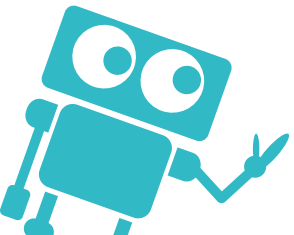
T
Tinker

2
Points

3DuxDesign
Community Building

Use your 3Dux materials to build a city building or buildings. What will your building(s) look like?



MackinMaker

T
Tinker

2
Points

Materials:

- 3DuxDesign GOBOX Classroom Set
- Additional cardboard (optional)
- Paper and pencil
- Scissors, coloring supplies, and other craft materials (optional)

Quick Start:

1. Before making your city building, think about what kind of building you want to create. Will you make an office building? A post office? A library? A hospital?
2. Draw a sketch of what your building will look like.
3. Choose the pieces that will work best for your structure and build it!
4. When you are finished, decorate it!

Hints and Tips:

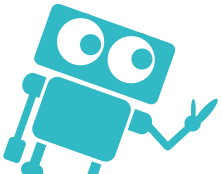
- Read about and brainstorm all the different buildings in our communities.
- Look at pictures of different community buildings for ideas, like a fire station, a hospital, and a library.

Extended Challenges

Art: Draw a picture of the things that people might do in the structure you made.

Social Studies: Build a famous building that you know or a real building in your community.

English/Language Arts: Name your building! Write a sentence or two about why you gave it that name.



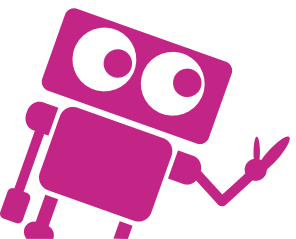
S
Skill-Up

7
Points

3DuxDesign

Building a Home

Use your 3Dux materials to build a home for an animal!



MackinMaker

S
Skill-Up

7
Points

Materials:

- 3DuxDesign GOBOX Classroom Set
- Additional cardboard (optional)
- Paper and pencil
- Scissors, coloring supplies, and other craft materials (optional)

Quick Start:

1. Before building your home, think about who you are making it for. What will this animal need to be safe and cozy?
2. Draw a sketch of what your home will look like.
3. Choose the pieces that will work best for your home and build it!
4. When you are finished, decorate it!

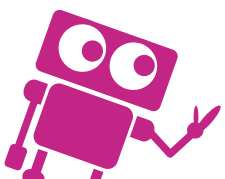
Hints and Tips:

- Read about animal homes around the world. What do some of those homes have? What is needed?

Extended Challenges

Science: What makes a good habitat? What makes a bad habitat? What is best for the animal? Read stories about the animal you are making a home for to find out.

English/Language Arts: Write or draw a story of a day in the life of that animal home. Who lives there? What do they do during the day? Where do they sleep? Eat?

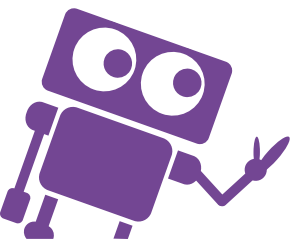


D
Design

11
Points

3DuxDesign
Treasure Box

Use your 3Dux materials to build something to hold a special treasure or something else that is important to you!



MackinMaker

D
Skill-Up

11
Points

Materials:

- 3DuxDesign GOBOX Classroom Set
- Additional cardboard (optional)
- Paper and pencil
- Scissors, coloring supplies, and other craft materials (optional)

Quick Start:

1. What will your box look like? What shapes will help to make your box? What will it hold? Draw a sketch to plan it out.
2. Choose the pieces that will work best for your treasure box and build it!
3. When you are finished, decorate it!

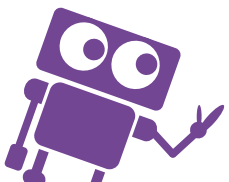
Hints and Tips:

- Decide what you want your box to hold before you start building it. What is important to you?
- Will your box have any other shapes built into it or added for decoration?
- Look at pictures of different storage and treasure boxes for ideas.

Extended Challenges

Art: Add other materials to your box to help decorate it.

English/Language Arts: Tell an imaginary story to someone about your treasure box. Where do you think your box would have been discovered if it were a real treasure box? What kind of treasure was found inside of it?



G
Global

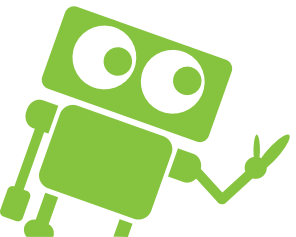
18
Points

3DuxDesign

Spotlight on Seasons

Choose a season and build something that you would find helpful to have during that season. Will you build a special umbrella for spring? A warm cabin for winter? A boat for summer?

MackinMaker



G
Global

18
Points

Materials:

- 3DuxDesign GOBOX Classroom Set
- Additional cardboard (optional)
- Paper and pencil
- Scissors, coloring supplies, and other craft materials (optional)

Quick Start:

1. What season are you choosing to think about?
2. What object might be helpful to have during that season? Draw a sketch of what your creation will look like.
3. Choose the pieces that will work best for your object and build it!
4. When you are finished, decorate it!

