TUTTLE TIMES

PLUS PACK

UNIT STUDY WORKBOOK

Delayed Gratification

Letter to Parents

Dear Parents,

This Plus Pack provides your children with fun activities and lessons that reinforce the concepts discussed in this month's *Tuttle Times magazine*! We want to empower you, as the primary educator of your children, to confidently guide your children in discussing these principles and applying them to their life.

We don't want each issue just to be read and put in a pile. We hope this Plus Pack extends the value of the magazine's content and leads to meaningful conversations as a family as well as with others in public discourse.

—The Tuttle Twins team

We would love for you and your child to give feedback about this month's issue. Find the surveys on the **Resources page!**

PLUS PACK CONTENTS

Article Overviews and Conversation Starters

This month, your kids will be reading several articles. Below you'll find summaries of each one along with suggested conversation starters. These discussions will help reinforce key concepts while also giving you, the parent, an opportunity to share your experiences and perspectives on the topic.


FROM BOTTLES TO BUCKETS

Brock could hardly believe it. Three hundred dollars! He had never had so much money in his life. Well, not all at once, anyway.

He bounced up the steps of the Little Pink House and tugged the screen door open. He found Grandpa Tuttle in the living room and showed him the pile of dollars.

Grandpa's eyebrows went up. "All that from Thusnelda's?"

Brock nodded. "I'll make this every two weeks! It's like a dream!"

"So. What will you do with all that money?" Grandpa said. "You're saving up for a boat, right? So you can do nature tours on the river?"

"Yeah, but there's so many other things! I can get those cool new shoes. Or I could take all my friends out for lunch. Why, I can do almost anything!"

"You're going to have to save quite a bit for that boat, though."

"But...not yet! I'm going to spend this, and have some fun first."

Grandpa stood over by the picture wall, as if he was studying something. Then he reached out and chose a small photograph from the dozens hanging there. "Did I ever show you this one?" he said, holding out the dusty wooden frame.

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From Bottles to Buckets

Brock, excited about earning $300 from his new job, dreams of spending it on fun things like new shoes or lunch with friends. He also wants to save for a boat to help him start a business doing nature tours on the river. Grandpa tells him a story from his past about being stranded in the desert with friends. They found a pump but needed to use a hidden bottle of water to make it work. Though tempted to drink the water, they decided to use it for the pump, which gave them an endless supply of water.

Brock realizes the story applies to his situation. Spending his paycheck now would bring short-term happiness, but saving it could help him achieve bigger goals, like buying the boat. Inspired, he decides to save his money.

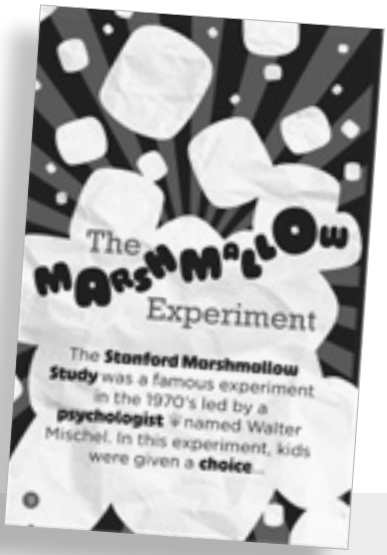
Conversation Starters

• Grandpa's story helped Brock realize the importance of investing for the future. What's a goal you have, and what could you do to 'prime the pump' to reach it?

• If you had $300 like Brock, what would you spend it on right now? Would you save any of it, and if so, for what?

The Marshmallow Experiment

The Stanford marshmallow study tested kids' ability to delay gratification by giving them a choice: eat one marshmallow immediately or wait 15 minutes to get two. Some kids resisted by distracting themselves, while others gave in quickly. The experiment highlights how practicing self-control and delayed gratification in childhood can shape one's future positively.



Conversation Starters

• Can you think of a time when you had to wait for something you really wanted? How did you feel while waiting, and was it worth it in the end?

• Why do you think some kids in the marshmallow study were able to wait, while others couldn't? What would you have done if you were in their place?

Claws of Success

Ethan Park, who started his business at 11, has grown it significantly by reinvesting his profits. He now operates eight claw machines after taking out a loan to expand. Ethan highlights the lessons of reinvestment, discipline, and resilience. Despite moments of doubt, like when he considered selling his first machine, he found motivation to continue after seeing strong sales results. His advice to other kids is to start small, enjoy the process of growth, and prioritize long-term rewards over short-term pleasures.

Conversation Starters

• Ethan said that growing a business is more rewarding than winning a video game. What's something you've done that felt better than a game or a toy?

• What's a goal you'd like to set for yourself, and how could you work toward it?

Latest Buzz: Los Angeles Burns

The Los Angeles fires began as multiple simultaneous infernos, sparking theories ranging from homeless individuals' campfires to deliberate arson by environmental terrorists. The fires intensified due to overgrown wilderness, a result of policies preventing proper management. Efforts to stop the fires were hampered by insufficient firefighting resources, as budgets had been slashed. Additionally, fire hydrants ran dry due to decisions against maintaining water reservoirs. Many homeowners are left without fire insurance, when their insurance companies pulled their coverage because of the high risks caused by foolish policies and laws. The broader question remains whether policymakers and influential individuals will learn from these failures.

THE LATEST BUZZ

LOS ANGELES BURNS

What started the LA fires?

