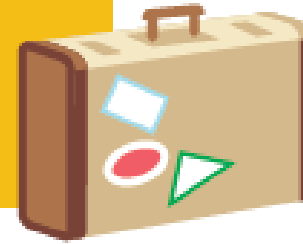


# Summer Patch Series: Passport to Adventure



Welcome to your next summer adventure! All aboard for days full of fun experiments, fresh perspectives, and outdoor exploration.

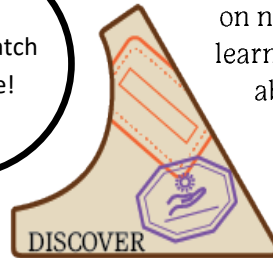
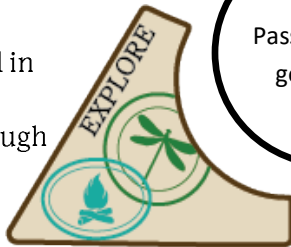
Design and test your way through this patch as you explore STEM topics with easy, hands-on experiments!



New perspectives often help us discover things about ourselves. Reflect on new ideas and learn a little more about yourself as you stroll through the activities to earn this patch.



There is so much wonder to be found in the natural world! Trek your way through these outdoors-focused activities to earn this patch.



## How to Put Your Passport Together

1. Print pages 2-7 double-sided (**flip on the SHORT side**).
2. Punch holes through the center of each black dot along the center fold with a skewer or a pencil.
3. Thread yarn or string through the holes, leaving the long sides loose on the *outside* of the book. Then tie your strings to bind the pages together permanently.
4. Enjoy your passport! Remember to put your name on the front so everyone knows it's yours.



At the heart of this adventure is the most important part: **the first step!** Complete *any* single activity from the passport to earn the passport patch. After, do more activities to earn the stamp patches for your passport!



Passport to Adventure



Summer  
2023

This passport belongs to:

# Welcome to Your Summer

Passports act as tickets for travel and as your permission to stay wherever you go. We don't need these when we travel from one state to the next, but when we travel to different countries with different governments, you need to have a passport. Passports can also be a great way of tracking where you've been, planning where you want to go next, and of keeping a record of all the wonderful memories that you make.

Use this passport as a guide and a place to keep track of a summer full of fun and exciting activities! You'll earn the first patch—the passport patch—just by getting started.



In travel passports, each time you visit another country, you get a "cancellation" stamp. These special stamps show the name of the place and the date you got the stamp.

## Reflections

My favorite summer memories:

---

---

---

---

---

---

---

---

---

---

Enjoy your completed patch!





Create Your Own!


# Immersion of Adventure

In this book, the empty space to the left of each activity is where the cancellation stamp goes. Use whatever you like as your cancellation stamp for completing an activity—stickers, fun stamps, doodles, or anything else!

It's your passport: make it YOU.

Complete a minimum number of activities from a single section to earn the patch for that section.

*(Daisies & Brownies = 4+ / Juniors and up= 6-7+)*



Earn your "Experiment" patch doing STEM activities!



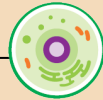
Earn your "Explore" patch by doing activities in the outdoors!



Earn your "Discover" badge by doing activities that introduce you to new ideas!



# Experiment



## **How does Bernoulli's Principle help airplanes fly?**

Faster air over the top of the wing creates low pressure while slower air under the wing creates higher pressure, making the air push the wing up. Try making 2-3 of these airplane designs to see which flies farther/faster.

<https://www.thecoolist.com/best-paper-airplane-designs/>

## **Edible Engineering**

Engineers have many things to consider when designing a building like what shape to make it, how much it will hold, or how stable it is. Use jelly beans or mini-marshmallows and toothpicks to build a bridge or tower.

## **Balancing Act**

Did you know that ancient Egyptians invented the first scale over 5000 years ago in 3100 BC? Scales tell us how much something weighs. Create a scale using the link below to compare the weights of different objects. Which types of objects are the heaviest? The lightest?

<https://handsonaswegrow.com/balance-scale/>

## **Sneaky Salt**

Epsom salt doesn't have the same chemical compound as table salt, but is just as versatile! You can put some in a warm bath to help soothe sore muscles or you can make a rainbow suncatcher to put in your window. Check out the link below to try making your own suncatcher:

<https://tinyurl.com/3j7mbp2n>

## **Learn at Your Local Library**

Read a book about a STEM topic that's *new* to you. Some examples of unique topics are:

- paleontology
- extra-sensory perception
- pyrotechnics
- astronomy



# Discover



## **Developing New Skills**

Have you always wanted to learn how to sew? What about learning to roller-skate? Take the time to learn a new hobby this summer. Get your friends involved!

## **Generational Perspective**

There are always new skills to teach and tools to learn about but some lessons are universal. Ask your grandparents or an elderly family friend (older than your parents) to tell you a story about their childhood. What did they learn from that experience that you can use in your life?

## **Lend a Helping Hand**

Everyone in a family has jobs to do to keep the house safe and clean. You probably have tasks around the house that you're responsible for. Notice what tasks other members of the family do and offer to help with theirs.

