

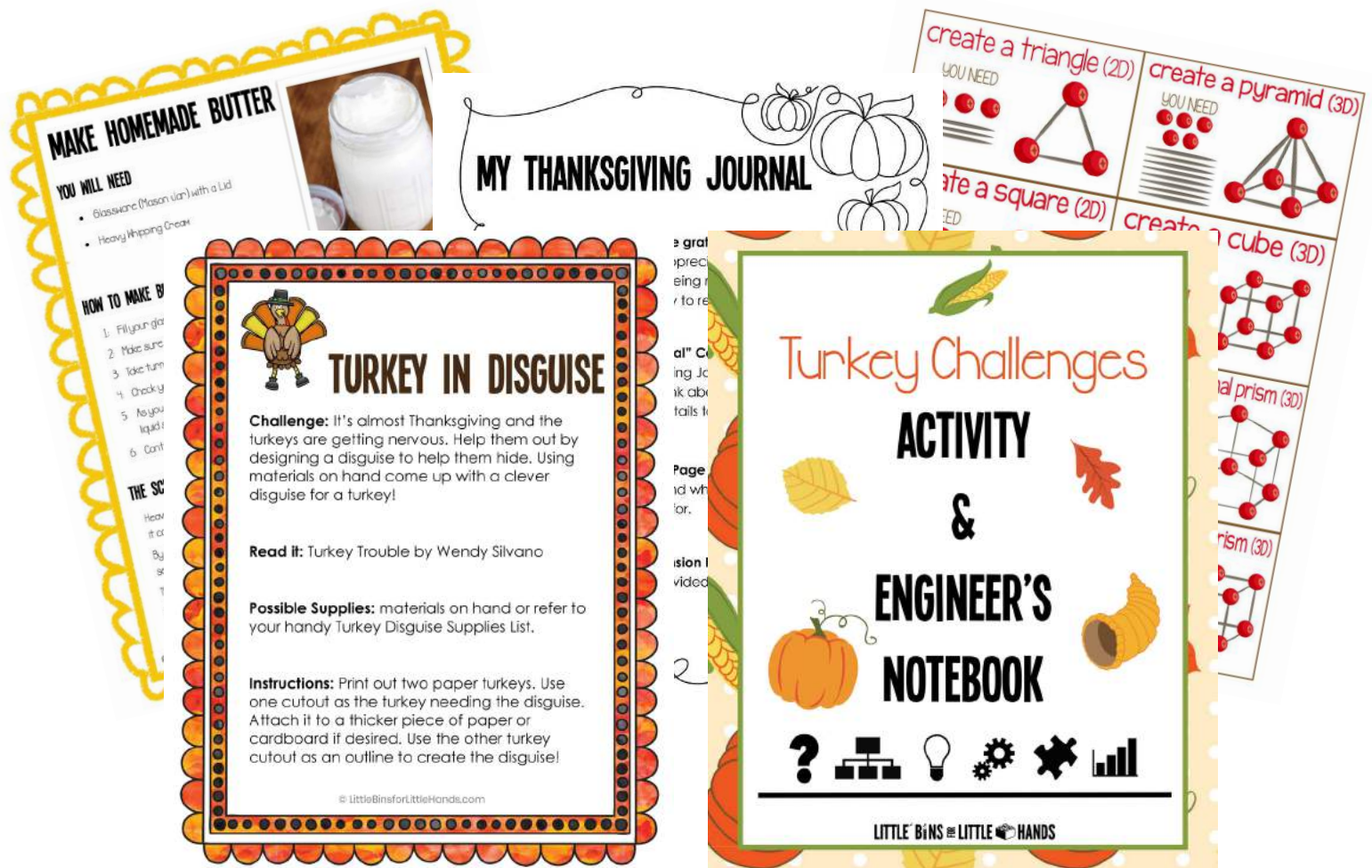
Thanksgiving STEM & Science

INCLUDING: STEMS-GIVING ACTIVITIES

www.littlebinsforlittlehands.com



THANKSGIVING STEM PACK



INTRODUCTION:

Welcome to your Thanksgiving STEM Pack filled with great projects every junior scientist or engineer should try! I hope it sparks creativity and curiosity within your young scientists, inventors, and engineers.

In this pack, find a fun selection of Thanksgiving activities and challenges. I have added supplies, setup instructions, and simple information for each activity. The pack also includes STEM projects and extras to share with your kids. Our packs now include simple writing activities!

Feel free to use this pack with one kiddo or a whole group of kids. You may copy activities as many times as you like for your class or group, but please send your friends to grab their pack instead of sharing files.





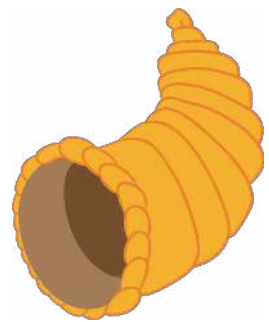
Turkey Challenges

ACTIVITY

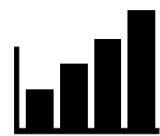


&

ENGINEER'S



NOTEBOOK

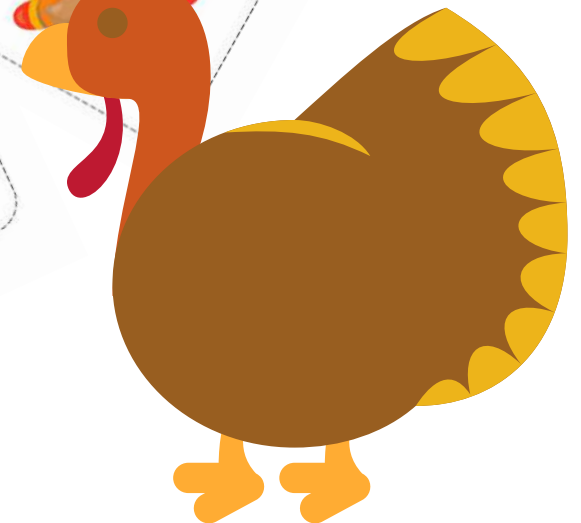
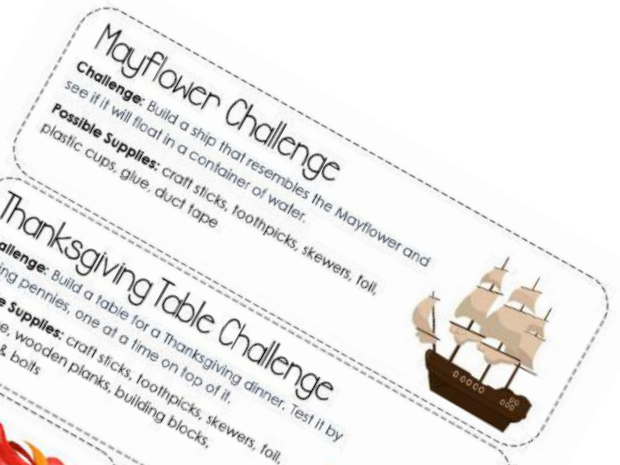


TURKEY QUICK STEM CHALLENGES

Add these Turkey STEM challenge cards to a simple engineering kit filled with easy to find supplies. Encourage the kids to get creative! Fun individual or group activity that's also perfect for a kid's table before or after Thanksgiving dinner! Also a fun way to engage the classroom before break!

What's Included:

- Handy Supply List
- Turkey Theme STEM Cards



Turkey Challenges Supply List

Acrylic paint
Aluminum foil
Baking soda
Baggies
Bamboo sticks
Cardboard
Coffee filters
Cookie cutters
Cornstarch
Cotton balls
Cotton swabs
Craft paper
Craft sticks
Cranberries
Dryer hose
Duct tape
Faux plants
Feathers
Felt
Flat marbles
Food coloring
Funnel
Gears
Glitter (gold)
Glitter glue
Glow stars
Glue
Golf tees
Hammer

Hinges
K'nex®
Leaves
LEGO® bricks
Lollipop sticks
Magnets
Marbles
Markers
Measuring cups
Nails
Paint
Paper
Paper towel tubes
Paper cups
Paper clips
Pencil
Pennies
Pipe cleaners
Plastic containers
Plastic cups
Plastic pipes
Plastic spoons
Ribbon
Rubber bands
Scissors
Screws
Screwdriver
Shredded paper
Skewers

Soil
Sponges
Springs
Stapler
Stickers
Straws
String
Styrofoam balls
Tape
Tape measure
Tea lights
Thread
Tin can
Toilet paper rolls
Toothpicks
Twine
Twist ties
Washi Tape
Water
Whirly gig
Wire
Wooden planks
Yarn
Zip ties

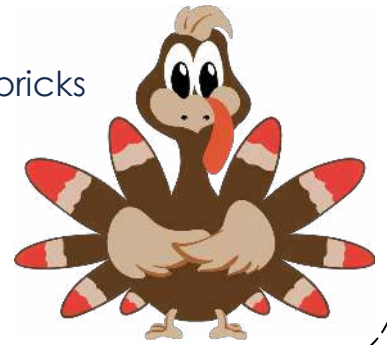


Turkey Building Challenge

Challenge: Build a three dimensional turkey out of building bricks or other materials.

Possible Supplies:

LEGO® bricks, wooden planks, craft sticks, K'nex®

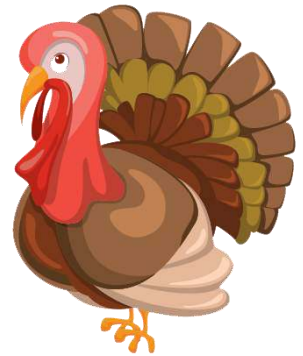


Turkey Disguise Challenge

Challenge: Design a clever and unique disguise for a turkey.

Possible Supplies:

turkey cut-out, fabric, needle and thread, Washi tape, scissors, craft paper, stickers, cotton balls, cotton swabs, glitter, google eyes, paint, feathers



Tallest Tower Challenge

Challenge: Build the tallest tower you can in 15 minutes with only cranberries and toothpicks.

Supplies: cranberries and toothpicks



Turkey Tower Challenge

Challenge: Build a tower as tall as yourself out of cups and place the turkey on top.

Possible Supplies: paper or plastic cups, turkey cut-out



Mayflower Challenge

Challenge: Build a ship that resembles the Mayflower and see if it will float in a container of water.

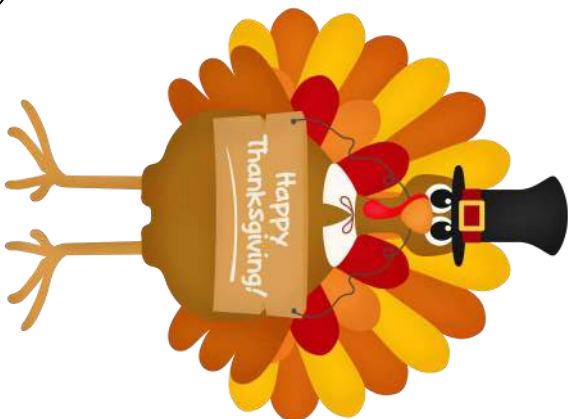
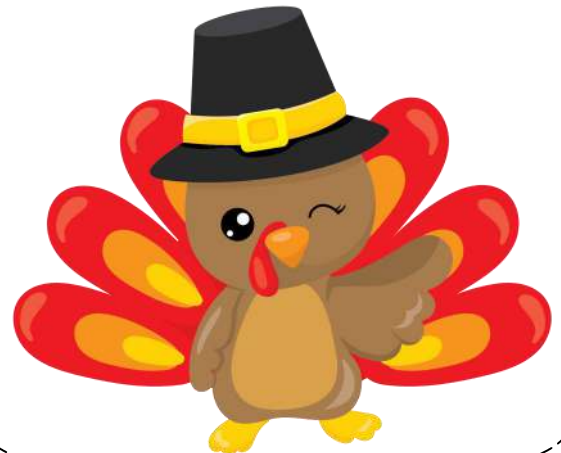
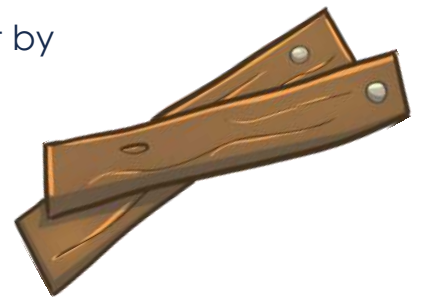
Possible Supplies: craft sticks, toothpicks, skewers, foil, plastic cups, glue, duct tape



Thanksgiving Table Challenge

Challenge: Build a table for a Thanksgiving dinner. Test it by placing pennies, one at a time, on top of it.

Possible Supplies: craft sticks, toothpicks, skewers, foil, duct tape, wooden planks, building blocks, glue, nuts & bolts

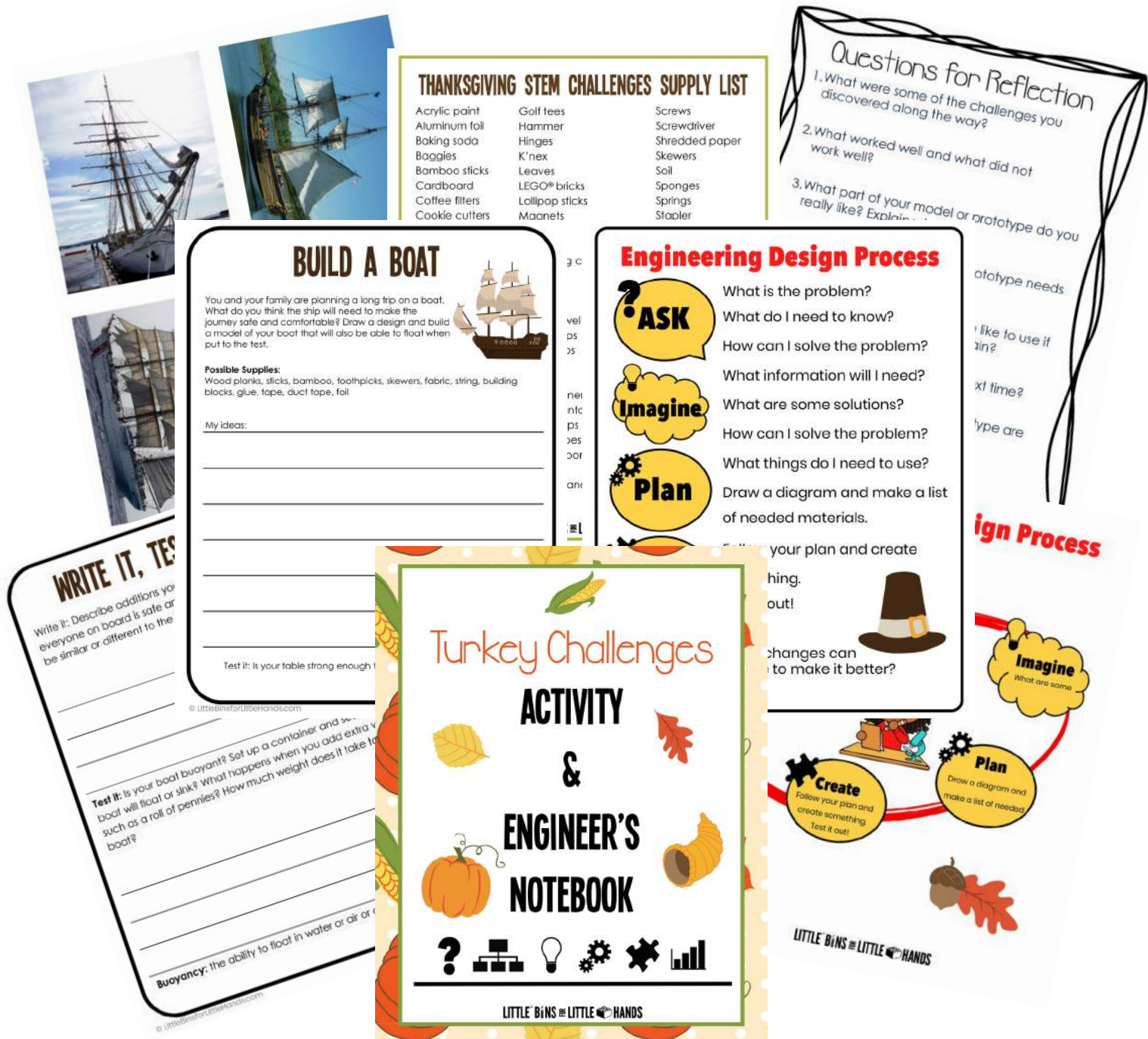


THANKSGIVING ENGINEERING PACK

Try these Thanksgiving themed, problem-based challenges, and get the kids thinking about the engineering design process.

What's Included:

- 4 Thanksgiving STEM Challenges
- STEM Journal Pages
- Engineering Design Process
- Questions for Reflection
- Writing Prompts, vocabulary, and more!



BUILD A BOAT



You and your family are planning a long trip on a boat. What do you think the ship will need to make the journey safe and comfortable? Draw a design and build a model of your boat that will also be able to float when put to the test.

Possible Supplies:

wood planks, sticks, bamboo, toothpicks, skewers, fabric, string, building blocks, glue, tape, duct tape, foil

My ideas:

Test it: Is your table strong enough to hold a can of cranberry sauce?

THANKSGIVING STEM CHALLENGES SUPPLY LIST

Acrylic paint	Golf tees	Screws
Aluminum foil	Hammer	Screwdriver
Baking soda	Hinges	Shredded paper
Baggies	K'nex®	Skewers
Bamboo sticks	Leaves	Soil
Cardboard	LEGO® bricks	Sponges
Coffee filters	Lollipop sticks	Springs
Cookie cutters	Magnets	Stapler
Cornstarch	Marbles	Stickers
Cotton balls	Markers	Straws
Cotton swabs	Measuring cups	String
Craft paper	Nails	Styrofoam balls
Craft sticks	Paint	Tape
Cranberries	Paper	Tape measure
Dryer hose	Paper towel tubes	Tea lights
Duct tape	Paper cups	Thread
Faux plants	Paper clips	Tin can
Feathers	Pencil	Toilet paper rolls
Felt	Pennies	Toothpicks
Flat marbles	Pipe cleaners	Twine
Food coloring	Plastic containers	Twist ties
Funnel	Plastic cups	Washi Tape
Gears	Plastic pipes	Water
Glitter (gold)	Plastic spoons	Whirly gig
Glitter glue	Ribbon	Wire
Glow stars	Rubber bands	Wooden planks
Glue	Scissors	Yarn
		Zip ties



WRITE IT, TEST IT, KNOW IT

Write it: Describe additions you would make to your boat so that everyone on board is safe and comfortable. How would your boat be similar or different to the Mayflower?

Test it: Is your boat buoyant? Set up a container and see if your boat will float or sink. What happens when you add extra weight, such as a roll of pennies? How much weight does it take to sink your boat?

Buoyancy: the ability to float in water, air, or a different fluid.

Engineering Design Process



Engineering Design Process



ASK

What is the problem?

What do I need to know?

How can I solve the problem?



Imagine

What information will I need?

What are some solutions?

How can I solve the problem?



Plan

What things do I need to use?

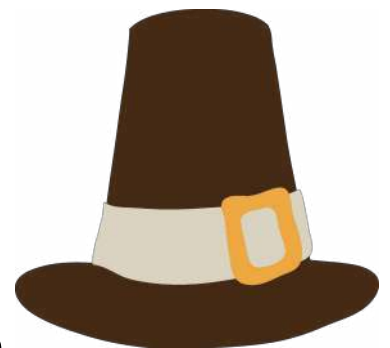
Draw a diagram and make a list of needed materials.



Create

Follow your plan and create something.

Test it out!



Improve

What changes can

I make to make it better?

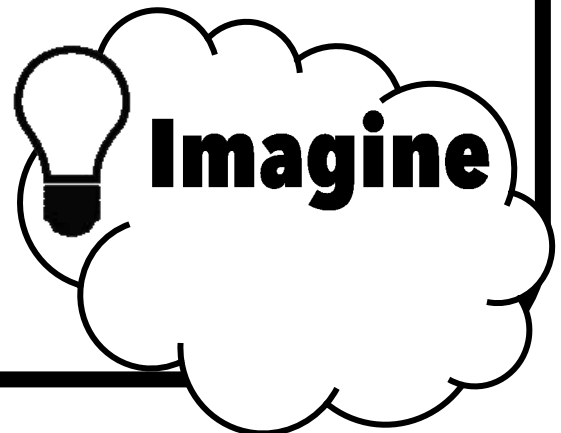
My STEM Challenge:



ASK

What's the problem?

BRAINSTORM AND RECORD possible solutions, as many as you can.



Imagine



Plan

Draw a diagram and make a list of needed materials.



Plan

My STEM Challenge:



Create

Look at the materials provided for use in creating your models.

My STEM Challenge:



Improve

Create a new drawing incorporating your ideas as well as the feedback you received on your prototype. Create an improved version of your original model.

Questions for Reflection

1. What were some of the challenges you discovered along the way?
2. What worked well and what did not work well?
3. What part of your model or prototype do you really like? Explain why.
4. What part of your model or prototype needs improvement? Explain why.
5. What other materials would you like to use if you could do this challenge again?
6. What would you do differently next time?
7. What parts of your model or prototype are similar to the real world version?



BUILD A SHELTER

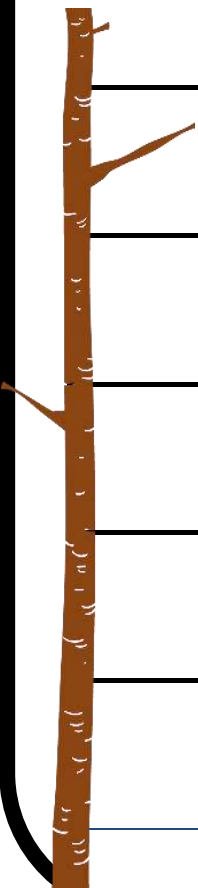


One of the biggest challenges the pilgrims faced was the harsh weather conditions. Can you design and build a shelter to protect the pilgrim from the weather such as rain, snow, hail, and extreme cold? Make sure the paper pilgrim can fit inside the shelter, and he or she has an exit and entry into the shelter.

Possible Supplies:

wood planks, hammer, nails, saw, craft sticks, toothpicks, skewers, duct tape, craft paper, building blocks

My ideas:



THANKSGIVING STEM CHALLENGES SUPPLY LIST

Acrylic paint
Aluminum foil
Baking soda
Baggies
Bamboo sticks
Cardboard
Coffee filters
Cookie cutters
Cornstarch
Cotton balls
Cotton swabs
Craft paper
Craft sticks
Cranberries
Cranberry sauce
Dryer hose
Duct tape
Faux plants
Feathers
Felt
Flat marbles
Food coloring
Funnel
Gears
Glitter (gold)
Glitter glue
Glow stars
Glue

Golf tees
Hammer
Hinges
K'nex®
Leaves
LEGO® bricks
Lollipop sticks
Magnets
Marbles
Markers
Measuring cups
Nails
Paint
Paper
Paper towel tubes
Paper cups
Paper clips
Pencil
Pennies
Pipe cleaners
Plastic containers
Plastic cups
Plastic pipes
Plastic spoons
Ribbon
Rubber bands
Scissors

Screws
Screwdriver
Shredded paper
Skewers
Soil
Sponges
Springs
Stapler
Stickers
Straws
String
Styrofoam balls
Tape
Tape measure
Tea lights
Thread
Tin can
Toilet paper rolls
Toothpicks
Twine
Twist ties
Washi Tape
Water
Whirly gig
Wire
Wooden planks
Yarn
Zip ties





BUILD A SHELTER WRITING PROMPT

Write it: Describe your shelter. What elements did you add to make your structure weatherproof? Will this shelter also work in warm or hot weather? Why or why not?