The Inferno was actually multiple fires, starting around the same day. It appears that one of the fires was started by sparks from a broken power line, but what about the other fires? Is it coincidence, a criminal plot, or the just raw power of nature?

Last year, 13,900 illegal campfires were started by homeless people in LA. Could careless campfires be the cause?

Some have witnessed fires being started by environmental arsonists who start fires on purpose to blame it on climate change.

Why did they get so bad?

Wildfires are nature's way of cleaning up unhealthy and overgrown wilderness. However, if people tend the wilderness like a garden, they can protect it from fires.

But ignorant Californians supported laws that prevent people from interfering too much with nature, allowing the wilderness around LA to become dry and fire-prone.

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Conversation Starters

• What do you think is the cause of these fires?

• Should insurance companies be forced to cover damage, even though they canceled their policies last year?

Share your conversation experiences with the world!

Tag us: @TuttleTimesMagazine

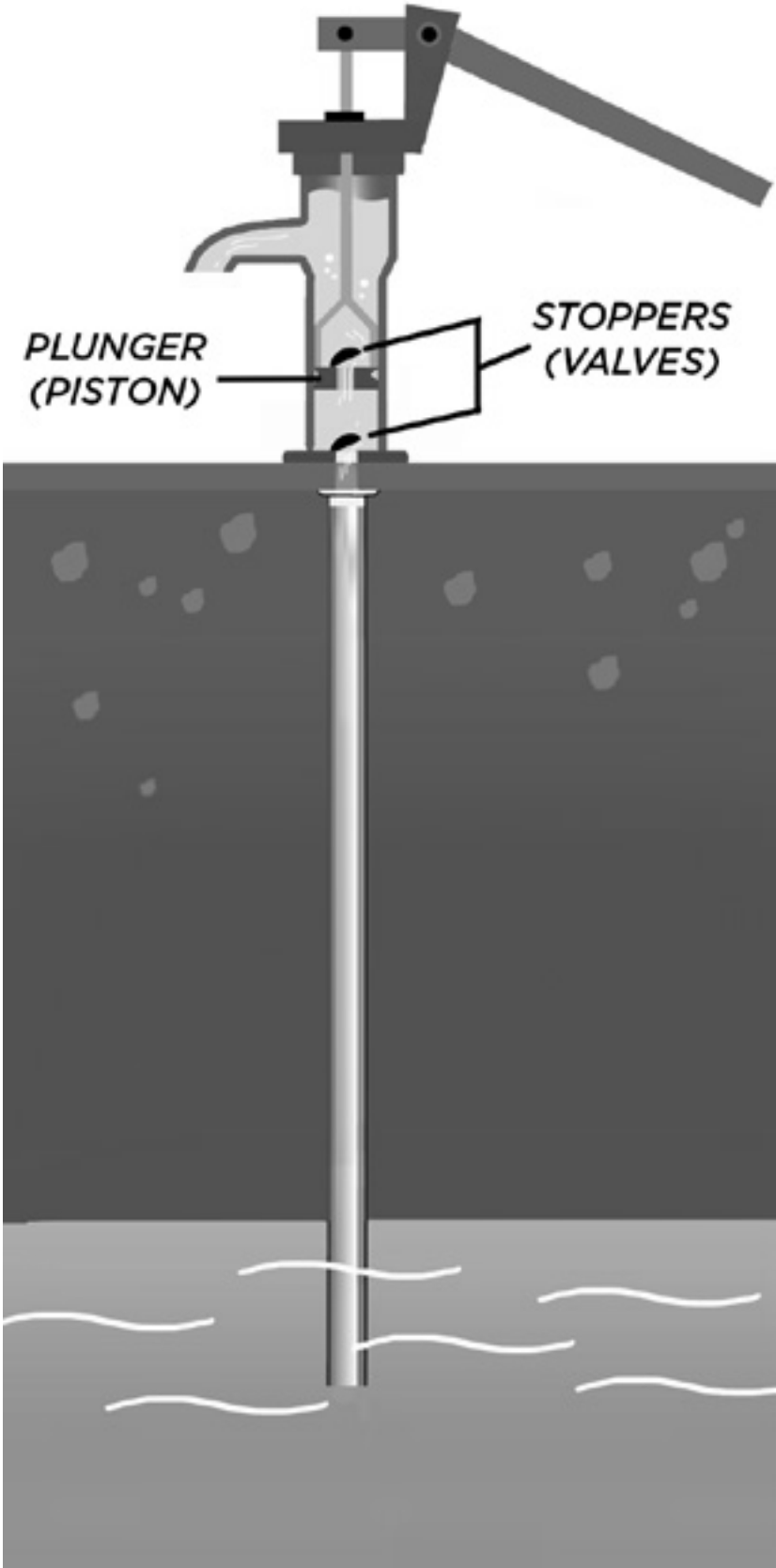
Instagram

The Piston Pump

Long ago, people had to carry all their water in containers from the river to their homes. Later, they invented wells and pumps to make life easier. It's one of the coolest inventions ever!

The pump from Grandpa Tuttle's story is called a piston pump. It uses plungers and stoppers to pull and push water from the ground, through a pipe, and out through the spicket.

Smart, simple...but life-changing!



Observe The Diagram To See How It Works

When the piston is pushed down, the top valve is forced open, while the bottom valve is forced closed. When the piston is pulled up, the opposite happens.