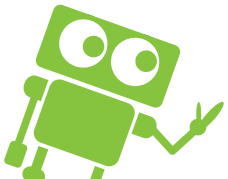
Hints and Tips:

- It is helpful to narrow down what season you plan on focusing on before brainstorming an object.
- Don't be afraid of creating an object that doesn't exist yet! Be prepared to share what it does.

Extended Challenges

English/Language Arts: Name your object! Write a sentence or two about why you gave it that name.

Social Studies: What holidays take place during the season you chose? What can you make to help celebrate that holiday?

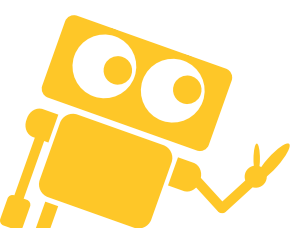


I
Innovator

23
Points

3DuxDesign
Changing Spaces

Use 3Dux to show a solution for how you can update a space to solve a problem or just make the space more fun. It could be a room, building, or outdoor area!



MackinMaker

I
Innovator

23
Points

Materials:

- 3DuxDesign GOBOX Classroom Set
- Additional cardboard (optional)
- Paper and pencil
- Scissors, coloring supplies, and other craft materials (optional)

Quick Start:

1. Before you start building, think of a plan. What is your solution, or how are you making it more fun? What would it look like? Draw it out before building and make sure you have all the pieces.
2. Choose pieces that will work best for your design.
3. When you are finished, decorate it!

Hints and Tips:

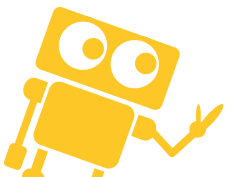
- If you're not sure where to begin, think about what the space you are thinking of looks like right now. Start there, and then think of how you can change or update it.

Extended Challenges

Social Studies: Design a way to make a school space better for social distancing. How can you be close but still keep each other safe?

Social Studies: Design a way to make a playground easier to use for people with special needs.

English/Language Arts: Create a story or written explanation of your solution. This could also be done as a narrated video.



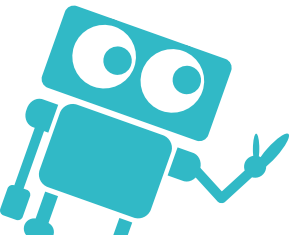
T
Tinker

1
Points

KEVA Planks

Ramp Up

Build a ramp that something round can roll down. How fast can you make it roll?



MackinMaker

T
Tinker

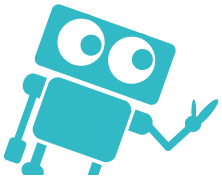
1
Points

Materials:

- KEVA planks
- Something round from your classroom
- Other supplies for ramp building from your classroom (optional)

Quick Start:

1. Gather as many KEVA planks as you can.
2. Start by stacking one KEVA plank on top of another. Make a set of "stairs" using only the KEVA planks. How steep of a ramp can you make?
3. Make sure that you put KEVA planks over the top of the KEVA plank stacks. This makes a ramp instead of stairs.
4. Test out your ramp. Does it work? Can you make it longer? Wider? Safer? Smoother?



Hints and Tips:

- If you're not sure where to begin, start by making stairs using your KEVA planks.
- Where can we find ramps in real life? Talk about it with an adult or someone you know and look at pictures of real-life ramps to help you build your own.

Extended Challenges

Science: Find a variety of round objects to test using your ramp. Which object moves down the ramp the fastest? Slowest? Why do you think that is?

Social Studies: Find a ramp that helps someone or something in your school. Draw a picture of that ramp and talk to an adult about why the ramp is important.

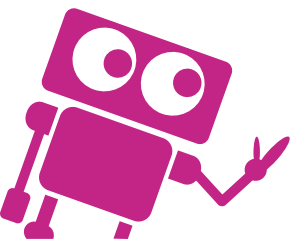
S
Skill-Up

6
Points

KEVA Planks

Name It!

Make your name using only KEVA planks.



MackinMaker

S
Skill-Up

6
Points

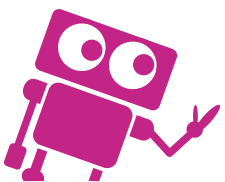
Materials:
KEVA planks

Quick Start:
1. Gather as many KEVA planks as you can.
2. How do you spell your name? Build your name letter by letter.
3. Can you make a letter uppercase? Lowercase? Try practicing different letter shapes!

Hints and Tips:
- Start by making the letter shapes with just a few KEVA planks. Then, build on from there. Can you make them closer to 3D shapes?

Extended Challenges
English/Language Arts: What is a word you have recently learned the definition of? Spell out that word.

Social Studies: Think of a famous person you admire. Find out how to spell their name, and build it using KEVA planks.