PILGRIM CUT-OUTS TO USE IN YOUR SHELTER.



Engineering Design Process



Engineering Design Process



ASK

What is the problem?

What do I need to know?

How can I solve the problem?



Imagine

What information will I need?

What are some solutions?

How can I solve the problem?



Plan

What things do I need to use?

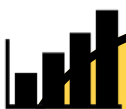
Draw a diagram and make a list of needed materials.



Create

Follow your plan and create something.

Test it out!



Improve

What changes can

I make to make it better?

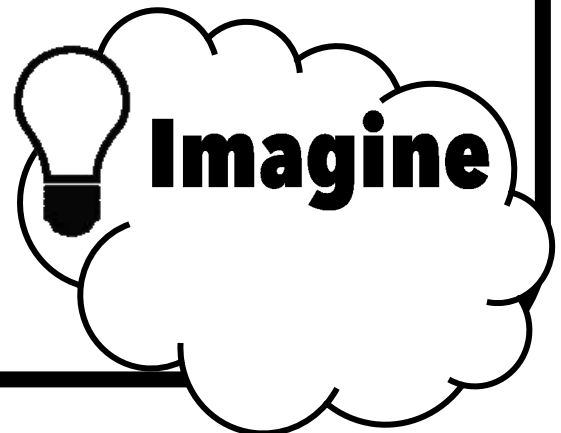
My STEM Challenge:



ASK

What's the problem?

BRAINSTORM AND RECORD possible solutions, as many as you can.



Imagine



Plan

Draw a diagram and make a list of needed materials.



THE

My STEM Challenge:



Create

Look at the materials provided for use in creating your models.

My STEM Challenge:



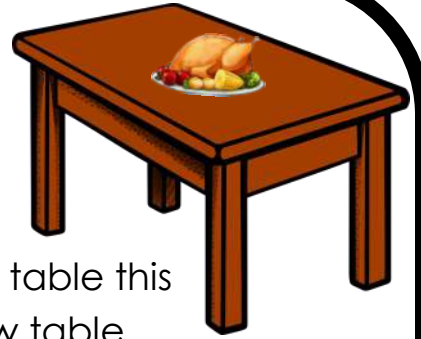
Improve

Create a new drawing incorporating your ideas as well as the feedback you received on your prototype. Create an improved version of your original model.

Questions for Reflection

1. What were some of the challenges you discovered along the way?
2. What worked well and what did not work well?
3. What part of your model or prototype do you really like? Explain why.
4. What part of your model or prototype needs improvement? Explain why.
5. What other materials would you like to use if you could do this challenge again?
6. What would you do differently next time?
7. What parts of your model or prototype are similar to the real world version?

BUILD A TABLE



There's going to be a large amount of food on the dining table this year for Thanksgiving. You've been asked to design a new table strong enough to hold all of the dishes, bowls, and platters! Draw a design and build a prototype!

Possible Supplies:

wood planks, hammer, nails, screws, screwdriver, saw, stapler, paint, brushes, foil, craft sticks, toothpicks, skewers, duct tape, craft paper, building blocks

My ideas:

Test it: Is your table strong enough to hold a can of cranberry sauce?

THANKSGIVING STEM CHALLENGES SUPPLY LIST

Acrylic paint
Aluminum foil
Baking soda
Baggies
Bamboo sticks
Cardboard
Coffee filters
Cookie cutters
Cornstarch
Cotton balls
Cotton swabs
Craft paper
Craft sticks
Cranberries
Cranberry sauce
Dryer hose
Duct tape
Faux plants
Feathers
Felt
Flat marbles
Food coloring
Funnel
Gears
Glitter (gold)
Glitter glue
Glow stars
Glue



Golf tees
Hammer
Hinges
K'nex®
Leaves
LEGO® bricks
Lollipop sticks
Magnets
Marbles
Markers
Measuring cups
Nails
Paint
Paper
Paper towel tubes
Paper cups
Paper clips
Pencil
Pennies
Pipe cleaners
Plastic containers
Plastic cups
Plastic pipes
Plastic spoons
Ribbon
Rubber bands
Scissors



Screws
Screwdriver
Shredded paper
Skewers
Soil
Sponges
Springs
Stapler
Stickers
Straws
String
Styrofoam balls
Tape
Tape measure
Tea lights
Thread
Tin can
Toilet paper rolls
Toothpicks
Twine
Twist ties
Washi Tape
Water
Whirly gig
Wire
Wooden planks
Yarn
Zip ties





Engineering Design Process



Engineering Design Process



ASK

What is the problem?

What do I need to know?

How can I solve the problem?



Imagine

What information will I need?

What are some solutions?

How can I solve the problem?



Plan

What things do I need to use?

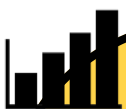
Draw a diagram and make a list of needed materials.



Create

Follow your plan and create something.

Test it out!



Improve

What changes can I make to get better results?

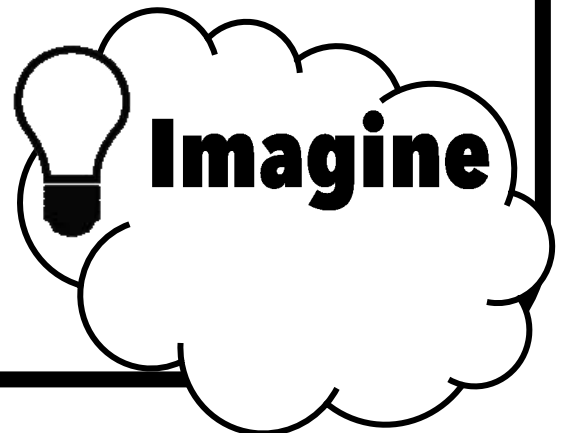
My STEM Challenge:



ASK

What's the problem?

BRAINSTORM AND RECORD possible solutions, as many as you can.

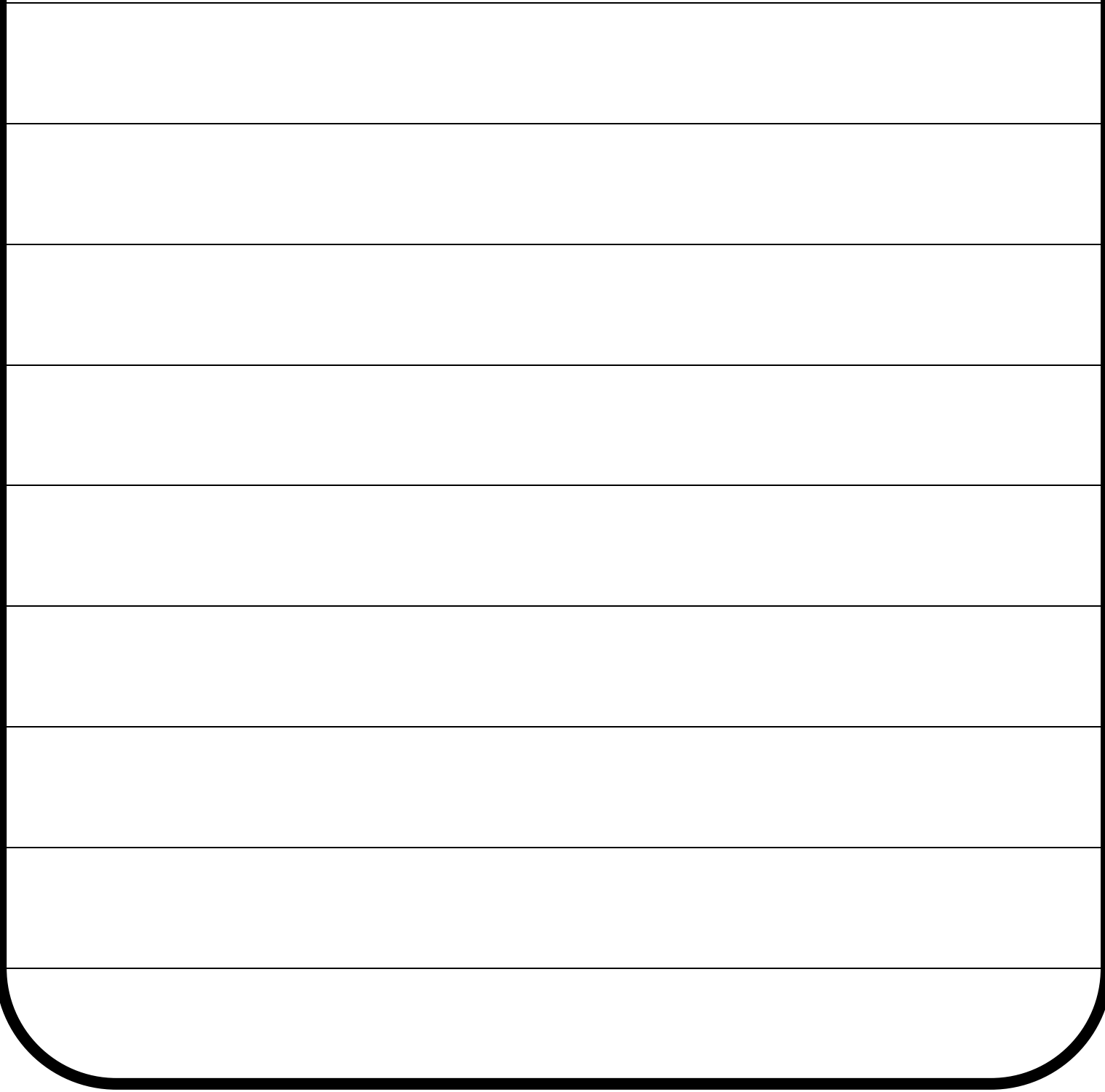


Imagine



Plan

Draw a diagram and make a list of needed materials.



Plan

My STEM Challenge:



Create

Look at the materials provided for use in creating your models.

My STEM Challenge:



Improve

Create a new drawing incorporating your ideas as well as the feedback you received on your prototype. Create an improved version of your original model.

Questions for Reflection

1. What were some of the challenges you discovered along the way?
2. What worked well and what did not work well?
3. What part of your model or prototype do you really like? Explain why.
4. What part of your model or prototype needs improvement? Explain why.
5. What other materials would you like to use if you could do this challenge again?
6. What would you do differently next time?
7. What parts of your model or prototype are similar to the real world version?



TURKEY ZIP LINE

The turkey's disguise wasn't good enough, and he needs a quick escape! Design a zip line with a special harness to hold a paper turkey and get him to safety!

Possible Supplies:

string, yarn, fish line, tape, balloon, fabric, rubber bands, straws, craft sticks

My ideas:

THANKSGIVING STEM CHALLENGES SUPPLY LIST

Acrylic paint	Glitter glue	Ribbon
Aluminum foil	Glow stars	Rubber bands
Baggies	Glue	Scissors
Bamboo sticks	Golf tees	Screws
Branches	Hammer	Screwdriver
Cardboard	Hinges	Shredded paper
Coffee filters	K'nex®	Skewers
Cookie cutters	Leaves	Soil
Cornstarch	LEGO® bricks	Sponges
Cotton balls	Lollipop sticks	Springs
Cotton swabs	Magnets	Stapler
Craft paper	Marbles	Stickers
Craft sticks	Markers	Straw
Cranberries	Measuring cups	String
Cranberry sauce	Nails	Styrofoam balls
Dryer hose	Paint	Tape
Duct	Paper	Tape measure
tape	Paper towel tubes	Tea lights
Faux	Paper cups	Thread
plants	Paper clips	Tin can
Feath-	Pencil	Toilet paper rolls
ers	Pennies	Toothpicks
Felt	Pipe cleaners	Twine
Flat marbles	Plastic containers	Twist ties
Food coloring	Plastic cups	Washi Tape
Funnel	Plastic pipes	Water
Gears	Plastic spoons	Whirly gig
Glitter (gold)		Wire





ZIP LINE SCIENCE



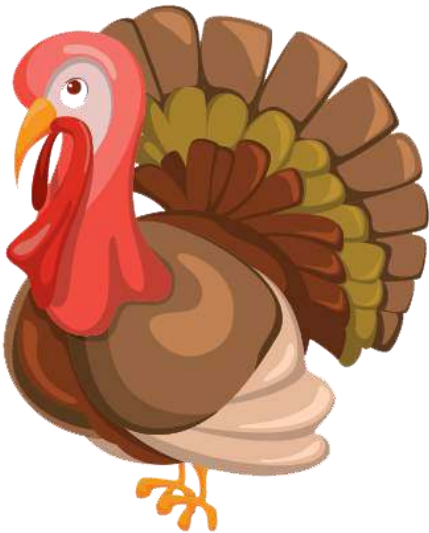
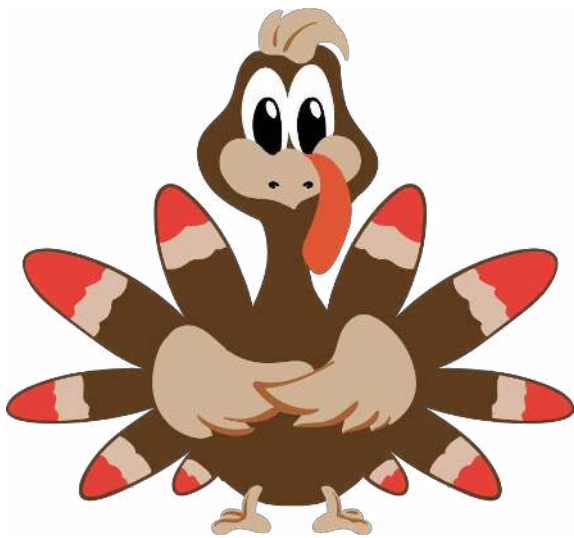
What is a zip line? A zip line is a transportation system made up of a cable stretched between points of different elevations. A pulley and harness attach a rider who moves by gravity.

Friction: The force two touching objects exert on each other that resists motion between them. Objects sliding past each other create friction.

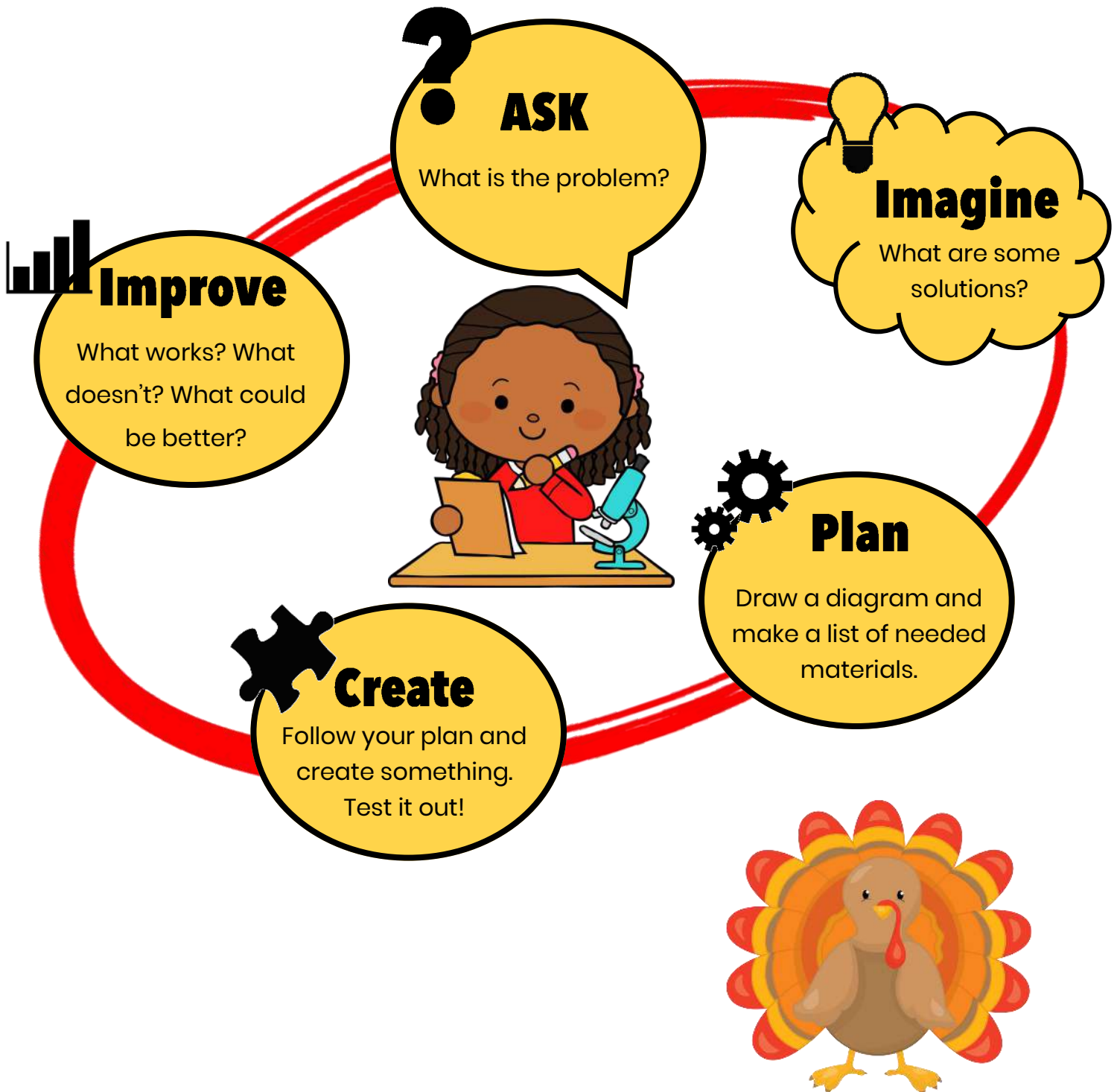
Mass: the amount of matter in an object.

Gravity: a force that pulls an object down toward the earth.

Cut out any of the turkeys photos below to use in your experiments.



Engineering Design Process



Engineering Design Process



ASK

What is the problem?

What do I need to know?

How can I solve the problem?



Imagine

What information will I need?

What are some solutions?

How can I solve the problem?



Plan

What things do I need to use?

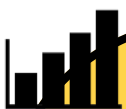
Draw a diagram and make a list of needed materials.



Create

Follow your plan and create something.

Test it out!



Improve

What changes can I make to get better results.

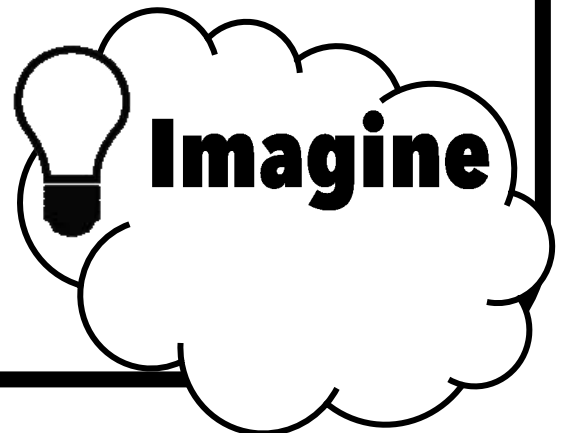
My STEM Challenge:



ASK

What's the problem?

BRAINSTORM AND RECORD possible solutions, as many as you can.

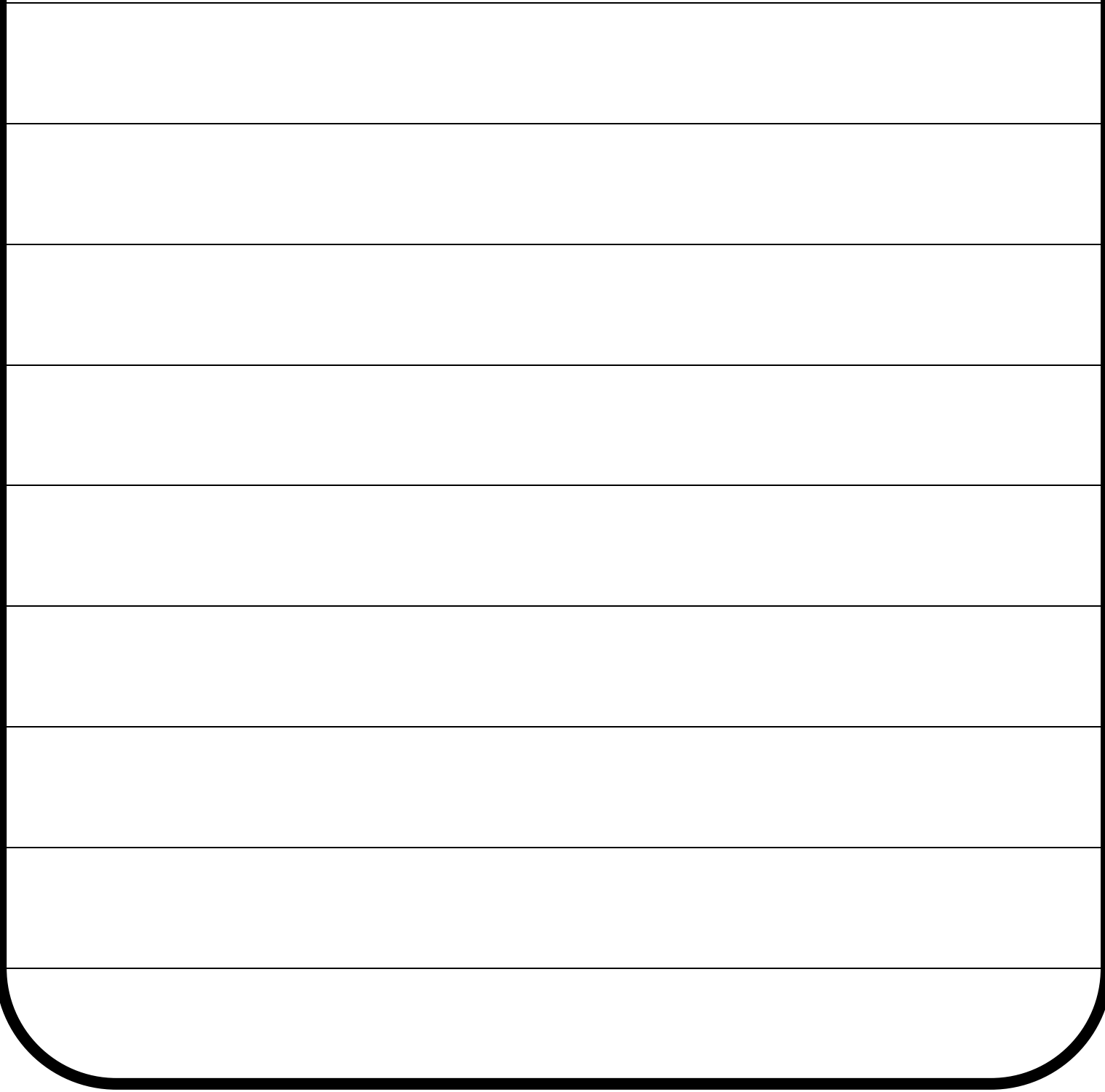


Imagine



Plan

Draw a diagram and make a list of needed materials.



Plan

My STEM Challenge:



Create

Look at the materials provided for use in creating your models.

My STEM Challenge:



Improve

Create a new drawing incorporating your ideas as well as the feedback you received on your prototype. Create an improved version of your original model.