Moving Water Experiment

What You'll Need:

- A plastic water bottle
- A straw
- Hot glue
- A balloon
- Water

Instructions:

- Cut a small hole halfway up the water bottle.

- Push the straw through so it reaches the bottom.

- Seal the hole with hot glue. Let it dry.

- Fill the bottle with water, leave space at the top.

- Blow up a balloon and pinch it closed. Stretch it over the bottle's opening.

- Let go of the balloon and watch the water shoot out through the straw!

- The balloon pushes air into the bottle, increasing pressure and forcing the water out. Try it and see science in action!

Compounding Returns

Imagine your family decided to become popcorn farmers. You start with a bag of only 10 corn seeds. You have the choice to pop all the corn, smother it with butter, and enjoy them on family movie night, or you can plant all the corn seeds and grow 100 times more popcorn, returned to you at the end of the year.

Here is the data showing how much corn your family could harvest if you replanted 10%, 50%, and 100% of your seeds after 3 years.

	10% Reinvestment	50% Reinvestment	100% Reinvestment
Year 0:	Plant 1 seed	Plant 5 seeds	Plant 10 seeds
Year 1:	Replant 10 seeds	Replant 250 seeds	Replant 1000 seeds
Year 2:	Replant 100 seeds	Replant 12,500 seeds	Replant 100,000 seeds
Year 3:	Harvest 10,000	Harvest 1,250,000	Harvest 10,000,000

*Use this data for a crazy challenge on the next page.

Explination of the Math Used

Step 1: The harvest each year is 100x the amound planted. Simply add two zeros at the end of the number of seeds planted!

Step 2: Take that number of the total harvest and multiply it by either
1.00 (100%) .50 (50%) or .10 (10%)

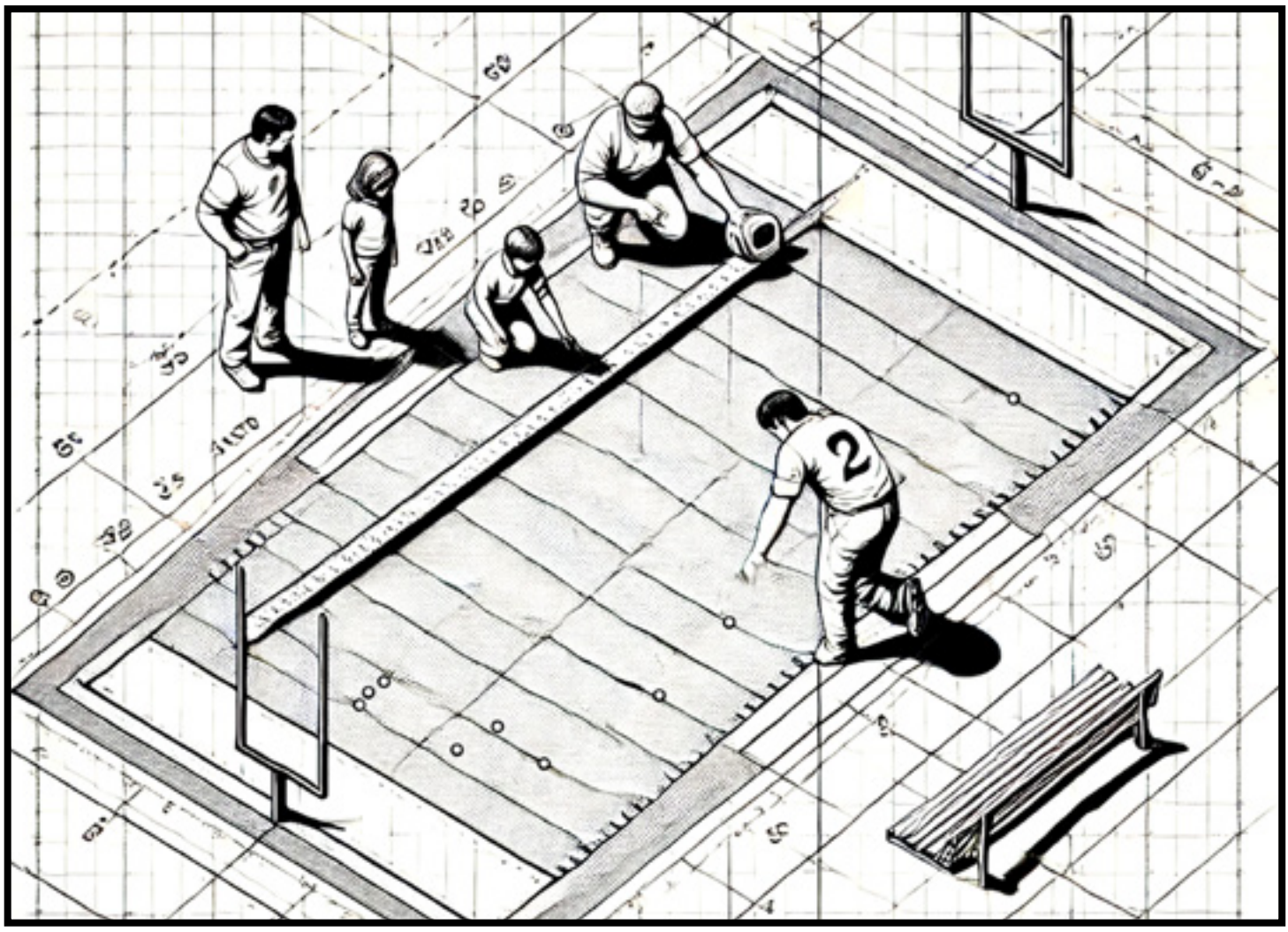
This gives you the nubmer of seeds to replant!