## **Counting Coins**

Do you earn allowance or have a change jar that you're saving coins in? Think of something you'd like to spend money on. Write out a savings plan, including how much you have now, what you need, and make a budget. Ask your adults for help if you need it.

## **Get Creative with Your Clothing**

Oops! The knee of your pants got ripped. Patching your clothing instead throwing it out saves money *and* the planet. Ask an adult to teach you how to patch up a small tear in your clothes. You can even use a Girl Scout patch to make it fun!



# Discover



## **Bonjour! Hola! Guten Tag!**

These are some of the many ways to say “hello” in different languages. Challenge yourself this summer by learning how to say something about yourself in another language. (As an added challenge, learn to say it in more than one language.)

## **Stars Shine Brighter Together**

Have you ever thought about how the people in your life support you? Write an acceptance speech for an award (use your imagination) thanking everyone who helped you get to where you are today.

## **Daylight Dilemma**

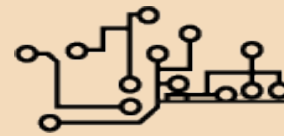
Increased daylight in summer makes Alaska days feel SO long. Sometimes, you might find it difficult to get to sleep at the right time (adults do too!). Research how not getting enough sleep can affect you and brainstorm some ways to get better quality sleep during the summer nights.

## **Thinking Outside the (Lunch) Box**

Taste buds get replaced every two weeks. That means that something you didn’t like before, you might like now. Give a food you didn’t like another try or try something brand new that you’ve never had before. Did you like it? Why or why not?

## **Making Connections**

Think about what it means to you to feel “loved”. What things do your parents or friends do that make you feel special and safe? Talk to a friend or a parent and ask them what makes them feel loved? Are they the same?



# Experiment



## **Rooted in Color**

Have you ever noticed the steam left behind when you breathe on glass? Plants “breathe” out water like this too! At the same time that they “breathe” out, they pull water in through their roots or stem. Try this experiment to watch how water moves through a plant during this process: <https://tinyurl.com/84evcjtp>

## **Cloud in a Jar**

Did you know that clouds are incredibly heavy? An average cumulus cloud (the white fluffy ones) weighs the same as a jumbo jet: 500 tons! Try making your own mini cloud in a jar using the experiment found at this link: <https://tinyurl.com/5hepejd4>

## **Dominos**

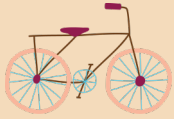
The “domino effect” is the term given to a chain reaction of energy, moving from potential (non-moving) to kinetic (moving). Watch a domino maze video or create your own sequence with dominos and start the chain reaction yourself!

## **Problem-Solving at Home**

The scientific method is the process we use in science and engineering to identify and fix problems during the design process. Watch the video below, then find a problem around your home and use the scientific method to find a solution. <https://www.youtube.com/watch?v=qAJ8IF4HI20>

## **Did you know there are currently more than 3 million known animal species?**

Pick an animal that you don’t know much about and learn some new facts about it! Videos and books are a great place to start researching. You might even be able to find a zoo website with a live animal camera to watch them on.



# Explore



## **Navigating Nature**

Take a nature walk. (Make sure to tell an adult where you're going first!) Then draw or color a map to show where you went and what you saw along the way.

## **Where the Roots Grow**

Summer is the perfect time for tending a garden, but what makes a garden grow? Nutrients in the soil are essential for healthy plants. Find some soil outside and make observations. What color is it? Is it wet or dry? What soil do you think would be best for gardening?

## **Feathered Friends**

Spring and summer bring birds of all kinds. Have you seen a nest near your house or a bird feeder that lots of birds eat at? Draw a picture of a bird you've seen. What does it sound like? Borrow a bird identification book or research online to see if you can figure out what it's called.

## **Bringing the Outdoors In**

Plan a living room campout. Make a pillow fort to sleep in and decide what snacks you'll make and activities you'll do. You could sing campfire songs around a lantern, make shadow puppets, or something else!

## **Art in Nature**

Nature is a source of inspiration for many artists and creators. Train your inner artist by exploring the natural materials you have (sticks, rocks, leaves, etc.) What patterns can you find? Try making your own nature pattern using those materials.

## **Bug Hunt**

Insects are able to live in any habitat in the world and there are more than 900,000 different species that we know about. What insects might you find in your neighborhood? They like to hide, so find them by flipping over logs or rocks or digging in the dirt.

## **Rock N' Roll**

Start a rock collection! Go on an adventure and bring back some rocks that you like. Make observations about color, size and how they feel. Do some research to see if you can identify what type they are.

## **Happy, Healthy Hearts**

Exercising in nature is great for our mental and physical health. Brainstorm some ways you can be active outdoors with your family or friends and then go do it!

## **Go Fish**

Love to fish but can't make it to the water? Go fishing in your backyard by making a fishing pole, lures, and fish out of craft materials. Be as creative as you want with your fish— you can even create new fish species!

## **Words in Motion**

What about nature inspires you? Do you have a favorite tree, smell, or experience? Write a poem to celebrate what that means to you.