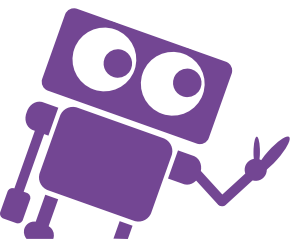
D
Design

12
Points

KEVA Planks

Patterns with KEVA Planks

Can you make a pattern using your KEVA planks? What shapes will you include in your design?



MackinMaker

D
Skill-Up

12
Points

Materials:

- KEVA planks
- Additional classroom materials (optional)

Quick Start:

1. Gather as many KEVA planks as you can.
2. Make a pattern with your KEVA planks. Will it be 2D or 3D?

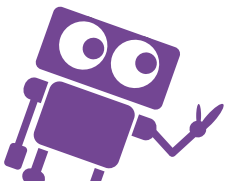
Hints and Tips:

- Did your pattern creation fall down or get messed up? Just keep trying, testing, trying and testing some more– engineers call this "iterating."

Extended Challenges

Art: Draw the pattern you made using paper and coloring supplies. Add to it if you would like!

Math: How many planks did you use to make your pattern? Count them all! Can you add more?



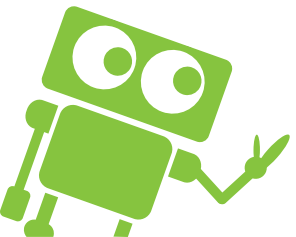
G
Global

16
Points

KEVA Planks

Lovely Library

Build a library that you would want to explore. How many rooms will it have? Will there be a reading fort?



MackinMaker

G
Global

16
Points

Materials:

- KEVA planks
- Additional classroom materials (optional)

Quick Start:

1. Gather as many KEVA planks as you can.
2. Think about what you want in your dream library. How many different rooms will there be and how will you get into each room?
3. Start to build your library. How will you stack your planks? Will it be a bird's eye view of your library or will you make your library have a roof?

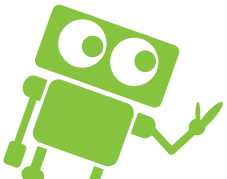
Hints and Tips:

- Triangles are strong shapes and crisscrossing the planks helps too. Try some different techniques to see what works the best.
- Did your library structure fall down? Just keep trying, testing, trying and testing some more–engineers call this "iterating."

Extended Challenges

English/Language Arts: What books would you make sure to include in your library? Make a list of your favorites and tell an adult or a friend about it.

Science: Instead of a library, build your dream bedroom.



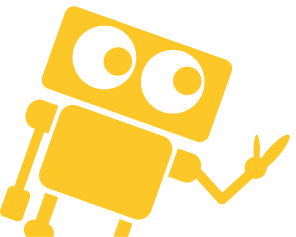
1
Innovator

21
Points

KEVA Planks

Tallest Tower

Build the tallest tower you can.



MackinMaker

I
Innovator

21
Points

Materials:

- KEVA planks

Quick Start:

1. Gather as many KEVA planks as you can.
2. Start to build your tower. How will you stack your planks to make the tower strong?
3. Does it stay standing? Can you do anything to improve your tower?

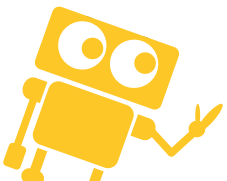
Hints and Tips:

- Triangles are strong shapes and crisscrossing the planks helps too. Try some different techniques to see what works the best.
- Did your tower fall down? Just keep trying, testing, trying and testing some more–engineers call this "iterating."

Extended Challenges

Science: Can you make your tower using different shapes? Try a hexagon- or triangle-shaped tower! Build a tower that is a single plank wide. How tall can you make it before it falls?

Science: Can you make a window in your tower? A door?



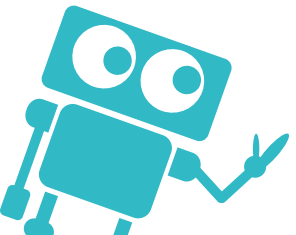
T
Tinker

3
Points

K'NEX

Create a K'NEX Creature

Create a creature with K'NEX pieces. What is your creature called?



MackinMaker

T
Tinker

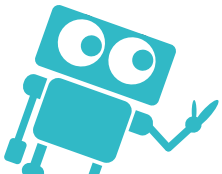
3
Points

Materials:

- K'NEX Classroom Connection

Quick Start:

1. Gather K'NEX pieces.
2. Will your creature be mostly one color or multi-colored? Does your creature have eyes? Legs? Arms? How many? Think through how your creature will get around and accomplish tasks.
3. Can your creature stand by itself? Try to make it stand on a surface without support.



Hints and Tips:

If you are new to using K'NEX, it might help to start by making sure you know how to connect the pieces and break them apart. To attach a rod to a connector, line the rod up on top of an open space on the connector and push down until the rod snaps into place. Connect the open slots on the blue and gray pieces to build in 3D.

Extended Challenges

English/Language Arts: Write a story with the creature as the main character. Add in illustrations and/or share with a friend if possible.

Science: Instead of a creature, research and build a real animal.

