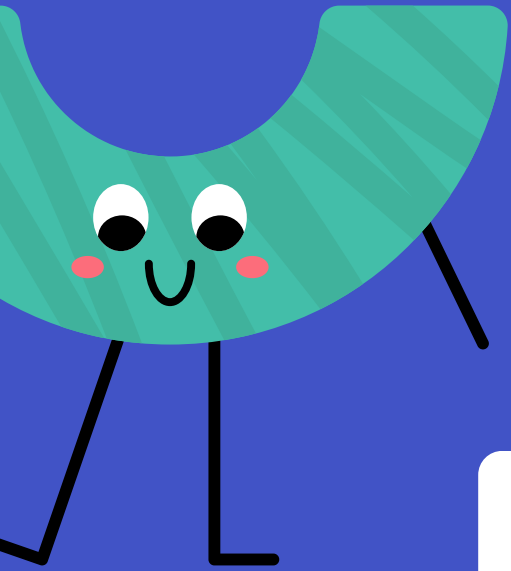
Ag in the Classroom

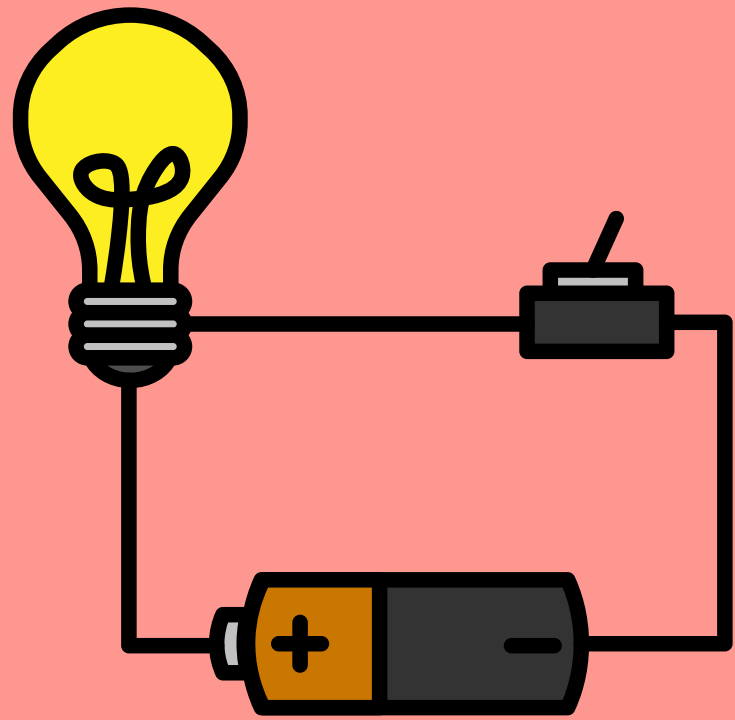
STEM Resources can be requested

State Fair Entries

4-H Curriculum

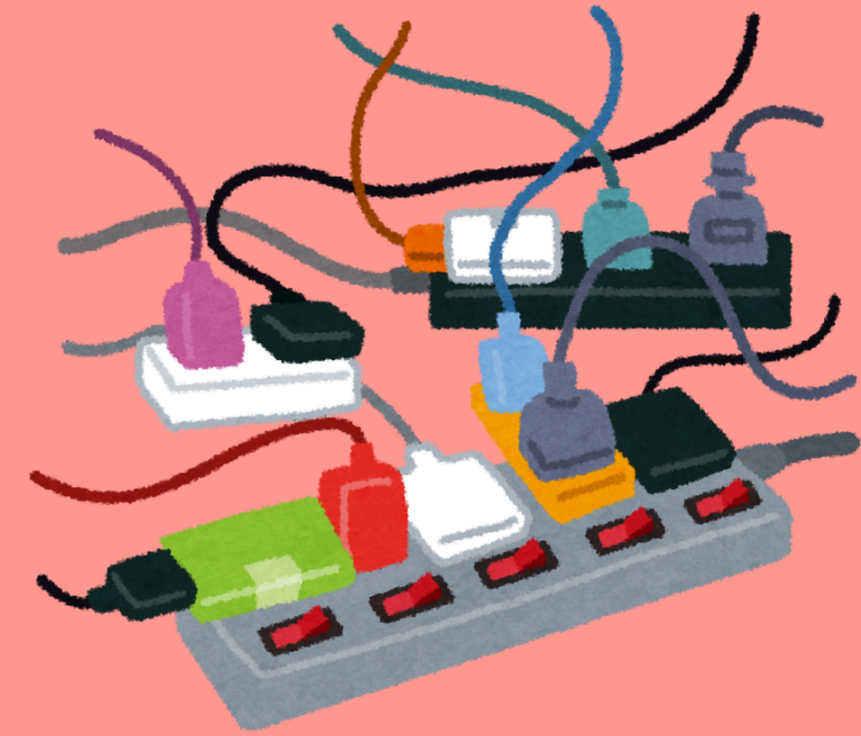
Trainings/Resources/Etc.





Learn By Doing

LET'S TRY



[https://classroom.littlebits.com/lessons/introduction
-to-littlebits-simple-input-circuits](https://classroom.littlebits.com/lessons/introduction-to-littlebits-simple-input-circuits)

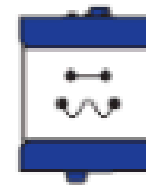
EXPERIMENTING THROUGH DESIGN CHALLENGES

The best way to learn about littleBits is through experimentation and play. Complete the following challenges, which are designed to get you building simple circuits. While you're learning more about how littleBits work, reflect on the prominent role of electronics and circuits in your daily life.

Developing a degree of familiarity with littleBits will help you envision how to use them with students. As you work through each step of the challenges, think about how the activity could be used in your own classroom and the modifications you might need to make. (Note: The challenges below are based on Bits in the Workshop Set, August 2015 release. You can find answers to the challenges in Mini Lesson: Getting Started with littleBits Design Challenges, p. 18)

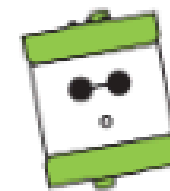
Challenge 1

Let's start with a simple circuit. Find one of the lights in your collection (it will be green because it is an output) and snap it to a power Bit. (Hint: your power Bit will need to be connected to a 9V battery and turned on.)



Challenge 2

Imagine you want to create a flashlight. You don't want the light to be on all the time or the battery will run out. What input Bit would you add so that you could turn your flashlight on and off?

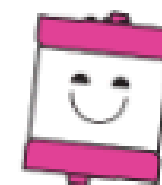


Challenge 3

Now let's make a smart flashlight. What could you use to make your flashlight turn on automatically when it gets dark? (Hint: you might need to change the mode or sensitivity of a Bit you add to your circuit.)

Challenge 4

What other ways could you use this same circuit? If we put our circuit in a box, what would we need to change so that the light turns on whenever we open the box? (Hint: we will need to change one of the little switches on one of the Bits.)



Challenge 5

Now let's imagine we have something secret in the box, so we want to turn this circuit into an alarm. We already have it set up so that the light turns on when we open the drawer. What could we add so that instead of just turning on, the light flashes? What could we add so that people will notice the alarm even if they don't see the light?



Challenge 6

Let's change our circuit so we can run a little experiment. What if we don't want to have an alarm on our box, but we do want to know how many times it gets opened every day? The light sensor will tell us when the box is opened. What Bit could we add to count the number of times the light sensor is triggered?

Challenge 7

For the final challenge, using the Bits and your knowledge from the previous challenges, what else could you make with these Bits? Use your imagination.