*Bonus Question:
How much would you harvest if you replanted one more year?

Visualizing Compound Returns

With a parent, a calculator, a long tape measure, and some popcorn for markers, try to make a graph compairing the three data sets from the prevoius page. If you make one inch represent 10,000 popcorn seeds, you'll need a big yard, field, park, or sidewalk to complete this task.

Figuring it out is going to blow your mind!



Take-away Lesson

This multiplying effect is called the principle of compounding returns. The less you consume today, the more you can reinvest. Over time this makes an unfathomable difference in how much you can earn with a good investment!

Did you know you can actually plant popcorn?

That buttery treat you enjoy at the movies or from the store comes from corn kernels that have been dried and dehydrated. Each of those hard, shiny kernels is a seed, and when heated, it pops into the delicious snack we all know. But here's the cool part: if you plant a few of those popcorn kernels, they can grow into corn plants that produce hundreds more kernels—just like our compound interest example, where a small start grows into something much bigger!

You can try this fun experiment at home using a cardboard egg carton, some soil, and a handful of popcorn kernels. Start by soaking the egg carton in water so it becomes damp and ready to hold soil. Fill each hole in the carton with soil, then gently press a popcorn kernel into each one. Water them every day and keep them in a warm, sunny spot. With a bit of patience, you might start to see tiny green corn shoots sprouting up!

Keep in mind, not all popcorn kernels will grow. Some kernels are processed differently to make them pop better, which can affect their ability to sprout. Experiment with different brands or try soaking the kernels before planting to see what works best. It's a fun way to learn about plants and the journey this snack takes before it gets to your bowl!

History - Marshmallows

A Timeless Treat

Marshmallows trace their origins back to ancient Egypt, where they were first made over 4,000 years ago. The original marshmallows weren't the fluffy candies we know today, but were created from the sap of the marshmallow plant. This plant grows in marshy areas (thats why it got its name!) and has a gooey, sticky sap. Ancient Egyptians would mix the sap with honey and nuts to create a sweet, chewy treat that was reserved for royalty.

Fast forward to the 19th century in France, candy makers adapted the marshmallow plant's sap to create a more modern version of the candy. They whipped the sap with egg whites and sugar to create a fluffy texture. This mixture was then poured into molds to set. However, using sap from the marshmallow plant took a lot of extra time and effort, so it wasnt good for mass producing them.

By the late 1800s, gelatin replaced marshmallow sap as the main ingredient, making the production process much easier and more consistent. Gelatin provided the same spongy texture without relying on the plant. With this change, marshmallows became affordable and widely available, evolving into the treat we recognize today.

The name "marshmallow" comes directly from the marshmallow plant used in the original recipe. The plant's roots and sap were the key ingredient, giving the candy its characteristic sticky texture. The plant grows in wet, marshy environments, which inspired its name.

Even though the plant is no longer used in modern marshmallow recipes, the name stuck. So when you enjoy a fluffy marshmallow today, you're experiencing a treat with a name rooted in ancient history and a connection to a humble plant that once thrived in marshlands!

Make a Marshmallow

For this recipe, you'll need a Candy or Baking Thermometer and:

- 1/3 Cup Powdered Sugar
- 3 Tablesoons of Cornstarch
- 3/4 of an Ounce of Unflavored Gelatin (thats 3 standard packets!)
- 1 Cup of Cold Water
- 1 Cup Light Corn Syrup
- 1 and 1/2 Cups of Granulated Sugar
- 1/4 Teaspoon of Salt
- 1 Tablespoon of Vanilla Extract

Instructions:

- Grab a 9x13 glass baking dish and grease it with Non-Stick Cooking Spray. In a bowl, combine your Powdered Sugar and Corn Starch, and sprinkle some of it into your baking dish until its lightly coated to keep your marshmallows from sticking. put the rest of the powder aside.
- Whisk together half a cup of water and your Gelatin until just combined, then set aside. Add the other half of your water to a pot or saucepan and add your Corn Syrup, Granulated Sugar, and salt. Mix slowly over medium heat until the sugar has dissolved. make sure to scrape the sides of the pot so it wont burn!
- Let the sugary syrup cook until it reaches between 235 and 240 °F, then take it off the heat and let it cool for 5 minutes. Add your syrup to your Gelatin and whisk it in a mixer or by hand for 10-15 minutes. Be careful, its hot!
- Mix firmly and quickly until it becomes white, shiney, and looks like marshmallow fluff! Then add your Vanilla and spoon the fluff into your baking dish.
- Let the marshmallows set overnight before cutting them up and coating them with the rest of your powdered sugar

Creative Writing & Art Contest

Finish the Story!

Grandpa Tuttle's story taught Brock an important lesson about delayed gratification and making smart choices. But one big question remains—how did Grandpa Tuttle and his friends escape the desert after they primed the pump?

Did they encounter new challenges? Was there an unexpected twist? Maybe they met someone who helped them, or perhaps they had to rely on their wits and teamwork to make it to safety.

Now it's your turn! Imagine the rest of Grandpa Tuttle's adventure. On another sheet of paper write a short story about how he and his friends escaped the desert.

Illustrate the Story!