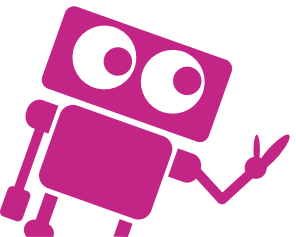
S
Skill-Up

8
Points

K'NEX

Connect K'NEX

Build the following shapes using K'NEX: Square, Rectangle,Triangle, Parallelogram, Octagon, Cube, and Pyramid.



MackinMaker

S
Skill-Up

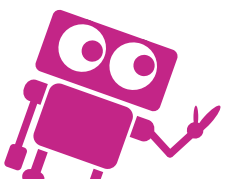
8
Points

Materials:
K'NEX Classroom Connection

Quick Start:
1. Gather K'NEX pieces.
2. Do you know how to connect and disconnect K'NEX pieces? Experiment until you figure out the best ways to do it.
3. Start building to see if you can make all the shapes on the list. Are there any other shapes you can build?

Hints and Tips:
- If you are new to using K'NEX, it might help to start by making sure you know how to connect the pieces and break them apart. To attach a rod to a connector, line the rod up on top of an open space on the connector and push down until the rod snaps into place. Connect the open slots on the blue and gray pieces to build in 3D.
- Start with building a square and work your way down the list with each successful shape. How can you use what you learned from making the first shape to make the next ones?

Extended Challenges
Math: Let's practice our shape recognition! Take turns making shapes and naming them with a friend or an adult. Can you make a tessellation or a pattern instead?
Art: Combine multiple shapes to make a design.



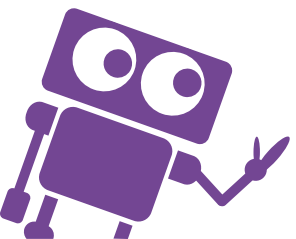
D
Design

13
Points

K'NEX

K'NEX Habitat

Create a structure for an animal's habitat at a zoo.



MackinMaker

D
Skill-Up

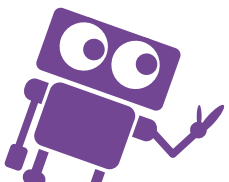
13
Points

Materials:

- K'NEX Classroom Connection
- Pencil
- Paper

Quick Start:

1. Gather K'NEX pieces. What animals do you normally see at the zoo? What animal will you make a habitat for?
2. What does the animal need in its habitat to survive? Make sure you include all of the necessary parts.
3. Build the habitat with your K'NEX!



Hints and Tips:

- If you are new to using K'NEX, it might help to start by making sure you know how to connect the pieces and break them apart. To attach a rod to a connector, line the rod up on top of an open space on the connector and push down until the rod snaps into place. Connect the open slots on the blue and gray pieces to build in 3D.
- Feeling stuck? Look through the instruction book for some making inspiration.

Extended Challenges

English/Language Arts: Create the setting from a story you have recently read.
Social Studies: Create a prototype (or model) of your own home or a dream home!

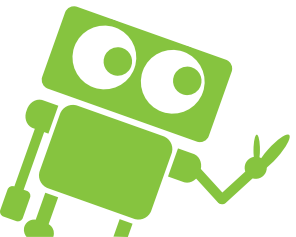
G
Global

17
Points

K'NEX

Prototyping with K'NEX

Make a prototype, or a model, of an invention that solves a problem or inconvenience in your life.



MackinMaker

G
Global

17
Points

Materials:

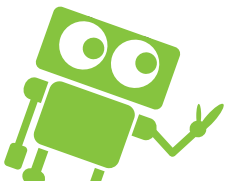
- K'NEX Classroom Connection
- Pencil
- Paper

Quick Start:

1. Gather K'NEX pieces and get a paper and pencil so you can brainstorm.
2. Brainstorm on paper and/or in a small group. What could you create that could solve a problem? Is there anything that you dislike doing or that is difficult to do in your daily life at home or at school? Once you decide, draw a sketch to help plan out your creation.
3. Use the K'NEX pieces to make a prototype of the invention.

Hints and Tips:

- If you are new to using K'NEX, it might help to start by making sure you know how to connect the pieces and break them apart. To attach a rod to a connector, line the rod up on top of an open space on the connector and push down until the rod snaps into place. Connect the open slots on the blue and gray pieces to build in 3D.
- It can help to think through daily routines or chores that you have, or daily activities that you participate in.
- Feeling stuck? Look through the instruction book for some making inspiration.
- *Teacher note: If working with younger students, it might be helpful to narrow down the invention (i.e. something to help you clean your room, something to help accomplish tasks like homework or getting ready) and/or brainstorm together.*



Extended Challenges

Social Studies: Can you think of something that might help other people? Try to make something that could solve a local or worldwide problem.

English/Language Arts: Write about what your invention does and why you built it.

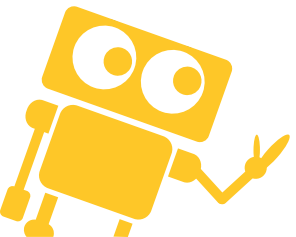
I
Innovator

24
Points

K'NEX

K'NEX Spins

Using K'NEX, build something that has a piece that turns, or spins. Can you build a Ferris wheel? Or a wind turbine? What other objects rotate?