Questions for Reflection

1. What were some of the challenges you discovered along the way?
2. What worked well and what did not work well?
3. What part of your model or prototype do you really like? Explain why.
4. What part of your model or prototype needs improvement? Explain why.
5. What other materials would you like to use if you could do this challenge again?
6. What would you do differently next time?
7. What parts of your model or prototype are similar to the real world version?

BONUS: THANKSGIVING FUN PACK

Play a game, make some matches, ask a question or two, play bingo, try an I-Spy, or do a wordsearch! Print and play.



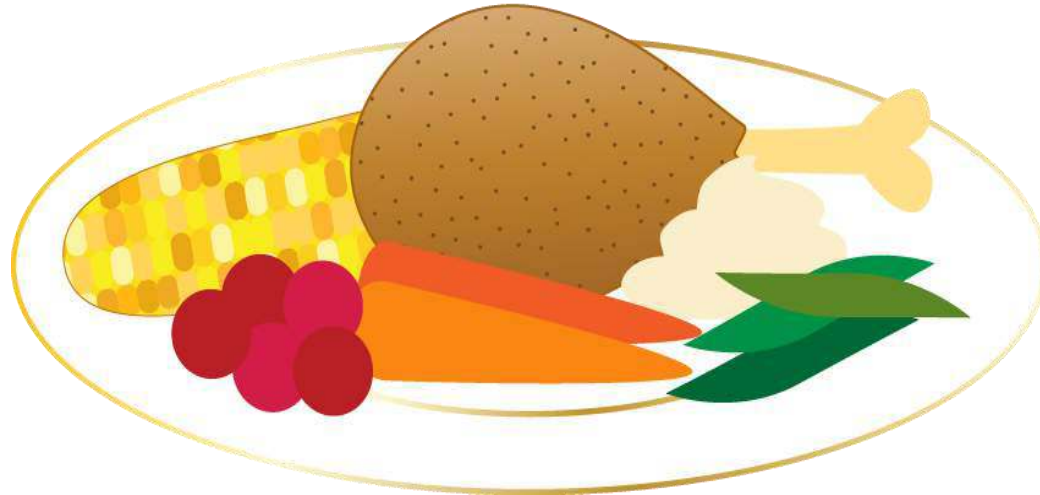
THANKSGIVING FUN

Would You Rather?
Conversation Starters



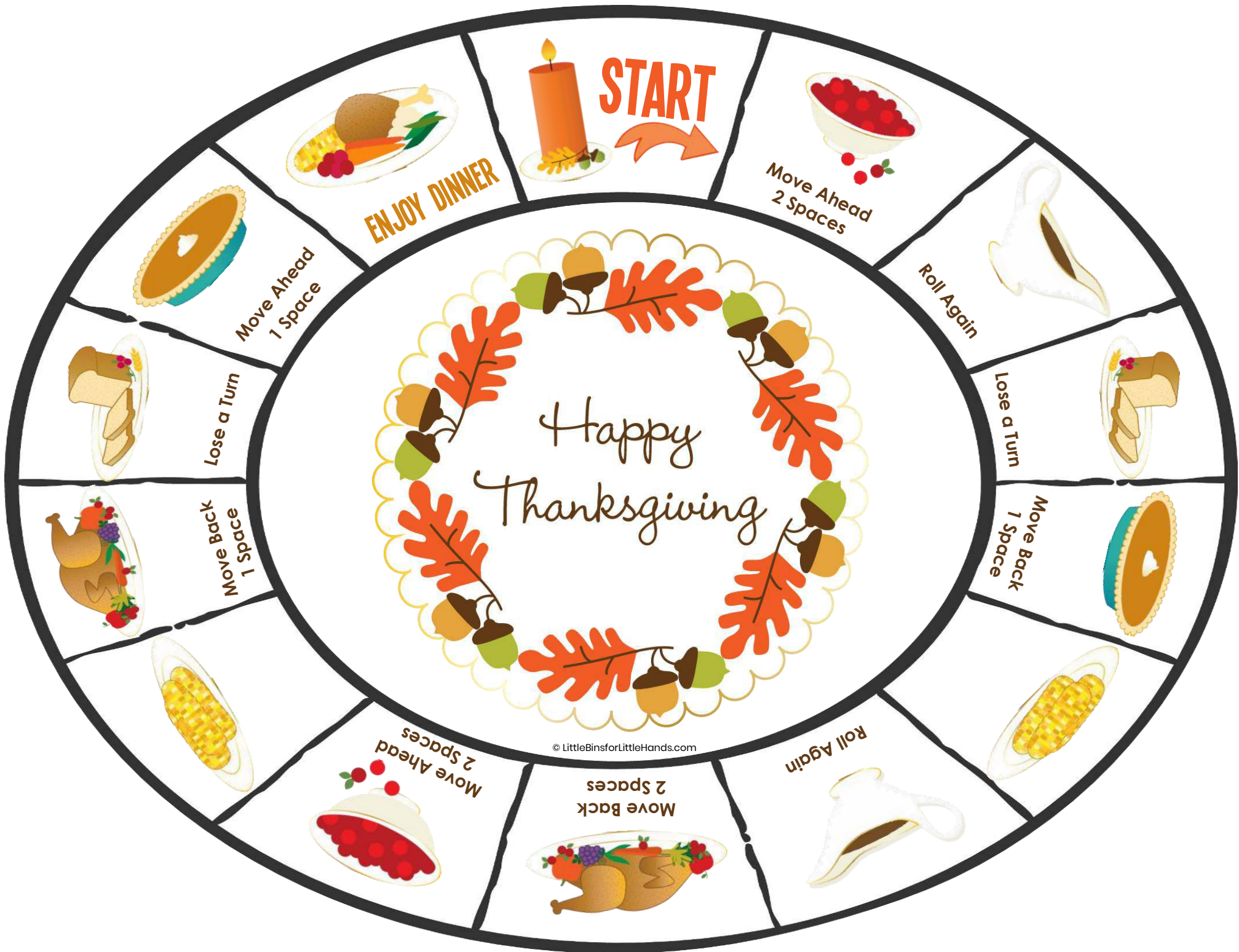
THANKSGIVING FUN

Race to Dinner



Board Game

© LittleBinsforLittleHands.com



Race to Dinner Game Instructions

Place all player pieces on the START section.
Each player takes a turn spinning the arrow on the spin board. Then proceed to the matching food item, follow the directions on each space you land on. The first one to enjoy dinner is the winner.

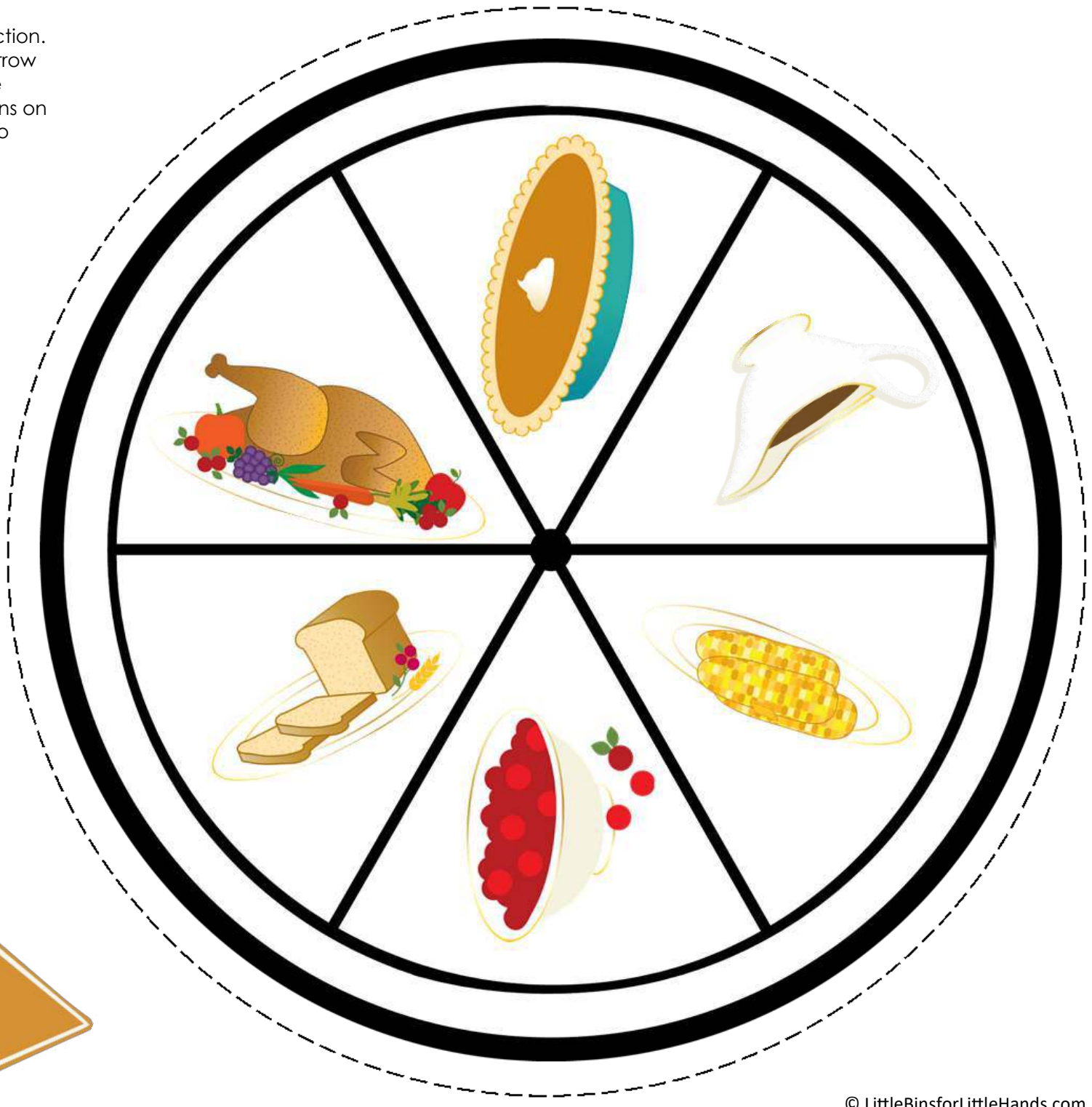
Game Prep Instructions

Print on cardstock.

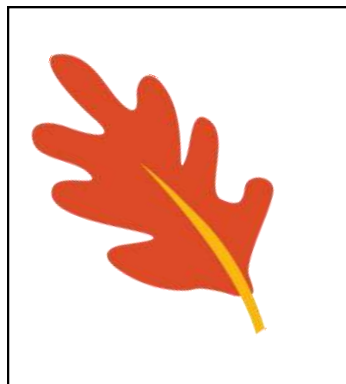
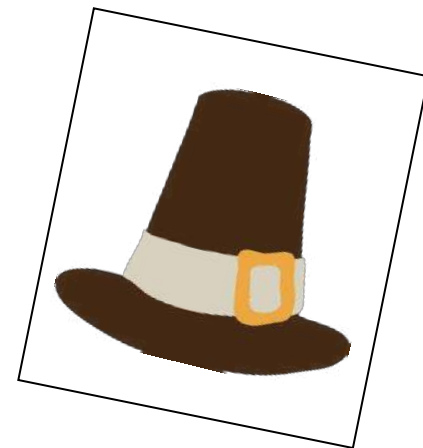
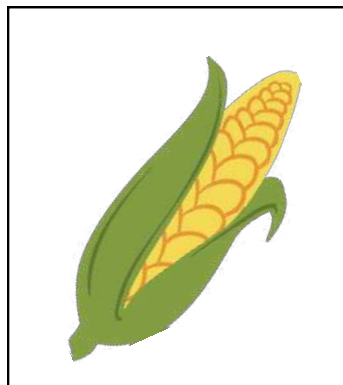
Cut out the game pieces, spin board and arrow.

Attach arrow to the center of the spin board using a brad.

Game Pieces



THANKSGIVING FUN BINGO GAME



THANKSGIVING FUN BINGO



© LittleBinsforLittleHands.com

THANKSGIVING FUN BINGO



© LittleBinsforLittleHands.com

THANKSGIVING FUN BINGO

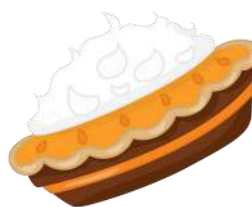
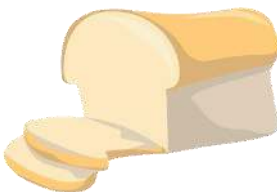
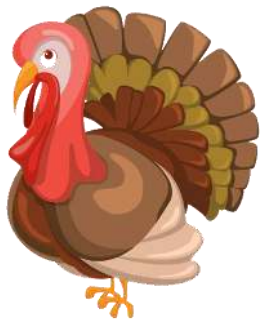
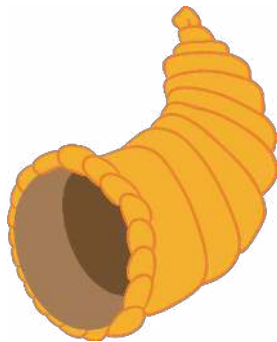
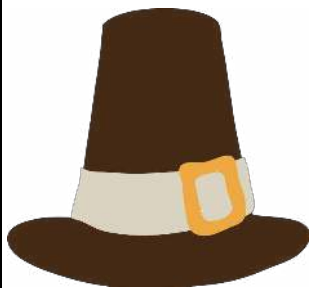


© LittleBinsforLittleHands.com

THANKSGIVING FUN BINGO



© LittleBinsforLittleHands.com





THANKSGIVING WORD SEARCH



Q	N	R	O	C	A	H	G	B	Q	Y	C	K	P	T
H	A	R	V	E	S	T	P	O	L	E	E	D	E	H
P	H	N	R	O	C	N	A	I	D	N	I	N	C	A
U	M	R	P	Q	J	M	M	Y	A	M	S	Y	A	N
M	J	A	A	E	U	A	T	C	A	S	S	R	N	K
P	B	P	Y	Q	F	U	C	I	X	E	W	R	S	S
K	D	P	M	F	R	I	P	B	K	L	O	E	D	G
I	U	L	Q	K	L	O	M	J	D	B	G	B	U	I
N	K	E	E	B	C	O	W	T	U	A	N	N	I	V
S	B	Y	R	U	P	D	W	U	M	T	I	A	H	I
Z	Y	E	N	Z	F	L	P	E	F	E	F	R	T	N
U	A	R	L	E	A	V	E	S	R	G	F	C	H	G
D	O	D	L	R	O	W	W	E	N	E	U	W	A	T
C	F	T	C	A	U	T	U	M	N	V	T	F	L	N
B	F	A	Y	V	E	E	P	T	R	E	S	S	E	D

Acorn

Apple

Autumn

Bread

Cranberry

Cornucopia

Dessert

Family

Thanksgiving

Harvest

Indian corn

Leaves

Mayflower

New world

Pecans

Pumpkin

Squash

Stuffing

Roast

Turkey

Vegetables

Yams

HAPPY THANKSGIVING



Would you rather?

eat pumpkin pie
or
sweet apple pie



Would you rather?

eat turkey
or
ham



Would you rather?

sit at the kid's table
or the
adult's table



Would you rather?

peel 100 potatoes
or clean the guts
out of a 100 pound
pumpkin



Would you rather?

have lime Jell-O® in your
mashed potatoes
or stuffing mixed
with candy corn



Would you rather?

have to wear a pilgrim
outfit everyday for a week
or never eat pizza
again



Would you rather?

eat Brussels sprouts
or have to wash
all the Thanksgiving
Day dishes



Would you rather?

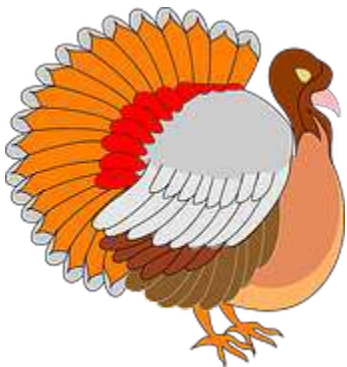
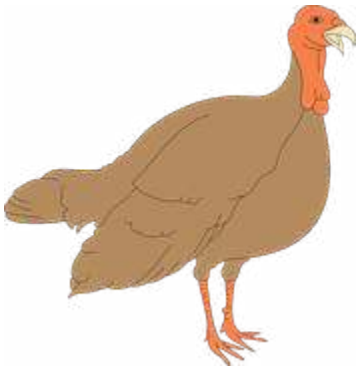
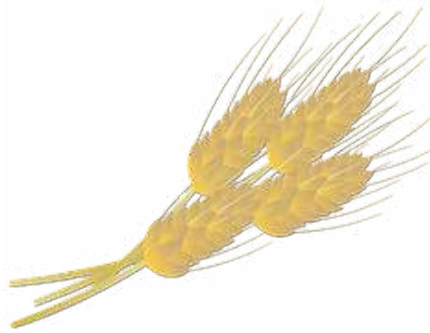
walk like a turkey
for an entire day
or talk like a Pilgrim
for a month



LittlebinsforLittleHands.com

THANKSGIVING I SPY

Count how many of each item you see. Write the number beside the picture.



THANKSGIVING I SPY



Would you rather?

use socks for your
napkin or use
tree branches for
utensils



Would you rather?

watch the Thanksgiving Day
parade all day
or watch
football all day



Would you rather?

eat dry overcooked
turkey or eat cold
gravy on your
mashed potatoes



Would you rather?

be invited to Thanksgiving
dinner at the
White House or
be invited to
the Super Bowl



Would you rather?

not eat turkey on
Thanksgiving or
no candy on
Halloween



Would you rather?

go swimming in a
cranberry bog or go
walking through a
pile of leaves to
your knees



Would you rather?

eat mashed potatoes
or mashed
acorn squash



Would you rather?

play board games
or charades
after Thanksgiving
dinner



LittlebinsforLittleHands.com

THANKSGIVING WRITING ACTIVITY

Our NEW cover page includes the opportunity to draw and write about Thanksgiving.

What's Included:

- Thanksgiving cover page with the space to draw
- Hints to extend the activity
- Writing prompt for Thanksgiving



MY THANKSGIVING JOURNAL

What does it mean to be grateful? It means to be warmly or deeply appreciative of kindness or benefits received. It is being ready to show appreciation and ready to return kindness.

"My Thanksgiving Journal" Cover Directions: On the cover of your Thanksgiving Journal, draw something you are grateful for. Think about how you feel in the moment. Add many details to your drawing.

"I Am Grateful" Writing Page Directions: Write down words that come to mind when you think about things you are grateful for.

Writing Extension Page Directions: Use the prompts provided to complete the page.

© Little Bins for Little Hands





MY THANKSGIVING JOURNAL

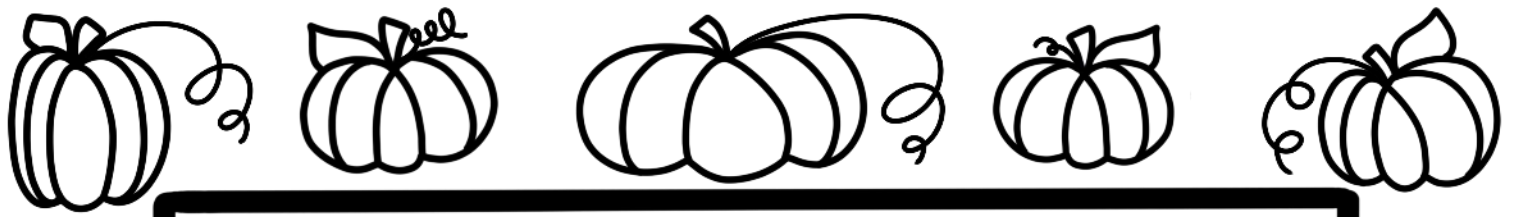
What does it mean to be grateful? It means to be warmly or deeply appreciative of kindness or benefits received. It is being ready to show appreciation and ready to return kindness.

“My Thanksgiving Journal” Cover Directions: On the cover of your Thanksgiving Journal, draw something you are grateful for. Think about how you feel in the moment. Add many details to your drawing.

“I Am Grateful” Writing Page Directions: Write down words that come to mind when you think about things you are grateful for.



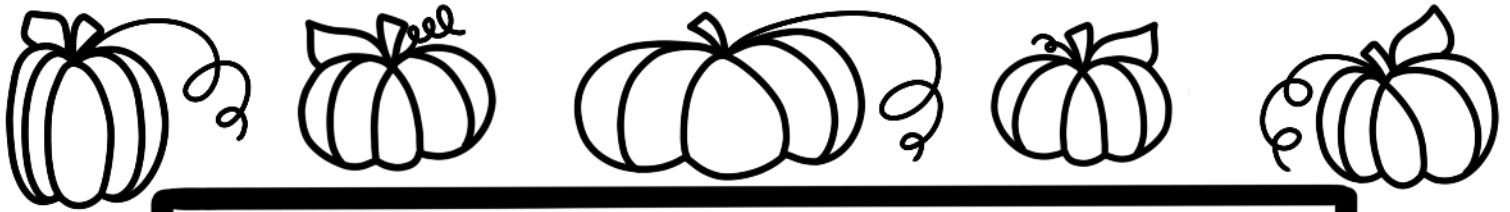
Writing Extension Page Directions: Use the prompts provided to complete the page.



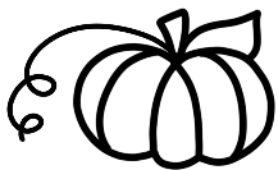
MY THANKSGIVING JOURNAL

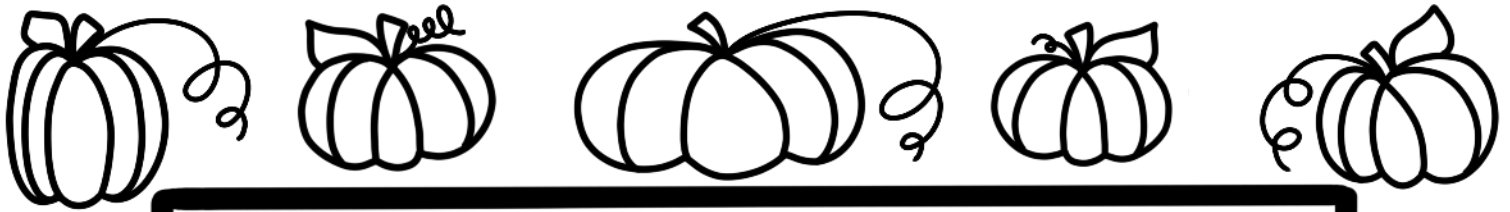


Something I Am Grateful For



I AM GRATEFUL

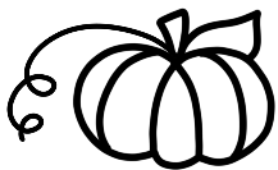




Why are you grateful for the picture you drew on the cover?