Draw a picture or create a comic about the end of Grandpa Tuttle's escape from the desert. It's your chance to show off your drawing skills. Have fun and bring your story to life!

Enter To Win!

Type out your story (or take a picture), and take a picture of your illustration. Then send it to Magazine@tuttletwins.com.

The best stories will be displayed on our social media pages, and one winner will recieve a special prize!

Glad-Libs

The next page of the Plus Pack contains a partially finished story that you and your family can fill in together! On this page, take the time to fill in each of the needed parts of speech, then flip to the next page and fill in the corresponding words!

Adjective	
Delicious Food Smell	
Emotion	
Adjective	
Verb Ending with "ing"	
Favorite Song	
Plural Noun	
Plural Noun	
Food Related Items	
Silly Accessory	
Noun	
Adverb	
Adjective	
Emotion	
Hot Beverage	
Adjective	
Adjective	

The Grind and the Glory

On the first morning of the new week, Brock walked into Thusnelda's feeling Adjective and ready to tackle whatever Tess, the owner, had in store for him. The diner smelled of Delicious Food Smell, and the red-and-white checkered floors seemed to sparkle under the morning sun.

"Morning, Brock!" Tess greeted with a Emotion smile. "Ready for another Adjective week? You've got big dreams of saving for that boat, and I'm here to help you get there. Start with the floors—they're begging for a good Verb ending in -ing!"

Brock grabbed the mop and began swishing it back and forth across the checkered tiles, humming along to the diner's radio playing Favorite Song. He imagined himself behind the wheel of his dream boat, and worked even harder.

By the lunch rush, Brock was running back and forth as a busboy, clearing Plural Noun and wiping down Plural Noun until they sparkled. He stacked a towering pile of Food-Related Items and brought them to the sink, where he tackled the dishes with a sponge in one hand and Silly Accessory in the other.

Tess came by as he finished scrubbing the last Noun. "Good job, kid," she said Adverb. "But don't stop now—the bathrooms need your magic touch!"

Cleaning the bathrooms was less glamorous, but Brock rolled up his sleeves and made them Adjective. By the time the last customer left and the diner's neon sign buzzed off for the night, Brock stood by the counter, Emotion but happy with himself, as Tess counted the day's receipts.

"You worked hard this week, Brock," Tess said, pouring two mugs of Hot Beverage. She slid one over to him and added, "Not everyone your age has the determination to save for the future. Be proud of yourself."

Brock smiled, sipping from the mug and looking out at the now-spotless diner. "Thanks, Tess. One step closer to that boat—and thanks for believing in me."

Tess gave him a knowing wink. "You've got a good head on your shoulders, Brock. Keep this up, and you'll get there in no time."

And with that, Brock headed out into the Adjective night, tired but motivated, knowing his dreams were just a little closer with each Adjective day at Thusnelda's.

Long Distance Language

Morse code is one of the oldest ways of sending messages across long distances. It was invented in the early 1830s by Samuel Morse, an artist who wanted a faster way to send information than mail delivered by horseback. He teamed up with Alfred Vail, a mechanical engineer, and together they created the system of dots and dashes we now know as Morse code.

Originally, Morse code was used alongside the telegraph. A telegraph is a device that sends electric pulses along a wire to another location, where the pulses are translated into sound or written symbols. The "code" part of Morse code assigns every letter of the alphabet a specific sequence of short signals and long signals. Words are separated by spaces, and the length of the signals determines their meaning.

To send a message, operators would press and release a key connected to the telegraph machine to create the dots and dashes. The short sounds for dots and longer notes for dashes—would be transmitted to the other end, where another operator would decode them into words. The system worked so well that it revolutionized communication, making it possible to send messages across countries almost instantly.

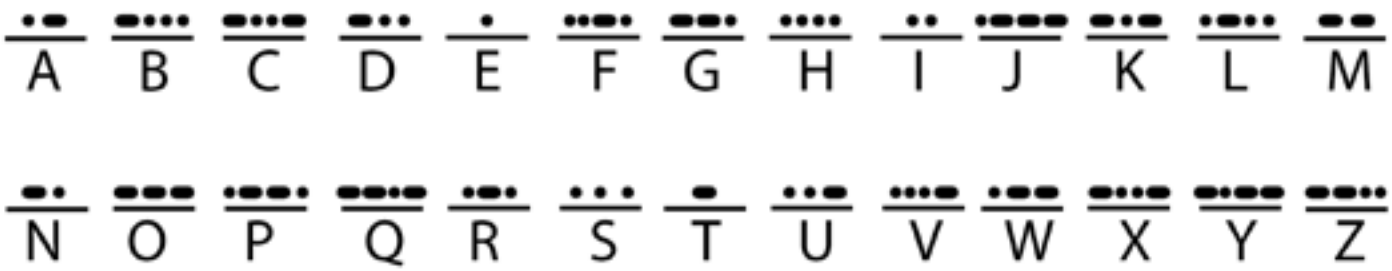
Even though Morse code isn't widely used today, it's still important in areas like aviation, navigation, and emergency communication. It's a fascinating system that helped shape the world of modern communication!

The next few pages of the plus pack include some Morse Code puzzles waiting to be cracked and a Key to help you solve them! You can use that Key to write your own coded messages as well!

Activity

Crack the Code!

We can use Morse Code ourselves to make and solve coded messages and puzzles. Use the Key below to decode all three messages, then try writing a few secret messages yourself!