MackinMaker

I
Innovator

24
Points

Materials:

- K'NEX Classroom Connection
- Pencil
- Paper

Quick Start:

1. Gather K'NEX pieces. Begin brainstorming objects you might make that spin. What objects could be created using K'NEX?
2. Build your spinning object.
3. Test your creation. Does it work? If not, is there a way to build your spinning component so it is not blocked by other pieces or objects?
4. Improve your spinning object. Can you make it turn faster or more smoothly? Can you make the part that spins larger in size?

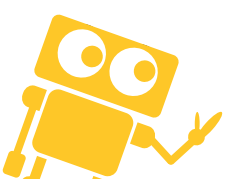
Hints and Tips:

- If you are new to using K'NEX, it might help to start by making sure you know how to connect the pieces and break them apart. To attach a rod to a connector, line the rod up on top of an open space on the connector and push down until the rod snaps into place. Connect the open slots on the blue and gray pieces to build in 3D.
- Feeling stuck? Look through the instruction book for some making inspiration.
- *Teacher note: If working with younger students, you may want to have them start simply by having students place the circular connector piece onto the rod. Then, they can add more pieces onto their creation and see how it affects their spinning object.*
- *Teacher note: Discuss the engineering process with students. Walk them through planning, building, testing, and improving their creations.*

Extended Challenges

Science: Can you make another object that spins? There are so many wonderful solutions to this challenge!

Math: What shapes work best for creating objects that rotate? Talk about it and experiment using your K'NEX!



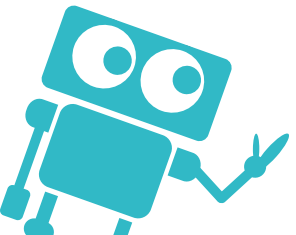
T
Tinker

5
Points

Squishy Circuits

Building a Circuit

Make an LED light work using conductive play dough, a light, and a battery pack.



MackinMaker

T
Tinker

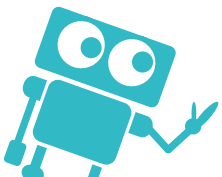
5
Points

Materials:

- Squishy Circuits Deluxe Kit
- Duracell Coppertop Alkaline Battery, AA (4-pack)

Quick Start:

1. Brainstorm what you want to mold out of the conductive dough (any dough besides white). Making two shapes out of the conductive dough is a great way to start.
2. Gather the materials you need and start to mold your creation.
3. Plug in your components (LED light and battery pack). Be careful not to create any short circuits.
4. Does it work? Keep testing until you get it!
5. Once you get it to work, add more lights or experiment with the insulator play dough.



Hints and Tips:

- Use the Squishy Circuits Quick Start Guide to learn the basics of a Squishy Circuit.
- It is easier to have multiple separate dough components. If you want to make one larger sculpture, use the white insulator dough to separate your components.
- Is it not turning on? Switch up how your components are connected.

Extended Challenges

Science: Add the motor and/or test out the buzzer. What do you think you could make using the motor? Share your ideas with someone you know.

Science: Experiment with the white insulating dough. What objects can you make with the play dough?

**Disclaimer: Please be sure to monitor and assist students under the age of 8 while they are exploring with Squishy Circuits.

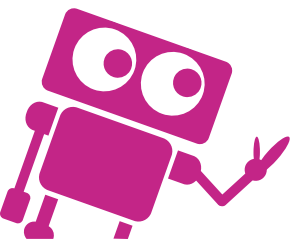
S
Skill-Up

9
Points

Squishy Circuits

Switch Up to Skill-Up

Make something using either the motor or the LED lights. Can you get the switch to turn the power on and off?



MackinMaker

S
Skill-Up

9
Points

Materials:

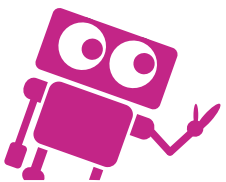
- Squishy Circuits Deluxe KitDuracell
- Coppertop Alkaline Battery, AA (4-pack)

Quick Start:

1. Brainstorm what you want to mold out of the conductive play dough (any dough besides white).
2. Gather the materials you need and start to mold your creation.
3. Plug in your components (switch, LED light, and/or motor). Be careful not to create any short circuits.
4. Does it work? Does the switch turn the light and/or motor on and off? If not, keep testing until you get it!

Hints and Tips:

- Use the Squishy Circuits Quick Start Guide to learn the basics of a Squishy Circuit.
- It is easier to have multiple separate dough components. If you want to make one larger sculpture, use the white insulator dough to separate your components.
- Is it not turning on? Switch up how your components are connected.
- Sandwich insulator dough between two pieces of conductive dough to attach lights to your creation. Remember, in order for electricity to work, the LED light must be connected to two different pieces of dough—the one that is connected to the black wire and the one that is connected to the red wire.