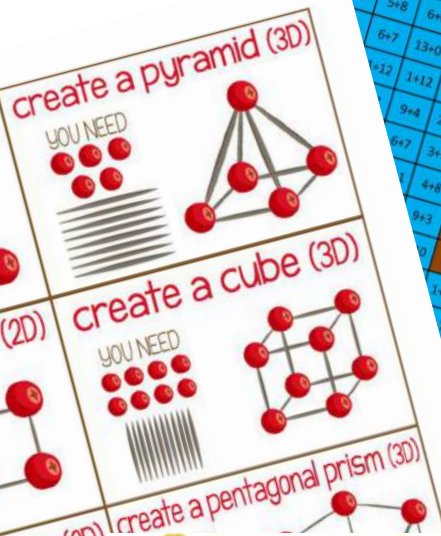
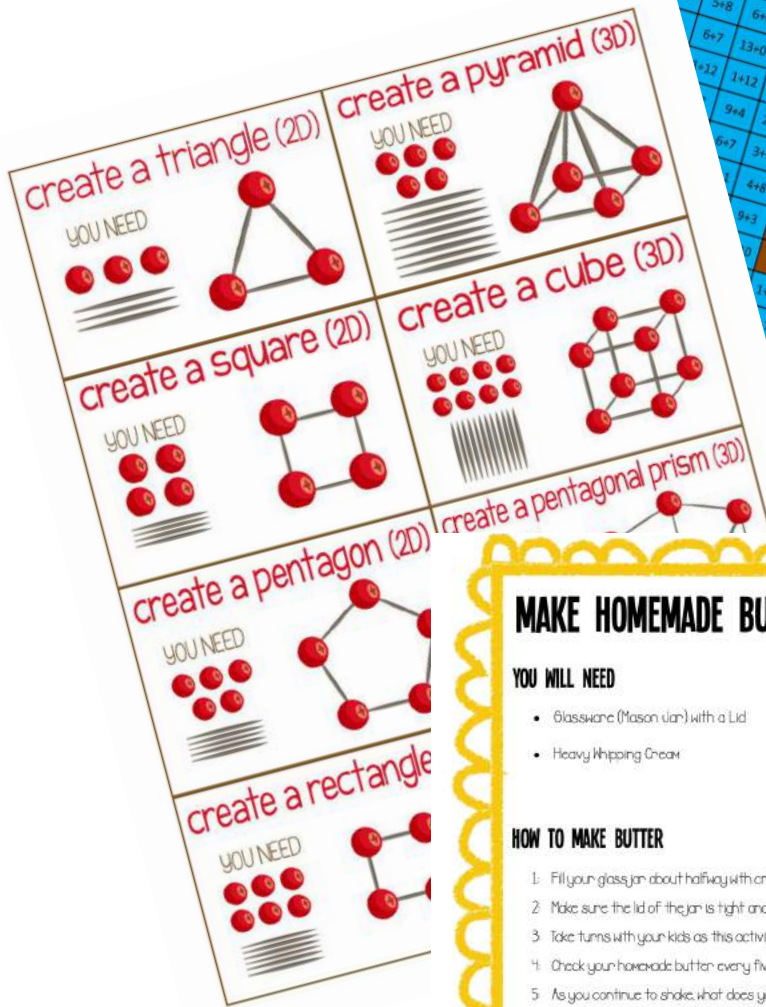


What would you like to be more grateful for in the future?



THANKSGIVING STEM EXTRAS

Build with cranberries, make homemade butter, and have fun with math-based coloring!



MAKE HOMEMADE BUTTER

YOU WILL NEED

- Glassware (Mason jar) with a Lid
- Heavy Whipping Cream

HOW TO MAKE BUTTER

1. Fill your glass jar about halfway with cream; you need room to shake the cream.
2. Make sure the lid of the jar is tight and shake.
3. Take turns with your kids as this activity requires a lot of arm strength!
4. Check your homemade butter every five minutes to observe the changes.
5. As you continue to shake, what does your child notice? (Can he or she still hear the liquid sloshing around? Why or why not?)
6. Continue to shake, shake, shake until you have butter!

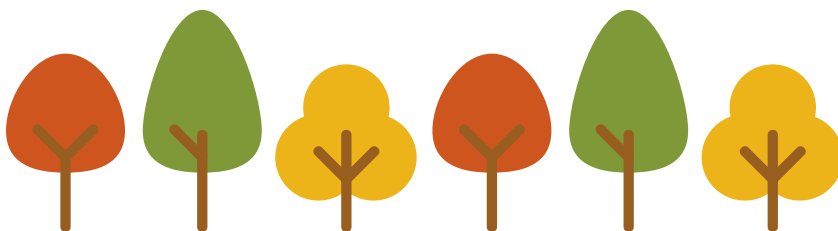
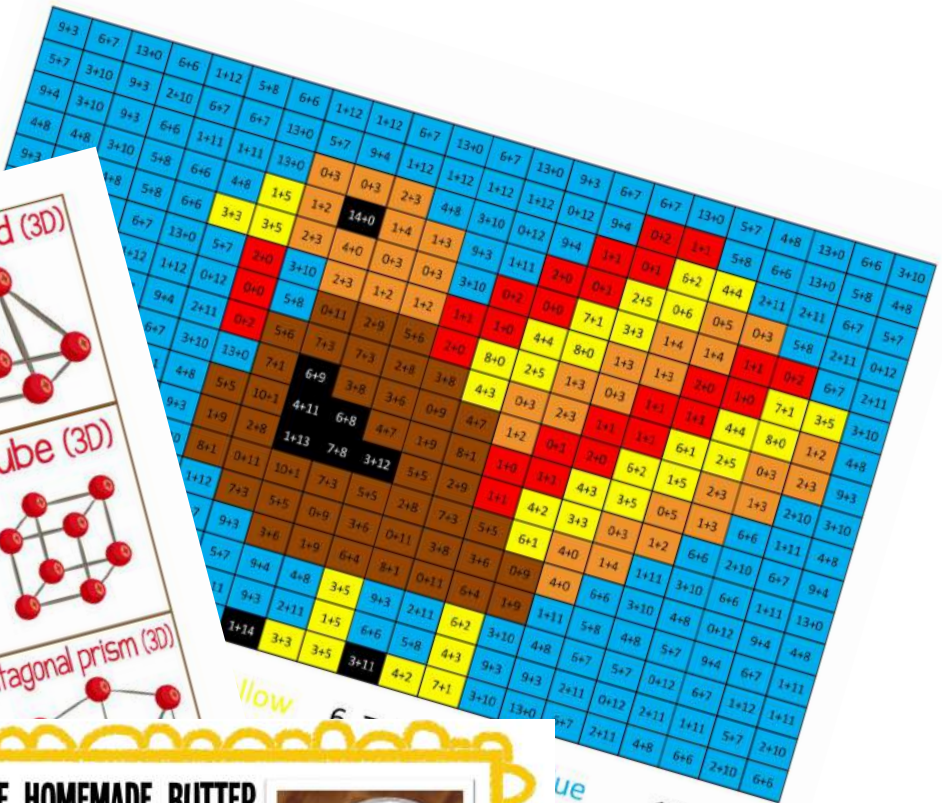
THE SCIENCE OF MAKING BUTTER

Heavy cream has a good deal of fat in it. That's why it can make such delicious treats.

By shaking the cream, the fat molecules begin to separate from the liquid.

The more the cream is shaken the more these fat molecules clump together to form a solid—which is the butter.

© HttleBitsForHttleHands.com



MAKE HOMEMADE BUTTER

YOU WILL NEED

- Glassware (Mason Jar) with a Lid
- Heavy Whipping Cream



HOW TO MAKE BUTTER

- 1: Fill your glass jar about halfway with cream, you need room to shake the cream!
- 2: Make sure the lid of the jar is tight and shake.
- 3: Take turns with your kids as this activity requires a lot of arm strength!
- 4: Check your homemade butter every five minutes to observe the changes.
- 5: As you continue to shake, what does your child notice? (Can he or she still hear the liquid sloshing around? Why or why not?)
- 6: Continue to shake, shake, shake until you have butter!

THE SCIENCE OF MAKING BUTTER

Heavy cream has a good deal of fat in it. That's why it can make such delicious items.

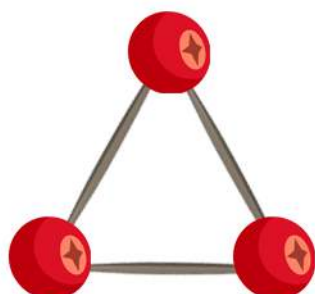
By shaking the cream, the fat molecules begin to separate from the liquid.

The more the cream is shaken the more these fat molecules clump together to form a solid—which is the butter.



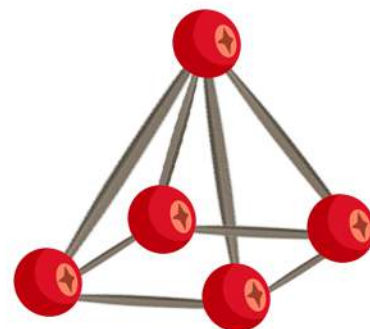
create a triangle (2D)

YOU NEED



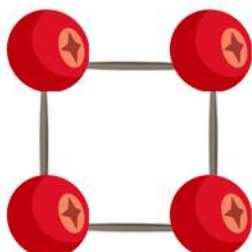
create a pyramid (3D)

YOU NEED



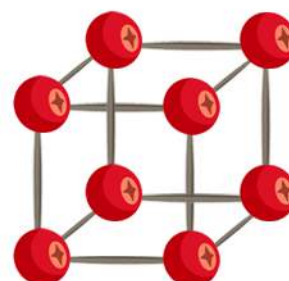
create a square (2D)

YOU NEED



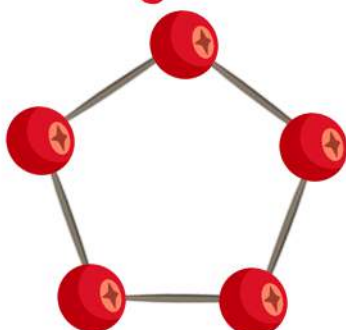
create a cube (3D)

YOU NEED



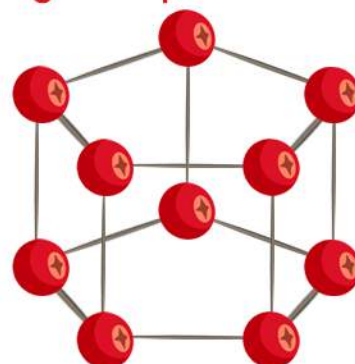
create a pentagon (2D)

YOU NEED



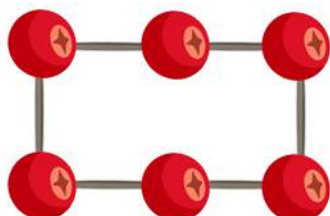
create a pentagonal prism (3D)

YOU NEED



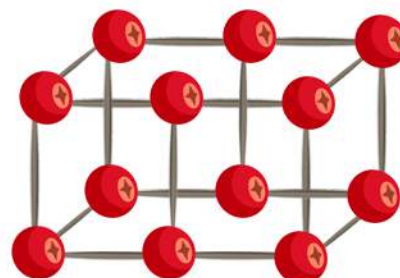
create a rectangle (2D)

YOU NEED



create a rectangular prism (3D)

YOU NEED



9+3	6+7	13+0	6+6	1+12	5+8	6+6	1+12	1+12	6+7	13+0	6+7	13+0	9+3	6+7	6+7	13+0	5+7	4+8	13+0	6+6	3+10
5+7	3+10	9+3	2+10	6+7	6+7	13+0	5+7	9+4	1+12	1+12	1+12	1+12	0+12	9+4	0+2	1+1	5+8	6+6	13+0	5+8	4+8
9+4	3+10	9+3	6+6	1+11	1+11	13+0	0+3	0+3	2+3	4+8	3+10	0+12	9+4	1+1	0+1	6+2	4+4	2+11	2+11	6+7	5+7
4+8	4+8	3+10	5+8	6+6	4+8	1+5	1+2	14+0	1+4	1+3	9+3	1+11	2+0	0+1	2+5	0+6	0+5	0+3	5+8	2+11	0+12
9+3	5+7	4+8	5+8	6+6	3+3	3+5	2+3	4+0	0+3	0+3	3+10	0+2	0+0	7+1	3+3	1+4	1+4	1+1	0+2	6+7	2+11
5+7	0+12	9+4	6+7	13+0	5+7	2+0	3+10	2+3	1+2	1+2	1+1	1+0	4+4	8+0	1+3	1+3	2+0	1+0	7+1	3+5	3+10
1+11	2+11	13+0	1+12	1+12	0+12	0+0	5+8	0+11	2+9	5+6	2+0	8+0	2+5	1+3	0+3	1+1	1+1	4+4	8+0	1+2	4+8
5+7	4+8	3+10	5+7	9+4	2+11	0+2	5+6	7+3	7+3	2+8	3+8	4+3	0+3	2+3	1+1	1+1	6+1	2+5	0+3	2+3	9+3
6+6	9+3	2+11	2+10	6+7	3+10	13+0	7+1	6+9	3+8	3+6	0+9	4+7	1+2	0+1	2+0	6+2	1+5	2+3	1+3	2+10	3+10
13+0	4+8	1+11	6+6	1+11	4+8	5+5	10+1	4+11	6+8	4+7	1+9	8+1	1+0	1+1	4+3	3+5	0+5	1+3	6+6	1+11	4+8
1+12	13+0	3+10	5+7	4+8	9+3	1+9	2+8	1+13	7+8	3+12	5+5	2+9	1+1	4+2	3+3	0+3	1+2	6+6	2+10	6+7	9+4
9+4	9+3	9+3	3+10	9+3	3+10	8+1	0+11	10+1	7+3	5+5	2+8	7+3	5+5	6+1	4+0	1+4	1+11	3+10	6+6	1+11	13+0
6+7	4+10	5+10	5+9	13+0	6+6	1+12	7+3	5+5	0+9	3+6	0+11	3+8	3+6	0+9	4+0	6+6	3+10	4+8	0+12	9+4	4+8
1+11	5+9	7+7	6+9	9+3	2+10	6+7	9+3	3+6	1+9	6+4	8+1	0+11	6+4	1+9	1+11	5+8	4+8	5+7	9+4	6+7	1+11
1+12	2+13	7+8	2+12	9+3	6+6	1+11	5+7	9+4	4+8	3+5	9+3	2+11	6+2	3+10	4+8	6+7	5+7	0+12	6+7	1+12	1+11
9+4	10+0	2+5	4+5	3+10	5+8	6+6	1+11	9+3	2+11	1+5	6+6	5+8	4+3	9+3	9+3	2+11	0+12	2+11	1+11	5+7	2+10
2+13	7+7	6+8	5+10	3+12	9+4	1+12	5+7	1+14	3+3	3+5	3+11	4+2	7+1	3+10	13+0	6+7	2+11	4+8	6+6	2+10	6+6

red 0, 1, 2

orange 3, 4, 5

yellow 6, 7, 8

brown 9, 10, 11

blue 12, 13

black 14, 15

9+3	6+7	13+0	6+6	1+12	5+8	6+6	1+12	1+12	6+7	13+0	6+7	13+0	9+3	6+7	6+7	13+0	5+7	4+8	13+0	6+6	3+10
5+7	3+10	9+3	2+10	6+7	6+7	13+0	5+7	9+4	1+12	1+12	1+12	1+12	0+12	9+4	0+2	1+1	5+8	6+6	13+0	5+8	4+8
9+4	3+10	9+3	6+6	1+11	1+11	13+0	0+3	0+3	2+3	4+8	3+10	0+12	9+4	1+1	0+1	6+2	4+4	2+11	2+11	6+7	5+7
4+8	4+8	3+10	5+8	6+6	4+8	1+5	1+2	14+0	1+4	1+3	9+3	1+11	2+0	0+1	2+5	0+6	0+5	0+3	5+8	2+11	0+12
9+3	5+7	4+8	5+8	6+6	3+3	3+5	2+3	4+0	0+3	0+3	3+10	0+2	0+0	7+1	3+3	1+4	1+4	1+1	0+2	6+7	2+11
5+7	0+12	9+4	6+7	13+0	5+7	2+0	3+10	2+3	1+2	1+2	1+1	1+0	4+4	8+0	1+3	1+3	2+0	1+0	7+1	3+5	3+10
1+11	2+11	13+0	1+12	1+12	0+12	0+0	5+8	0+11	2+9	5+6	2+0	8+0	2+5	1+3	0+3	1+1	1+1	4+4	8+0	1+2	4+8
5+7	4+8	3+10	5+7	9+4	2+11	0+2	5+6	7+3	7+3	2+8	3+8	4+3	0+3	2+3	1+1	1+1	6+1	2+5	0+3	2+3	9+3
6+6	9+3	2+11	2+10	6+7	3+10	13+0	7+1	6+9	3+8	3+6	0+9	4+7	1+2	0+1	2+0	6+2	1+5	2+3	1+3	2+10	3+10
13+0	4+8	1+11	6+6	1+11	4+8	5+5	10+1	4+11	6+8	4+7	1+9	8+1	1+0	1+1	4+3	3+5	0+5	1+3	6+6	1+11	4+8
1+12	13+0	3+10	5+7	4+8	9+3	1+9	2+8	1+13	7+8	3+12	5+5	2+9	1+1	4+2	3+3	0+3	1+2	6+6	2+10	6+7	9+4
9+4	9+3	9+3	3+10	9+3	3+10	8+1	0+11	10+1	7+3	5+5	2+8	7+3	5+5	6+1	4+0	1+4	1+11	3+10	6+6	1+11	13+0
6+7	4+10	5+10	5+9	13+0	6+6	1+12	7+3	5+5	0+9	3+6	0+11	3+8	3+6	0+9	4+0	6+6	3+10	4+8	0+12	9+4	4+8
1+11	5+9	7+7	6+9	9+3	2+10	6+7	9+3	3+6	1+9	6+4	8+1	0+11	6+4	1+9	1+11	5+8	4+8	5+7	9+4	6+7	1+11
1+12	2+13	7+8	2+12	9+3	6+6	1+11	5+7	9+4	4+8	3+5	9+3	2+11	6+2	3+10	4+8	6+7	5+7	0+12	6+7	1+12	1+11
9+4	10+0	2+5	4+5	3+10	5+8	6+6	1+11	9+3	2+11	1+5	6+6	5+8	4+3	9+3	9+3	2+11	0+12	2+11	1+11	5+7	2+10
2+13	7+7	6+8	5+10	3+12	9+4	1+12	5+7	1+14	3+3	3+5	3+11	4+2	7+1	3+10	13+0	6+7	2+11	4+8	6+6	2+10	6+6