Activity

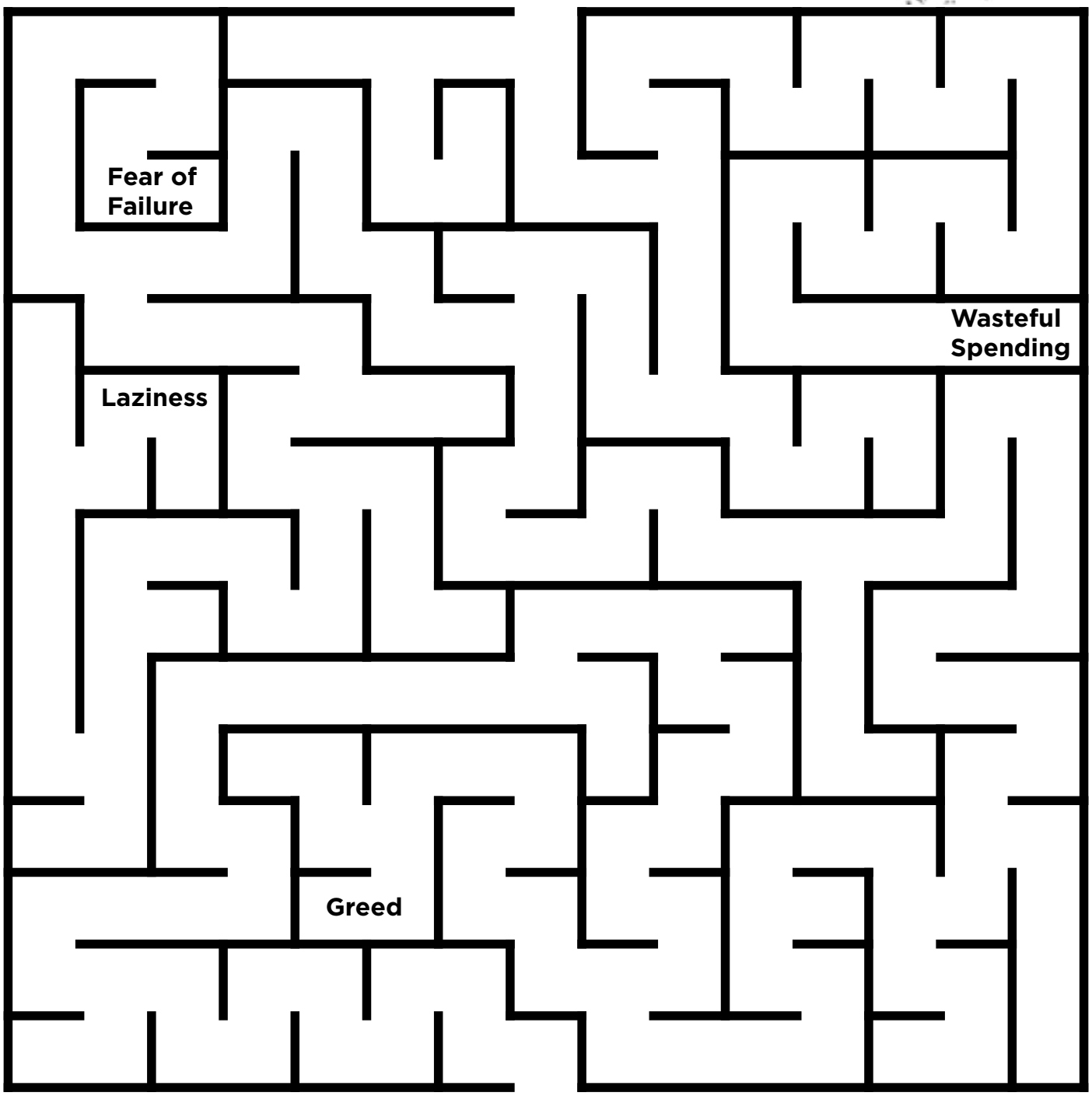
Write in Morse Code!

Using the lines above, make your own coded messages using Morse Code! make sure to give the key to whoever you want to read the message!