Extended Challenges

Science: Can you add additional lights and/or a buzzer into your design?
English/Language Arts: Think of a story you recently read. Make something from that story using the dough.

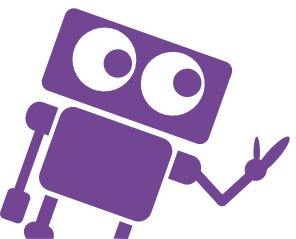
**Disclaimer: Please be sure to monitor and assist students under the age of 8 while they are exploring with Squishy Circuits.

D
Design

15
Points

Squishy Circuits
Light-Up Pet

Choose an animal that you would like as a pet. Make it out of both the conducting and insulating dough and add light(s) to it. What is your pet's name?



MackinMaker

D
Skill-Up

15
Points

Materials:

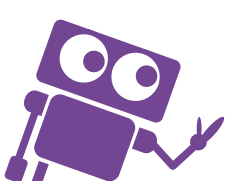
- Squishy Circuits Deluxe Kit
- Additional classroom materials (optional)

Quick Start:

1. Brainstorm what kind of pet you want to mold out of the conductive and insulating play dough. What color dough do you need?
2. Gather the materials you need and start to mold your creation.
3. Plug in your components (LED light and battery pack). Be careful not to create any short circuits.
4. Does it work? If not, keep trying until you get it! How many lights can you add to your creature?

Hints and Tips:

- Use the Squishy Circuits Quick Start Guide to learn the basics of a Squishy Circuit.
- It is easier to have multiple separate dough components. If you want to make one larger sculpture, use the white insulator dough to separate your components.
- Is it not turning on? Switch up how your components are connected.
- Sandwich insulator dough between two pieces of conductive dough to attach lights to your pet. Remember, in order for electricity to work, the LED light must be connected to two different pieces of dough—the one that is connected to the black wire and the one that is connected to the red wire.



Extended Challenges

English/Language Arts: Sculpt a character from a book out of conductive and insulating dough instead of a pet. Can you add a light?
Art: Sculpt an object of your choice out of the dough. Add a light or a motor to create special effects!

**Disclaimer: Please be sure to monitor and assist students under the age of 8 while they are exploring with Squishy Circuits.

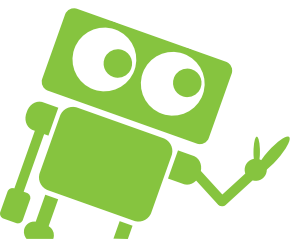
G
Global

20
Points

Squishy Circuits

Fun Fake Food

Create your favorite food with at least one LED light as a part of your creation.



MackinMaker

G
Global

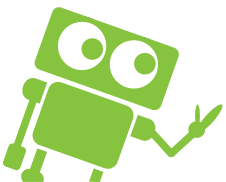
20
Points

Materials:

- Squishy Circuits Deluxe Kit
- Additional classroom materials (optional)

Quick Start:

1. Brainstorm your favorite foods. What could be made using the Squishy Circuits? Where will you put your LED light? Use conductive and insulating play dough. What color dough do you need?
2. Gather the materials you need and start to mold your creation.
3. Plug in your components (LED light and battery pack). Be careful not to create any short circuits.
4. Does it work? If not, keep trying until you get it! How many lights can you add to your food?



Hints and Tips:

- Use the Squishy Circuits Quick Start Guide to learn the basics of a Squishy Circuit.
- It is easier to have multiple separate dough components. If you want to make one larger sculpture, use the white insulator dough to separate your components.
- Is it not turning on? Switch up how your components are connected.
- Sandwich insulator dough between two pieces of conductive dough to attach lights to your scene. Remember, in order for electricity to work, the LED light must be connected to two different pieces of dough—the one that is connected to the black wire and the one that is connected to the red wire.

Extended Challenges

Science: What else would you eat with the food you made? Make more food to go with it or make some
for your friends too.

Science: Make something from nature using the conductive and insulating dough and an LED light.

**Disclaimer: Please be sure to monitor and assist students under the age of 8 while they are exploring with Squishy Circuits.

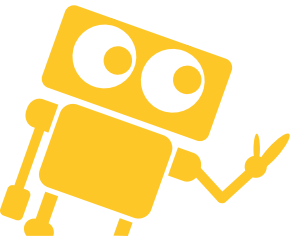
I
Innovator

25
Points

Squishy Circuits

Squishy Landscape

Make a landscape picture out of Squishy Circuit play dough, LED lights, and any other Squishy Circuit material of your choice.