red 0, 1, 2

orange 3, 4, 5

yellow 6, 7, 8

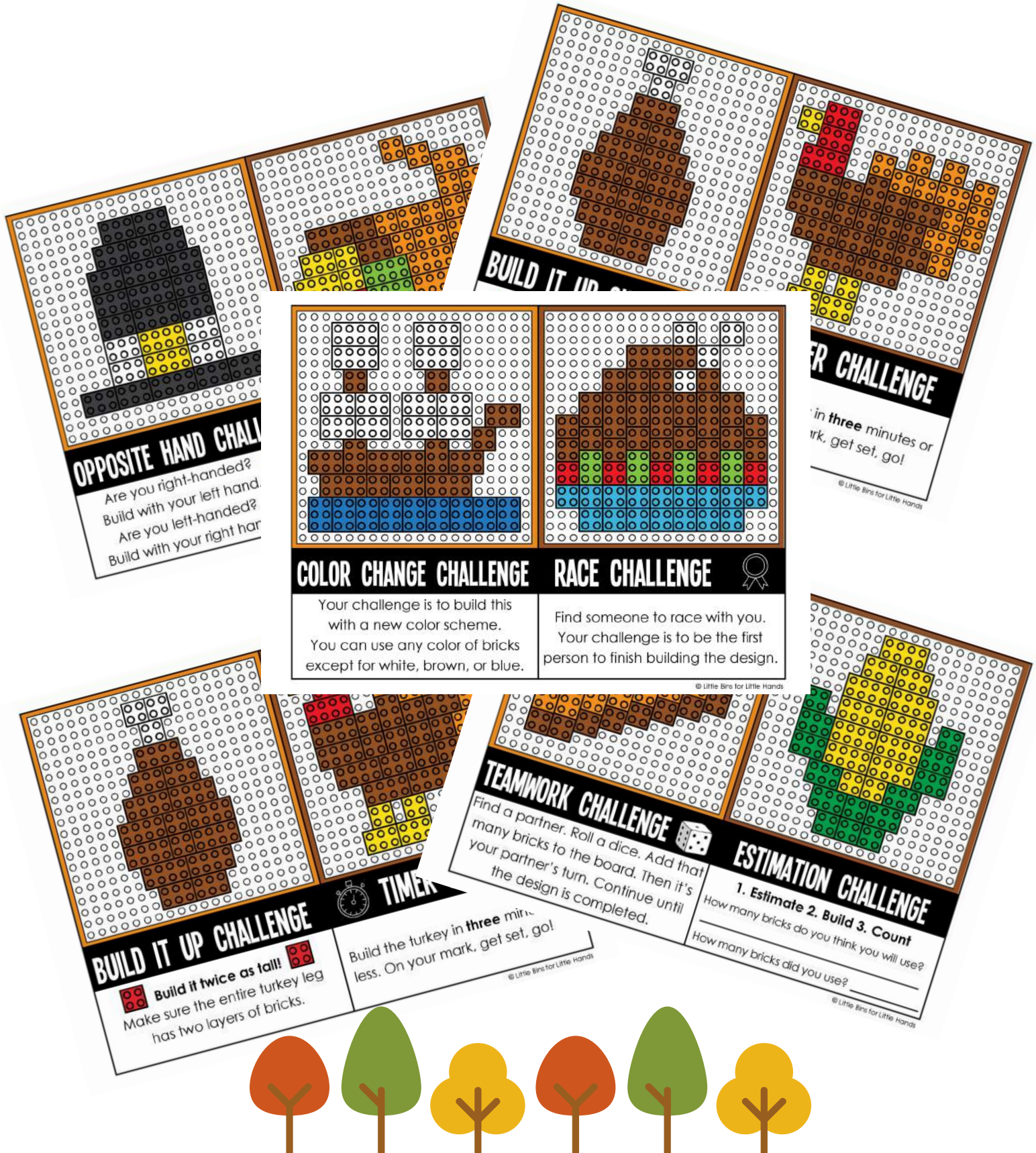
brown 9, 10, 11

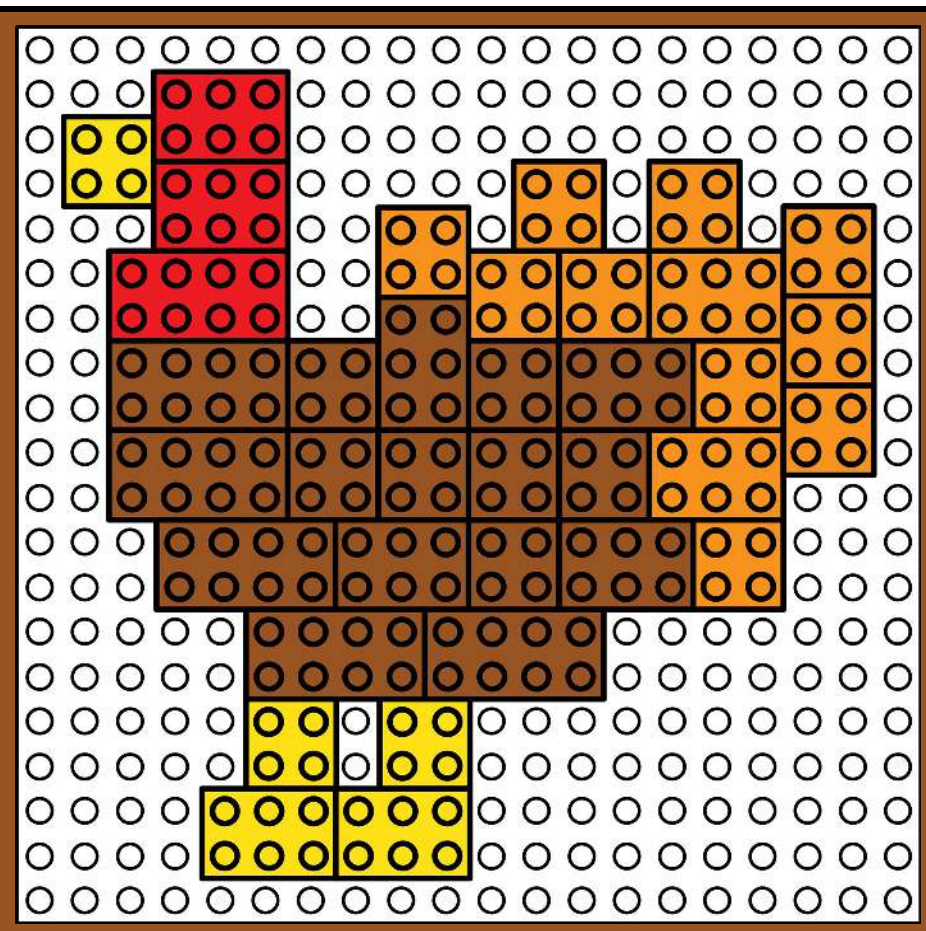
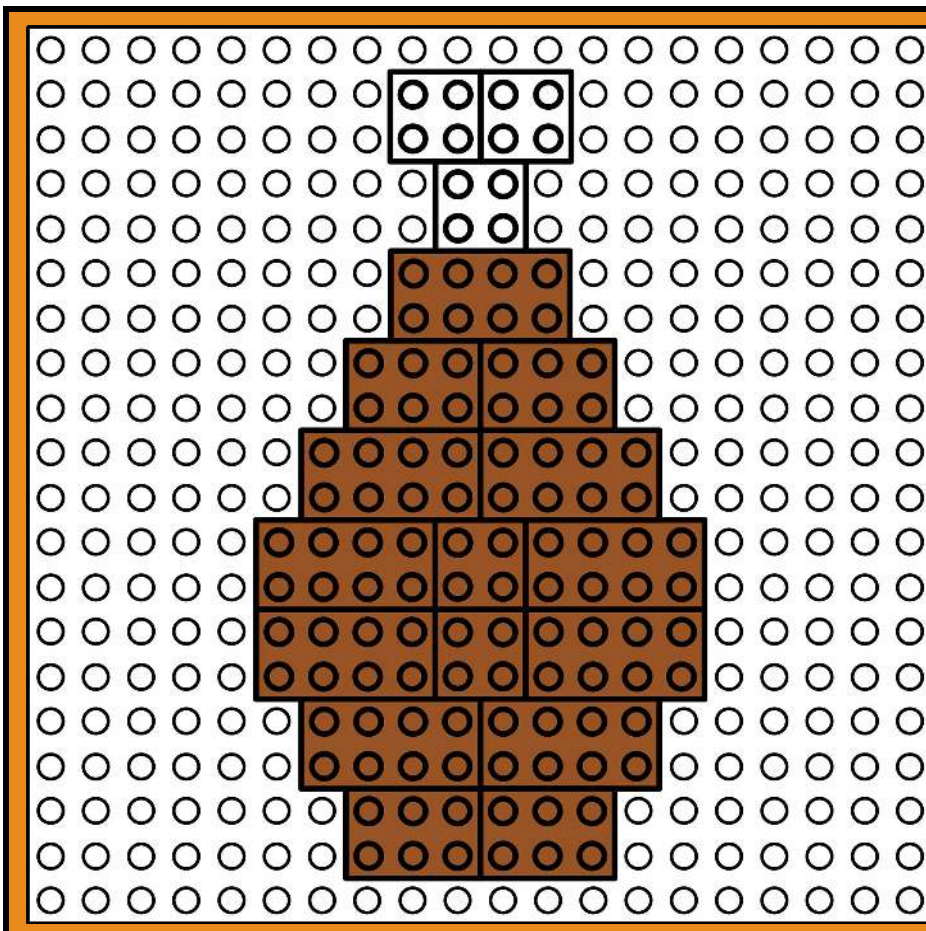
blue 12, 13

black 14, 15

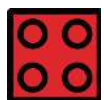
THANKSGIVING BRICK BUILDING

Try these Thanksgiving themed brick building activities perfect for your brick building fans. Add to centers, quiet time activities, group projects, and more!





BUILD IT UP CHALLENGE



Build it twice as tall!

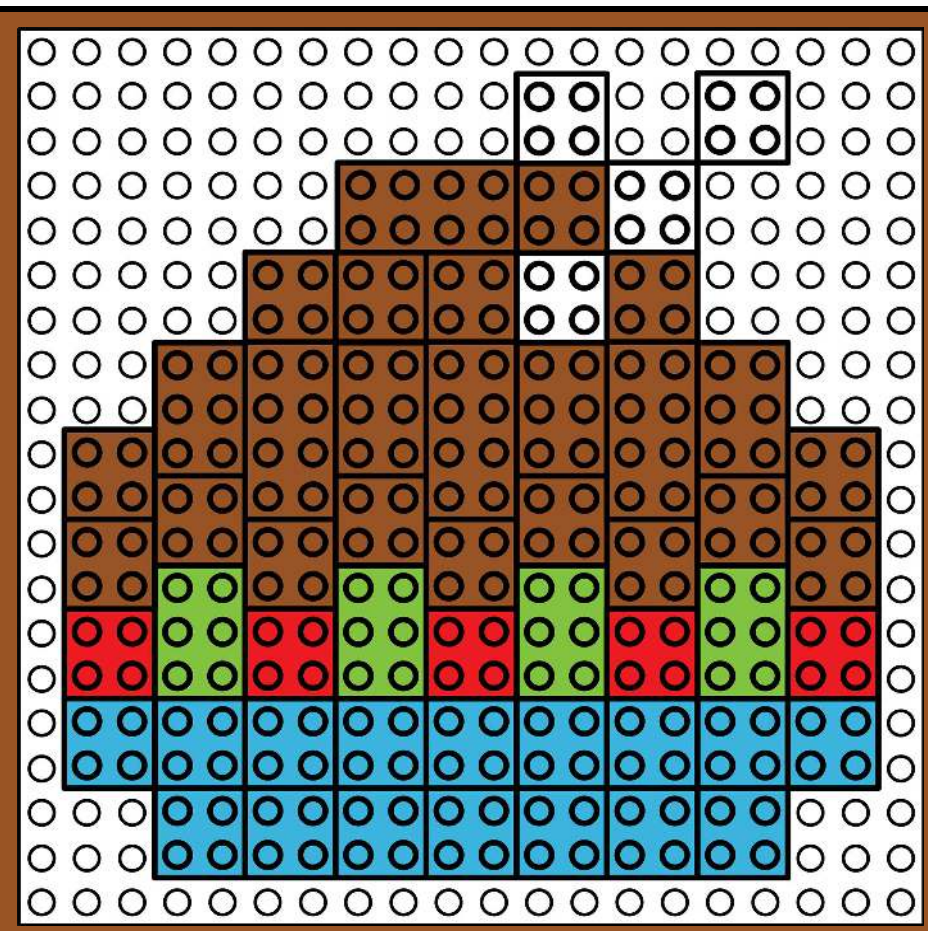
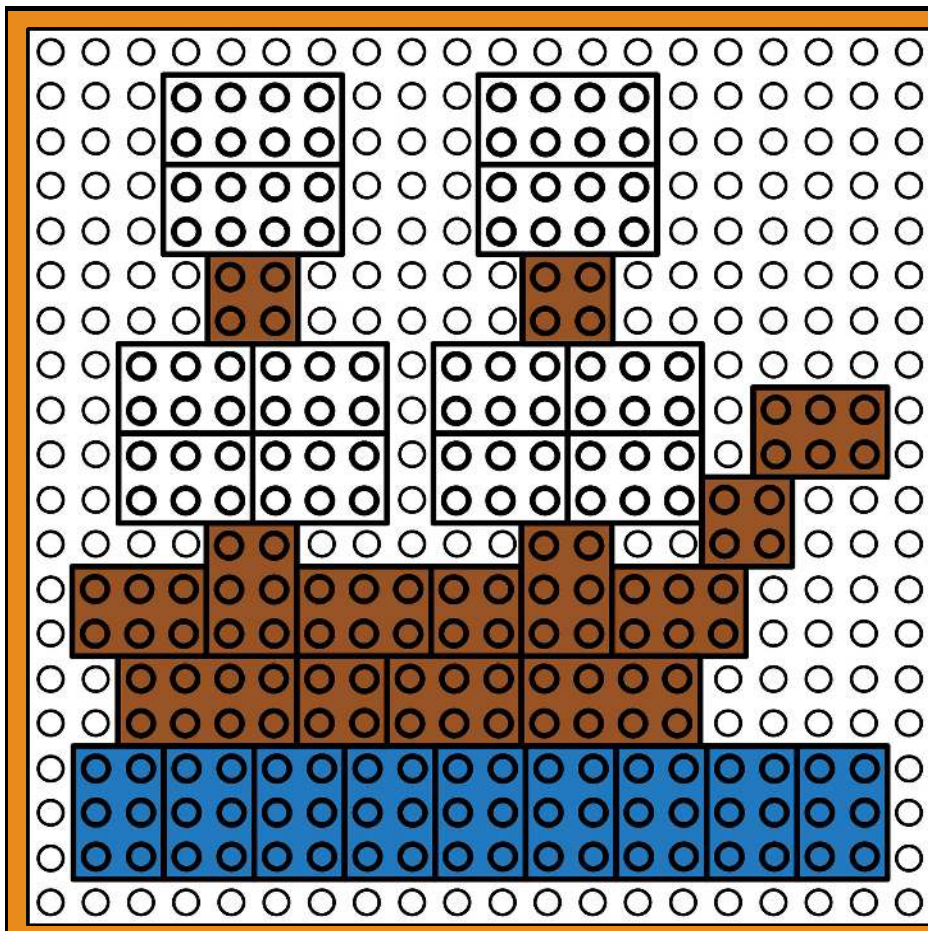


Make sure the entire turkey leg has two layers of bricks.



TIMER CHALLENGE

Build the turkey in **three** minutes or less. On your mark, get set, go!



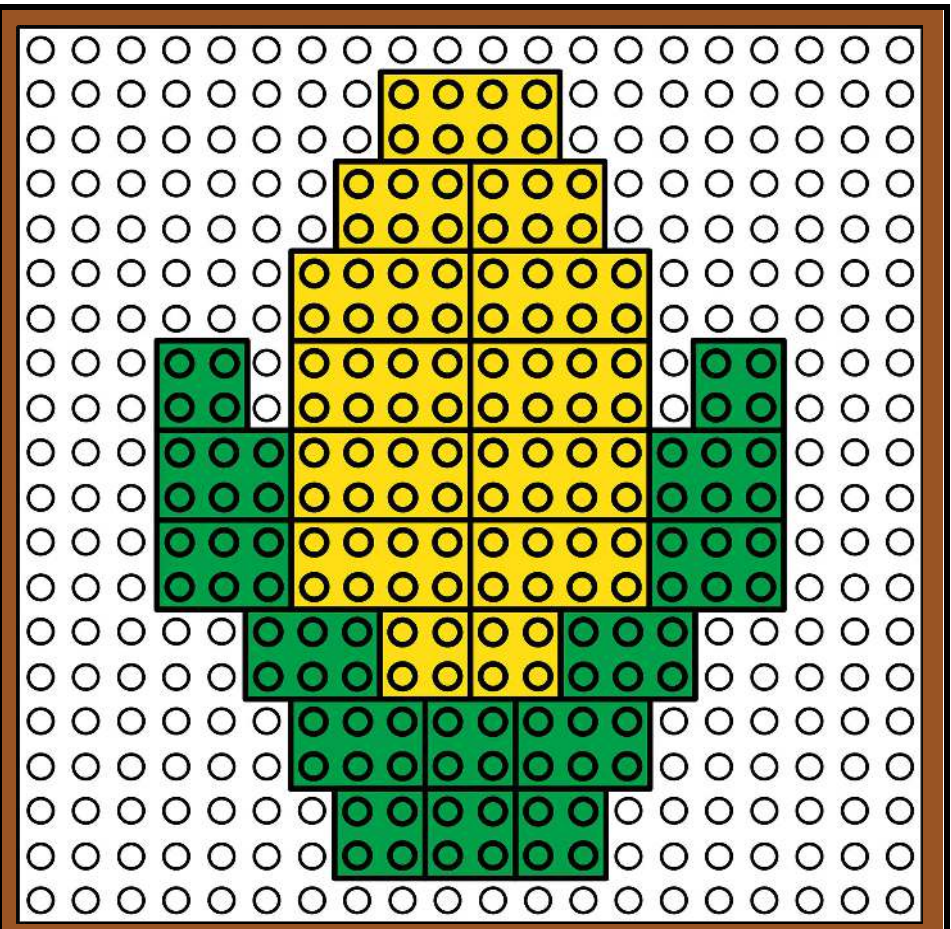
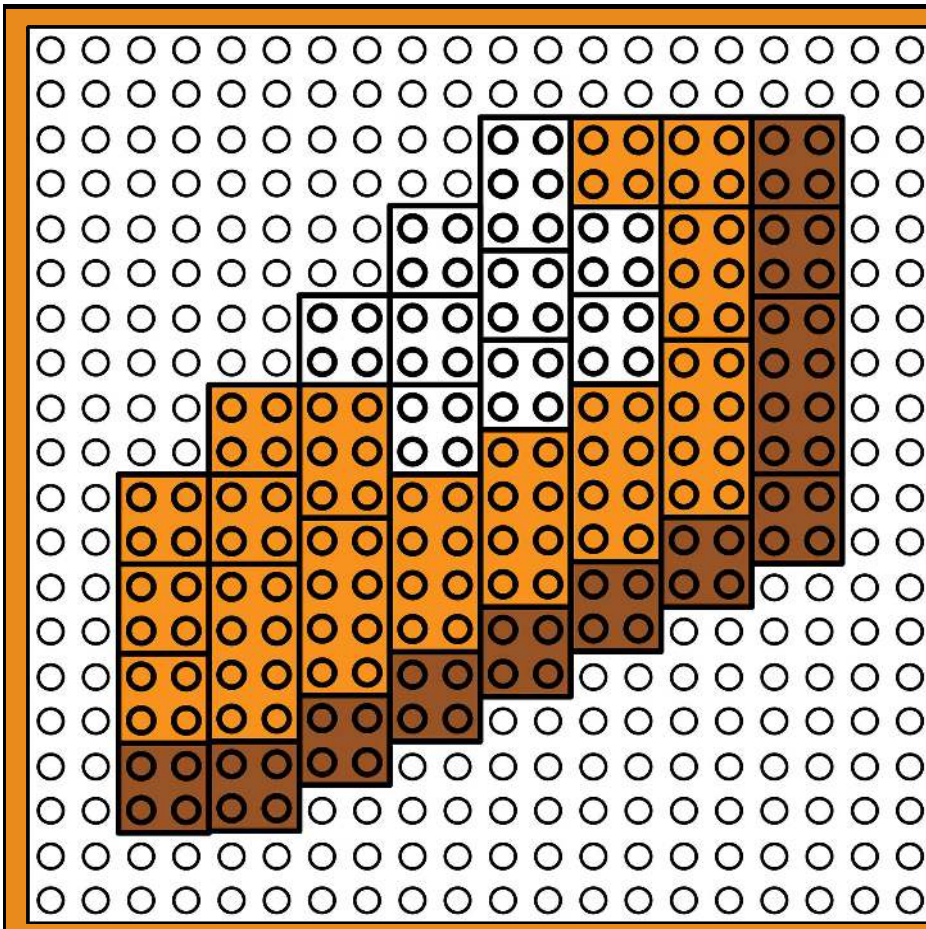
COLOR CHANGE CHALLENGE

Your challenge is to build this
with a new color scheme.
You can use any color of bricks
except for white, brown, or blue.

RACE CHALLENGE



Find someone to race with you.
Your challenge is to be the first
person to finish building the design.



TEAMWORK CHALLENGE

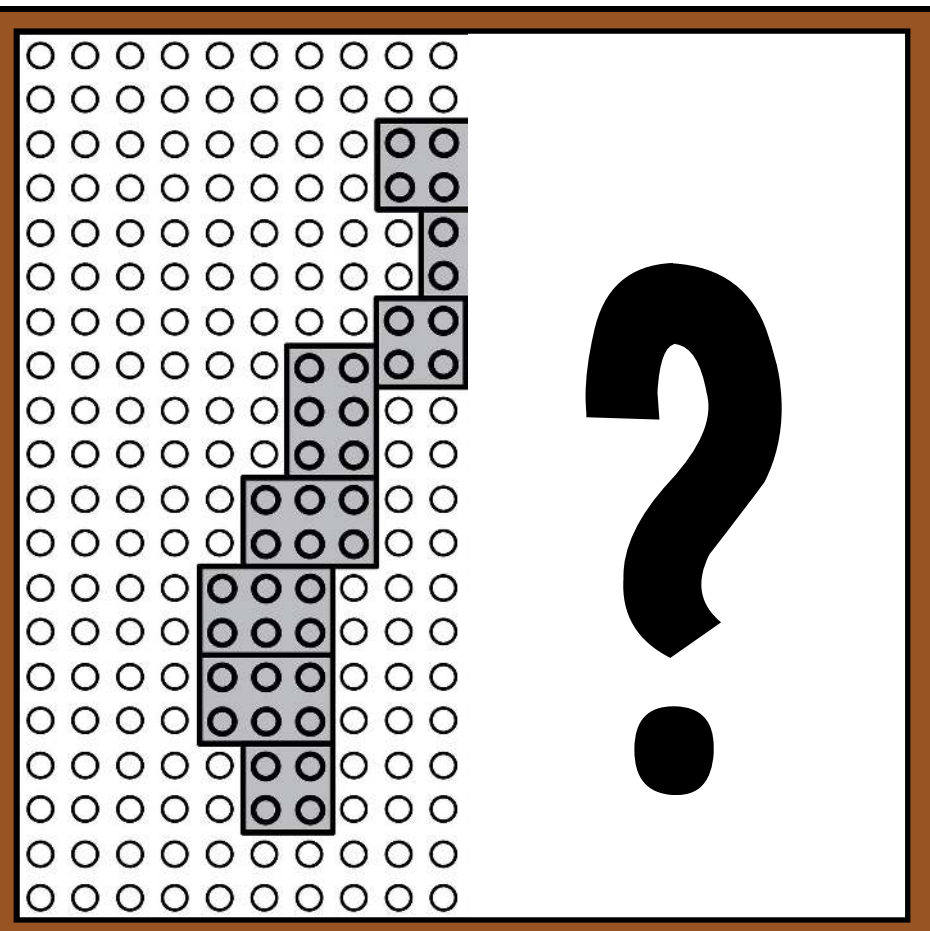
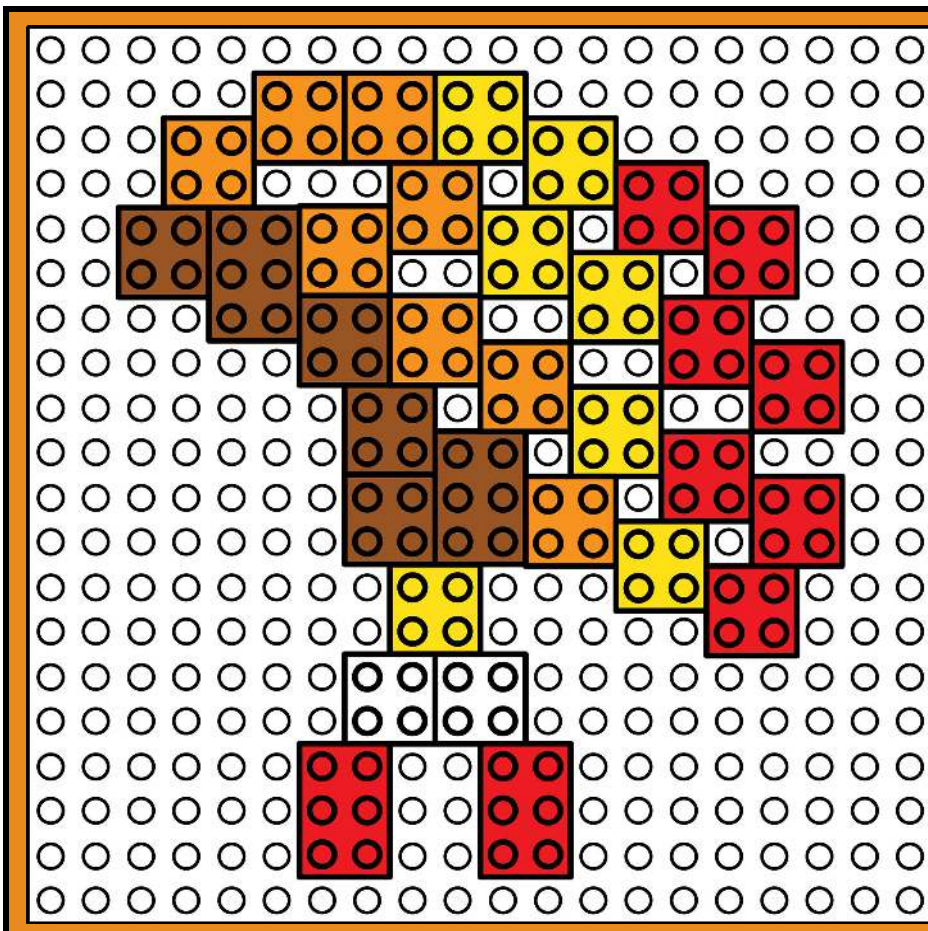
Find a partner. Roll a dice. Add that many bricks to the board. Then it's your partner's turn. Continue until the design is completed.

ESTIMATION CHALLENGE

1. Estimate 2. Build 3. Count

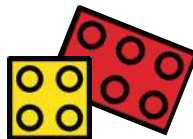
How many bricks do you think you will use?