Maze

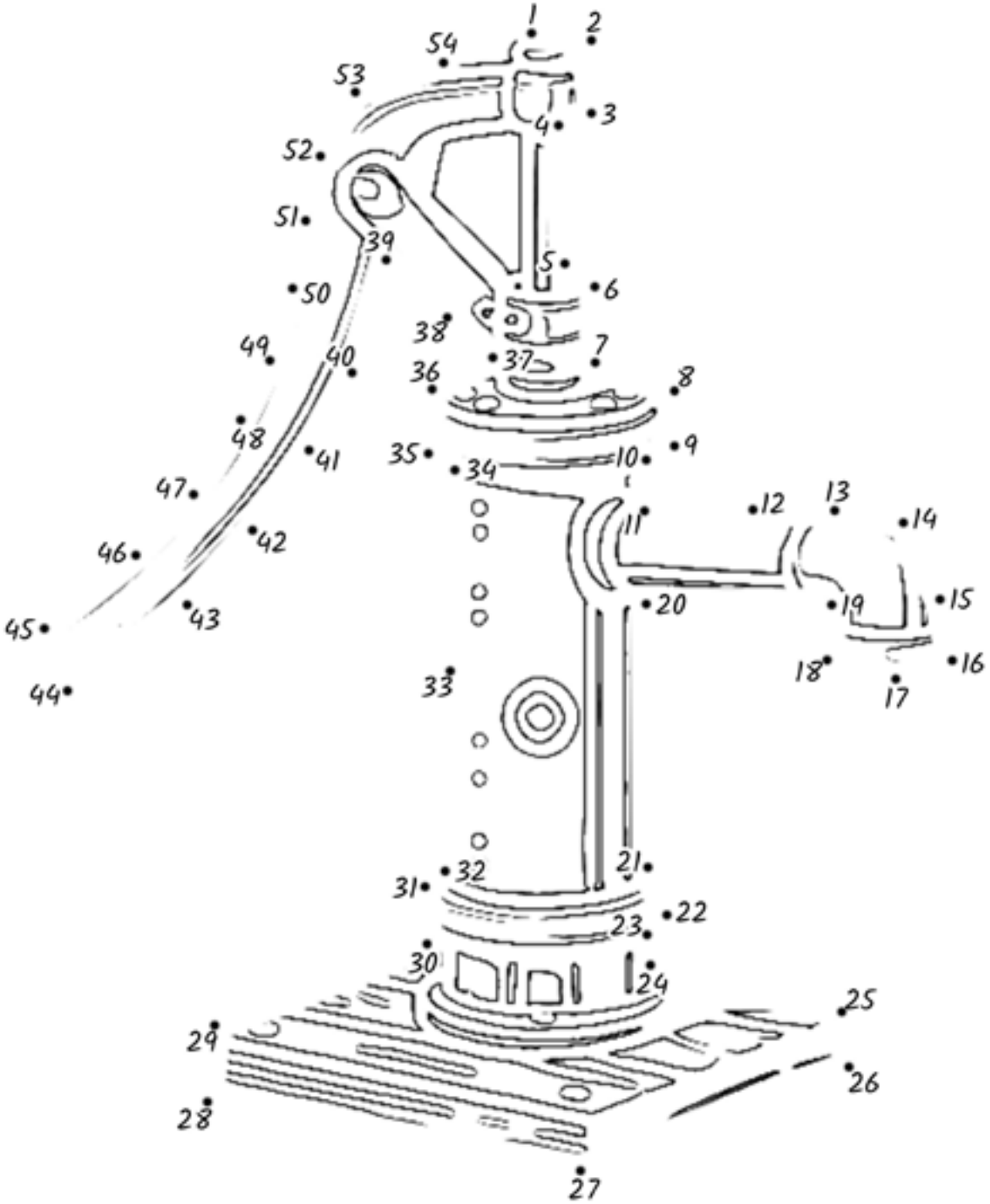
Brock is working hard to save money, but there are a lot of things that can distract or discurage him from achieving his goal. Navigate the maze to help brock get to the end. watch out for things that may cause him to lose his way!