MackinMaker

I
Innovator

25
Points

Materials:

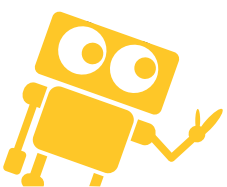
- Squishy Circuits Deluxe Kit
- Additional classroom materials (optional)

Quick Start:

1. Brainstorm what you want your landscape to look like. Use conductive and insulating play dough. What color dough do you need?
2. Gather the materials you need and start to mold your creation.
3. Plug in your components (LED light and battery pack). Be careful not to create any short circuits.
4. Does it work? If not, keep trying until you get it! How many lights can you add to your landscape

Hints and Tips:

- Use the Squishy Circuits Quick Start Guide to learn the basics of a Squishy Circuit.
- It is easier to have multiple separate dough components. If you want to make one larger sculpture, use the white insulator dough to separate your components.
- Is it not turning on? Switch up how your components are connected.
- Sandwich insulator dough between two pieces of conductive dough to attach lights to your scene. Remember, in order for electricity to work, the LED light must be connected to two different pieces of dough—the one that is connected to the black wire and the one that is connected to the red wire.



Extended Challenges

English/Language Arts: Create a scene from a story you recently read. What is happening in your picture?

Art: Create a scene of your choice. When you are done, show it to someone you know!

**Disclaimer: Please be sure to monitor and assist students under the age of 8 while they are exploring with Squishy Circuits.

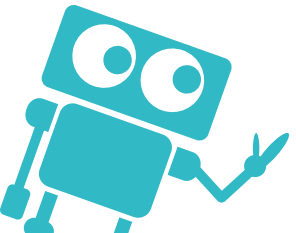
T
Tinker

4
Points

Cubetto

Lost and Found

Start Cubetto on Y. Cubetto is lost but thankfully it has all of you as great friends! Using the compass at the top, help Cubetto travel southeast to reach a letter. What letter will Cubetto reach?



MackinMaker

T
Tinker

4
Points

Materials:

- Cubetto playset

Quick Start:

1. Find a space to set up your world map.
2. Turn on both the Cubetto robot and the interface board, or the board that tells Cubetto where to move.
3. Can you find the Y on the map? Set Cubetto down in the "Y" square.
4. Use the colored blocks to plan out Cubetto's path southeast.
5. Test the directions. Did Cubetto successfully get to the letter in the Southeast corner of the map? Keep trying until it reaches it!

Hints and Tips:

- Is Cubetto not working? Make sure you have switched on both the interface board and the Cubetto robot!
- Having a hard time getting Cubetto to the right spot? Pretend you are Cubetto and start by walking the path yourself. Pay attention to each step you take to move to the right squares.
- Pay attention to the arrow on top of Cubetto. That tells you where the front of Cubetto is.
- Want more guidance on Cubetto? Read the Instruction Guide to learn about the different features of the robot!

Extended Challenges

Computer Science: Cubetto now needs to go to the Northwest corner of the map. Starting in the "P" square, can you get Cubetto to the letter in the Northwest corner of the map?

English/Language Arts: Start Cubetto in the sqaure with the castle. Can you tell a story about Cubetto and program it to end in the mountains?

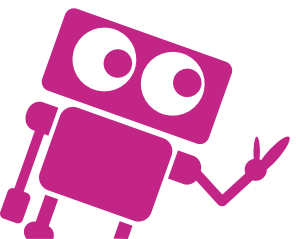
S
Skill-Up

10
Points

Cubetto

Desert Adventure

Cubetto is ready to start a journey to become a fearless knight! Our explorer needs to stop at the city for supplies to make it to the desert. Can you code Cubetto to start at the castle, go through the city square, and make it back to the desert?



MackinMaker

S
Skill-Up

10
Points

Materials:

- Cubetto Playset

Quick Start:

1. Find a space to set up your world map.
2. Turn on both the Cubetto robot and the interface board, or the board that tells Cubetto where to move.
3. Can you find the castle on the map? Set Cubetto down in the square with the castle image.
4. Use the colored blocks to plan out Cubetto's path from the castle to the city.
5. Use the colored blocks to plan out Cubetto's path from the city to the desert.
6. Test the directions. Did Cubetto successfully get to the city for supplies? Did Cubetto keep going and make the complete journey into the desert? Keep trying until it reaches it!

Hints and Tips:

- Is Cubetto not working? Make sure you have switched on both the interface board and the Cubetto robot!
- Having a hard time getting Cubetto to the right spot? Pretend you are Cubetto and start by walking the path yourself. Pay attention to each step you take to move to the right squares.
- Pay attention to the arrow on top of Cubetto. That tells you where the front of Cubetto is.
- Want more guidance on Cubetto? Read the Instruction Guide to learn about the different features of the robot!

Extended Challenges

English/Language Arts: Go on another adventure with Cubetto! Read the book Cubetto's First Day and complete the challenges within the story.

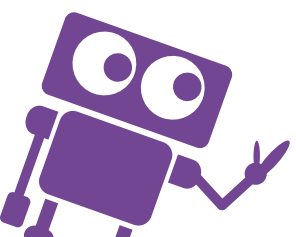
Computer Science: Instead of the desert, Cubetto has decided to travel into the mountains for even more adventure! After the city, code Cubetto to go all the way into the mountains.

D
Design

14
Points

Cubetto
Plant Parade

Starting at Space E1 have Cubetto visit the other spaces with plants on them.