How many bricks did you use? _____



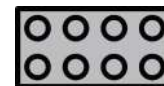
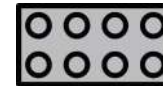
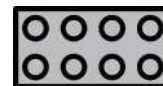
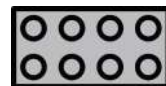
TWICE IS NICE CHALLENGE

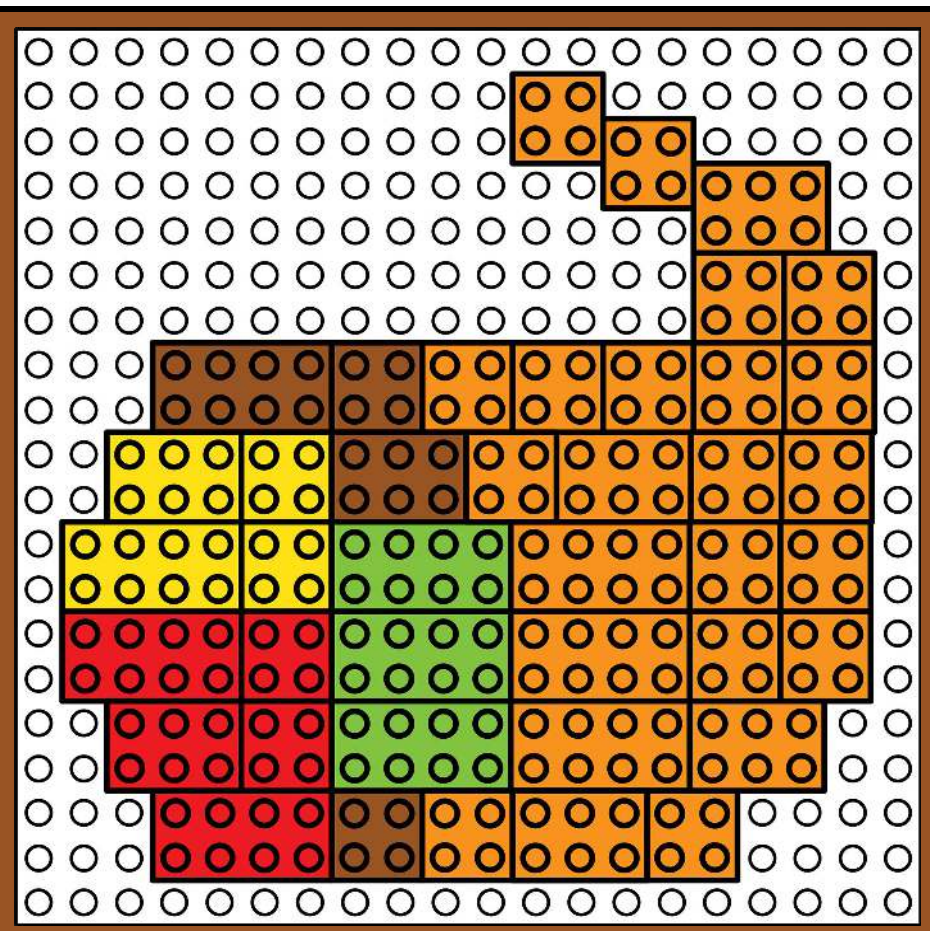
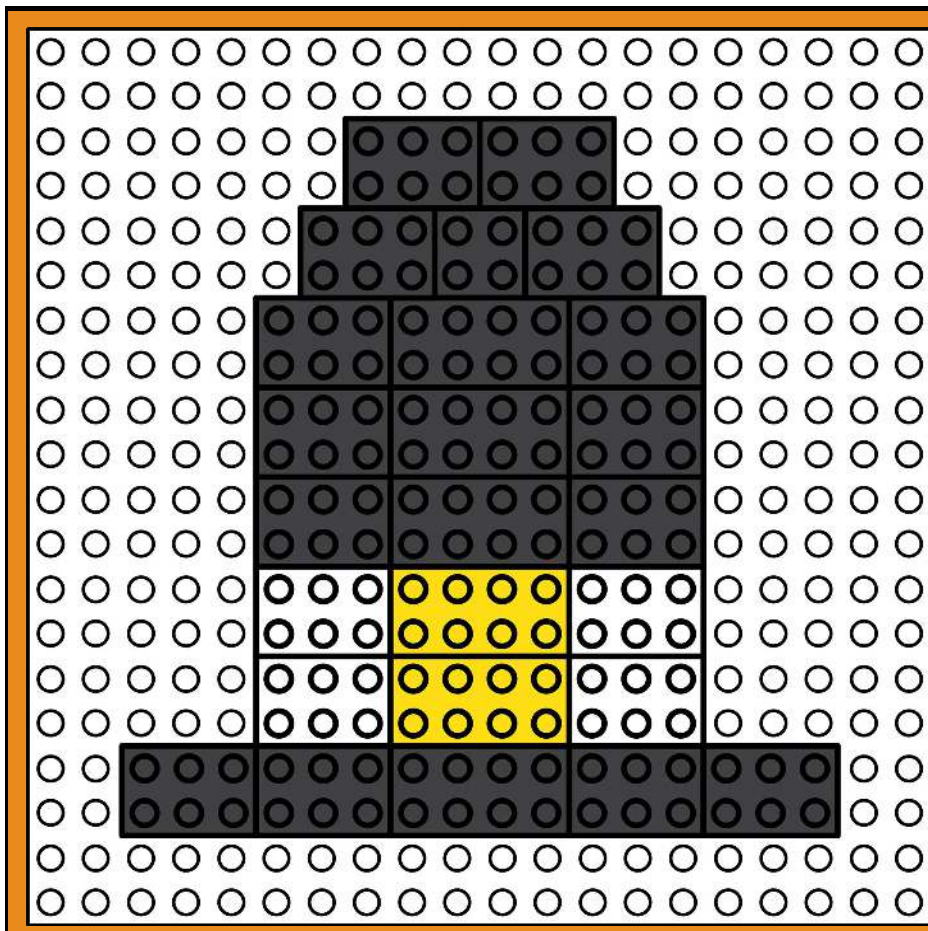
Time yourself building the design.
Build it a second time and try to
beat your first time.



SYMMETRY CHALLENGE

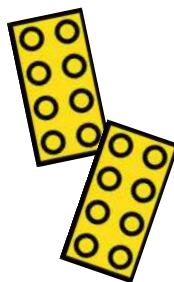
The wishbone is symmetrical. Your
challenge is to build both halves.





OPPOSITE HAND CHALLENGE UPSIDE DOWN CHALLENGE

Are you right-handed?
Build with your left hand.
Are you left-handed?
Build with your right hand.



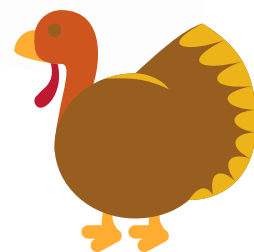
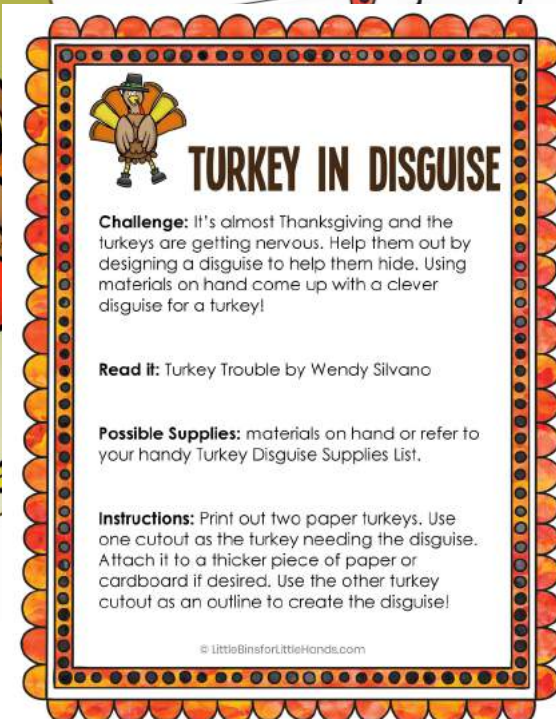
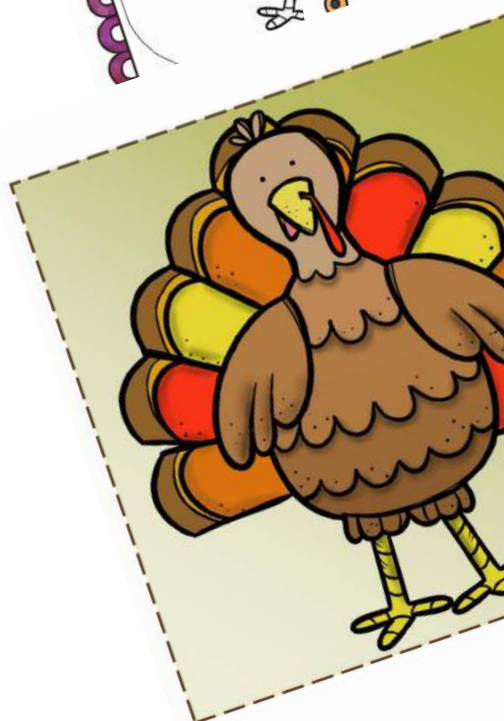
Your challenge is to build upside down! Make sure you keep the template right side up.

DISGUISE A TURKEY STEAM CHALLENGE

Oh no! Help the turkey find a new disguise.

What's Included: Disguise a turkey, disguise a turkey supply list, writing prompt, roll and build a turkey, and instructions

Cut out, and form the cube. Then roll the cube to determine which part to add to build your turkey.





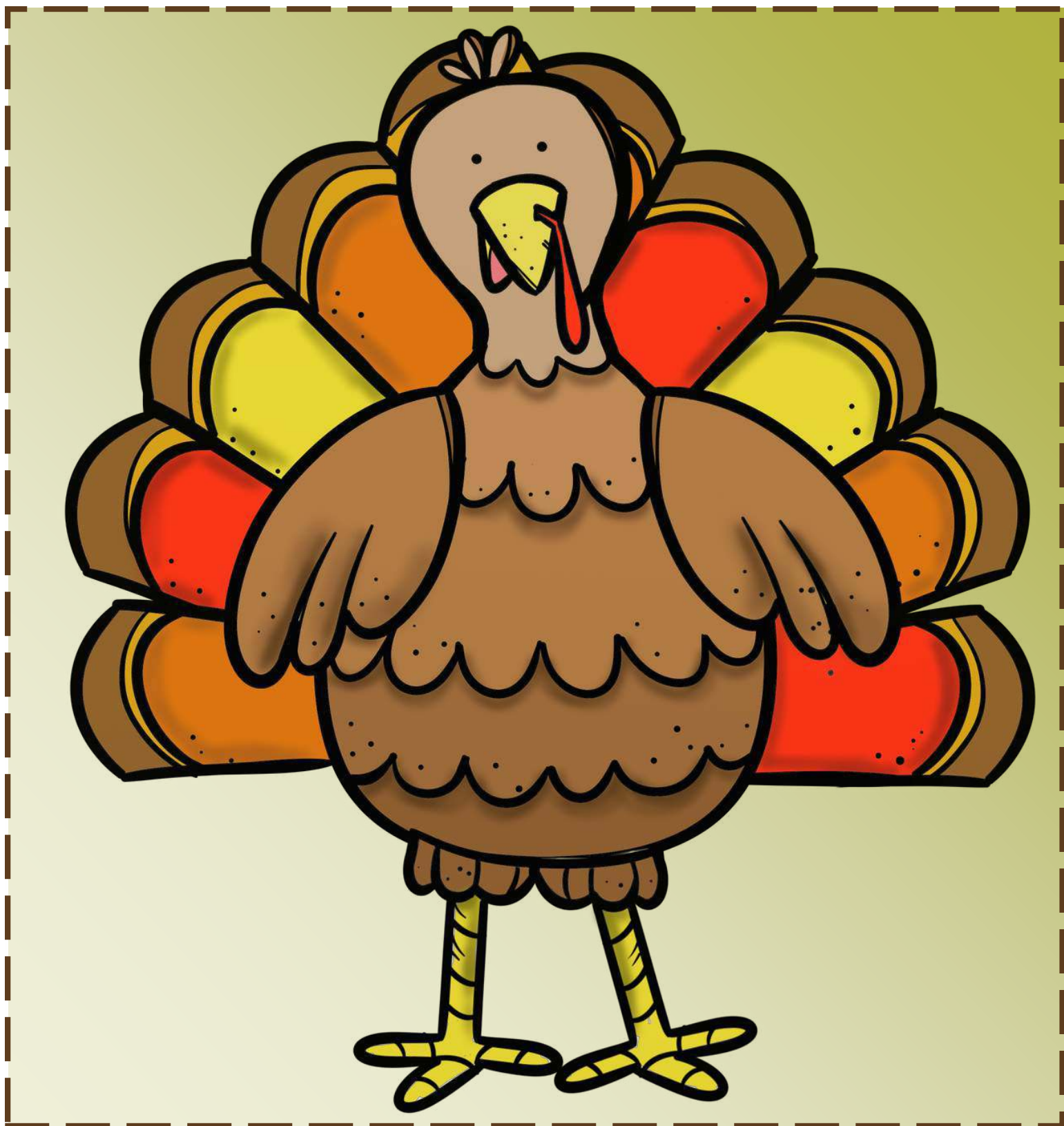
TURKEY IN DISGUISE

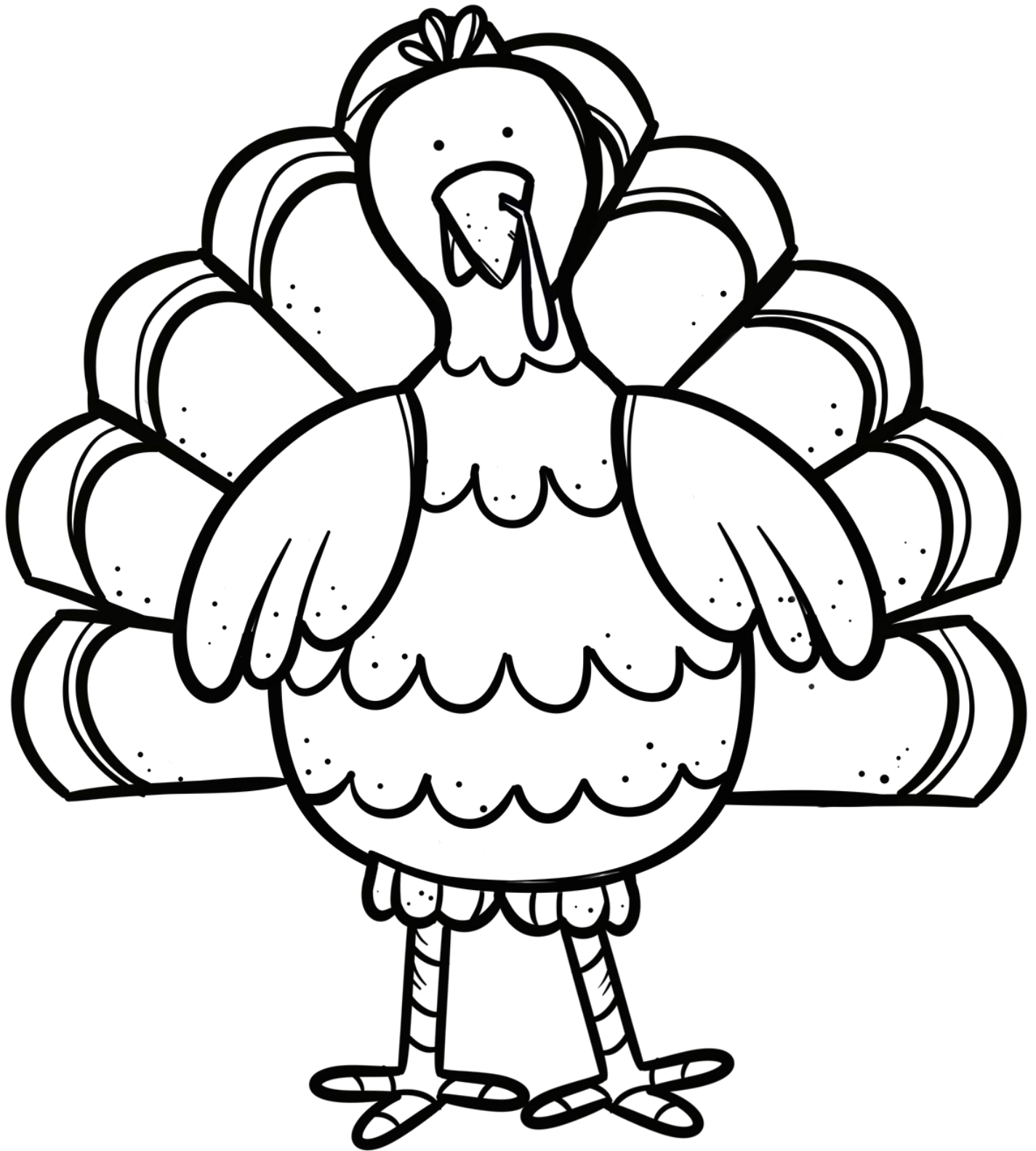
Challenge: It's almost Thanksgiving and the turkeys are getting nervous. Help them out by designing a disguise to help them hide. Using materials on hand come up with a clever disguise for a turkey!

Read it: Turkey Trouble by Wendy Silvano

Possible Supplies: materials on hand or refer to your handy Turkey Disguise Supplies List.

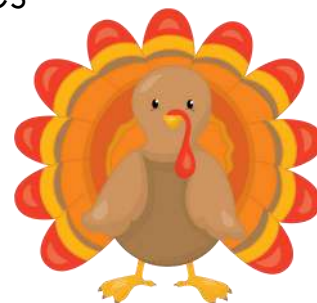
Instructions: Print out two paper turkeys. Use one cutout as the turkey needing the disguise. Attach it to a thicker piece of paper or cardboard if desired. Use the other turkey cutout as an outline to create the disguise!





TURKEY DISGUISE SUPPLY LIST

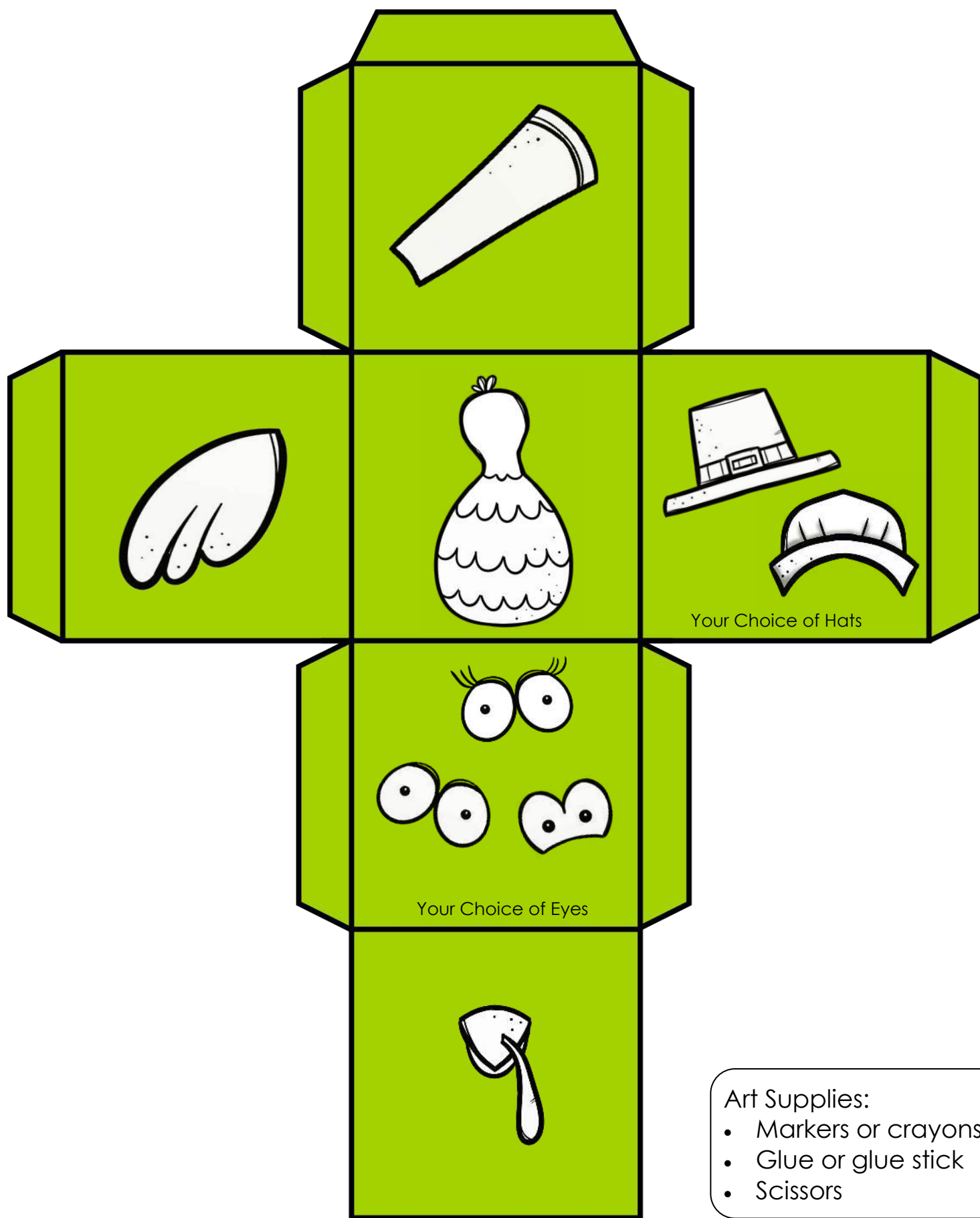
Acrylic paint	Hammer	Skewers
Aluminum foil	Hinges	Sponges
Baggies	K'nex	Springs
Bamboo sticks	Leaves	Stapler
Branches	LEGO® bricks	Stickers
Cardboard	Lollipop sticks	Sticks
Coffee filters	Magnets	Straw
Cookie cutters	Marbles	String
Cotton balls	Markers	Styrofoam balls
Cotton swabs	Measuring cups	Tape
Craft paper	Nails	Tape measure
Craft sticks	Paint	Thread
Crayons	Paper	Tin can
Dryer hose	Paper towel tubes	Toilet paper rolls
Duct tape	Paper cups	Toothpicks
Fabric	Paper clips	Twine
Faux plants	Pencil	Twist ties
Feathers	Pennies	Washi Tape
Felt	Pipe cleaners	Water
Flat marbles	Plastic containers	Whirly gig
Food coloring	Plastic cups	Wire
Gears	Plastic pipes	Wooden planks
Glitter	Plastic spoons	Yarn
Glitter glue	Ribbon	Zip ties
Glow stars	Rubber bands	
Glue	Scissors	
Golf tees	Shredded paper	



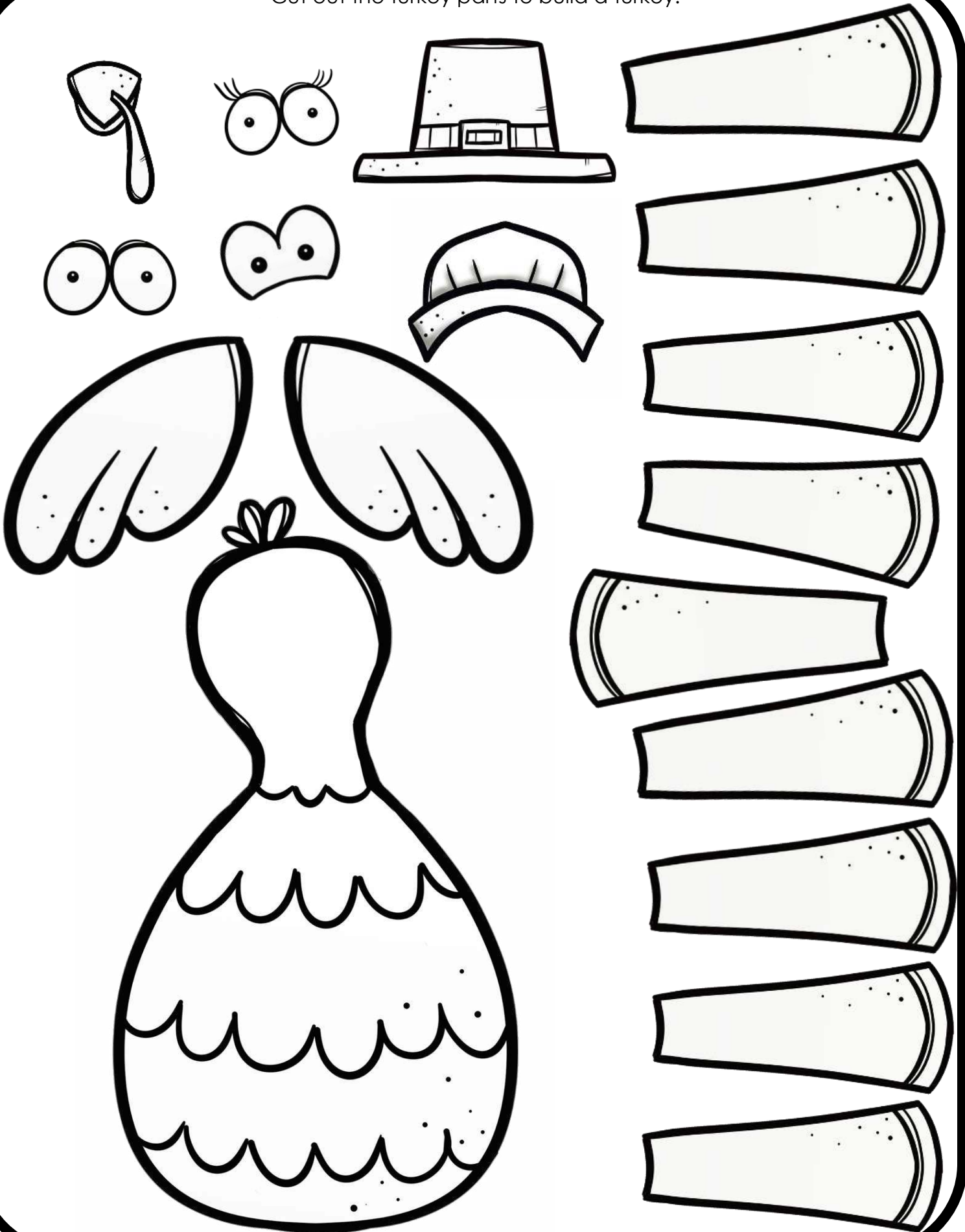
BUILD A TURKEY

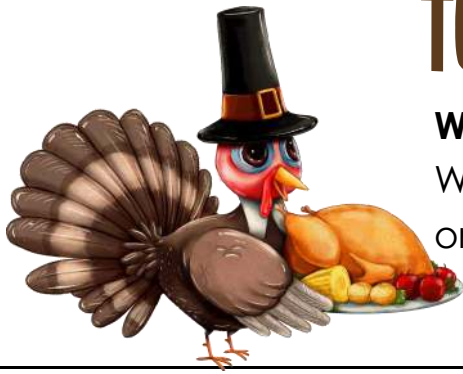


Cut out, and form the cube. Then roll the cube to determine which part to add to build your turkey.