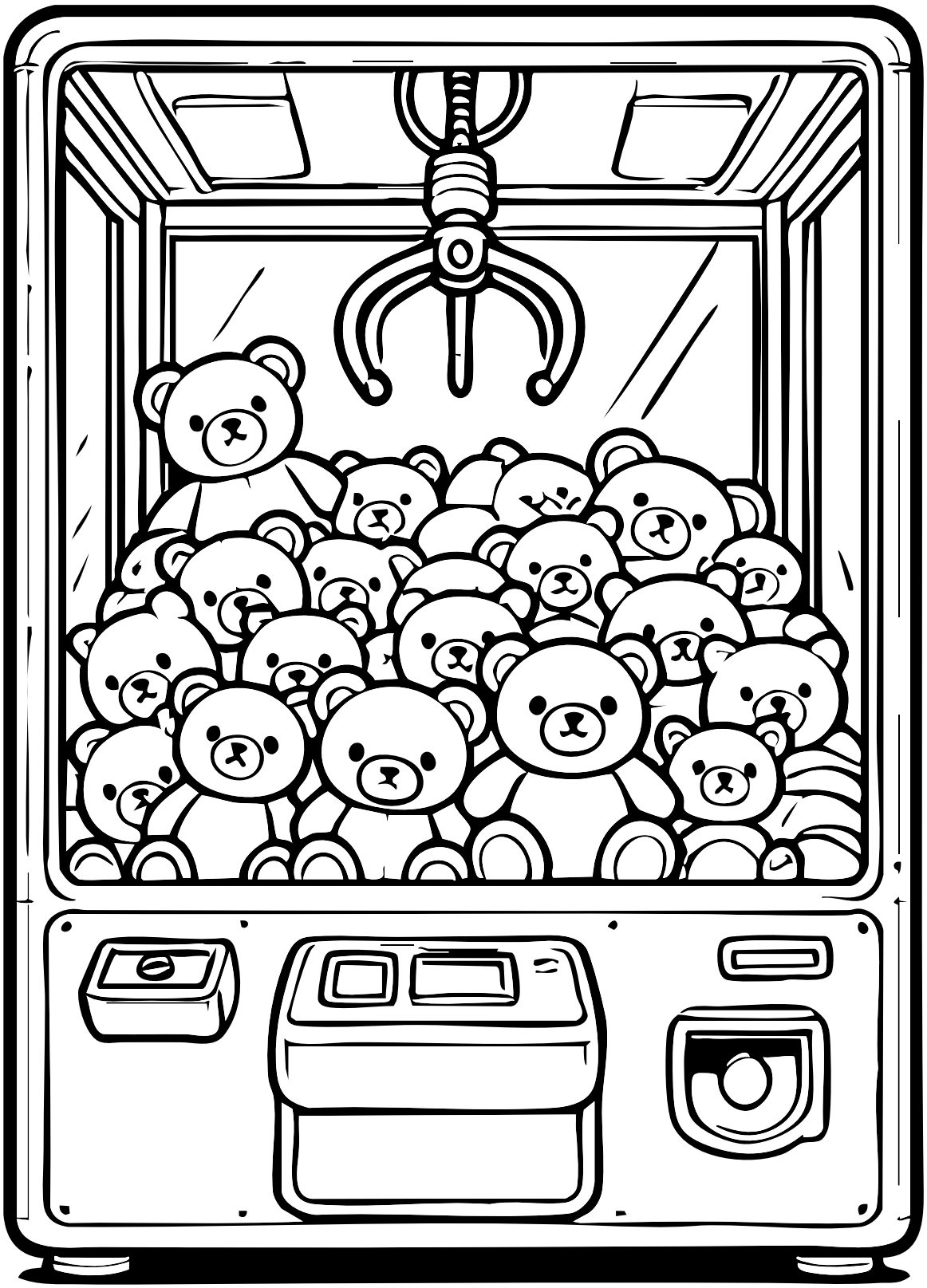
START

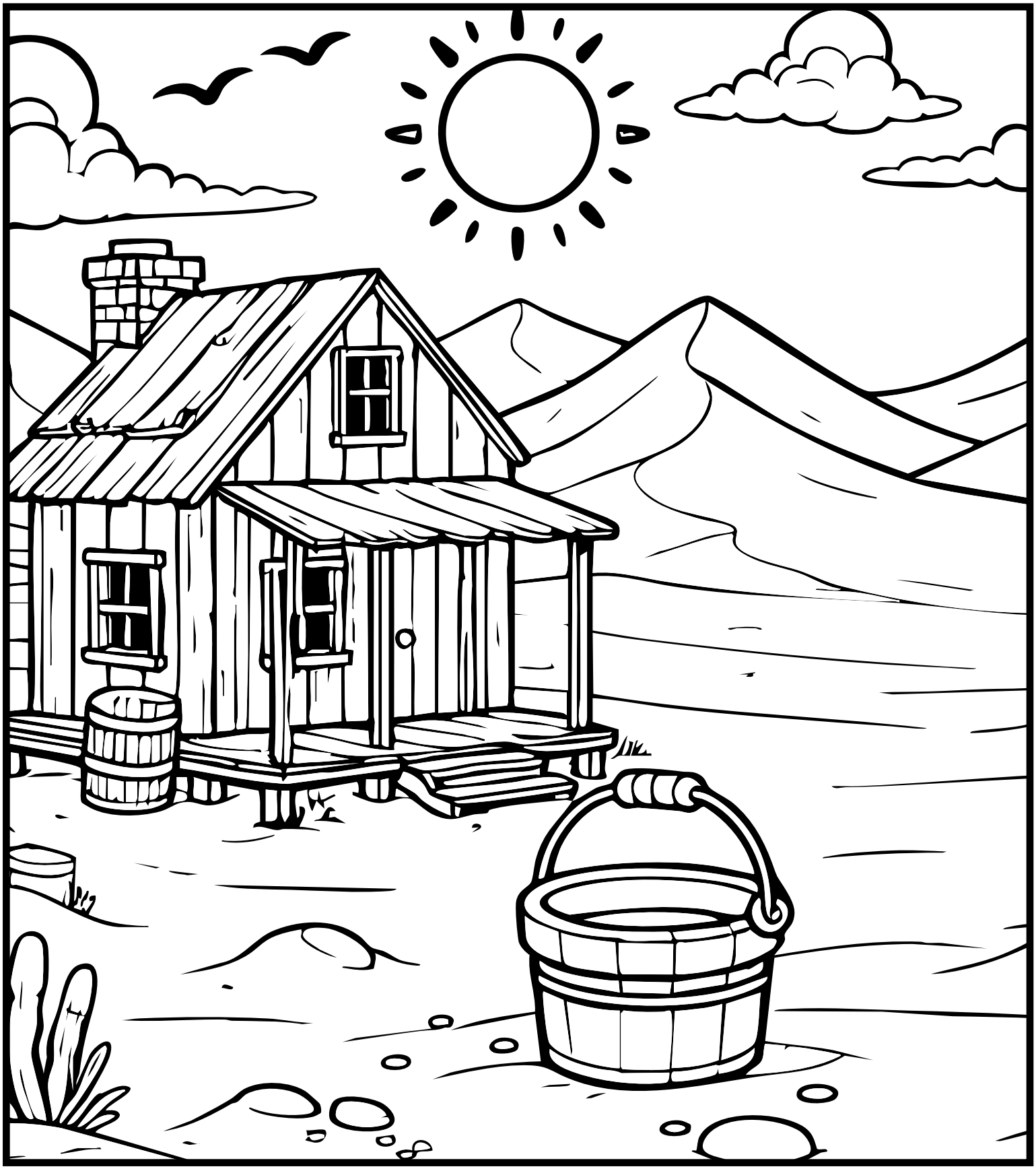


FINISH

Connect the Dots







Extra Resources

Tuttle Twins TV Show

Ethan and Emily visit their future selves to learn how their choices affect their future!

Season 2: Episode 12

Money Management Mayhem: A Christmas Adventure

www.angel.com