MackinMaker

D
Skill-Up

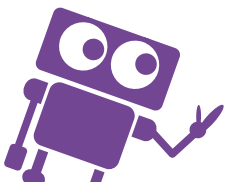
14
Points

Materials:

- Cubetto Playset

Quick Start:

1. Find a space to set up your world map.
2. Turn on both the Cubetto robot and the interface board, or the board that tells Cubetto where to move.
3. Can you find the space E1 on the world map? Set Cubetto down as soon as you do!
4. Find the other squares with plants on them. Hint: There are 2 more!
5. Use the colored blocks to plan out Cubetto's path from square E1 to the other squares with plants. Can you use the function option to shorten the directions?
6. Did Cubetto make it to all the plants? Keep trying until Cubetto reaches them all!



Hints and Tips:

- Is Cubetto not working? Make sure you have switched on both the interface board and the Cubetto robot!
- Having a hard time getting Cubetto to the right spot? Pretend you are Cubetto and start by walking the path yourself. Pay attention to each step you take to move to the right squares.
- Pay attention to the arrow on top of Cubetto. That tells you where the front of Cubetto is.
- Want more guidance on Cubetto? Read the Instruction Guide to learn about the different features of the robot!

Extended Challenges

Computer Science: After exploring all the plants, Cubetto is ready to explore the mountains! Code Cubetto to head to square C4 Next.

Science: What do plants need in order to grow and stay healthy? Draw a picture of a garden and talk to a friend about what plants need to survive.

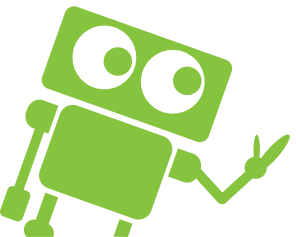
G
Global

19
Points

Cubetto

Apple Picking With Dragon

Cubetto was at the city getting more supplies, and decided to pick apples and visit the friendly dragon that lives there! Can we get Cubetto from the city to the apple tree using only 2 Command tiles? Would a blue function button help us with this?



MackinMaker

G
Global

19
Points

Materials:

- Cubetto Playset

Quick Start:

1. Find a space to set up your world map.
2. Turn on both the Cubetto robot and the interface board, or the board that tells Cubetto where to move.
3. Can you find the big city on the map? Set Cubetto down in the square with the city skyline image.
4. Use the colored blocks to plan out Cubetto's path from the city to the apple tree using only 2 command tiles!
5. Test the directions. Did Cubetto successfully get to the tree for apple picking? Did you use only 2 command tiles? Keep trying until Cubetto reaches the apple tree!

Hints and Tips:

- Is Cubetto not working? Make sure you have switched on both the interface board and the Cubetto robot!
- Having a hard time getting Cubetto to the right spot? Pretend you are Cubetto and start by walking the path yourself. Pay attention to each step you take to move to the right squares.
- Pay attention to the arrow on top of Cubetto. That tells you where the front of Cubetto is.
- Want more guidance on Cubetto? Read the Instruction Guide to learn about the different features of the robot!

Extended Challenges

Computer Science: After picking apples with Dragon, Cubetto decided to give some of the extras to some friends who are just arriving into town on a boat. Program Cubetto to go from the trees to the harbor (square with the boat) so Cubetto can give away the extra apples.

Math: Cubetto picked 10 red apples and 6 green apples with Dragon. How many apples does Cubetto have total? Count with a friend. Then, can you code Cubetto to drop the red apples off at the "R" square and the green apples off at the "G" square?

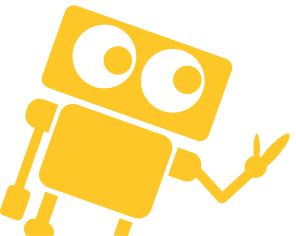
I
Innovator

22
Points

Cubetto

Story Time With Cubetto

Create your own story map or maze and have Cubetto journey through it!



MackinMaker

I
Innovator

22
Points

Materials:

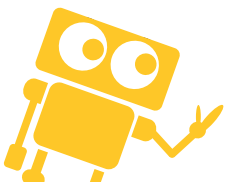
- Cubetto Playset
- Paper
- Markers or colored pencils

Quick Start:

1. Brainstorm what you want Cubetto's journey to be about, and where Cubetto will travel to.
2. Create your story map or maze.
3. Program Cubetto to take the journey you created. If Cubetto doesn't follow the path the way you want, try again until it does!
4. Share Cubetto's journey with a friend.

Hints and Tips:

- Is Cubetto not working? Make sure you have switched on both the interface board and the Cubetto robot!
- Having a hard time getting Cubetto to the right spot? Pretend you are Cubetto and start by walking the path yourself. Pay attention to each step you take to move to the right squares.
- Pay attention to the arrow on top of Cubetto. That tells you where the front of Cubetto is.
- Want more guidance on Cubetto? Read the Instruction Guide to learn about the different features of the robot!



Extended Challenges

Math: Write the numbers 1-8 on a large piece of paper, and code Cubetto to count to 10 with you.
Science: What is the life cycle of a plant? Create a story map to tell the story of how a plant grows, and program Cubetto to stop at each step.