Cut out the turkey parts to build a turkey.

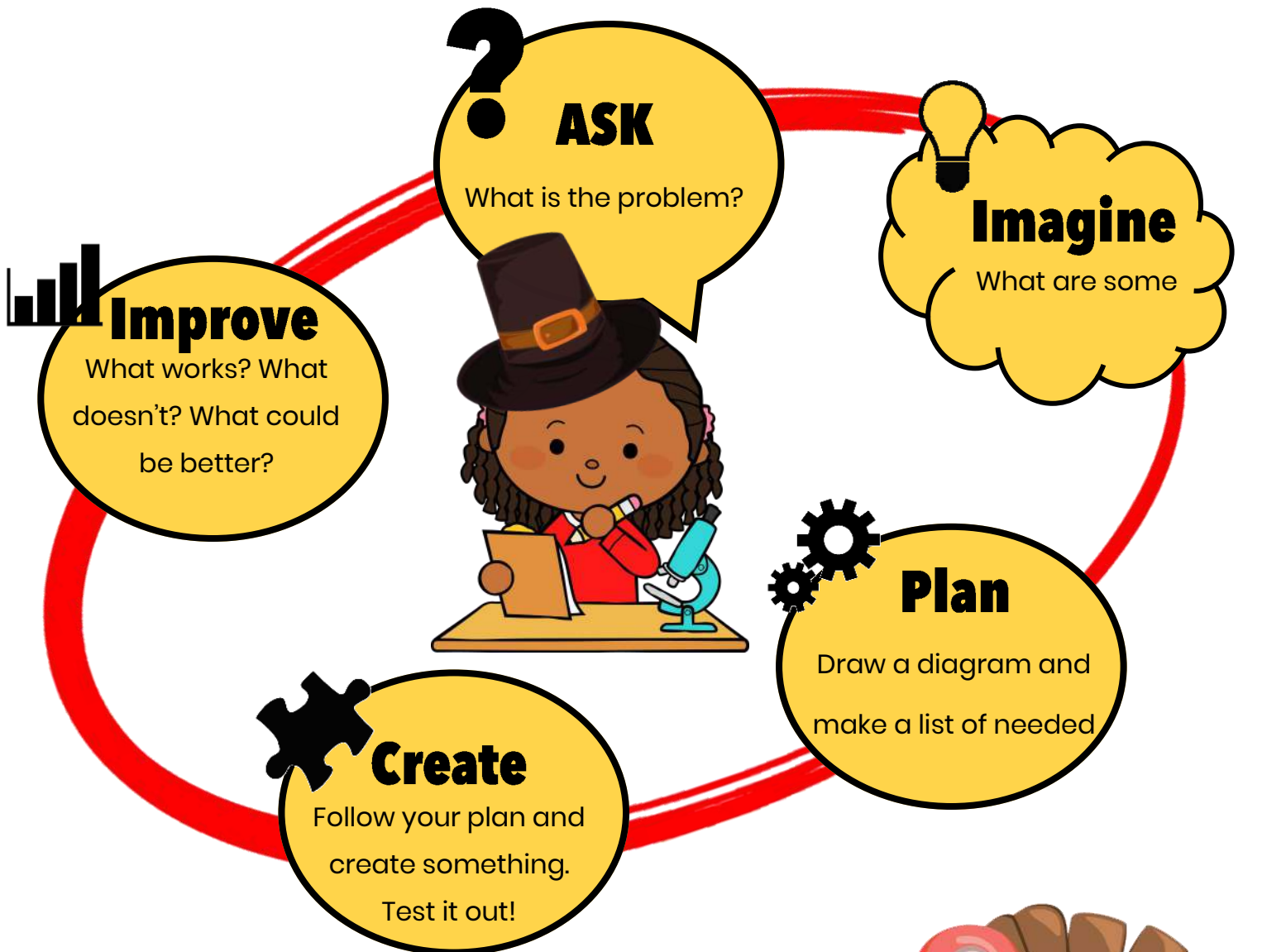




TURKEY IN DISGUISE STORY

Write it: Write about your turkey's disguise!
Why did you choose this particular disguise
or costume? How does it disguise the turkey?

Engineering Design Process



Engineering Design Process



ASK

What is the problem?

What do I need to know?

How can I solve the problem?



Imagine

What information will I need?

What are some solutions?

How can I solve the problem?



Plan

What things do I need to use?

Draw a diagram and make a list of needed materials.



Create

Follow your plan and create something.

Test it out!



Improve

What changes can I make to make it better?

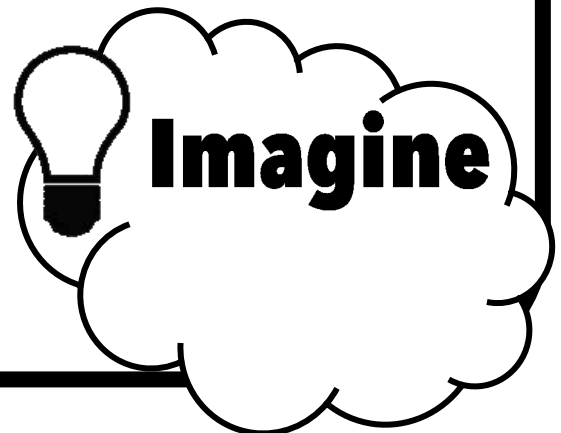
My STEM Challenge:



ASK

What's the problem?

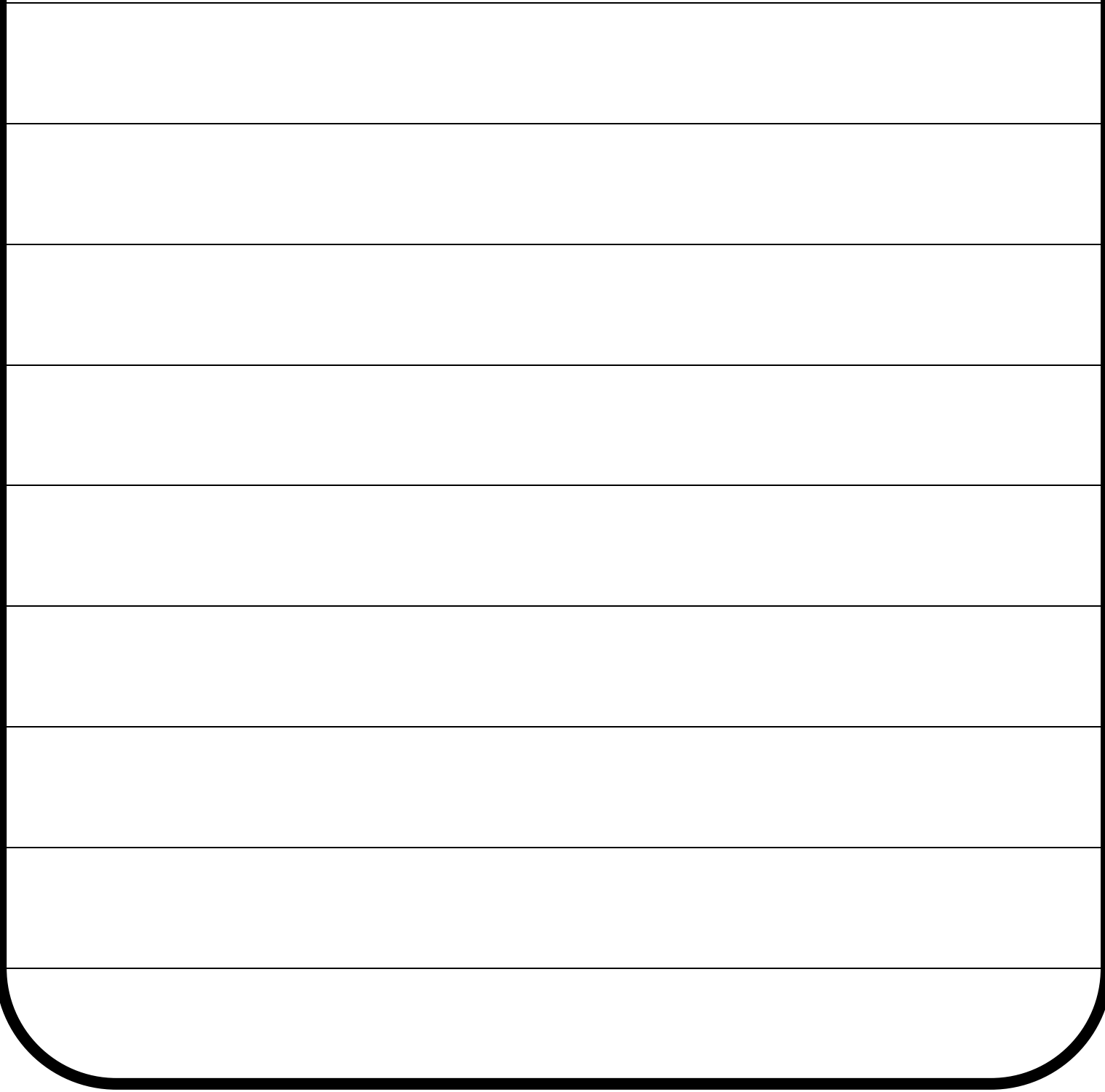
BRAINSTORM AND RECORD possible solutions, as many as you can.





Plan

Draw a diagram and make a list of needed materials.



Plan

My STEM Challenge:



Create

Look at the materials provided for use for creating your models.

My STEM Challenge:



Improve

Create a new drawing incorporating your ideas as well as the feedback you received on your prototype. Create an improved version of your original model.

Color by Number

Directions: Color the picture according to the code.

Color Code

blue - 1

brown - 2

green - 3

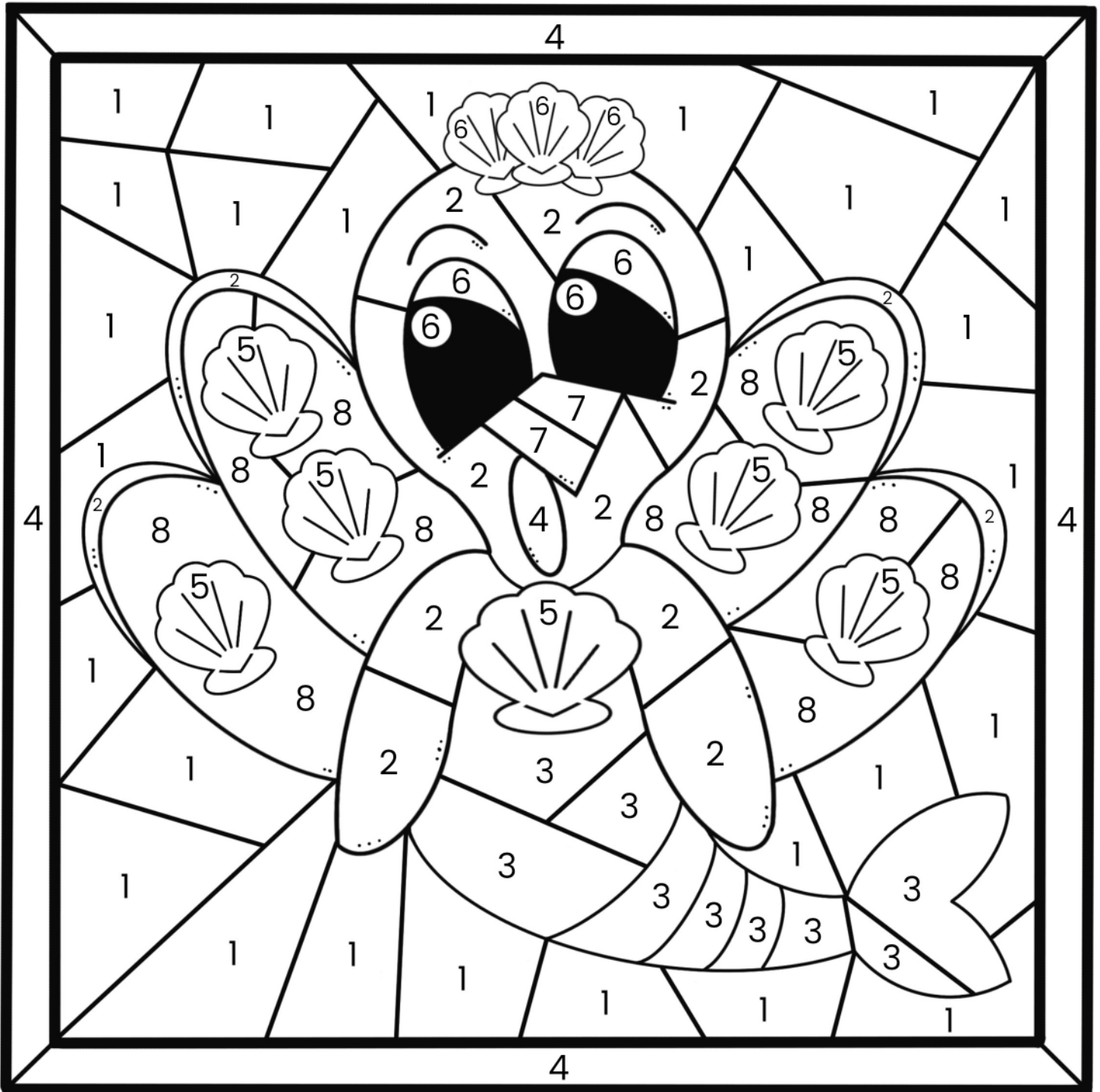
red - 4

tan - 5

white - 6

yellow - 7

orange - 8



Color by Number

Directions: Color the picture according to the code.

Color Code

black - 1

brown - 2

blue - 3

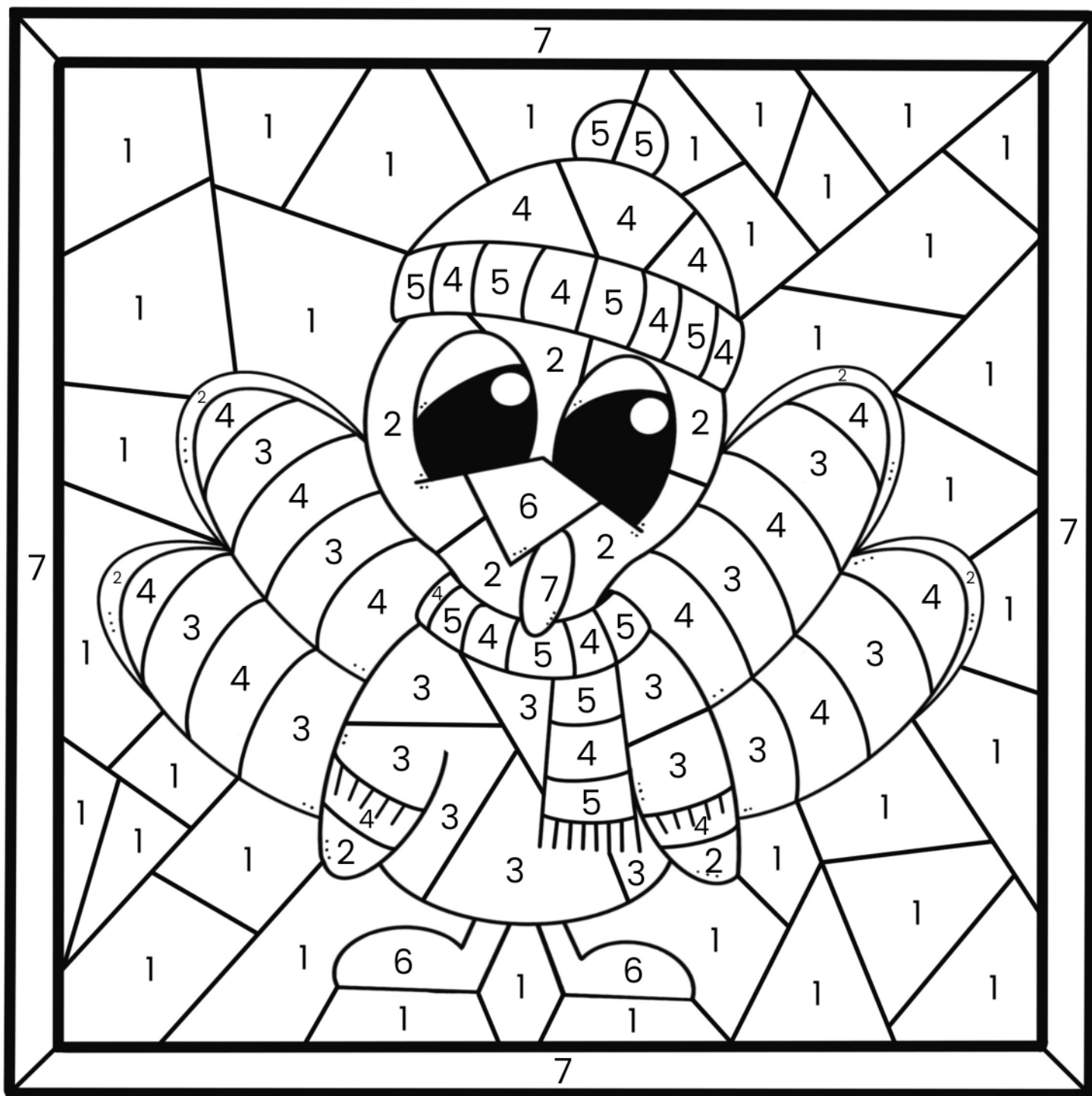
purple - 4

green - 5

yellow - 6

red - 7

2



Color by Number

Directions: Color the picture according to the code.

Color Code

red - 1

brown - 2

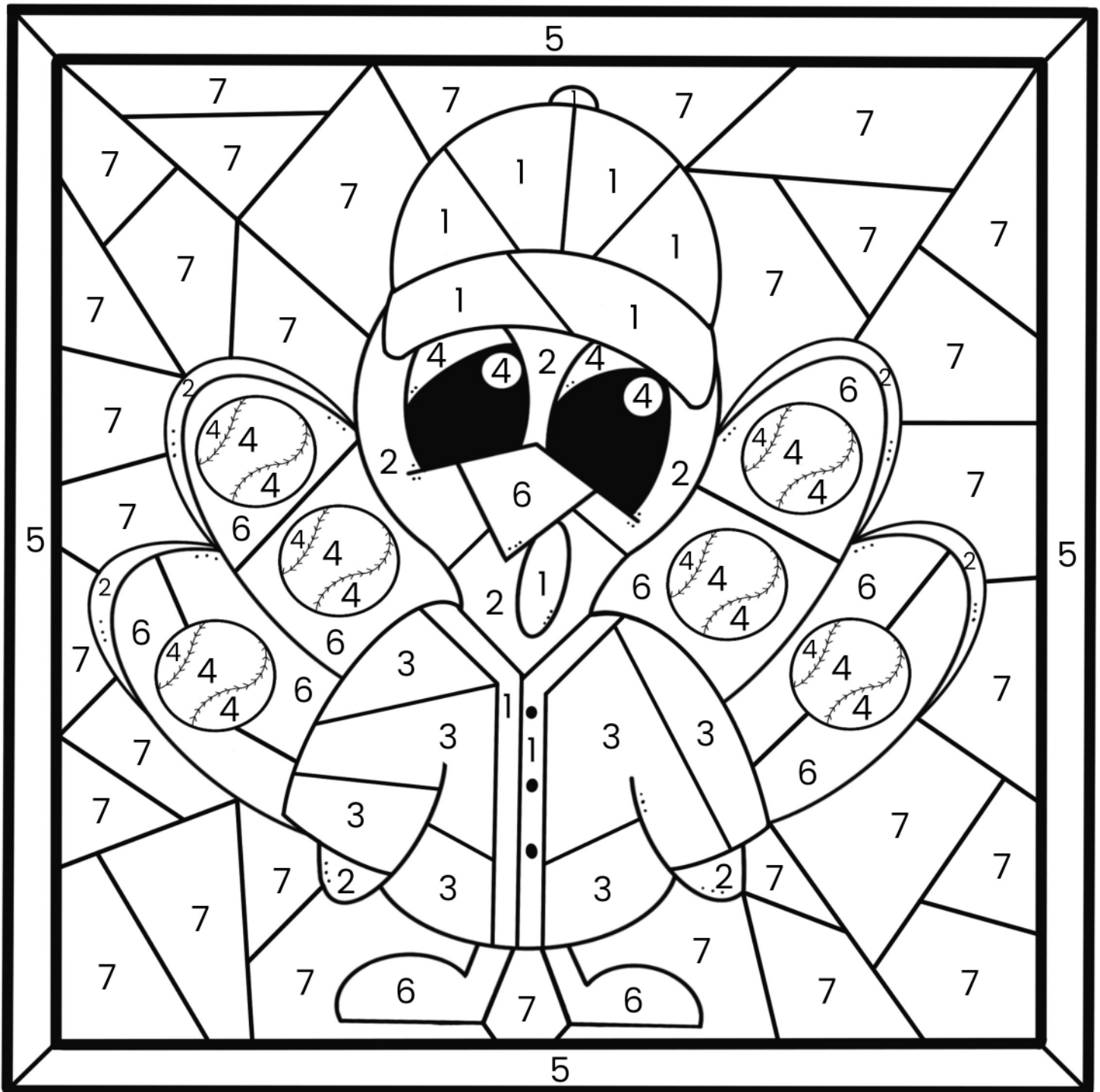
blue - 3

white - 4

purple - 5

yellow - 6

green - 7



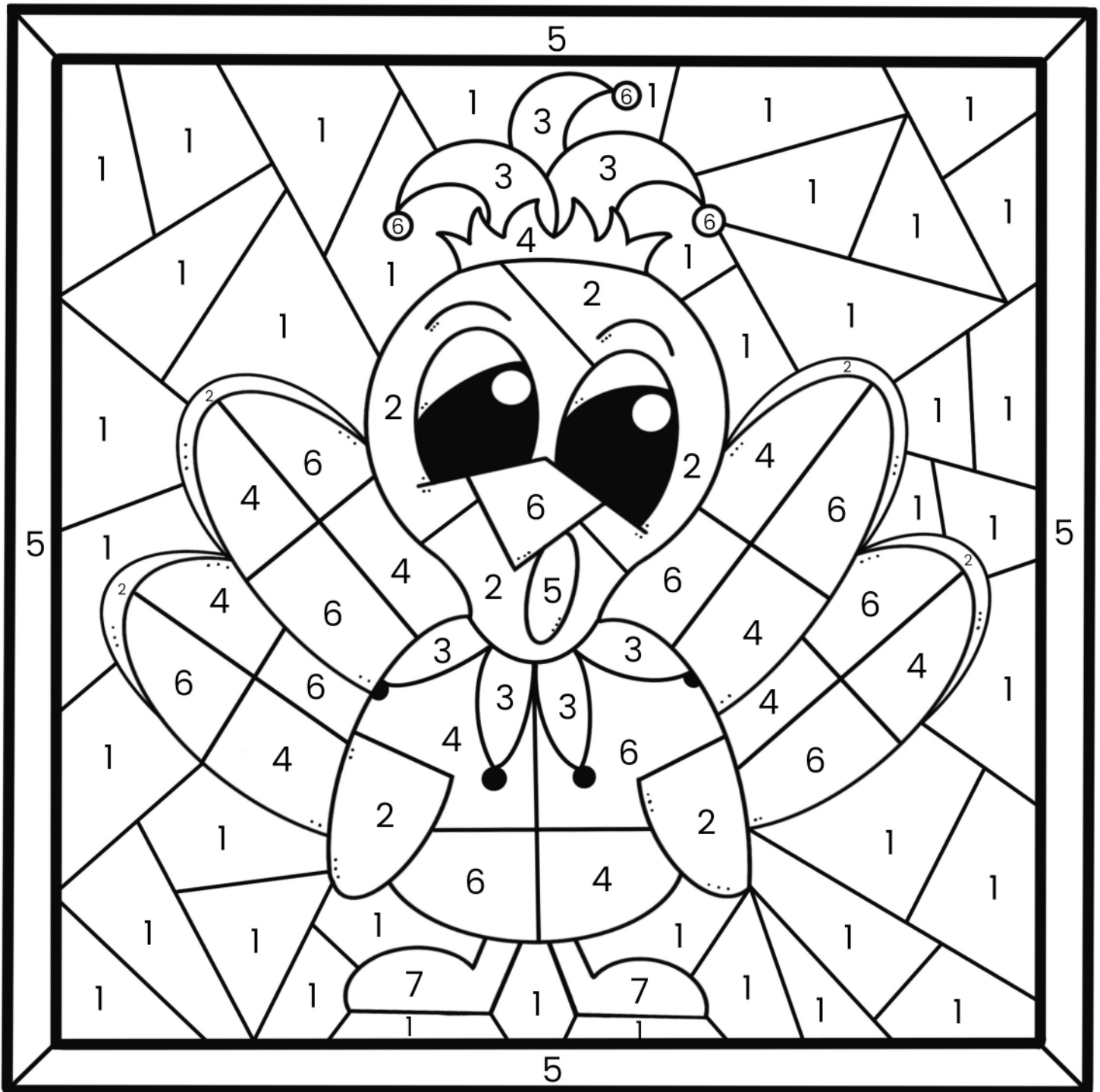
Color by Number

Directions: Color the picture according to the code.

Color Code

blue - 1
brown - 2
green - 3
purple - 4

red - 5
yellow - 6
orange - 7



Color by Number

Directions: Color the picture according to the code.

Color Code

black - 1

brown - 2

blue - 3

green - 4

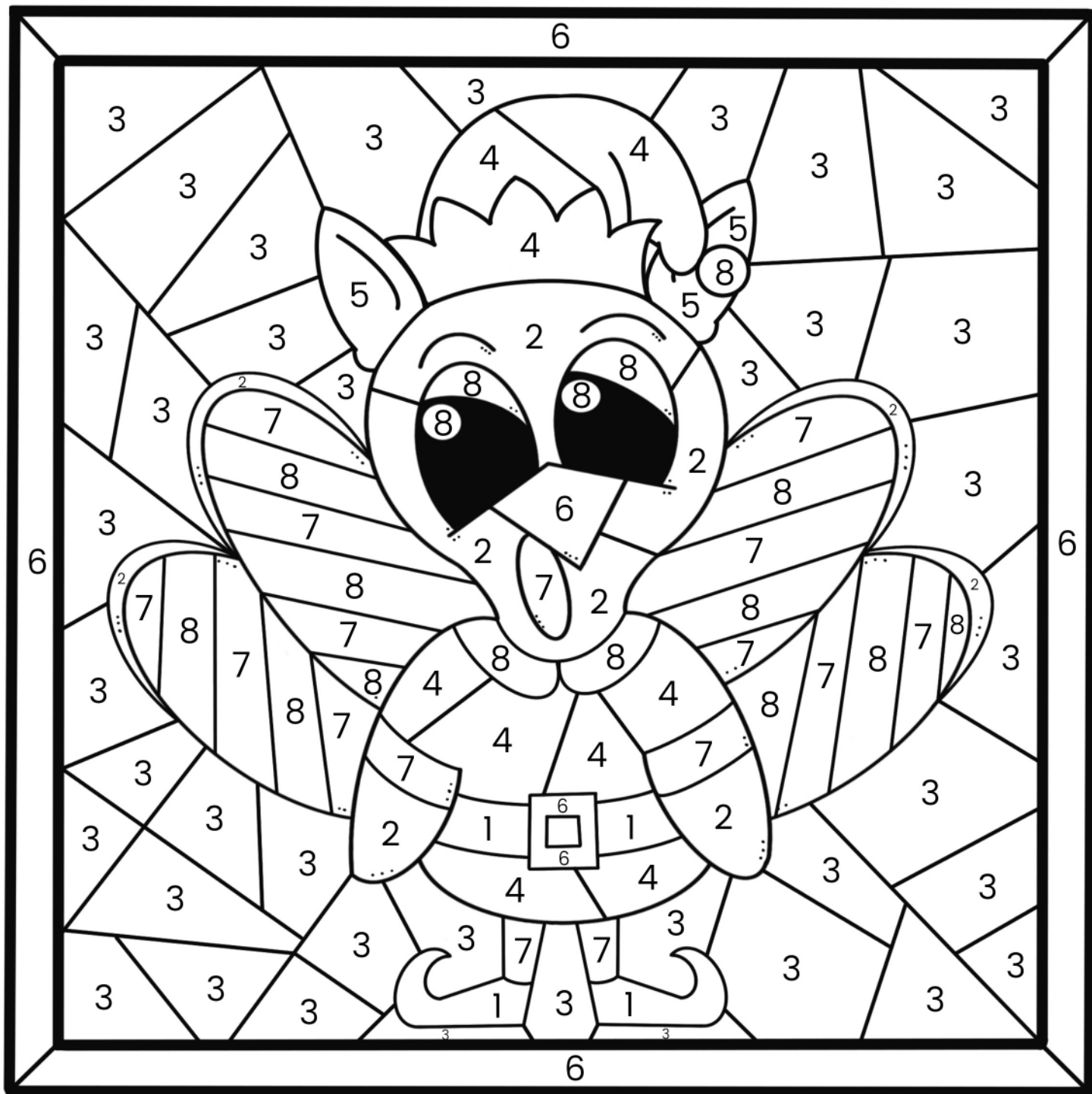
tan - 5

yellow - 6

red - 7

white - 8

1



Color by Number

Directions: Color the picture according to the code.

Color Code

black - 1

brown - 2

purple - 3

blue - 4

\tan^{-5}

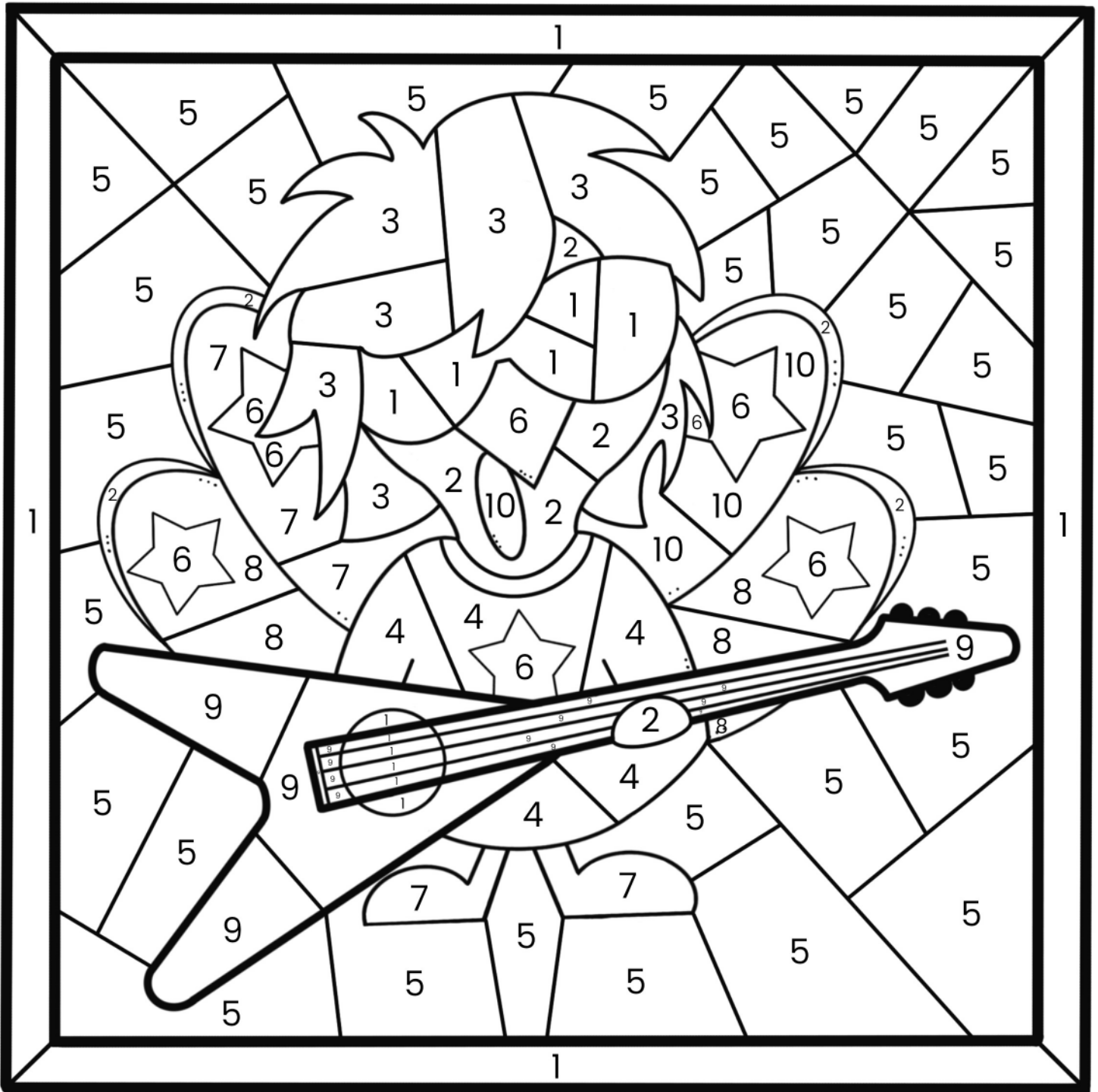
yellow - 6

orange - 7

green - 8

pink - 9

red - 10



Thank you for downloading!

Graphic Credit goes to:

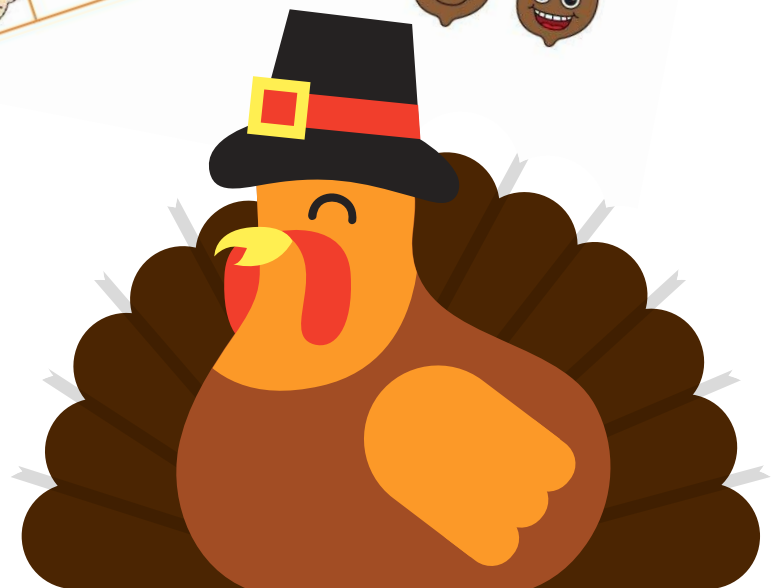
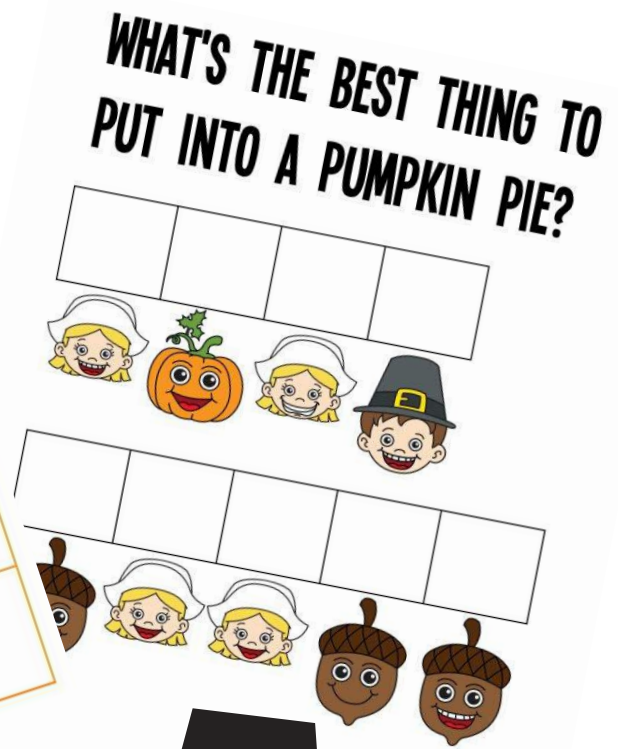
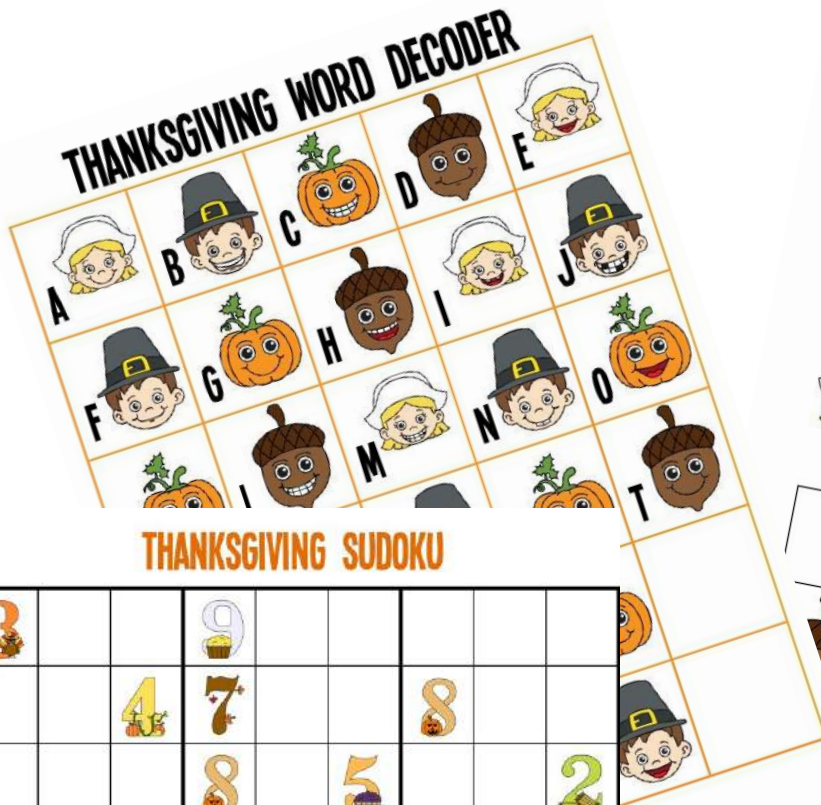


THANKSGIVING

PUZZLE PACK

FOR KIDS

Sudoku and Code Breaker Puzzles for Kids!



THANKSGIVING SODOKU

What is Sudoku?

A Sudoku puzzle is a logic and number puzzle using only numbers 1-9 and nine 3x3 grids.

Challenge: The goal is to fill each 3x3 grid with the numbers 1-9 without repeating any number in any row or column.

Helpful Tips:

























Each 3x3 grid can only contain one of each number 1-9.

You can not repeat a number in any horizontal row or vertical column (diagonal is ok).



























THANKSGIVING SUDOKU

3			9					
		4	7			8		
			8		5			2
	8		6					4
	5				4		3	
1			2		3		7	9
	6				7			
2		7				3		
4		9		2				

THANKSGIVING SUDOKU

THANKSGIVING SUDOKU

SOLUTIONS

3	2	8	9	4	6	1	5	7
5	9	4	7	1	2	8	6	3
6	7	1	8	3	5	9	4	2
7	8	3	6	5	9	2	1	4
9	5	2	1	7	4	6	3	8
1	4	6	2	8	3	5	7	9
8	6	5	3	9	7	4	2	1
2	1	7	4	6	8	3	9	5
4	3	9	5	2	1	7	8	6

1	2	6	9	8	5	3	4	7
3	9	5	1	4	7	2	6	8
4	7	8	2	6	3	5	9	1
2	3	7	4	1	8	9	5	6
5	6	1	7	9	2	4	8	3
8	4	9	3	5	6	7	1	2
7	8	4	5	2	1	6	3	9
6	5	3	8	7	9	1	2	4
9	1	2	6	3	4	8	7	5

THANKSGIVING WORD DECODER

Break the code and solve the puzzle! Match the symbol on the puzzle sheet to the symbol on the word decoder sheet.

Write in the appropriate letter in each box and solve the puzzle!

What's the best thing to put in a pumpkin pie?

Extend the activity:

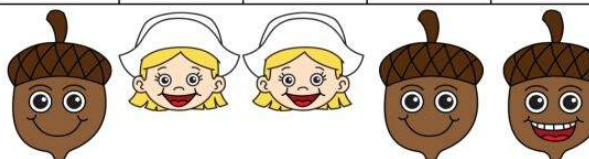
Have kids make up their own puzzle to share with friends!

**WHAT'S THE BEST THING TO
PUT INTO A PUMPKIN PIE?**


--	--	--	--






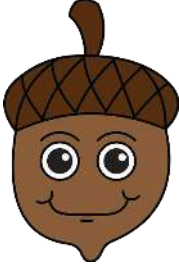



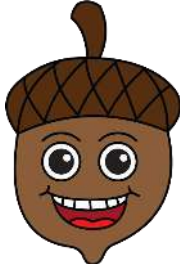


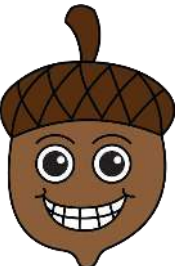












--	--	--	--	--



THANKSGIVING WORD DECODER

A 	B 	C 	D 	E 
F 	G 	H 	I 	J 
K 	L 	M 	N 	O 
P 	Q 	R 	S 	T 
	U 	V 	W 	
	X 	Y 	Z 	

THANKSGIVING WORD DECODER

A 	B 	C 	D 	E 
F 	G 	H 	I 	J 
K 	L 	M 	N 	O 
P 	Q 	R 	S 	T 
	U 	V 	W 	
	X 	Y 	Z 	

WHAT'S THE BEST THING TO PUT INTO A PUMPKIN PIE?

--	--	--	--



--	--	--	--	--



WHAT DO YOU GET WHEN YOU DIVIDE THE
CIRCUMFERENCE OF A PUMPKIN BY ITS DIAMETER?

--	--	--	--	--	--	--



--	--



**IF APRIL SHOWERS BRING MAY FLOWERS,
WHAT DO MAY FLOWERS BRING?**

--	--	--	--	--	--	--	--

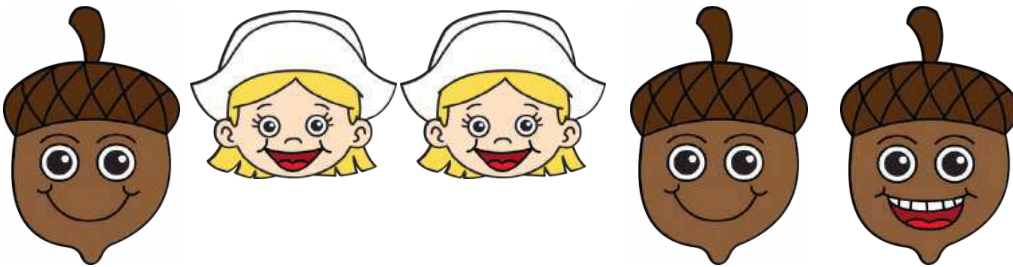


WHAT'S THE BEST THING TO PUT INTO A PUMPKIN PIE?

Y	O	U	R
---	---	---	---



T	E	E	T	H
---	---	---	---	---



WHAT DO YOU GET WHEN YOU DIVIDE THE
CIRCUMFERENCE OF A PUMPKIN BY ITS DIAMETER?

P	U	M	P	K	I	N
---	---	---	---	---	---	---



P	I
---	---



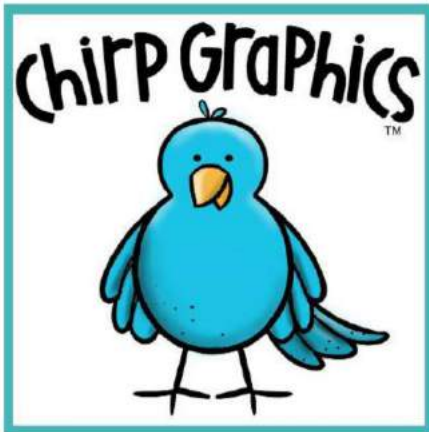
IF APRIL SHOWERS BRING MAY FLOWERS,
WHAT DO MAY FLOWERS BRING?

P	I	L	G	R	I	M	S
---	---	---	---	---	---	---	---



CLIP ART CREDIT PAGE

Credit is given to the following:



Build a Turkey Graphic by: [Chirp Graphics, Etsy Shop.](#)



Cube graphic by: [LittleReds Clip Art](#)



Border graphics by: [Paula Kim Studios](#)



GRAPHICS CREDIT

